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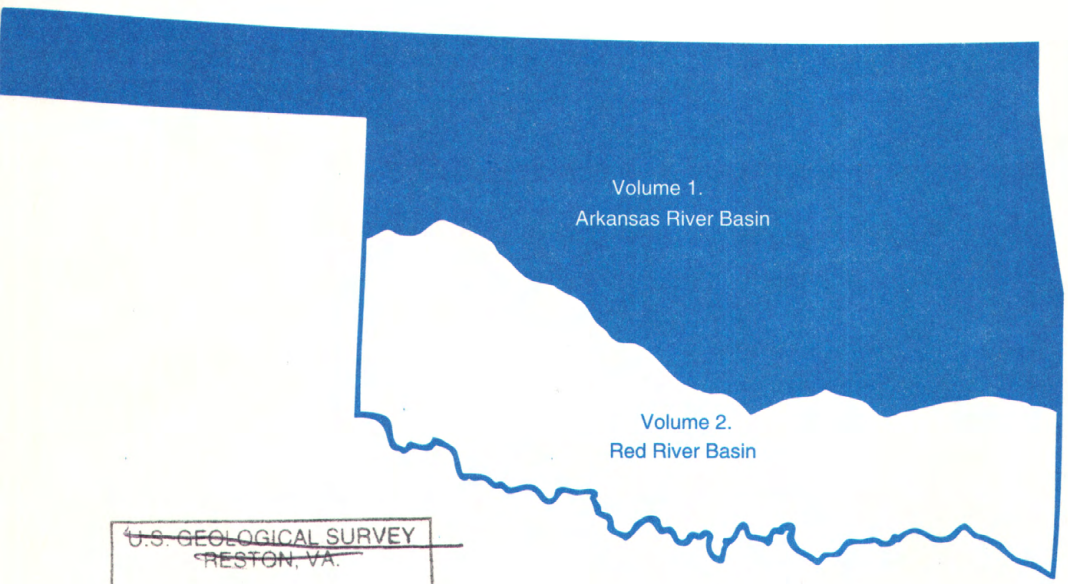
Water Resources Data Oklahoma Water Year 1998

Volume 1. Arkansas River Basin

Water-Data Report OK-98-1



U.S. Department of the Interior
U.S. Geological Survey

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

CALENDAR FOR WATER YEAR 1998

1997

OCTOBER

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1998

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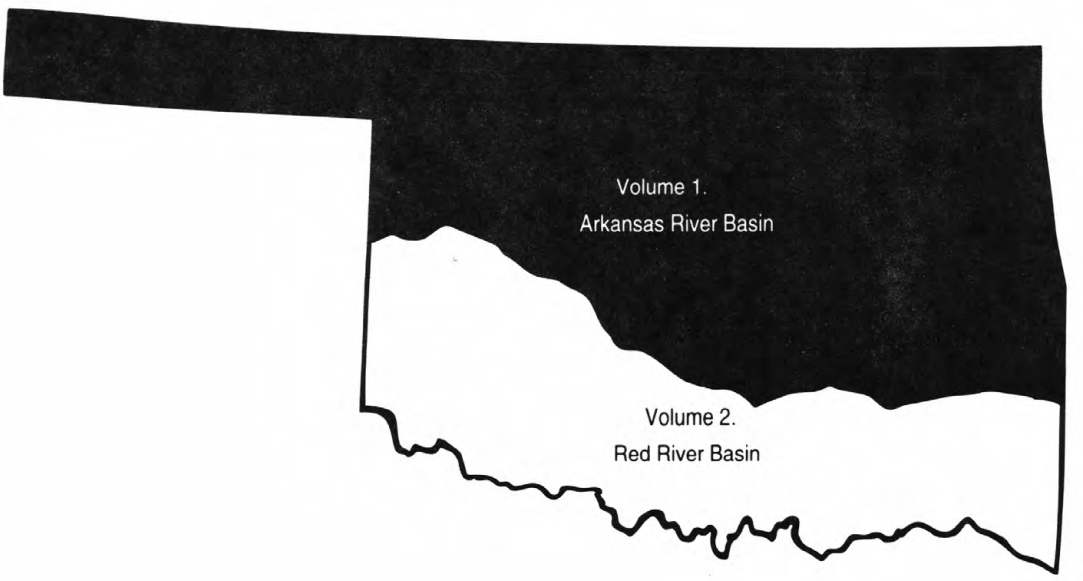
U.S. Department of the Interior
U.S. Geological Survey

Water Resources Data Oklahoma Water Year 1998

Volume 1. Arkansas River Basin

By R.L. Blazs, D.M. Walters, T.E. Coffey, D.L. Boyle, J.F. Kerestes, and R.E. Johnson

Water-Data Report OK-98-1



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

Charles G. Groat, 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

1999

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.A. Alf 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 two volumes as follows:
Volume 1. Arkansas River Basin
Volume 2. Red River Basin and Ground-Water Records

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13. ABSTRACT *(Maximum 200 words)*

Volumes 1 and 2 of the water resources data for the 1998 water year for Oklahoma consists of record 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 128 gaging stations; stage and contents for 12 lakes or reservoirs and 1 gage height stations; water quality for 67 gaging stations; 29 partial-record or miscellaneous streamflow stations and 1 ground-water sites. Also included are lists of discontinued surface-water discharge and water-quality sites. 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.

14. SUBJECT TERMS
*Oklahoma, *Hydrologic data, *Surface water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment, Water temperature, Sampling sites, Water analyses, Ground water, Gage height

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

[Letters after station names designate type of data: (d) discharge, (c) chemical, (b) biological, (m) microbiological, (s) sediment, (t) temperature, (e) elevation, gage heights, or contents]

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

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

[Letters after station names designate type of data: (d) discharge, (c) chemical, (b) biological, (m) microbiological, (s) sediment, (t) temperature, (e) elevation, gage heights, or contents]

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 STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
Arkansas River near Ponca City, OK	07148140	46,530	1976-93
Salt Fork Arkansas River near Winchester, OK	07148350	856	1960-93
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
Salt Fork Arkansas River near Jet, OK	07150500	3,202	1938-93
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 Buffalo	07157950	12,004	1960-94
Cimarron River near Englewood, KS	07157580	10,096	1982-87
Buffalo Creek near Lovedale, OK	07157960	408	1966-93
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
Skeleton Creek near Lovell, OK	07160500	410	1950-93
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
Council Creek near Stillwater, OK	07163000	31	1934-93

DISCONTINUED SURFACE-WATER STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
Cimarron River at Oilton, OK	07163500	18,669	1935-45
Cimarron River at Mannford, OK	07164000	18,849	1939-50, 1960-63
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
Caney River near Hulah, OK	07173000	733	1938-93
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
Sand Creek at Okesa, OK	07174600	139	1960-93
Caney River near Ochelata, OK	07174700	1,753	1956-76
Double Creek subwater shed 5 near Ramona, OK	07175000	2.39	1955-69
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
Hominy Creek below Skiatook Lake near Skiatook, OK	07177410	354	1985-93
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 22nd Street Bridge at Miami, OK	07185095	44.7	1984-93
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

DISCONTINUED SURFACE-WATER STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
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
Walnut Creek at Purcell, OK	07229300	202	1966-93
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
Beaver River near Guymon, OK	07232500	2,139	1938-93
Coldwater Creek near Hardesty, OK	07233000	1,967	1940-64
Beaver River near Hardesty, OK	07233210	5,029	1978-86
Clear Creek near Elmwood, OK	07234100	170	1966-93
Wolf Creek near Shattuck, OK	07235500	1,183	1938-46
Wolf Creek near Fargo, OK	07236000	1,624	1943-76
Wolf Creek near Fort Supply, OK	07237000	1,739	1938-93
Bent Creek near Seiling, OK	07237800	139	1967-70
North Canadian River at Canton, OK	07239000	12,484	1938-93
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, OK	07241503	13,356	1989-91
Wewoka Creek near Wetumka, OK	07242100	396	1960-64 1967
Deep Fork near Arcadia, OK	07242350	105	1970-93
Bellcow Creek at Chandler, OK	07242500	46.0	1949-55

DISCONTINUED SURFACE-WATER STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
Dry Creek near Kendrick	07243000	69.0	1956-94
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 (mi^2)	Period of record
ARKANSAS RIVER BASIN			
Beaver Creek near Kaw City, OK	07148126		1949, 1954-55, 1961
Arkansas River at Kaw City, OK	07148128	8,670	1948-51, 1961
Arkansas River near Ponca City, OK	07148140	46,530	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	1,009	1938-54, 1962, 1977-79, 1985-90
Salt Fork Arkansas River near Ingersoll, OK	07148450	1,140	1961-62, 1973-80
Salt Fork Arkansas River near Cherokee, OK	07149500	2,439	1941-49
Cottonwood Canyon Creek near Cherokee, OK	07149704		1944-45
Salt Fork Arkansas River near Jet, OK	07150500	3,202	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	4,528	1943-45, 1948, 1951-64, 1968-79, 1985-90
Chikaskia River near Braman, OK	07151900	1,510	1976-77

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
Chikaskia River near Blackwell, OK	07152000	1,859	1906, 1938, 1943-45, 1952-53, 1955-56, 1959-64, 1975-80, 1985-90
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
Arkansas River at Ralston, OK	07152500	54,465	1950-63, 1965-93
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	1,106	1952-53, 1955-56, 1959-63, 1967-68, 1977, 1982, 1987-90
Cimarron River Ab Ute Creek near Boise City, OK	07155000	1,955	1938-48, 1950
Cimarron River near Forgan, OK	07156900	8,536	1967-68, 1970-71, 1974, 1987-90

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
Cimarron River near Mocane, OK	07157000	8,670	1942-49, 1952-53, 1955-56, 1959-66, 1977-78
Cimarron River near Englewood, KS	07157580	10,096	1938-42, 1982-87
Buffalo Creek near Lovedale, OK	07157960	408	1917, 1973-80, 1987-90
Cimarron River near Buffalo	07157950	12,004	1953, 1961-63, 1968-94
Cimarron River at Freedom, OK	07157980	12,706	1953, 1973-80
Cimarron River near Waynoka, OK	07158000	13,334	1938-53, 1955-56, 1959-63, 1968-79, 1985-90
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	15,713	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
Deer Creek Blw Waste Wtr Trmt Fac near Edmond, OK	07159645		1983-84

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
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	16,892	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 at Perkins	07161000	17,852	1950, 1953-63, 1965-94
Council Creek near Stillwater, OK	07163000	31	1986-90
Cimarron River near Ripley, OK	07161450	17,979	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	18,669	1938, 1942, 1944-45, 1981
Cimarron River at Mannford, OK	07164000	18,849	1939-52, 1959-63
Arkansas River at Sand Springs near Tulsa, OK	07164400	74,615	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	75,473	1972-83, 1986-88
Cane Creek near Jamesville, OK	07165581		1960-61
Arkansas River near Tullahassee, OK	07165600	75,815	1969-72

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
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	3,639	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	4,339	1961-83, 1986, 1988-89
Verdigris River Ab Caney River near Claremore, OK	07171405		1941, 1945, 1948, 1952-55, 1959, 1961, 1978
Sweetwater Creek near Claremore, OK	07171490		1980-83
Verdigris River near Sageeyah, OK	07171500	4,402	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

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
Little Caney River Blw Cotton Cr, near Copan, OK	07174200	502	1944-81, 1983, 1986
Caney River Above Coon Creek at Bartlesville, OK	07174400	1,392	1985-86, 1989-90
Caney River at Bartlesville, OK	07174500	1,465	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	1,753	1959-61
Double Creek SWS 5 near Ramona, OK	07175000	2.39	1957-59, 1964-65, 1967-69
Caney River near Ramona, OK	07175500	1,955	1966-93
Caney River near Collinsville, OK	07175550	2,046	1949-53, 1959
Verdigris River near Claremore, OK	07176000	6,534	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
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

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
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	1,022	1948-50, 1987-90
Bird Creek near Catoosa, OK	07178050	1,080	1963-90
Verdigris River near Inola, OK	07178600	7,911	1940-71, 1976-79
Verdigris River (Newt Graham L&D) near Inola, OK	07178620	7,911	1971-86
Verdigris River near Okay, OK	07178670		1959-63
Neosho River near Commerce, OK	07185000	5,876	1944-54, 1959-73, 1975-83, 1985-89
Tar Creek at 22nd Street Bridge at Miami, OK	07185095	44.7	1988-89, 1989-92
Spring River near Quapaw, OK	07188000	2,510	1944-64, 1975-80, 1986, 1988-89
Neosho River near Langley, OK	07190500	10,335	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 (mi^2)	Period of record
ARKANSAS RIVER BASIN			
Big Cabin Creek near Big Cabin, OK	07191000	450	1948, 1951-60, 1964-71, 1975-77, 1985-89
Spavinaw Creek near Sycamore, OK	07191220	133	1972-77, 1980-88
Spavinaw Creek near Colcord, OK	071912213		1980-81
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	11,534	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	12,307	1930-31, 1938-50
Neosho River below Fort Gibson Lake near Fort Gibson, OK	07193500	12,495	1952-93
Arkansas River near Muskogee, OK	07194500	96,674	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 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
Peacheater Creek at Christe, OK	07196973	25	1991-93

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
Dirty Creek near Warner, OK	07198500	227	1940-46, 1960-61, 1977
South Fork near Porum, OK	07198800		1979-82
Canadian River near Roll, OK	07228200	23,615	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	25,911	1963-75
Canadian River at Purcell, OK	07229200	25,939	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

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
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
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, OK	07231000	865	1951-92
Canadian River at Calvin, OK	07231500	27,952	1944, 1951-53, 1960-61, 1965-95
Gaines Creek near Higgins,OK	07231955	152	1978-93
Pit Creek near Gowen, OK	07231958	5.74	1990-91
Pit Creek near Hartshorne, OK	07231959	8.95	1991-93
Gaines Creek near Gowen, OK	07231960	182	1990-93
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	2,139	1937-65, 1967-77, 1988, 1990
Beaver River near Hooker, OK	07232630	3,017	1972-73, 1975, 1977, 1979
Coldwater Creek near Hardesty, OK	07233000	1,967	1939-64

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
Beaver River near Hardesty, OK	07233210	5,029	1938-39, 1979-82
Palo Duro Creek near Range, OK	07233700	1,745	1953-54, 1959-62
Beaver River at Beaver	07234000	7,955	1952, 1958-59, 1962-63 1968-94
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	9,615	1939-51, 1957, 1976
Wolf Creek near Shattuck, OK	07235500	1,183	1938-46
Wolf Creek near Fargo, OK	07236000	1,624	1941-64, 1967-68, 1971-72, 1976, 1978
Wolf Creek near Fort Supply, OK	07237000	1,739	1938-63, 1971, 1973, 1979, 1987-90
North Canadian River at Woodward, OK	07237500	11,589	1955, 1958-59, 1961-63, 1975-95
North Canadian River near Seiling, OK	07238000	12,261	1943-44, 1946-72, 1974-83, 1987-90
North Canadian River at Canton, OK	07239000	12,484	1938-68, 1971-80, 1986-90
North Canadian River near Watonga, OK	07239200	12,692	1943-44, 1949-51, 1954-57, 1959, 1963, 1965
North Canadian R Blw Weavers Ck near Watonga, OK	07239300	12,736	1985-90

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
North Canadian River near Yukon, OK	07239700	13,183	1952-53, 1974, 1988-89
Lake Hefner Canal near OK City, OK	07240000		1979, 1988
North Canadian River near OK City, OK	07241500	13,354	1940, 1942, 1944-50, 1952, 1959-63, 1973, 1975
North Canadian River at NE 36th St at OKC, OK	07241503	13,356	1988-91
North Canadian River near Jones, OK	07241530		1973, 1982
North Canadian River near Shawnee, OK	07241700		1973, 1979-80
North Canadian River near Wetumka, OK	07242000	14,290	1944, 1952-95
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
Fish Creek near Wetumka, OK	07242109		1960-61
North Canadian River near Pierce, OK	07242190	17,712	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

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
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 Beggs, OK	07243500	2,018	1952-93
Deep Fork near Dewar, OK	07244000	2,307	1938-51, 1960-65, 1979
Deep Fork near Pierce, OK	07244200		1959-63
North Canadian River near Eufaula, OK	07244500	17,657	1952-53, 1959-61
Canadian River near Whitefield, OK	07245000	47,576	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
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	14,7757	1943-72
Cache Creek near Cowlington, OK	07246600	20.6	1958-61
Coal Creek near Spiro, OK	07246615	15.4	1910, 1978-81

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
Poteau River East Of Waldron, AR	07246940	15	1983-96
Poteau River Northwest Of Waldron, AR	07246950	46.1	1983-96
Poteau River near Hon, AR	07246960	69.5	1993-96
Jones Creek near Hon, AR	07246980	93.6	1993-96
Poteau River South Of Bates, AR	07247012		1972-83
Poteau River at Hontubby, OK	07247025	301	1992
Fourche Maline near Wilburton, OK	07247450	56.2	1978-81
Fourche Maline near Red Oak, OK	07247500	122	1954, 1954, 1956-60, 1978-79, 1992-96
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	1,240	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
Coal Creek Tributary near Bokoshe, OK	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
Poteau River near Braden, OK	07249438		1958-59, 1961-63

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
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	150,547	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

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
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
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 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

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
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
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

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
ARKANSAS RIVER BASIN			
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

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 and 2 of this report includes records on both surface water and ground water in the State. Specifically they contain: (1) Discharge records for 128 streamflow-gaging stations, and 29 partial-record or miscellaneous streamflow stations, (2) stage and content records for 12 lakes , reservoirs and gage height records for 1 stations; (3) water-quality records for 67 streamflow-gaging stations; (4) water-level records for 1 observation wells.

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. 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-98-1" 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.

Oklahoma Conservation Commission

Oklahoma City Water Utilities Trust.

City of Tulsa.

Oklahoma State University

Oklahoma Geological Survey.

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

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, Ardmore, Henryetta, and Lawton.**

Organizations that supplied data are acknowledged in the station descriptions.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark 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 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.

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 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 of stations 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).

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, diverse, and geographically distributed part of the Nation's ground- and surface-water resources, and to identify, describe, and explain the major natural and human factors that affect these observed conditions and trends.

Assessment activities have begun in about two-thirds of the study units and ultimately will be conducted in 60 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Radiochemical Programs is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

EXPLANATION OF THE RECORDS

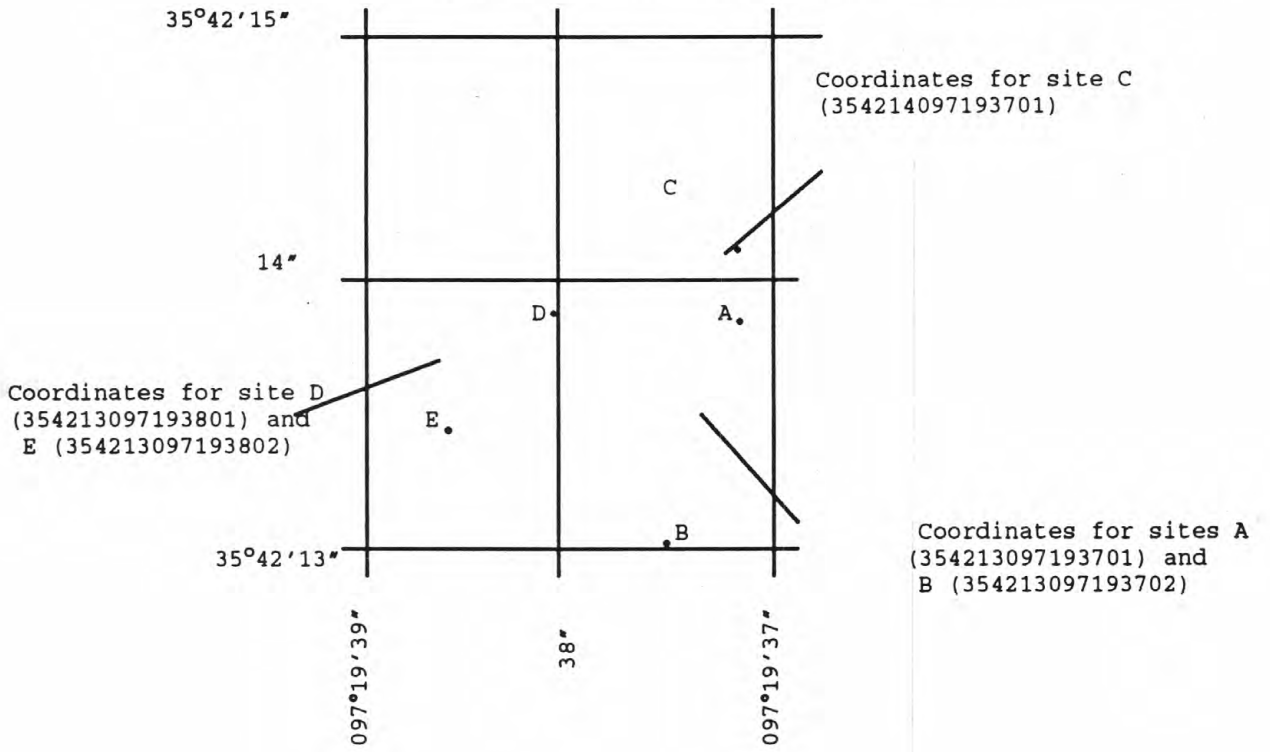
The surface-water and ground-water records published in this report are for the 1998 water year that began Oct. 1, 1997 and ended Sept. 30, 1998. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, 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 1-3. 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



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

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 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 figure 1.

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 A1 through A19 and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

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 of 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 works 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-flow 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 is exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.--The discharge is exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.--The discharge is exceeded 90 percent of the time 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 rectangular 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 ft^3/s; to the nearest tenth between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures for more than 1,000 ft^3/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 one 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 2.

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 miscellaneous 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 on-site measurements and for collecting, treating, and shipping samples are detailed in TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. These references are listed in PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS section of this report. Additional guidance is provided in technical memoranda. These methods are consistent with ASTM standards and generally follow ISO standards.

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. 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. Methods used in the computation of sediment records are described in the TWRI Book 3, Chapters C1 and C3. These methods are consistent with ASTM standards and generally follow ISO standards.

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

Samples for biochemical-oxygen (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. Sediment samples are analyzed in Missouri District Sediment Laboratory. All other samples are analyzed in the Geological Survey laboratories in Arvada, Colo. Methods used to analyze sediment samples and to compute sediment records are described in the TWRI, Book 5, Chapter C1. Methods used by the U.S. Geological Survey laboratories are given in the TWRI, Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, A4, and A5. These methods are consistent with ASTM standards and generally follow ISO standards.

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 for those years 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, pH, water temperature, and dissolved oxygen 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 recorder, 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.

Remarks 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).
V	Analyte was detected in both the environmental sample and the associated blanks.
&	Biological organism estimated as dominant.

Water Quality-Control Data

Data generated from the quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by this district are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples.

Blank Samples--Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated by the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. There are many types of blank samples possible, each designed to segregate a different part of the overall data-collection process. The types of blank samples collected in this disctrict are:

Field blank - a blank solution that is subjected to all aspects of sample collection, field processing preservation, transportation, and laboratory handling as an environmental sample.

Trip blank - a blank solution that is put in the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

Equipment blank - a blank solution that is processed through all equipment used for collecting and processing an environmental sample (similiar to a field blank but normally done in the more controlled conditions of the office).

Sampler blank - a blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank - a blank soltion that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank - a blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank - a blank solution that is treated with the sampler preservatives used for an environmental sample.

Reference Samples--Reference material is a solution or material prepared by a laboratory whose composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properies are similar to the environmental sample properties.

Replicate Samples--Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a

duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. There are many types of replicate samples possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this district are:

Sequential samples - a type of replicate samples in which the samples are collected one after the other, typically over a short time.

Split sample - a type of replicate sample in which a sample is split into subsamples contemporaneous in time and space.

Spike samples - spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

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 concentrations for a number of trace elements are within the range of 10's and 100's of nanograms per liter (ng/L). 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 began using new trace-element protocols at all stations in the water year 1994.

Nutrient Calculations

The values for many nitrogen parameters are calculated from other parameters. In some of these calculations, dissolved values are considered equivalent to total values.

Records of Ground-Water Levels

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 3.

Although, in this report, records of water levels are presented for fewer than 10 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 USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the world wide web (WWW). These data may be accessed at

http://www.water.usgs.gov

Some water-quality and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on magnetic tape or 3-1/2 inch floppy disk. 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 District Offices. (See address on the back of the title page.)

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-cell, colonial, or multicelled plants, containing chlorophyll 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.

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 35°C ± 1.0°C 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 500°C 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 105°C 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.

Code Numbers have been assigned for agencies collecting and analtysing samples, and are listed in water-quality tables of this report as follows:

1028 Oklahoma District, Water Resources Division (WRD), U.S. Geological Survey

80020 National Water Quality Laboratory, WRD, U.S. Geological Survey

Contents are 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 (ft^3/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 [$(ft^3/s)/mi^2$] 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.

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

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

Dissolved refers to that material in a representative water sample which passes through a 0.45 µm 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 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.

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 (m^2), 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's data system, National Water Information System (NWIS), to uniquely identify a specific constituent. The codes used in NWIS are the same as those used in the U.S. Environmental Protection Agency's data system, STORET.

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 (ft^3/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 multiplet 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 soluble 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, 1995, is called the "1995 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, Branch of Information Services, Box 25286, Federal Center, 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. Ficke, 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. MacCary: 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 measurement 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.

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3-A11. *Measurement of discharge by the 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*, Revised, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS- -TWRI Book 3, Chapter A12. 1986. 34 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. Rathbun, Nobuhiro Yotsukura, G. W. Parker, and L. L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.

3-A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 31 pages.

3-A20. *Simulation of soluable waste transport and buildup in surface waters using tracers*, by F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A20. 1993. 38 pages.

3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.

3-B2. *Introduction to ground-water hydraulics, a programed 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. 190 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.

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4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.

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5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.

5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R. L. Wershaw, M. J. Fishman, R. R. Grabbe, and L. E. Lowe: USGS--TWRI Book 5, Chapter A3. 1987. 80 pages.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L. J. Britton and P. E. Greeson, editors: USGS--TWRI Book 5, Chapter A4. 1989. 363 pages.

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5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.

5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.

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-flow 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. Schaffranek, 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.

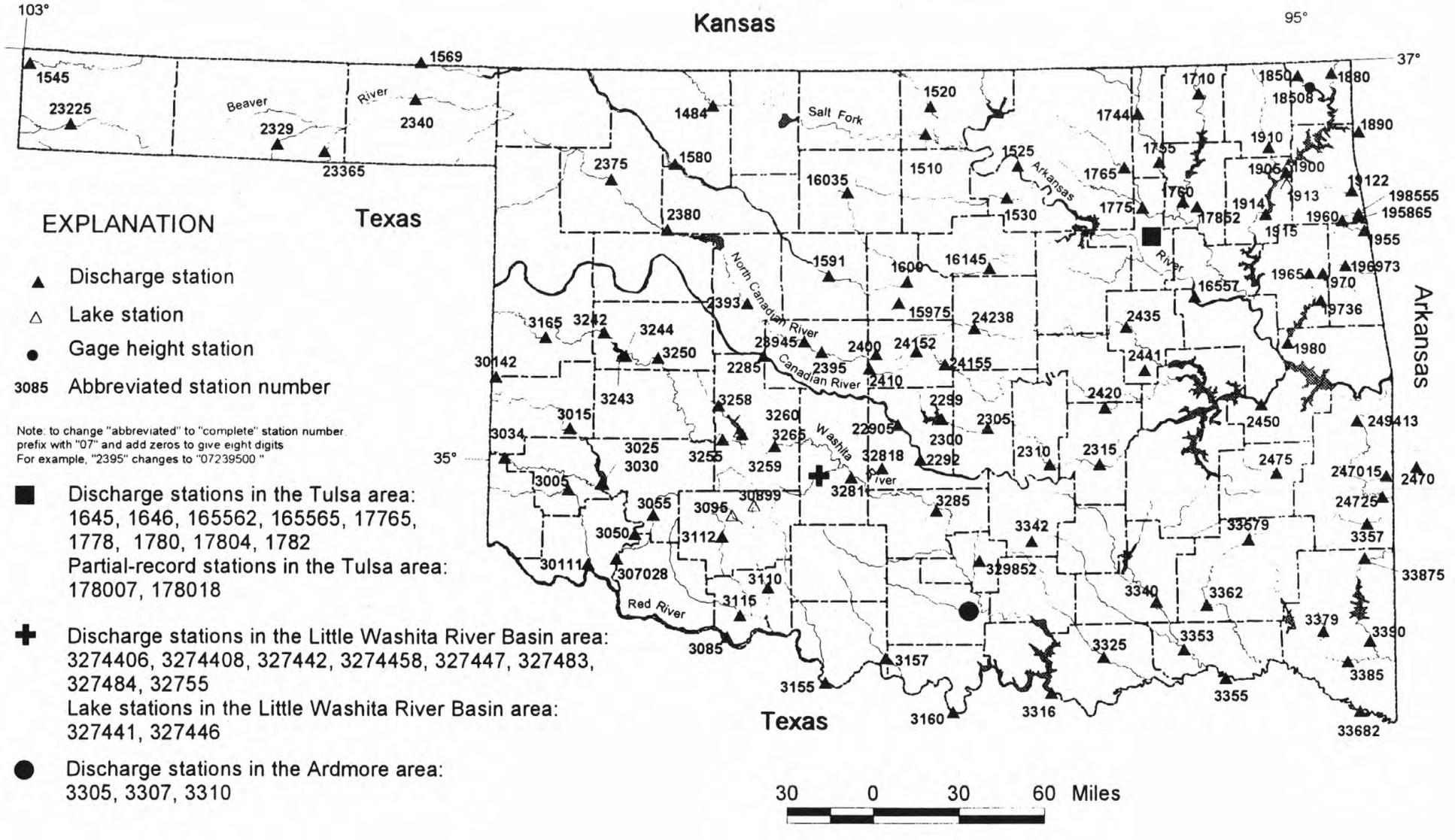
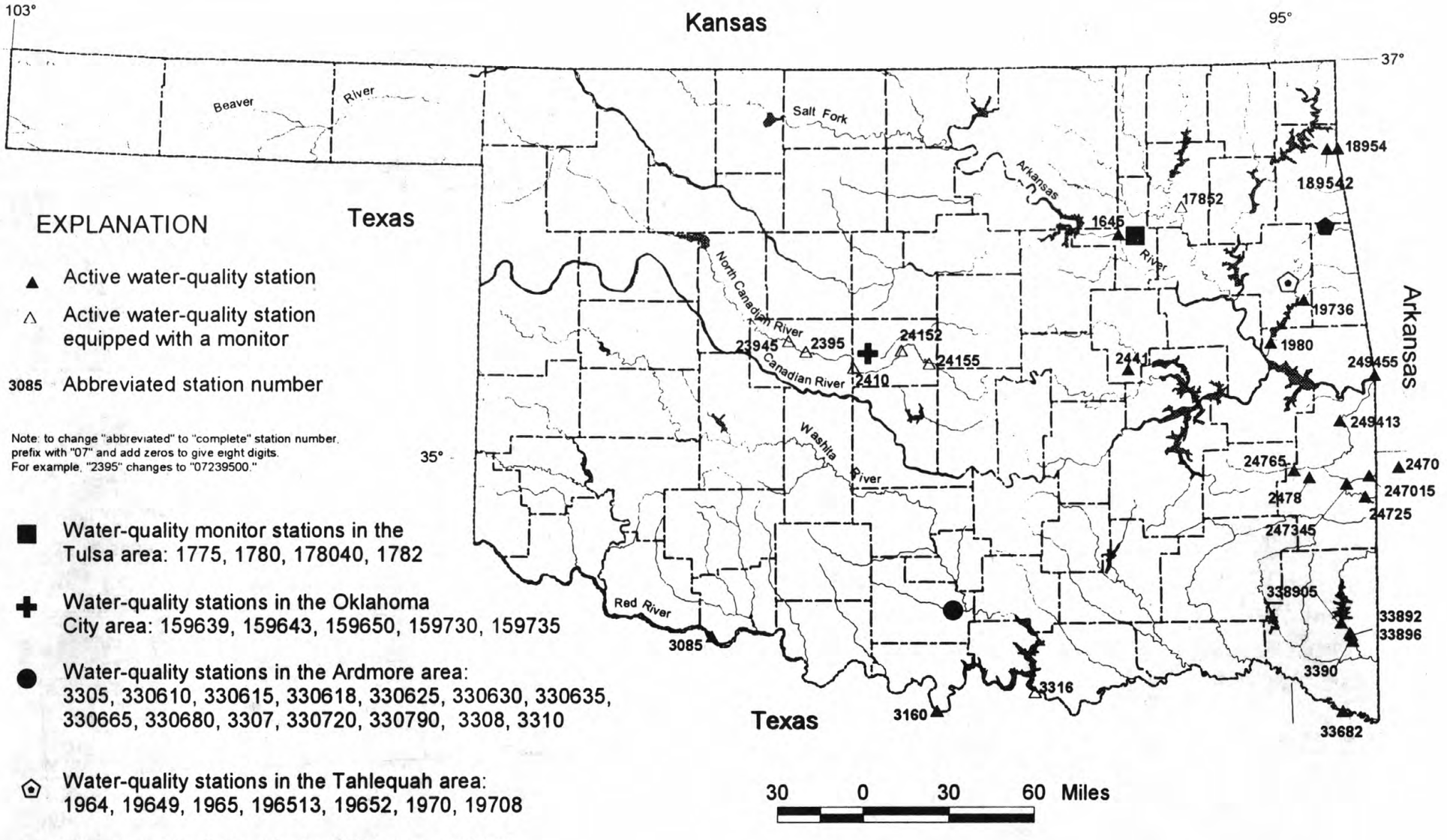


Figure 1.--Locations of continuous surface-water stations, water year 1998



EXPLANATION

▲ Active water-quality station

△ Active water-quality station equipped with a monitor

3085 Abbreviated station number

Note: to change "abbreviated" to "complete" station number, prefix with "07" and add zeros to give eight digits. For example, "2395" changes to "07239500."

■ Water-quality monitor stations in the Tulsa area: 1775, 1780, 178040, 1782

✚ Water-quality stations in the Oklahoma City area: 159639, 159643, 159650, 159730, 159735

● Water-quality stations in the Ardmore area: 3305, 330610, 330615, 330618, 330625, 330630, 330635, 330665, 330680, 3307, 330720, 330790, 3308, 3310

⬠ Water-quality stations in the Tahlequah area: 1964, 19649, 1965, 196513, 19652, 1970, 19708

⬟ Water-quality stations in the Watts area: 19483, 1954, 1955, 19561, 195855, 195865, 1960, 19604, 19609, 19619

Figure 2.--Locations of water-quality stations, water year 1998

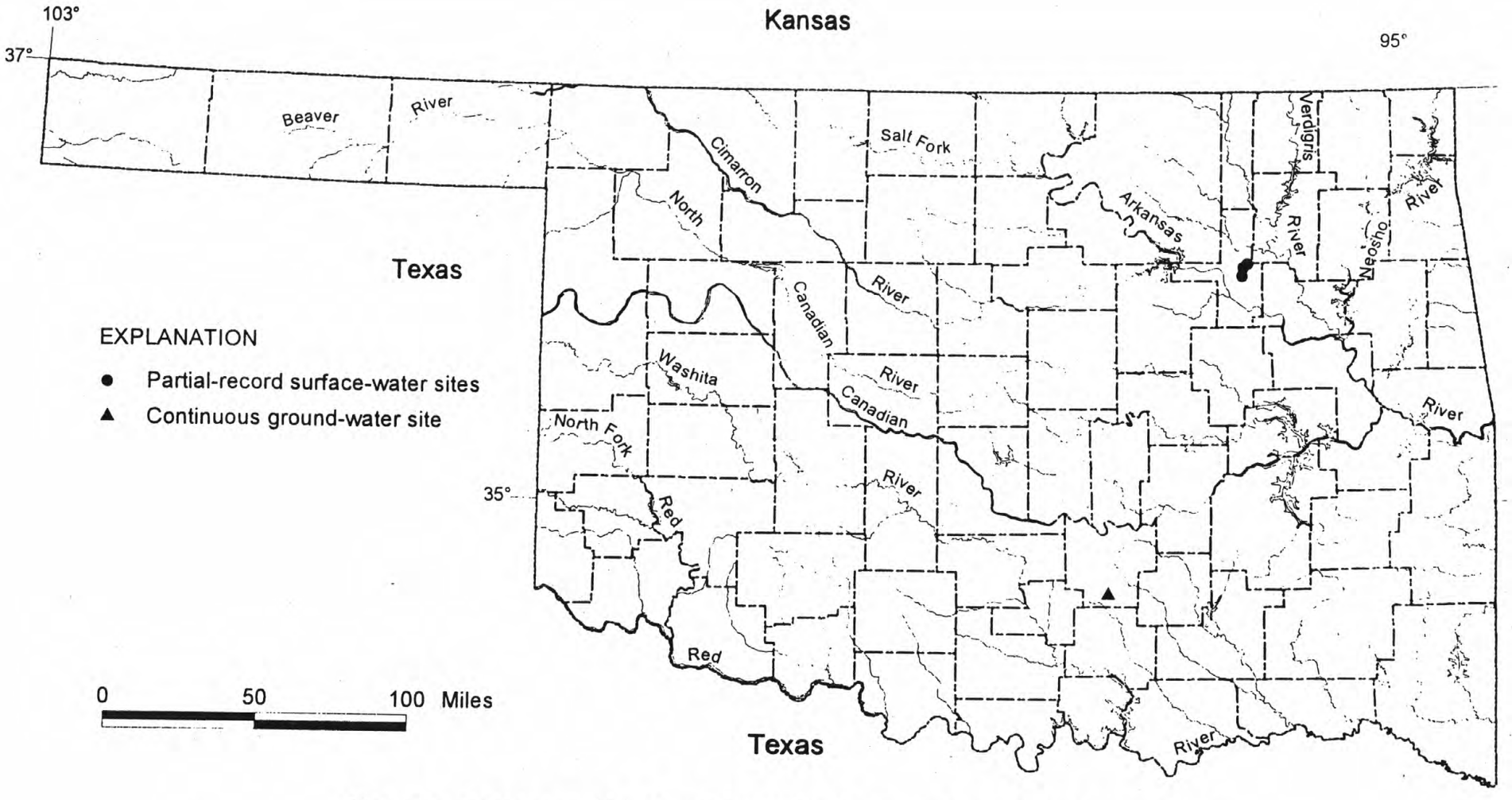


Figure 3.--Locations of network partial-record surface-water stations and ground-water wells, water year 1998

07148400 SALT FORK ARKANSAS RIVER NEAR ALVA, OK

LOCATION.--Lat 36°48'54", long 98°38'52", in SW ¼ SW ¼ 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. Occasional low-flow measurements water years 1952-54, 1977-79. October 1979 to current year.

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

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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146	124	125	337	232	148	489	309	235	44	47	28
2	130	117	122	310	251	146	451	283	216	47	47	24
3	121	109	126	301	233	149	412	262	200	40	45	22
4	110	107	146	356	212	153	383	249	188	34	43	19
5	107	105	148	428	201	154	368	503	181	32	40	17
6	101	104	136	428	196	157	371	446	175	29	40	18
7	95	101	133	423	196	165	499	367	173	27	38	17
8	111	102	134	380	197	209	660	341	217	53	33	14
9	121	105	136	334	201	e200	478	551	191	133	31	12
10	120	93	131	e285	208	e180	407	826	172	83	27	9.4
11	117	90	126	e240	211	e185	373	641	159	177	26	7.4
12	151	99	e115	e235	203	186	354	444	146	159	37	6.5
13	268	110	e110	e240	198	188	337	360	138	100	50	5.3
14	257	121	115	e230	196	206	319	317	130	78	45	4.5
15	212	123	119	241	197	219	298	340	121	72	53	3.4
16	179	114	122	248	198	693	280	371	110	59	51	3.1
17	158	114	121	256	196	2340	268	313	103	55	40	3.4
18	146	117	121	253	193	1330	267	275	97	51	33	2.7
19	144	121	120	240	190	e896	267	254	92	47	28	2.3
20	135	120	120	229	184	823	272	242	85	41	24	1.7
21	125	117	135	228	184	1140	274	234	79	35	23	3.6
22	112	114	161	225	184	1010	269	228	71	33	21	6.2
23	114	111	183	221	185	810	265	217	65	30	15	3.1
24	118	111	381	221	183	659	257	214	56	26	12	3.2
25	120	111	433	220	182	573	252	1900	52	24	9.8	2.3
26	123	110	382	217	178	521	248	859	53	27	14	2.0
27	132	110	320	210	167	525	266	541	50	25	115	1.7
28	141	123	291	205	158	585	327	405	46	42	79	1.2
29	139	125	310	202	---	506	372	336	46	61	52	1.1
30	134	128	343	197	---	458	346	295	43	71	41	1.1
31	129	---	342	200	---	482	---	266	---	53	36	---
TOTAL	4316	3356	5807	8340	5514	15996	10429	13189	3690	1788	1195.8	246.2
MEAN	139	112	187	269	197	516	348	425	123	57.7	38.6	8.21
MAX	268	128	433	428	251	2340	660	1900	235	177	115	28
MIN	95	90	110	197	158	146	248	214	43	24	9.8	1.1
AC-FT	8560	6660	11520	16540	10940	31730	20690	26160	7320	3550	2370	488

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1998, BY WATER YEAR (WY)

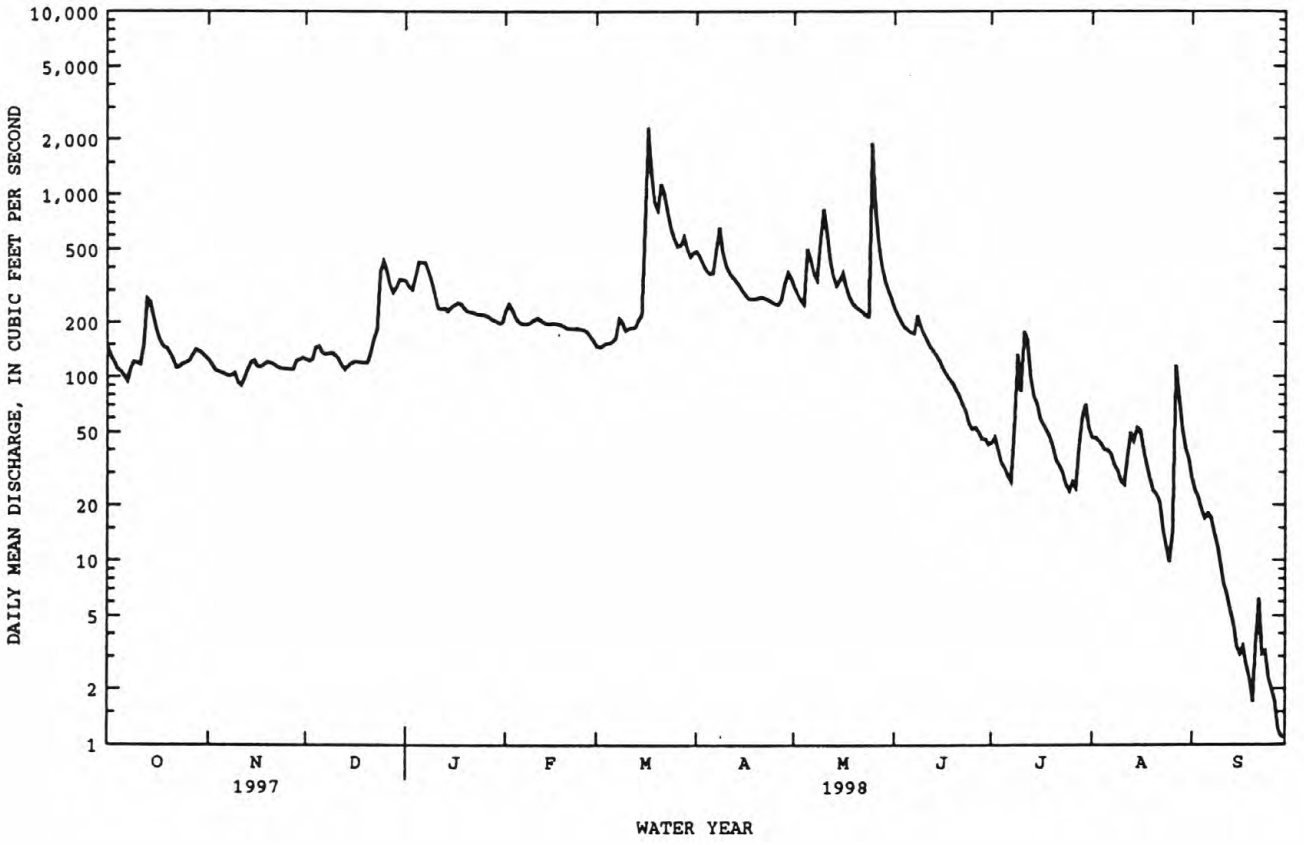
MEAN	106	86.4	72.9	79.2	91.4	161	186	260	241	123	101	84.2
MAX	620	381	251	269	227	822	601	856	689	411	598	557
(WY)	1986	1997	1997	1998	1987	1987	1997	1993	1989	1982	1996	1996
MIN	2.35	.95	14.8	15.3	17.4	29.2	22.5	27.1	31.3	5.17	2.66	.94
(WY)	1992	1981	1981	1981	1981	1981	1981	1992	1994	1984	1980	1980

e Estimated

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

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1980 - 1998	
ANNUAL TOTAL	75900		73867.0			
ANNUAL MEAN	208		202		[a]133	
HIGHEST ANNUAL MEAN					271	1987
LOWEST ANNUAL MEAN					40.5	1994
HIGHEST DAILY MEAN	3580	Apr 11	2340	Mar 17	7880	Mar 24 1987
LOWEST DAILY MEAN	14	Aug 5	1.1	Sep 29, 30	[b].43	Aug 24 1984
ANNUAL SEVEN-DAY MINIMUM	22	Jul 30	1.8	Sep 24	.48	Aug 18 1984
INSTANTANEOUS PEAK FLOW			3520	May 25	[c]12800	Oct 10 1985
INSTANTANEOUS PEAK STAGE			12.21	May 25	15.24	Oct 10 1985
ANNUAL RUNOFF (AC-FT)	150500		146500		96240	
10 PERCENT EXCEEDS	359		406		278	
50 PERCENT EXCEEDS	146		146		62	
90 PERCENT EXCEEDS	76		24		5.4	

[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.



07151000 SALT FORK ARKANSAS RIVER AT TONKAWA, OK

LOCATION.--Lat 36°40'19", long 97°18'33", in NW ¼ SE ¼ 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)
Mar 18	1800	24,700	21.43	May 27	0200	12,700	17.15

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3380	1030	719	2970	2340	893	3560	2250	2400	1720	193	126
2	3000	1010	694	2780	2900	829	3330	1960	2090	2130	179	96
3	2680	985	709	2620	2200	813	2960	1770	1870	1020	172	86
4	2420	977	784	4240	1780	749	2820	1610	1580	765	165	84
5	2150	851	930	5390	1560	708	2700	1500	1340	571	164	101
6	1890	779	881	3860	1450	603	2510	1380	1200	480	166	83
7	1650	755	836	3100	1440	613	3850	1330	1060	421	158	77
8	1460	722	829	2800	1390	661	5560	1300	1030	4470	150	74
9	1270	690	790	2620	1310	766	4200	1360	1120	4140	150	73
10	1200	685	808	2490	1260	926	3130	1120	953	3300	137	74
11	1150	687	819	2320	1260	794	2790	1780	1750	2420	139	74
12	2150	688	803	2220	1260	793	2680	2080	1080	2120	141	73
13	4340	692	795	2110	1180	756	2590	2150	796	1770	224	84
14	3690	704	786	1900	1140	806	2350	2110	680	1450	317	84
15	3040	729	769	1900	1100	787	2170	2060	617	1220	214	80
16	2430	780	741	1840	1060	6380	1970	2240	607	1200	222	79
17	2280	745	724	1750	1020	21000	1780	2410	539	1040	194	78
18	2100	713	711	1690	1030	23900	1620	2010	475	910	174	80
19	1960	714	696	1630	1080	21200	1600	1750	450	795	168	81
20	1790	700	674	1550	1010	15800	1520	1530	437	695	323	78
21	1590	688	1010	1470	1000	14100	1430	1380	411	607	373	91
22	1450	682	2350	1490	963	12300	1320	1250	444	551	373	218
23	1350	677	2830	1370	937	8920	1280	1160	411	508	373	126
24	1280	664	7130	1340	930	7160	1230	1080	403	487	372	105
25	1250	651	9900	1300	923	6420	1150	7170	404	465	369	122
26	1220	649	7570	1250	886	5910	1190	11200	404	433	365	100
27	1360	650	5290	1220	963	5440	2300	10800	405	278	205	84
28	1300	645	4020	1200	870	4940	5140	5340	406	325	140	80
29	1140	669	3720	1160	---	4560	4730	3610	405	255	e130	79
30	1110	709	3480	1130	---	4100	2880	3020	403	228	e126	101
31	1050	---	3210	1120	---	3760	---	2680	---	204	e131	---
TOTAL	60130	22320	66008	65830	36242	177387	78340	84390	26170	36978	6707	2771
MEAN	1940	744	2129	2124	1294	5722	2611	2722	872	1193	216	92.4
MAX	4340	1030	9900	5390	2900	23900	5560	11200	2400	4470	373	218
MIN	1050	645	674	1120	870	603	1150	1080	403	204	126	73
AC-FT	119300	44270	130900	130600	71890	351800	155400	167400	51910	73350	13300	5500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1998, BY WATER YEAR (WY)

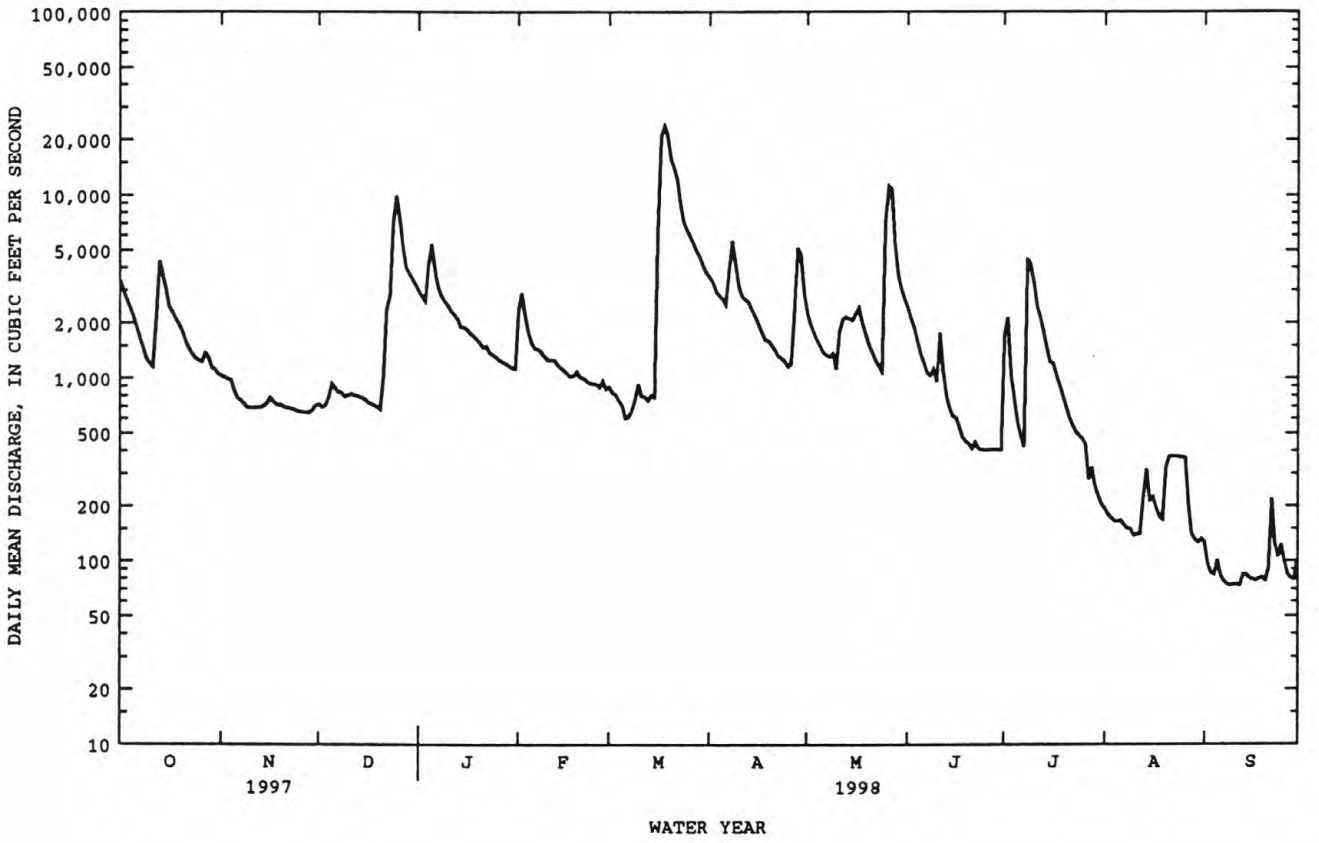
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	882	687	408	391	565	1002	1234	1716	1513	931	709	666
MAX	9412	4431	2129	2124	5171	6188	7916	12770	8379	8821	6157	3448
(WY)	1987	1975	1998	1998	1949	1973	1973	1993	1995	1951	1995	1949
MIN	.64	4.82	3.56	7.52	10.9	10.6	13.6	8.78	7.92	5.69	5.50	.000
(WY)	1957	1955	1955	1957	1957	1955	1955	1956	1956	1954	1956	1956

e Estimated

07151000 SALT FORK ARKANSAS RIVER AT TONKAWA, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1942 - 1998	
ANNUAL TOTAL	808237		663273			
ANNUAL MEAN	2214		1817		893	
HIGHEST ANNUAL MEAN					3260	1987
LOWEST ANNUAL MEAN					95.5	1954
HIGHEST DAILY MEAN	19300	Sep 24	23900	Mar 18	57800	Oct 12 1973
LOWEST DAILY MEAN	516	Jun 11	73	Sep 9, 12	[a].00	Aug 31 1956
ANNUAL SEVEN-DAY MINIMUM	599	Jun 7	75	Sep 6	.00	Aug 31 1956
INSTANTANEOUS PEAK FLOW			24700	Mar 18	97300	Oct 11 1973
INSTANTANEOUS PEAK STAGE			21.43	Mar 18	28.98	Oct 11 1973
ANNUAL RUNOFF (AC-FT)	1603000		1316000		646800	
10 PERCENT EXCEEDS	5470		3740		2050	
50 PERCENT EXCEEDS	1060		1080		259	
90 PERCENT EXCEEDS	707		146		34	

[a]Also occurred Sept. 12, 14-16, 1956.



07152000 CHIKASKIA RIVER NEAR BLACKWELL, OK

LOCATION.--Lat 36°48'41", long 97°16'37", in NE ¼ NW ¼ 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)
Oct 13	1730	12,300	25.95	Mar 17	2230	24,500	30.90
Dec 25	0500	13,700	27.02	Mar 21	1530	11,700	25.44

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	391	426	432	742	1040	361	1200	837	290	1140	117	50
2	355	403	385	671	1480	354	980	632	275	608	106	47
3	330	375	471	662	947	352	807	528	264	326	97	46
4	312	356	606	2210	673	350	725	480	e255	269	98	40
5	299	345	547	2920	585	350	680	444	e254	229	95	20
6	289	335	440	1500	528	354	638	416	e251	208	88	18
7	283	332	384	1240	490	363	1520	400	e249	198	85	16
8	282	329	390	1010	467	390	2700	402	268	2250	85	28
9	290	329	411	799	457	447	1180	448	264	816	80	30
10	576	336	420	687	465	470	835	520	267	248	75	29
11	391	332	405	616	468	407	698	626	272	529	68	27
12	1690	330	380	574	463	380	626	529	264	954	67	27
13	9380	334	360	535	440	373	585	428	254	660	103	39
14	5380	340	353	496	423	365	540	388	275	440	167	38
15	1590	342	347	483	418	379	519	452	267	266	139	37
16	1040	332	347	550	419	4560	503	1030	235	204	102	36
17	788	321	343	517	421	20100	485	614	224	180	89	40
18	646	319	341	512	420	16700	462	430	221	193	78	38
19	562	320	337	506	416	4440	446	367	211	152	69	33
20	509	323	333	502	403	4470	437	343	209	128	63	37
21	474	322	803	497	394	9960	430	327	223	114	60	107
22	443	324	2180	489	393	5930	416	318	222	104	57	162
23	424	324	1630	467	395	3370	407	312	211	92	54	165
24	431	324	7540	448	394	2170	403	344	202	86	53	88
25	467	326	11600	441	390	1720	398	2410	193	85	52	60
26	974	321	4010	438	385	1380	399	1610	189	82	51	53
27	1540	320	1930	435	379	1190	829	739	183	76	50	51
28	826	364	1350	431	369	1100	2100	461	180	104	48	47
29	572	391	1080	421	---	1090	1780	378	178	120	47	56
30	492	503	938	415	---	1010	1350	339	225	131	45	283
31	453	---	825	423	---	990	---	315	---	133	60	---
TOTAL	32479	10378	41918	22637	14522	85875	25078	17867	7075	11125	2448	1748
MEAN	1048	346	1352	730	519	2770	836	576	236	359	79.0	58.3
MAX	9380	503	11600	2920	1480	20100	2700	2410	290	2250	167	283
MIN	282	319	333	415	369	350	398	312	178	76	45	16
AC-FT	64420	20580	83140	44900	28800	170300	49740	35440	14030	22070	4860	3470

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1998, BY WATER YEAR (WY)

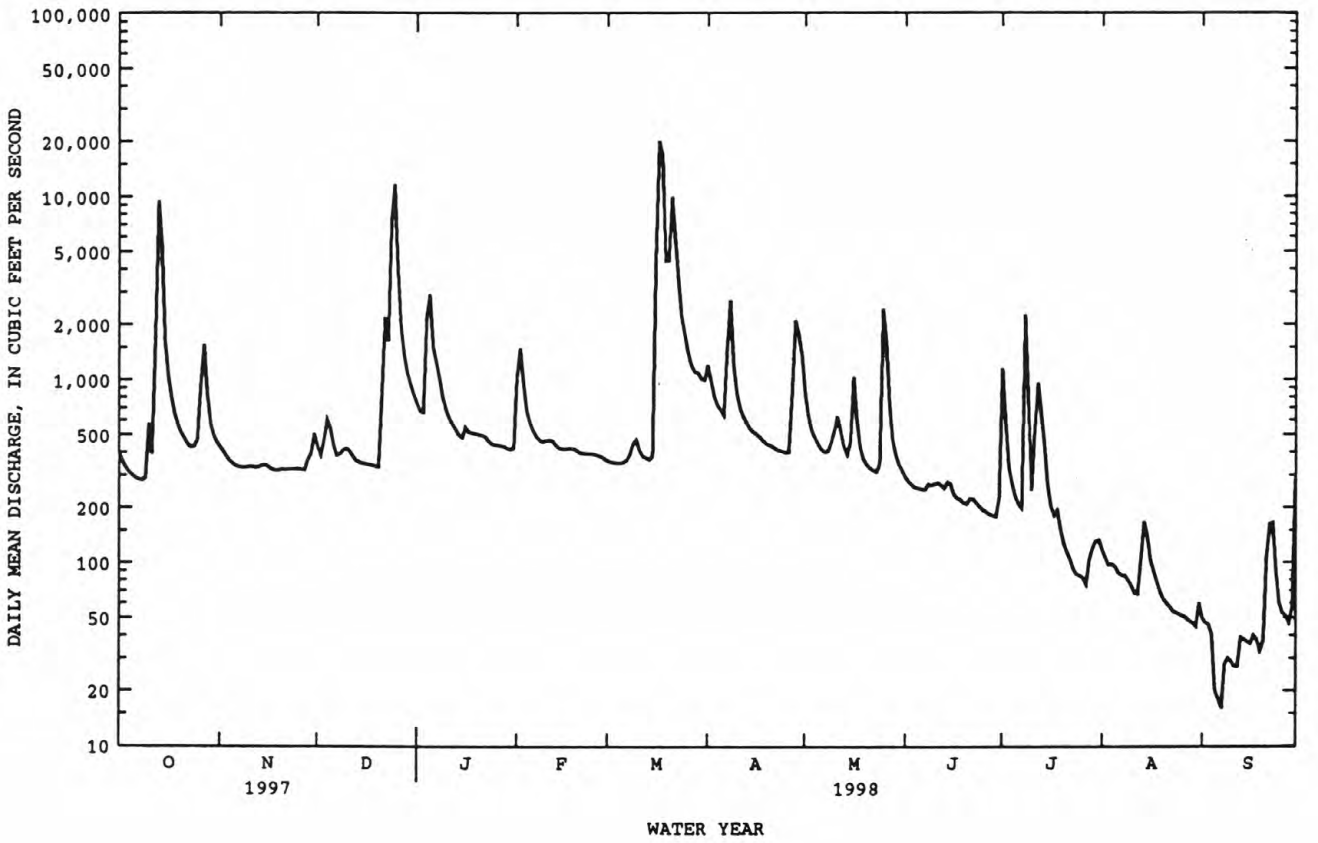
MEAN	532	442	256	240	357	639	765	1062	1002	513	349	487
MAX	5244	4486	1649	1659	3732	4561	4748	8589	5093	5129	2467	3395
(WY)	1960	1965	1945	1949	1949	1973	1944	1993	1951	1951	1995	1973
MIN	.90	1.08	1.34	4.35	10.3	30.7	29.4	27.1	26.1	6.17	.55	.64
(WY)	1957	1955	1955	1957	1957	1957	1955	1956	1972	1954	1936	1956

e Estimated

07152000 CHIKASKIA RIVER NEAR BLACKWELL, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1936 - 1998	
ANNUAL TOTAL	449981		273150			
ANNUAL MEAN	1233		748		558	
HIGHEST ANNUAL MEAN					1732	1987
LOWEST ANNUAL MEAN					71.0	1954
HIGHEST DAILY MEAN	22000	Apr 12	20100	Mar 17	69500	Jun 22 1942
LOWEST DAILY MEAN	220	Jun 24	16	Sep 7	[a].00	Jul 18 1954
ANNUAL SEVEN-DAY MINIMUM	242	Jun 6	24	Sep 5	.00	Aug 12 1954
INSTANTANEOUS PEAK FLOW			24500	Mar 17	85000	Jun 22 1942
INSTANTANEOUS PEAK STAGE			30.90	Mar 17	34.31	May 10 1993
ANNUAL RUNOFF (AC-FT)	892500		541800		404300	
10 PERCENT EXCEEDS	2330		1220		831	
50 PERCENT EXCEEDS	405		388		138	
90 PERCENT EXCEEDS	290		62		21	

[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 ¼ NE ¼ 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.

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 fair. 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17600	4740	3500	10300	9830	6740	18600	13300	7850	3150	4340	514
2	12900	4050	4350	7990	10300	6440	17800	11300	7230	5680	2540	578
3	6510	3530	4480	16100	11700	5870	17300	10100	5220	8250	1740	623
4	5070	3970	4370	29900	10900	5350	22000	9460	4180	5440	1860	663
5	4470	4490	5110	30600	10300	4970	23600	11400	3470	3880	2750	657
6	4030	4010	4150	24200	6970	3780	23400	14200	2760	2790	2210	631
7	4430	3500	4800	16300	4730	3980	25000	13100	3070	2420	1400	589
8	5110	3600	4440	12500	3940	5140	26000	12200	2990	3690	1120	511
9	5270	3390	4470	11300	3740	4520	28300	13400	2610	12600	1200	441
10	6340	3450	5070	10500	3550	4560	25800	15400	2790	13300	1180	497
11	4830	3510	5050	10000	3380	5640	21700	14100	3840	9350	1170	517
12	5470	3180	5060	10400	4600	4990	22600	13400	3170	8350	1310	410
13	10100	2730	4090	10000	8070	4340	21800	11900	3260	7610	1330	500
14	19900	2950	3530	9440	8210	4040	21300	9300	3520	7240	1300	564
15	23600	3060	3530	9070	8190	3740	17500	9240	2800	8600	1290	485
16	20400	2810	3830	8600	8120	24000	13100	9610	3050	8160	1410	591
17	18400	2650	4290	8510	8050	45100	13200	8470	4480	5280	1270	639
18	12700	2640	4040	9120	7590	51300	13100	8720	4280	4070	845	641
19	7350	2860	3840	9070	7680	60300	12900	8100	3520	3770	640	657
20	6520	2960	3590	9140	7700	45700	12600	7610	2720	3090	690	651
21	6510	2660	3590	9040	8220	32300	11300	6220	2050	2670	860	648
22	6980	2910	6010	8280	9870	29200	8450	6020	2100	2410	910	829
23	4520	3310	8790	7670	9780	26800	8130	5850	1920	2060	875	1530
24	4030	3340	18500	7890	8300	20900	8070	5540	1990	1860	906	3630
25	4040	3140	20700	7940	6720	27900	7890	11000	2030	2200	820	2230
26	3760	2690	25100	8020	8120	28800	9180	13000	2010	1970	907	1620
27	3540	2680	18800	9530	7680	22600	25400	18000	2070	1610	704	1390
28	4220	2750	11100	11500	7490	20600	23200	17800	1930	1530	661	909
29	5530	2710	8200	11800	---	19600	19000	12500	1780	3690	584	801
30	5190	2870	8260	10600	---	19200	15500	9450	1900	3440	616	3100
31	4900	---	10700	9190	---	19800	---	8770	---	3680	586	---
TOTAL	254220	97140	225340	364500	213730	568200	533720	338460	96590	153840	40024	28046
MEAN	8201	3238	7269	11760	7633	18330	17790	10920	3220	4963	1291	935
MAX	23600	4740	25100	30600	11700	60300	28300	18000	7850	13300	4340	3630
MIN	3540	2640	3500	7670	3380	3740	7890	5540	1780	1530	584	410
AC-FT	504200	192700	447000	723000	423900	1127000	1059000	671300	191600	305100	79390	55630

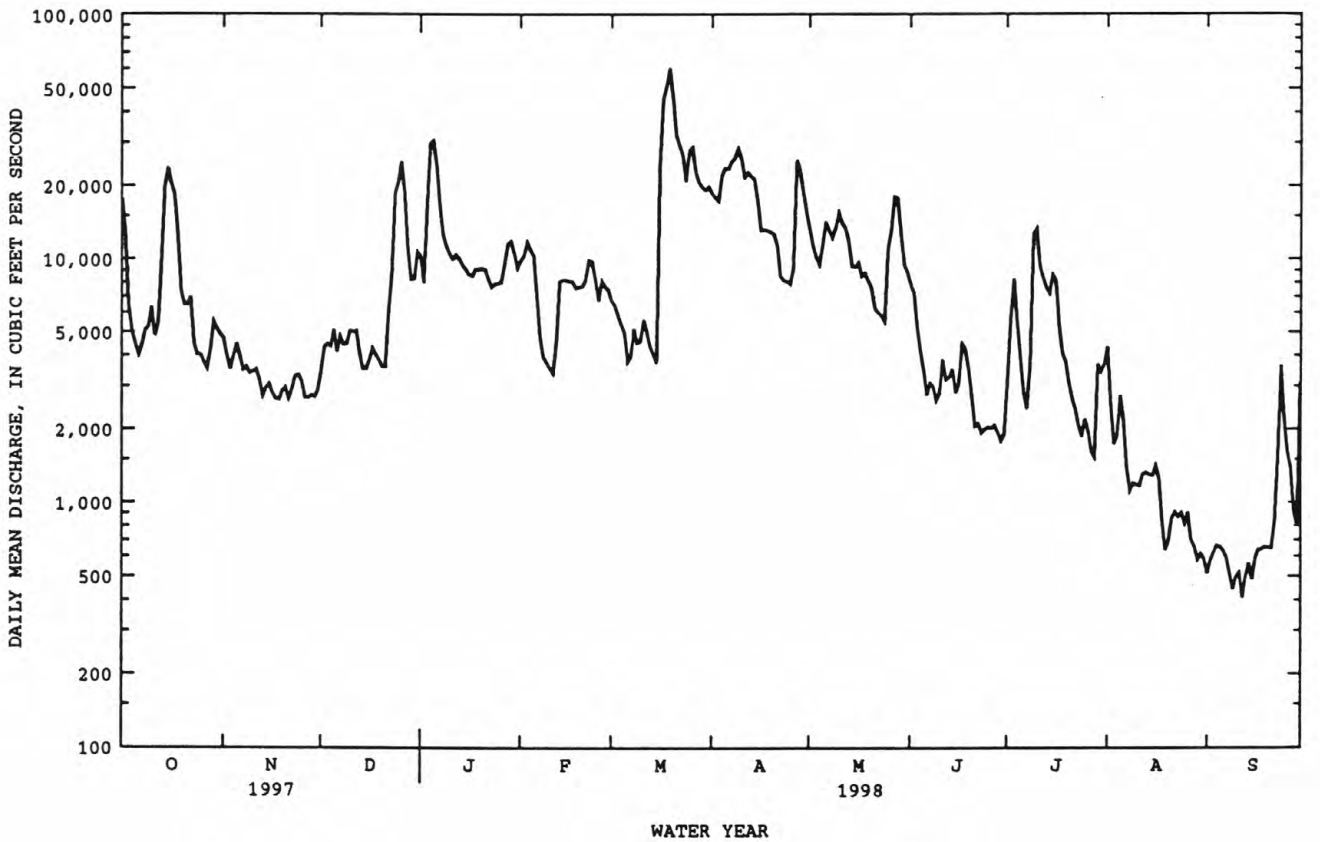
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1998, BY WATER YEAR (WY)

MEAN	4702	4276	3294	3705	4157	7701	8682	9797	10370	6843	4770	3897
MAX	41580	14500	9430	12450	17510	27120	25300	52840	41910	23050	21280	17660
(WY)	1987	1980	1993	1993	1993	1987	1984	1993	1995	1993	1995	1989
MIN	161	251	453	500	487	402	305	2001	2139	908	390	205
(WY)	1992	1981	1983	1977	1981	1981	1981	1996	1988	1991	1978	1984

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

SUMMARY STATISTICS	POR 1997 CALENDAR YEAR		POR 1998 WATER YEAR		WATER YEARS 1977 - 1998	
ANNUAL TOTAL	3280230		2913810			
ANNUAL MEAN	8987		7983		[a]6021	
HIGHEST ANNUAL MEAN					16160	1993
LOWEST ANNUAL MEAN					1292	1981
HIGHEST DAILY MEAN	65600	Jul 18	60300	Mar 19	170000	Oct 4 1986
LOWEST DAILY MEAN	1480	Sep 22	410	Sep 12	[b]52	Sep 18 1978
ANNUAL SEVEN-DAY MINIMUM	1850	Sep 16	488	Sep 9	103	Oct 19 1991
INSTANTANEOUS PEAK FLOW			65800	Mar 19	[c]174000	Oct 4 1986
INSTANTANEOUS PEAK STAGE			14.67	Mar 19	[d]22.20	Oct 4 1986
ANNUAL RUNOFF (AC-FT)	6506000		5780000		4362000	
10 PERCENT EXCEEDS	19300		19400		14800	
50 PERCENT EXCEEDS	5940		5070		2850	
90 PERCENT EXCEEDS	2770		908		475	

[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.



07153000 BLACK BEAR CREEK AT PAWNEE, OK

LOCATION.--Lat 36°20'37", long 96°47'57", on east line of SE ¼ NE ¼ 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; also Aug. 27, 1953 to Apr. 29, 1954, temporary 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)
Jan 4	1400	4,850	11.28	Apr 27	1700	7,600	15.49
Mar 17	1200	7,700	15.66				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	19	16	170	113	72	403	1390	61	101	6.4	2.7
2	48	21	19	158	276	72	283	1020	47	253	6.4	2.6
3	37	18	27	138	280	72	234	709	41	213	6.1	2.6
4	25	16	33	3280	195	71	194	503	37	87	5.7	2.4
5	19	14	36	3600	139	71	176	420	35	38	5.6	2.2
6	17	13	32	1810	116	71	166	349	33	27	5.5	2.1
7	14	12	27	1210	102	256	161	1960	31	21	5.3	2.1
8	12	12	34	1080	94	906	167	1300	32	1540	5.0	1.9
9	10	12	45	712	89	486	185	742	31	439	5.7	2.1
10	9.2	12	45	464	87	243	165	2060	29	203	5.7	2.2
11	9.0	13	41	326	87	152	150	1080	167	132	5.5	2.2
12	238	14	34	252	85	113	138	643	104	127	5.6	2.3
13	1440	22	30	191	83	97	128	444	52	60	8.1	3.4
14	1040	20	27	153	82	90	e115	326	88	34	8.0	3.7
15	592	18	26	134	81	96	e100	270	42	25	6.2	3.7
16	404	23	25	122	80	5300	e86	323	31	20	5.8	3.5
17	237	23	24	114	79	7540	e74	271	24	18	5.7	3.5
18	147	19	23	109	77	6790	e64	213	22	16	5.6	3.6
19	105	18	23	102	77	5720	e56	178	20	13	5.6	3.7
20	81	18	21	96	76	4470	e50	144	19	11	5.4	3.6
21	62	22	258	94	76	3540	e49	122	17	9.8	5.3	3.5
22	49	21	883	92	75	2490	e48	106	16	8.5	5.3	3.8
23	39	19	628	87	75	2000	e48	93	16	7.5	5.1	3.3
24	34	18	3030	85	74	1520	47	82	15	6.9	4.6	3.4
25	32	17	2830	84	74	1190	45	116	14	6.6	4.1	9.7
26	32	16	1380	84	74	910	195	349	13	6.4	3.7	15
27	28	16	893	84	73	689	5910	425	12	7.1	3.7	8.3
28	25	16	620	83	73	537	5330	283	12	10	3.5	5.4
29	22	16	433	81	---	411	3160	173	11	8.6	3.1	4.2
30	22	16	309	80	---	380	1880	118	11	7.3	2.9	3.9
31	21	---	221	80	---	573	---	85	---	6.7	2.9	---
TOTAL	4910.2	514	12073	15155	2892	46928	19807	16297	1083	3463.4	163.1	116.6
MEAN	158	17.1	389	489	103	1514	660	526	36.1	112	5.26	3.89
MAX	1440	23	3030	3600	280	7540	5910	2060	167	1540	8.1	15
MIN	9.0	12	16	80	73	71	45	82	11	6.4	2.9	1.9
AC-FT	9740	1020	23950	30060	5740	93080	39290	32330	2150	6870	324	231

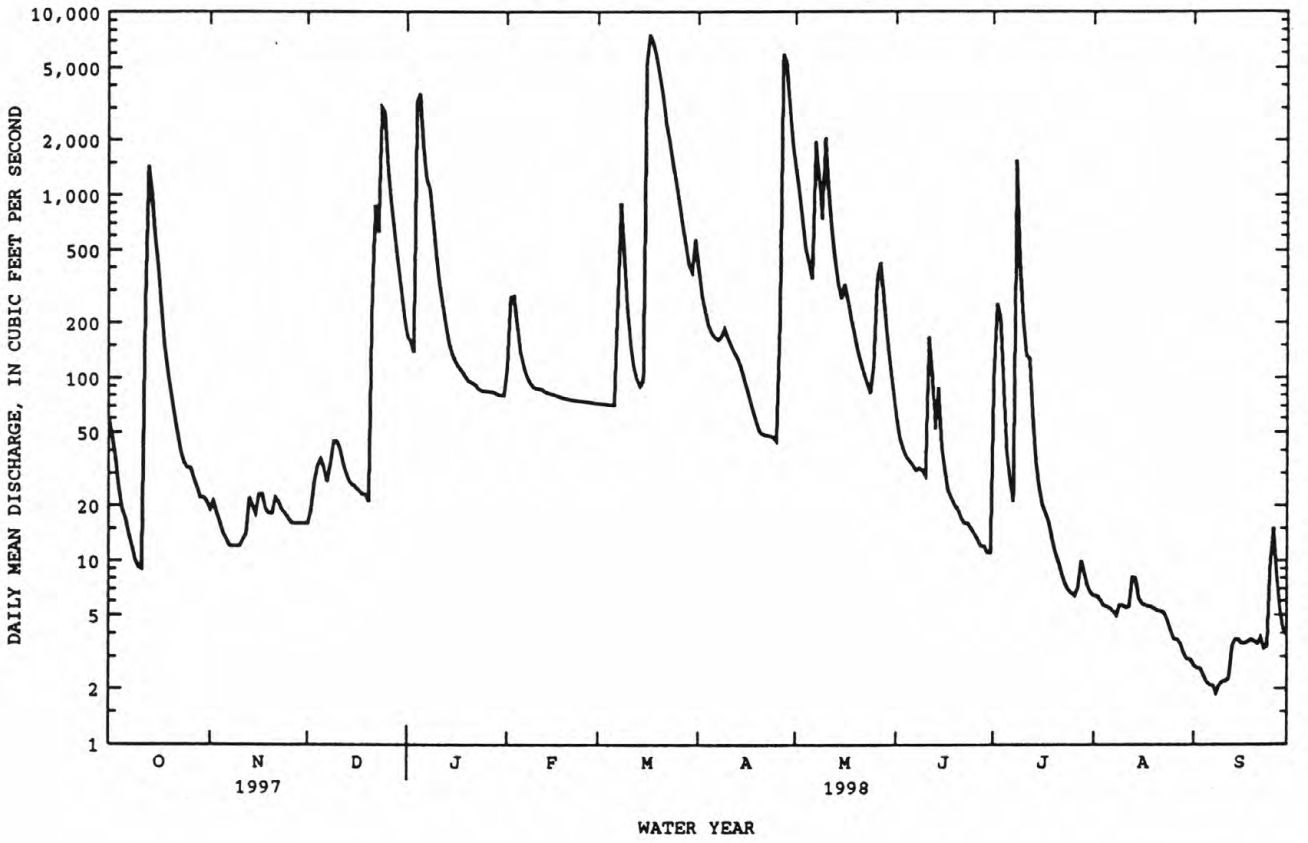
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1998, BY WATER YEAR (WY)

MEAN	214	147	87.7	71.7	120	270	293	483	334	164	111	176
MAX	4025	2359	715	595	1013	1607	1307	2933	2181	950	1592	1354
(WY)	1987	1975	1993	1993	1987	1990	1994	1993	1957	1997	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

e Estimated

07153000 BLACK BEAR CREEK AT PAWNEE, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1945 - 1998	
ANNUAL TOTAL	127170.0		123402.3			
ANNUAL MEAN	348		338		206	
HIGHEST ANNUAL MEAN					835	1987
LOWEST ANNUAL MEAN					23.1	1954
HIGHEST DAILY MEAN	6170	Jul 18	7540	Mar 17	25400	Oct 3 1959
LOWEST DAILY MEAN	9.0	Sep 22	1.9	Sep 8	.00	at times
ANNUAL SEVEN-DAY MINIMUM	10	Sep 16	2.1	Sep 5	.00	Jul 17 1954
INSTANTANEOUS PEAK FLOW			7700	Mar 17	30200	Oct 3 1959
INSTANTANEOUS PEAK STAGE			15.66	Mar 17	31.43	Oct 3 1959
ANNUAL RUNOFF (AC-FT)	252200		244800		149400	
10 PERCENT EXCEEDS	902		724		376	
50 PERCENT EXCEEDS	51		50		15	
90 PERCENT EXCEEDS	16		5.2		1.0	



07154500 CIMARRON RIVER NEAR KENTON, OK

LOCATION.--Lat 36°55'36", long 102°57'31", in SW ¼ 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 Ken- ton, 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 except for estimated winter periods which are poor. Extensive diversions for irrigation upstream from sta- tion. 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)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	5.3	3.0	3.5	1.6	2.5	1.7	1.1	.05	.00	2.5	.10
2	1.3	5.1	3.3	3.5	1.7	2.5	1.6	.56	.05	.00	29	.09
3	1.2	4.8	3.5	3.5	1.6	2.6	1.6	.38	.05	.00	3.2	.07
4	1.1	4.5	3.4	3.5	1.7	2.6	.98	.77	.06	.00	201	.07
5	.98	3.9	3.3	3.5	1.7	2.6	.46	.43	.06	.00	128	.05
6	1.0	3.4	3.3	3.3	1.7	2.7	.34	.55	.07	.00	26	.03
7	1.0	3.0	3.3	3.2	1.7	e2.7	.60	.36	.07	28	5.3	.02
8	1.2	2.9	3.4	3.2	1.8	e2.6	1.2	.32	9.7	41	2.2	.01
9	1.1	2.9	3.5	3.2	1.7	e2.7	.97	.29	.69	8.8	1.7	.00
10	1.2	2.9	3.4	3.2	1.7	e2.5	.65	.35	.20	7.7	1.3	.00
11	1.4	2.9	e2.9	3.2	1.6	2.5	.67	.33	.11	5.7	.94	.00
12	1.4	3.0	e2.5	3.2	1.6	2.6	.42	.26	.07	.88	7.5	.00
13	1.2	3.1	e2.7	e3.1	1.6	2.5	.33	.22	.06	.23	1.6	.00
14	1.2	3.3	3.2	3.2	1.6	2.5	.29	.17	.03	.13	1.7	.00
15	1.3	3.1	3.2	3.2	1.6	2.5	.30	.14	.03	.08	1.0	.00
16	1.2	3.1	3.2	3.2	2.0	3.2	.41	.12	.02	.07	.77	.00
17	1.2	3.1	3.2	3.2	2.4	4.5	.43	.10	.01	.06	.60	.00
18	1.2	2.9	3.2	3.2	2.2	3.6	.38	.10	.00	.05	.42	.00
19	1.2	3.0	3.3	3.1	2.3	3.7	.38	.10	.00	.03	.34	.00
20	1.3	3.0	3.2	3.1	2.0	3.0	.35	.10	.00	.02	.23	.00
21	1.4	3.0	3.4	3.0	2.0	2.5	.33	.09	.00	.00	.17	.00
22	1.6	3.0	3.3	3.0	1.9	2.1	.41	.09	.00	.00	.13	.00
23	1.7	3.0	4.0	2.9	1.8	2.0	.38	.09	.00	.00	.12	.00
24	2.1	3.0	3.8	2.4	1.8	1.8	.32	.09	.00	.00	.11	.00
25	5.0	3.0	3.8	2.0	2.1	1.8	.27	.09	.00	.00	.10	.00
26	5.7	3.0	3.6	1.9	2.4	1.6	.48	.09	.00	.00	.13	.00
27	6.3	3.0	3.3	1.9	2.5	1.5	1.0	.08	.00	.00	.11	.00
28	5.8	3.0	3.3	1.8	2.4	1.3	1.7	.06	.00	.00	.12	.00
29	6.1	3.0	3.3	1.6	---	1.2	1.5	.06	.00	.00	2.8	.00
30	6.5	2.9	3.4	1.7	---	1.3	.92	.06	.00	.00	.34	.00
31	5.7	---	3.5	1.6	---	1.6	---	.05	---	6.6	.15	---
TOTAL	71.98	99.1	102.7	89.1	52.7	75.3	21.37	7.60	11.33	99.35	419.58	0.44
MEAN	2.32	3.30	3.31	2.87	1.88	2.43	.71	.25	.38	3.20	13.5	.015
MAX	6.5	5.3	4.0	3.5	2.5	4.5	1.7	1.1	9.7	41	201	.10
MIN	.98	2.9	2.5	1.6	1.6	1.2	.27	.05	.00	.00	.10	.00
AC-FT	143	197	204	177	105	149	42	15	22	197	832	.9

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1998, BY WATER YEAR (WY)

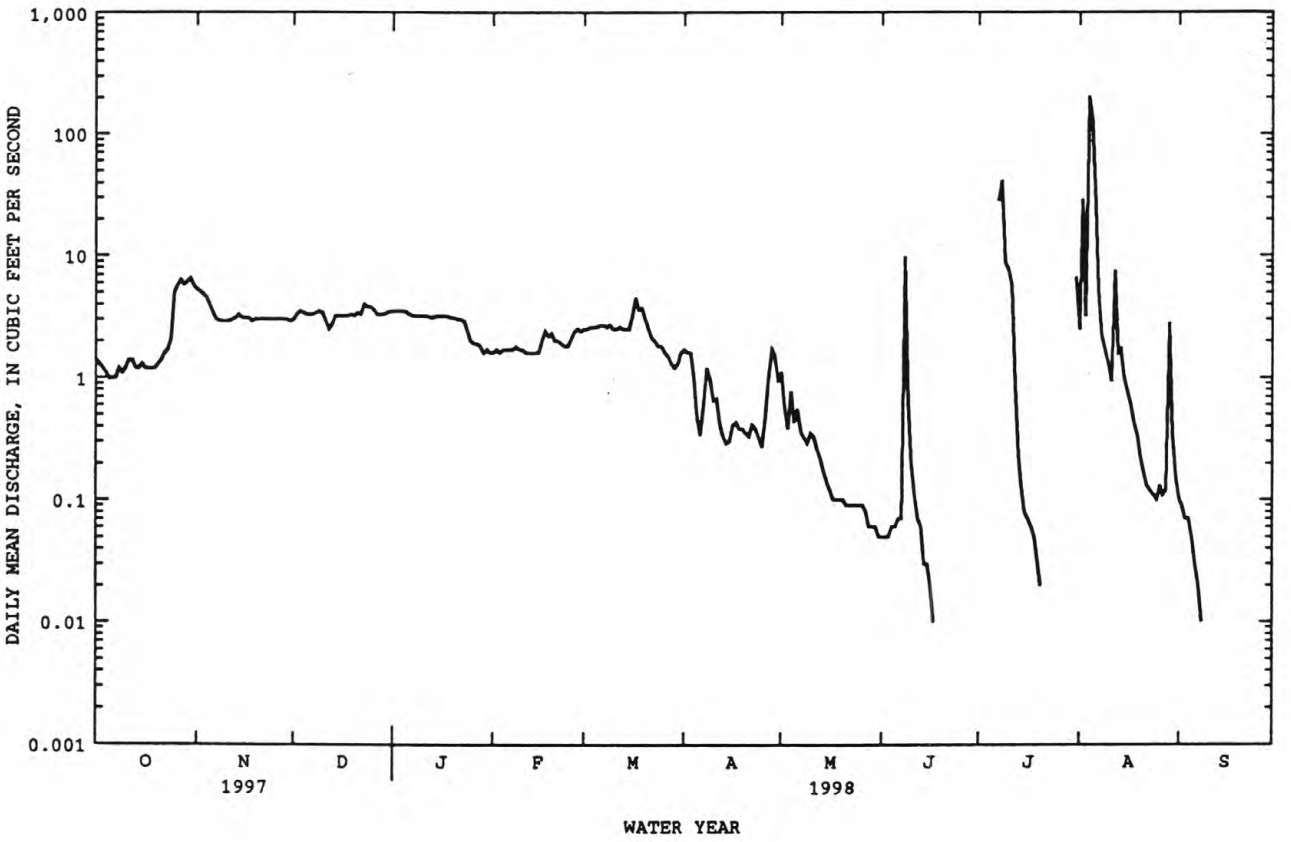
MEAN	10.4	1.96	2.10	1.99	1.74	1.45	5.61	32.6	32.7	33.1	54.1	26.9
MAX	334	12.1	9.59	8.07	6.76	4.42	116	525	514	204	406	235
(WY)	1966	1966	1966	1988	1966	1958	1977	1955	1965	1958	1965	1963
MIN	.000	.000	.000	.000	.000	.002	.000	.029	.000	.000	.000	.000
(WY)	1965	1965	1965	1965	1994	1994	1965	1975	1954	1993	1972	1956

e Estimated

07154500 CIMARRON RIVER NEAR KENTON, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1951 - 1998	
ANNUAL TOTAL	7467.13		1050.55			
ANNUAL MEAN	20.5		2.88		17.2	
HIGHEST ANNUAL MEAN					95.2	1965
LOWEST ANNUAL MEAN					.65	1993
HIGHEST DAILY MEAN	1990	Aug 12	201	Aug 4	11000	Jun 17 1965
LOWEST DAILY MEAN	.00	at times	.00	at times	.00	most years
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 10	.00	Jun 18	.00	Jun 14 1952
INSTANTANEOUS PEAK FLOW			1120	Aug 4	[a]43400	Oct 17 1965
INSTANTANEOUS PEAK STAGE			10.56	Aug 4	[b]22.32	Oct 17 1965
ANNUAL RUNOFF (AC-FT)	14810		2080		12440	
10 PERCENT EXCEEDS	4.9		3.5		7.7	
50 PERCENT EXCEEDS	.96		1.5		.90	
90 PERCENT EXCEEDS	.04		.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 ¼ SE ¼ 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. 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)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	31	34	47	42	42	49	43	27	26	53	25
2	25	31	37	50	42	43	45	41	27	24	44	26
3	25	31	39	52	42	43	43	40	27	19	41	25
4	25	31	36	50	42	43	43	39	27	18	66	25
5	25	31	34	52	43	44	43	40	29	19	59	25
6	24	31	34	50	43	45	48	41	29	18	39	24
7	24	31	35	45	42	51	61	40	30	21	36	25
8	25	31	36	42	44	e50	62	41	29	39	32	25
9	26	31	36	41	45	e46	51	97	27	45	32	26
10	27	31	35	e40	46	e45	45	78	28	33	31	26
11	28	30	37	e39	46	e46	42	64	25	42	30	27
12	29	32	e35	e39	45	e45	42	50	24	35	31	26
13	29	33	e34	e39	44	e45	42	42	24	31	33	27
14	29	32	e35	42	44	46	42	39	24	28	33	28
15	28	33	e36	43	44	49	41	45	37	26	29	28
16	28	32	37	43	53	67	41	38	28	26	28	29
17	27	32	36	43	51	78	41	37	23	24	28	29
18	28	32	36	43	48	72	41	36	21	22	24	30
19	28	32	37	41	45	65	41	34	22	19	23	29
20	28	33	36	41	44	64	43	34	22	18	23	29
21	28	33	41	41	44	72	41	33	20	17	23	30
22	28	33	43	41	44	65	40	32	21	17	22	30
23	28	32	e43	41	44	57	39	33	20	17	22	31
24	29	33	e42	40	43	51	39	33	18	20	22	31
25	63	33	e45	40	43	50	39	31	18	25	22	30
26	60	33	46	41	43	47	39	31	17	26	23	30
27	40	34	43	44	42	52	43	32	16	52	23	31
28	36	33	42	44	42	52	48	29	17	52	29	31
29	33	33	44	42	---	48	48	28	16	38	26	30
30	33	34	45	43	---	49	44	28	15	30	25	31
31	32	---	47	44	---	57	---	27	---	88	25	---
TOTAL	944	962	1196	1343	1240	1629	1326	1256	708	915	977	839
MEAN	30.5	32.1	38.6	43.3	44.3	52.5	44.2	40.5	23.6	29.5	31.5	28.0
MAX	63	34	47	52	53	78	62	97	37	88	66	31
MIN	24	30	34	39	42	42	39	27	15	17	22	24
AC-FT	1870	1910	2370	2660	2460	3230	2630	2490	1400	1810	1940	1660

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1998, BY WATER YEAR (WY)

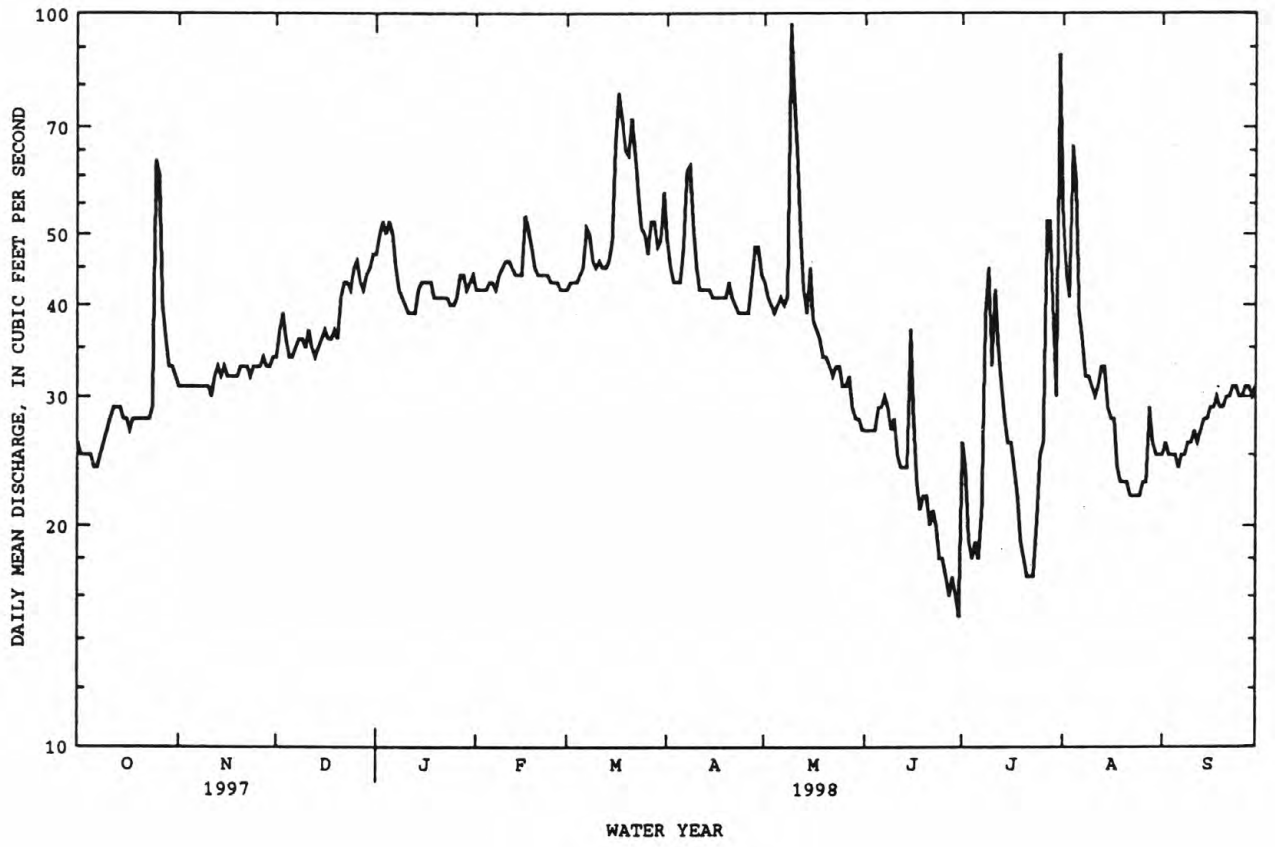
MEAN	68.9	54.7	56.9	56.4	60.4	59.6	71.2	74.3	62.2	48.4	51.1	48.1
MAX	751	114	102	110	167	111	376	476	364	211	208	210
(WY)	1966	1972	1973	1967	1978	1973	1976	1977	1978	1967	1972	1966
MIN	26.1	32.1	30.7	38.0	39.8	38.6	32.1	23.8	22.0	20.5	19.1	20.8
(WY)	1992	1998	1990	1996	1994	1996	1996	1986	1986	1991	1983	1995

e Estimated

07156900 CIMARRON RIVER NEAR FORGAN, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1966 - 1998	
ANNUAL TOTAL	13313		13335			
ANNUAL MEAN	36.5		36.5		59.3	
HIGHEST ANNUAL MEAN					145	1966
LOWEST ANNUAL MEAN					34.7	1994
HIGHEST DAILY MEAN	127	Jun 16	97	May 9	7490	Oct 20 1965
LOWEST DAILY MEAN	23	Sep 17	15	Jun 30	[a]13	Jun 19 1988
ANNUAL SEVEN-DAY MINIMUM	24	Sep 13	17	Jun 24	15	Jul 13 1986
INSTANTANEOUS PEAK FLOW			135	Jul 31	21200	Oct 20 1965
INSTANTANEOUS PEAK STAGE			3.14	Jul 31	8.10	Oct 20 1965
ANNUAL RUNOFF (AC-FT)	26410		26450		42990	
10 PERCENT EXCEEDS	44		50		83	
50 PERCENT EXCEEDS	37		35		46	
90 PERCENT EXCEEDS	26		24		27	

[a]Also occurred June 20, 1988, and Aug. 2, 1991.



07158000 CIMARRON RIVER NEAR WAYNOKA, OK

LOCATION.--Lat 36°31'02", long 98°52'45", in NW ¼ NE ¼ 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 discharge. 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)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141	214	208	469	461	219	761	463	277	43	27	.09
2	127	201	209	501	415	220	807	429	262	20	49	.00
3	116	190	253	499	394	225	704	384	232	7.4	54	.00
4	105	179	269	671	364	228	624	376	211	3.8	78	.00
5	98	176	258	823	341	229	556	388	201	2.3	68	.00
6	94	171	256	785	324	230	505	650	187	1.7	54	.00
7	93	164	245	718	308	246	759	661	187	2.0	46	.00
8	122	162	241	656	310	312	691	521	227	58	55	.00
9	145	161	235	602	312	325	588	1140	328	185	48	.00
10	123	162	223	538	318	332	537	3370	255	97	39	.00
11	137	160	217	481	303	317	481	1800	229	58	38	.00
12	262	164	211	457	294	323	450	1240	203	55	66	.00
13	316	195	207	435	291	313	445	880	175	41	42	.00
14	233	196	205	399	280	306	397	712	142	31	36	.00
15	185	192	205	420	282	305	363	671	121	28	30	.00
16	155	187	207	406	283	905	351	694	113	19	25	.00
17	138	190	205	416	293	2590	344	544	104	13	21	.00
18	126	193	204	424	293	1920	348	489	96	8.8	11	.00
19	120	190	204	425	294	1710	347	441	91	4.7	5.3	.00
20	114	187	205	413	293	1610	350	415	81	2.1	2.9	.00
21	112	183	240	383	283	1780	391	387	70	.39	1.3	.00
22	110	180	323	373	275	1600	374	350	62	.00	.24	.00
23	111	175	326	370	273	1390	356	325	57	.00	.00	.00
24	116	174	792	365	277	1200	350	308	48	.70	.00	.00
25	122	175	809	364	278	1020	326	1060	29	.55	.00	.00
26	139	175	684	361	260	917	317	1460	16	.07	.00	.00
27	140	175	545	347	242	883	354	712	10	.00	.00	.00
28	270	200	511	340	229	861	517	556	7.1	2.9	.00	.00
29	286	225	453	335	---	743	542	442	4.8	44	1.0	.00
30	247	211	447	324	---	690	497	361	6.0	60	7.8	.00
31	231	---	447	330	---	755	---	301	---	33	2.0	---
TOTAL	4834	5507	10044	14430	8570	24704	14432	22530	4031.9	822.41	807.54	0.09
MEAN	156	184	324	465	306	797	481	727	134	26.5	26.0	.003
MAX	316	225	809	823	461	2590	807	3370	328	185	78	.09
MIN	93	160	204	324	229	219	317	301	4.8	.00	.00	.00
AC-FT	9590	10920	19920	28620	17000	49000	28630	44690	8000	1630	1600	.2

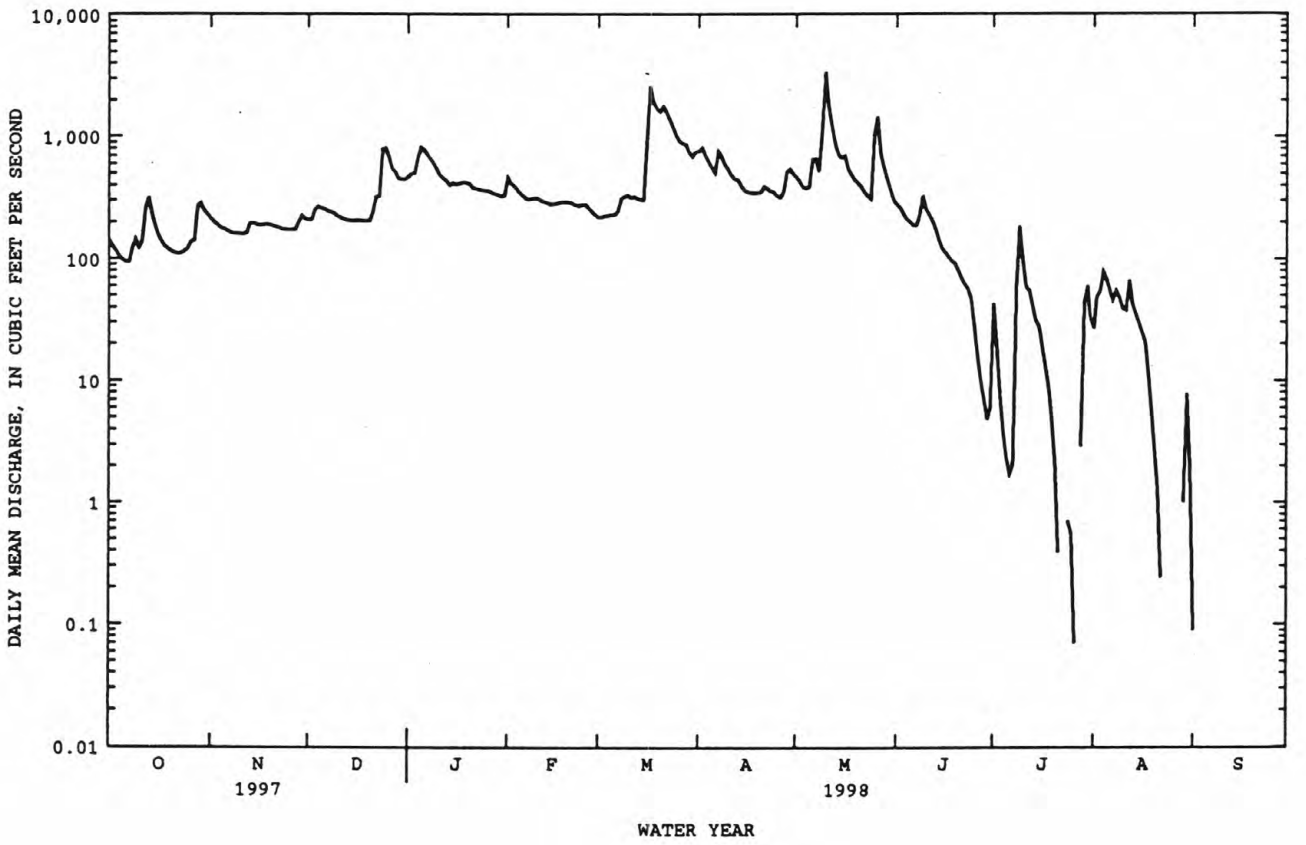
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1998, BY WATER YEAR (WY)

MEAN	214	123	117	130	179	242	356	789	594	335	231	266
MAX	2644	587	493	465	1011	2196	2944	5673	3674	3826	2507	1475
(WY)	1942	1947	1974	1998	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

07158000 CIMARRON RIVER NEAR WAYNOKA, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1938 - 1998	
ANNUAL TOTAL	125761		110712.94			
ANNUAL MEAN	345		303		299	
HIGHEST ANNUAL MEAN					1081	1957
LOWEST ANNUAL MEAN					43.2	1991
HIGHEST DAILY MEAN	3330	Apr 11	3370	May 10	51600	May 16 1957
LOWEST DAILY MEAN	78	Sep 19	.00	at times	.00	at times
ANNUAL SEVEN-DAY MINIMUM	102	Sep 6	.00	Sep 2	.00	Sep 3 1939
INSTANTANEOUS PEAK FLOW			4320	May 10	[a]94500	May 16 1957
INSTANTANEOUS PEAK STAGE			8.57	May 10	15.10	May 16 1957
ANNUAL RUNOFF (AC-FT)	249400		219600		216300	
10 PERCENT EXCEEDS	636		686		474	
50 PERCENT EXCEEDS	263		223		85	
90 PERCENT EXCEEDS	122		.00		.49	

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



07159100 CIMARRON RIVER NEAR DOVER, OK

LOCATION.--Lat 35°57'06", long 97°54'51", in SW ¼ NE ¼ 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.

REVISED RECORDS.--OK-95-1: 1994

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

REMARKS.--No estimated daily discharge. Records fair. 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)
Dec 24	1800	14,100	16.39	Mar 17	1145	37,600	19.66

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	989	639	529	1510	2750	584	1220	1090	490	115	66	30
2	882	585	522	1390	2600	572	1180	825	440	135	77	30
3	811	559	530	1330	1670	564	1080	680	401	135	93	55
4	747	539	548	2600	1340	557	1070	588	376	146	84	34
5	700	521	564	5400	1160	551	984	627	358	128	78	29
6	662	508	586	4500	1080	551	881	1560	341	118	84	28
7	639	502	564	3030	1000	565	895	1290	331	119	92	25
8	646	499	563	2440	955	645	2720	1720	322	122	106	25
9	617	495	554	1980	926	716	2620	1390	313	666	98	24
10	1140	507	545	1730	899	729	1440	2100	305	1620	95	23
11	1020	505	542	1560	882	718	1110	6850	350	461	91	23
12	1280	504	537	1430	843	686	931	3790	373	326	99	23
13	3130	512	531	1310	818	665	776	2380	314	266	132	24
14	3010	531	526	1250	787	654	685	1600	294	221	128	26
15	1590	545	517	1210	769	666	610	1240	273	193	135	27
16	1020	554	507	1140	762	11700	576	1380	258	176	154	41
17	814	539	503	1120	744	33300	551	1530	246	161	118	40
18	709	527	499	1090	738	21200	531	1130	226	149	96	35
19	642	518	492	1090	729	15500	511	831	216	139	83	33
20	600	515	485	1060	721	15100	496	692	208	127	74	28
21	580	510	534	1050	702	9780	499	619	214	115	68	34
22	567	504	1380	1000	699	10400	501	577	194	103	63	98
23	559	500	2120	968	690	5820	500	549	182	93	56	312
24	564	496	9740	929	680	3950	491	517	170	88	51	306
25	572	489	12200	895	669	2980	461	508	161	95	47	208
26	568	482	8010	869	643	2420	444	620	149	109	44	128
27	570	480	4740	852	626	2020	751	2410	140	93	40	94
28	563	481	2840	831	605	1780	2430	1830	132	80	37	78
29	563	491	2120	812	---	1770	2460	963	125	73	36	64
30	571	505	1840	789	---	1590	1560	706	117	71	36	56
31	696	---	1630	852	---	1320	---	555	---	68	34	---
TOTAL	28021	15542	57798	48017	27487	150053	30964	43147	8019	6511	2495	1981
MEAN	904	518	1864	1549	982	4840	1032	1392	267	210	80.5	66.0
MAX	3130	639	12200	5400	2750	33300	2720	6850	490	1620	154	312
MIN	559	480	485	789	605	551	444	508	117	68	34	23
AC-FT	55580	30830	114600	95240	54520	297600	61420	85580	15910	12910	4950	3930

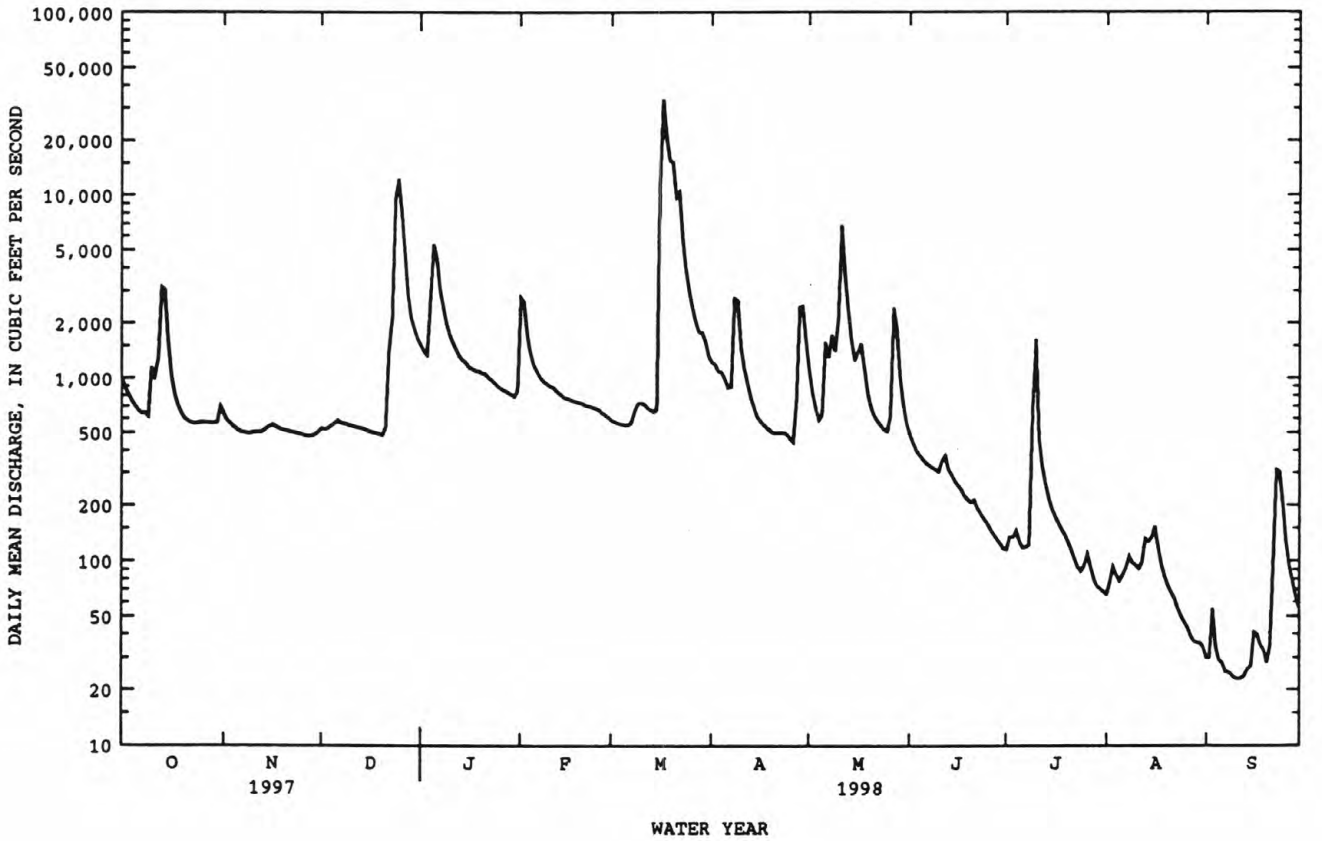
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1998, BY WATER YEAR (WY)

MEAN	821	758	462	400	553	1163	997	2301	1467	540	555	655
MAX	9071	3381	1864	1549	2410	4840	4218	11750	6969	2002	2622	2311
(WY)	1987	1975	1998	1998	1987	1998	1988	1993	1995	1987	1995	1996
MIN	40.2	45.1	70.2	61.8	75.6	77.4	60.7	146	207	45.3	29.5	13.8
(WY)	1985	1985	1977	1977	1981	1977	1981	1996	1984	1974	1984	1984

07159100 CIMARRON RIVER NEAR DOVER, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1974 - 1998	
ANNUAL TOTAL	478765		420035			
ANNUAL MEAN	1312		1151		891	
HIGHEST ANNUAL MEAN					2804	1987
LOWEST ANNUAL MEAN					265	1991
HIGHEST DAILY MEAN	25300	Apr 12	33300	Mar 17	80200	Oct 3 1986
LOWEST DAILY MEAN	105	Sep 21	23	Sep 10-12	4.3	Sep 23 1980
ANNUAL SEVEN-DAY MINIMUM	156	Sep 16	24	Sep 7	7.5	Sep 19 1980
INSTANTANEOUS PEAK FLOW			37600	Mar 17	123000	Oct 3 1986
INSTANTANEOUS PEAK STAGE			19.66	Mar 17	[a]26.10	Oct 3 1986
ANNUAL RUNOFF (AC-FT)	949600		833100		645400	
10 PERCENT EXCEEDS	2550		2050		1770	
50 PERCENT EXCEEDS	562		559		273	
90 PERCENT EXCEEDS	333		70		61	

[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 ¼, NW ¼, 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 current year.

REMARKS.--Samples were collected monthly from May through September and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)
MAY									
12...	0945	1028	80020	16	735	8.2	23.5	20.6	733
JUN									
10...	0945	1028	80020	22	641	8.2	30.0	23.9	738
JUL									
14...	0830	1028	80020	3.8	1210	8.3	28.0	28.5	735
22...	0830	1028	80020	E2.0	1250	8.5	31.1	27.7	736
AUG									
13...	0930	1028	80020	1.5	1070	8.3	24.6	25.8	739
SEP									
01...	0815	1028	80020	1.4	1260	9.8	26.6	25.4	733

DATE	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	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)	FONOFOS (DYFONATE) WATER WHOLE TOT.REC (UG/L) (82614)	CHLORPYRIFOS TOTAL RECOVER (UG/L) (38932)	DEF TOTAL (UG/L) (39040)
MAY								
12...	6.6	77	222	0	182	<.010	<.010	<.010
JUN								
10...	7.0	86	195	0	160	<.010	.010	<.010
JUL								
14...	5.2	70	325	0	266	<.010	<.010	<.010
22...	6.7	89	318	6	270	<.010	<.010	<.010
AUG								
13...	5.0	64	170	0	139	<.010	<.010	<.010
SEP								
01...	4.3	55	288	4	245	<.010	<.010	<.010

DATE	DIAZINON, TOTAL (UG/L) (39570)	DISULFOTON UNFILT RECOVER (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)
MAY								
12...	.250	<.010	<.010	<.010	<.010	<.010	<.010	<.010
JUN								
10...	.230	<.010	<.010	<.010	<.010	<.010	<.010	<.010
JUL								
14...	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010
22...	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010
AUG								
13...	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010
SEP								
01...	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010

07159643 DEER CREEK BELOW BLUFF CREEK AT OKLAHOMA CITY, OK

LOCATION.--Lat 35°40'56", long 97°35'26", in NE ¼, NW ¼, 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 current year.

REMARKS.--Samples were collected monthly from May to September and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)
MAY									
12...	1110	1028	80020	48	955	8.3	28.6	21.3	734
JUN									
18...	0915	1028	80020	28	998	8.3	29.2	24.3	736
JUL									
16...	1130	1028	80020	6.1	1230	8.3	34.0	26.3	740
AUG									
13...	1030	1028	80020	6.0	1170	8.0	27.0	25.4	739
SEP									
01...	0930	1028	80020	6.7	1190	9.1	32.0	25.6	733

DATE	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	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)	FONOFOS (DYFONATE) WATER WHOLE TOT.REC (UG/L) (82614)	CHLORPYRIFOS TOTAL RECOVER (UG/L) (38932)	DEF TOTAL (UG/L) (39040)
MAY								
12...	7.0	82	305	0	250	<.010	<.010	<.010
JUN								
18...	6.7	83	276	0	226	<.010	<.010	<.010
JUL								
16...	7.6	98	225	0	184	<.010	<.010	<.010
AUG								
13...	6.0	76	181	0	148	<.010	<.010	<.010
SEP								
01...	5.9	75	164	*0	134	<.010	<.010	<.010

DATE	DIAZINON, TOTAL (UG/L) (39570)	DISULFOTON UNFILT RECOVER (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)
MAY								
12...	.150	<.010	<.010	<.010	<.010	<.010	<.010	<.010
JUN								
18...	.040	<.010	<.010	<.010	<.010	<.010	<.010	<.010
JUL								
16...	.020	<.010	<.010	<.010	<.010	<.010	<.010	<.010
AUG								
13...	.014	<.010	<.010	<.010	<.010	<.010	<.010	<.010
SEP								
01...	.210	<.010	<.010	<.010	<.010	<.010	<.010	<.010

*pH of filtered sample <8.3; therefore no carbonate value.

07159650 DEER CREEK AT OKLAHOMA CITY, OK

LOCATION.--Lat 35°41'24", long 97°35'06", in SW ¼, NW ¼, sec 13, T.14 N., R.4 W., Oklahoma County, Hydrologic Unit 11050002, at bridge on 220th St., 0.4 mi east of State Highway 74.

PERIOD OF RECORD.--August 1993 to current year.

REMARKS.--Samples were collected monthly from May to September and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)
MAY									
13...	1215	1028	80020	57	1100	8.1	30.5	21.9	738
JUN									
18...	1030	1028	80020	34	1080	8.3	31.8	24.3	736
JUL									
14...	1040	1028	80020	17	1220	7.9	34.0	27.0	736
AUG									
13...	1330	1028	80020	23	1210	7.8	31.6	26.0	738
SEP									
01...	1045	1028	80020	12	1280	9.2	32.6	26.1	733

DATE	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	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)	FONOFOS (DYFONATE) WATER WHOLE TOT.REC (UG/L) (82614)	CHLORPYRIFOS TOTAL RECOVER (UG/L) (38932)	DEF TOTAL (UG/L) (39040)
MAY								
13...	7.2	85	307	0	252	<.010	<.010	<.010
JUN								
18...	6.5	81	256	0	210	<.010	<.010	<.010
JUL								
14...	5.5	72	198	0	162	<.010	---	<.010
AUG								
13...	5.5	70	128	0	105	<.010	<.010	<.010
SEP								
01...	6.1	78	128	*0	105	<.010	---	<.010

DATE	DIAZINON, TOTAL (UG/L) (39570)	DISULFOTON UNFILT RECOVER (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)
MAY								
13...	.060	<.010	<.010	<.010	<.010	<.010	<.010	<.010
JUN								
18...	.070	<.010	<.010	<.010	<.010	<.010	<.010	<.010
JUL								
14...	.040	<.010	<.010	<.010	<.010	<.010	<.010	<.010
AUG								
13...	.172	<.010	<.010	<.010	<.010	<.010	<.010	<.010
SEP								
01...	.040	<.010	<.010	<.010	<.010	<.010	<.010	<.010

*pH of filtered sample <8.3; therefore no carbonate value.

07159730 CHISHOLM CREEK AT EDMOND, OK

LOCATION.--Lat 35°38'03", long 97°31'56", in SE ¼, SE ¼, sec 17, T.14 N., R.3 W., Oklahoma County, Hydrologic Unit 11050002, at bridge on 206th St., 0.2 mi west of Western Ave., 1.8 mi south of Logan County line.

PERIOD OF RECORD.--August 1993 to current year, previously published as 07159690.

REMARKS.--Samples were collected monthly from May to September and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field. No flow Sept. 1.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)
MAY									
12...	1245	1028	80020	4.7	485	8.3	27.0	23.5	734
JUN									
10...	1115	1028	80020	9.5	312	7.8	30.6	24.9	737
JUL									
14...	0930	1028	80020	.25	997	8.3	31.2	28.3	735
AUG									
13...	1415	1028	80020	.26	1430	8.3	31.1	28.5	738

DATE	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	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)	FONOFOS (DYFONATE) WATER WHOLE TOT.REC (UG/L) (82614)	CHLORPYRIFOS TOTAL RECOVER (UG/L) (38932)	DEF TOTAL (UG/L) (39040)
MAY								
12...	8.4	103	200	0	164	<.010	.020	<.010
JUN								
10...	6.8	85	122	0	100	<.010	.030	<.010
JUL								
14...	4.9	66	315	0	258	<.010	<.010	<.010
AUG								
13...	9.5	127	249	0	204	<.010	<.010	<.010

DATE	DIAZINON, TOTAL (UG/L) (39570)	DISULFOTON UNFILT RECOVER (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)
MAY								
12...	.480	<.010	<.010	<.010	<.010	<.010	<.010	<.010
JUN								
10...	.400	<.010	<.010	.020	<.010	<.010	<.010	<.010
JUL								
14...	.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010
AUG								
13...	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010

07159735 CHISHOLM CREEK NEAR EDMOND, OK

LOCATION.--Lat 35°43'32", long 97°31'37", in NW ¼, NW ¼, 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 current year, previously published as 07159695.

REMARKS.--Samples were collected monthly from May through September and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

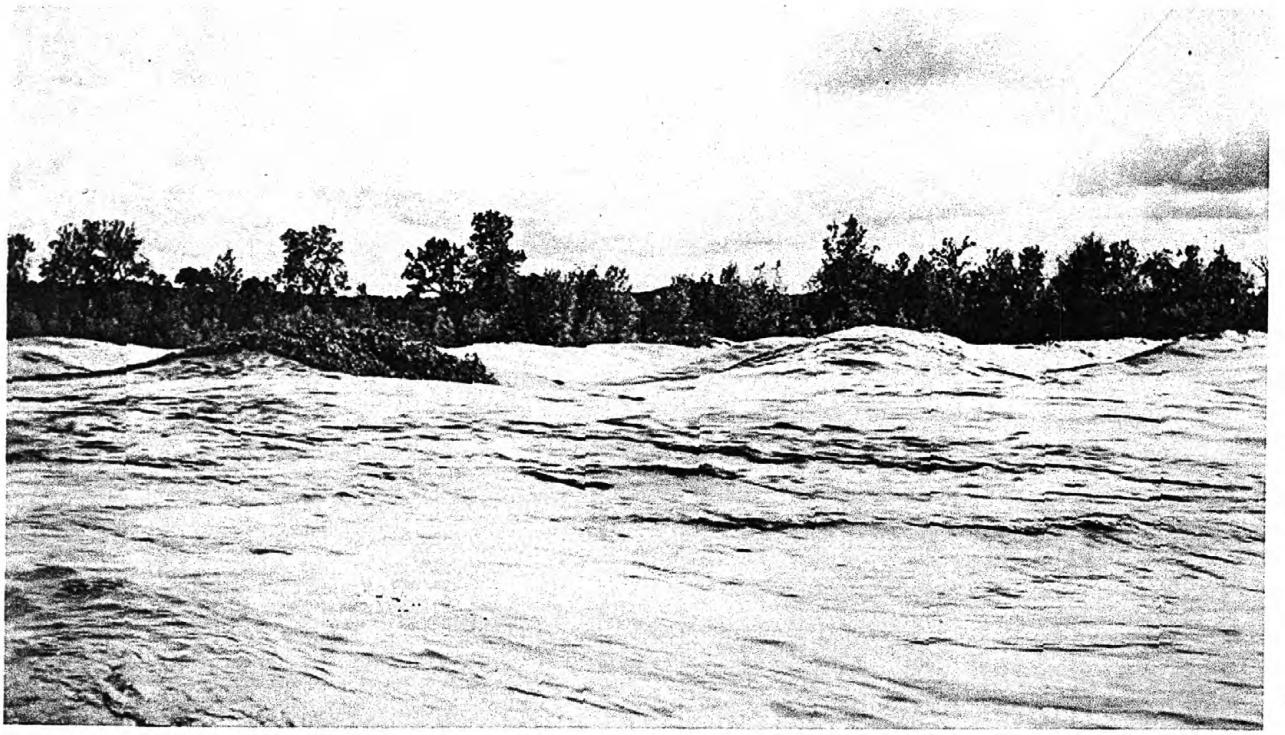
WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)
MAY									
13...	1045	1028	80020	16	944	8.0	28.2	23.3	738
JUN									
18...	1245	1028	80020	6.3	976	8.1	34.4	27.8	736
JUL									
16...	1245	1028	80020	6.0	1070	8.4	33.0	29.7	740
AUG									
14...	1015	1028	80020	6.8	1050	7.8	25.0	27.0	738
SEP									
01...	1300	1028	80020	4.3	1130	9.4	39.1	29.1	733

DATE	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	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)	FONOFOS (DYFONATE) WATER WHOLE TOT.REC (UG/L) (82614)	CHLORPYRIFOS TOTAL RECOVER (UG/L) (38932)	DEF TOTAL (UG/L) (39040)
MAY								
13...	6.2	75	250	0	205	<.010	.020	<.010
JUN								
18...	5.7	76	203	0	166	<.010	.020	<.010
JUL								
16...	8.7	119	182	3	154	<.010	<.010	<.010
AUG								
14...	7.1	92	156	0	128	<.010	<.010	<.010
SEP								
01...	6.7	91	135	*0	111	<.010	<.010	<.010

DATE	DIAZINON, TOTAL (UG/L) (39570)	DISULFOTON UNFILT RECOVER (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)
MAY								
13...	.220	<.010	<.010	<.010	<.010	<.010	<.010	<.010
JUN								
18...	.120	<.010	<.010	<.010	<.010	<.010	<.010	<.010
JUL								
16...	.110	<.010	<.010	<.010	<.010	<.010	<.010	<.010
AUG								
14...	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010
SEP								
01...	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010

*pH of filtered sample <8.3; therefore no carbonate value.



Canadian River at Calvin May 5, 1941

07159750 COTTONWOOD CREEK NEAR SEWARD, OK

LOCATION.--Lat 35°48'49", long 97°28'40", in SW ¼ sec.36, T.16 N., R.3 W., Logan County, Hydrologic Unit 11050002, on downstream left bank, 1.2 mi north of Seward on Broadway Road, 6.5 mi southwest of Guthrie, and at mile 16.2.

DRAINAGE AREA.--320 mi^2.

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

REVISED RECORDS.--OK-95-1: 1993(M)

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 good. 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)
Mar 17	1100	11,500	27.00	Apr 28	0100	3,590	20.07

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	50	53	121	714	97	215	260	63	e42	23	16
2	34	46	55	119	439	91	177	216	56	e41	23	14
3	32	49	103	113	245	86	162	181	50	e40	28	13
4	34	50	138	723	211	81	150	157	44	e39	32	13
5	30	48	86	1490	182	83	145	187	41	e40	34	21
6	27	47	73	491	151	80	147	206	40	e39	34	16
7	28	45	63	299	137	108	143	182	38	e38	32	12
8	33	45	63	348	133	509	136	162	40	e38	30	11
9	945	47	97	279	132	258	129	150	281	e37	26	13
10	562	52	72	225	126	155	127	351	154	e36	28	11
11	158	63	64	200	128	130	116	190	777	e35	27	10
12	318	60	61	187	124	123	111	157	636	e35	27	9.5
13	1180	56	61	176	117	118	120	123	193	e35	28	11
14	371	91	59	161	111	120	107	113	198	e34	31	22
15	221	116	59	161	110	122	95	108	153	e34	40	40
16	141	72	60	133	112	2670	97	112	114	33	40	30
17	107	60	58	128	112	9160	101	100	98	e32	36	21
18	89	58	55	123	111	2710	130	93	88	e32	35	19
19	79	55	57	116	107	1810	136	87	79	e31	30	17
20	70	53	55	113	127	1730	116	81	70	e30	33	16
21	63	54	108	118	139	698	111	81	67	e31	28	18
22	61	52	396	103	117	493	123	80	60	30	23	247
23	60	53	188	101	113	383	107	72	57	30	20	208
24	145	51	1910	119	109	321	97	68	54	29	18	99
25	123	51	1310	109	104	293	93	76	52	29	19	58
26	78	51	423	170	107	269	91	307	e50	32	18	46
27	68	52	272	195	99	251	1830	294	e48	26	16	36
28	60	53	206	132	103	267	2450	146	e46	28	15	31
29	57	52	168	115	---	231	526	109	e45	26	15	31
30	54	55	145	103	---	215	334	93	e43	23	14	25
31	55	---	132	113	---	262	---	76	---	24	15	---
TOTAL	5318	1687	6650	7084	4520	23924	8422	4618	3735	1029	818	1134.5
MEAN	172	56.2	215	229	161	772	281	149	125	33.2	26.4	37.8
MAX	1180	116	1910	1490	714	9160	2450	351	777	42	40	247
MIN	27	45	53	101	99	80	91	68	38	23	14	9.5
AC-FT	10550	3350	13190	14050	8970	47450	16710	9160	7410	2040	1620	2250

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1998, BY WATER YEAR (WY)

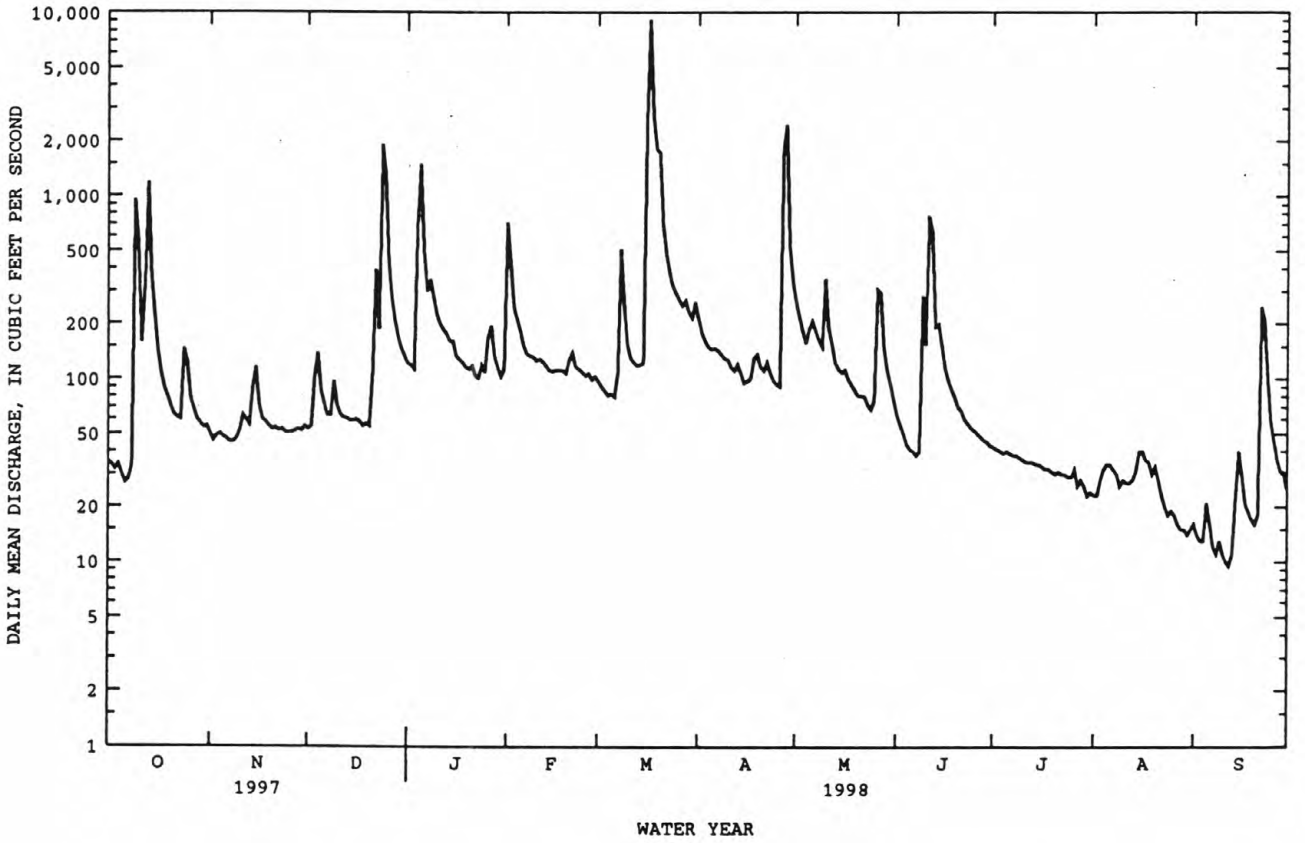
MEAN	84.4	177	116	94.8	124	253	216	490	420	98.8	77.2	110
MAX	267	1218	570	265	336	1591	803	2267	2909	467	246	546
(WY)	1975	1975	1992	1975	1975	1990	1990	1993	1995	1975	1996	1973
MIN	12.0	15.2	17.6	17.6	22.8	19.8	22.1	42.5	24.9	18.2	8.58	17.4
(WY)	1977	1977	1977	1978	1977	1977	1978	1981	1976	1976	1976	1980

e Estimated

07159750 COTTONWOOD CREEK NEAR SEWARD, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1973 - 1998	
ANNUAL TOTAL	60641		68939.5			
ANNUAL MEAN	166		189		177	
HIGHEST ANNUAL MEAN					438	1993
LOWEST ANNUAL MEAN					42.9	1981
HIGHEST DAILY MEAN	5690	Apr 12	9160	Mar 17	29300	May 9 1993
LOWEST DAILY MEAN	27	Oct 6	9.5	Sep 12	6.1	[a]Aug 15 1976
ANNUAL SEVEN-DAY MINIMUM	31	Oct 2	11	Sep 7	6.7	Aug 11 1976
INSTANTANEOUS PEAK FLOW			11500	Mar 17	[b]43500	Jun 9 1995
INSTANTANEOUS PEAK STAGE			27.00	Mar 17	[c]34.47	Jun 9 1995
ANNUAL RUNOFF (AC-FT)	120300		136700		128100	
10 PERCENT EXCEEDS	266		286		328	
50 PERCENT EXCEEDS	86		86		55	
90 PERCENT EXCEEDS	45		26		18	

[a]Also occurred on Aug. 22, 23, 1976.
[b]From indirect measurement.
[c]From high water mark.



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)
Dec 25	0400	22,400	9.68	Mar 17	2200	41,100	12.46

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1080	845	662	1990	2240	1010	2540	2810	1020	195	e108	94
2	952	818	698	1830	5640	981	2310	2200	864	209	e112	e97
3	853	753	724	1700	3390	954	2220	1850	746	238	e118	e100
4	778	713	786	2390	2420	934	2130	1640	665	242	140	e97
5	720	688	778	9320	1960	926	2060	2760	611	239	133	e94
6	667	659	772	7000	1700	910	1950	2000	570	219	e124	e98
7	632	645	802	4800	1560	966	1910	2600	532	197	e118	e94
8	671	636	794	3530	1450	1420	2060	2410	510	216	e115	e92
9	1090	633	794	2920	1400	1480	3830	2870	604	215	e112	e89
10	1680	656	801	2420	1350	1320	3310	2910	790	601	e108	e86
11	1100	664	783	2130	1320	1210	2420	4070	1290	1680	e105	e84
12	1240	676	765	1920	1290	1180	2030	7230	1780	845	e102	e82
13	3320	690	756	1770	1240	1130	1870	4090	912	557	e100	e93
14	4330	705	749	1630	1200	1120	1740	3090	701	433	143	e96
15	2920	762	742	1560	1170	1140	1620	2530	658	342	174	e105
16	1830	772	733	1490	1160	9470	1540	2230	526	286	179	130
17	1340	753	720	1440	1180	36800	1480	2290	471	255	197	e115
18	1110	720	711	1430	1180	30100	1440	2310	e440	227	184	e108
19	971	697	694	1410	1200	21500	1430	1960	e420	204	140	e100
20	876	678	693	1390	1190	21800	1390	1680	363	189	e130	e96
21	810	672	767	1370	1180	14000	1360	1510	363	175	e120	130
22	757	666	1110	1360	1150	12200	1370	1400	350	160	e112	320
23	730	658	2100	1310	1130	10200	1370	1310	325	e143	e105	462
24	743	644	8690	1280	1120	6720	1340	1250	288	e135	e100	360
25	824	625	19700	1250	1100	5180	1280	1240	263	e128	e98	434
26	757	621	11100	1230	1090	4210	1280	1740	245	e135	e95	354
27	734	613	6760	1330	1060	3670	3460	2840	233	e140	e93	255
28	731	620	4390	1240	1040	3340	7710	3320	219	e135	e90	188
29	714	626	3130	1200	---	3070	5340	2250	202	e124	e88	148
30	717	642	2550	1180	---	2970	3960	1580	192	e120	e92	e132
31	721	---	2240	1180	---	2790	---	1260	---	e110	e95	---
TOTAL	36398	20550	77494	68000	44110	204701	69750	75230	17153	9094	3730	4733
MEAN	1174	685	2500	2194	1575	6603	2325	2427	572	293	120	158
MAX	4330	845	19700	9320	5640	36800	7710	7230	1780	1680	197	462
MIN	632	613	662	1180	1040	910	1280	1240	192	110	88	82
AC-FT	72200	40760	153700	134900	87490	406000	138300	149200	34020	18040	7400	9390

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1998, BY WATER YEAR (WY)

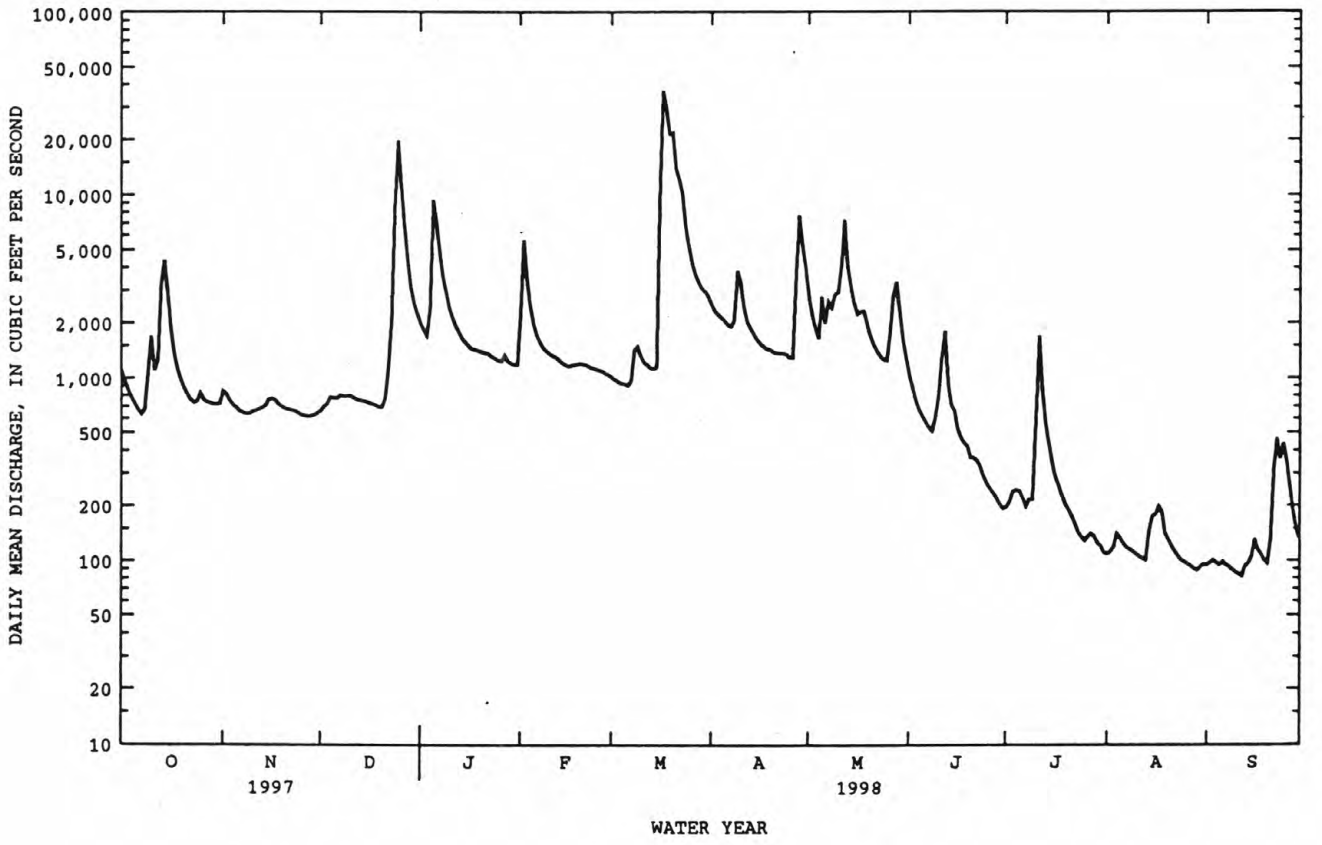
MEAN	1083	734	494	466	647	1129	1463	2561	2147	860	664	908
MAX	13800	6145	2874	2266	4063	6603	8184	20630	14860	4220	4182	3988
(WY)	1987	1975	1993	1993	1987	1998	1942	1993	1995	1950	1995	1989
MIN	.79	.70	1.39	6.38	21.7	24.7	66.5	63.0	58.6	9.58	26.1	8.03
(WY)	1953	1955	1955	1940	1957	1955	1956	1971	1953	1954	1943	1954

e Estimated

07160000 CIMARRON RIVER NEAR GUTHRIE, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1938 - 1998	
ANNUAL TOTAL	667437		630943			
ANNUAL MEAN	1829		1729		1092	
HIGHEST ANNUAL MEAN					3901	1987
LOWEST ANNUAL MEAN					192	1953
HIGHEST DAILY MEAN	38800	Apr 12	36800	Mar 17	112000	May 17 1957
LOWEST DAILY MEAN	282	Sep 22	82	Sep 12	[a].30	Oct 20 1939
ANNUAL SEVEN-DAY MINIMUM	308	Sep 8	89	Sep 7	.39	Oct 19 1939
INSTANTANEOUS PEAK FLOW			41100	Mar 17	158000	May 17 1957
INSTANTANEOUS PEAK STAGE			12.46	Mar 17	18.58	May 17 1957
ANNUAL RUNOFF (AC-FT)	1324000		1251000		791300	
10 PERCENT EXCEEDS	3300		3200		2120	
50 PERCENT EXCEEDS	831		845		334	
90 PERCENT EXCEEDS	600		114		55	

[a]Also occurred Oct. 21-22, Nov. 2, 1939.



07160350 SKELETON CREEK AT ENID, OK

LOCATION.--Lat 36°22'34", long 97°48'00", in NW ¼ NW ¼ sec.24, T.22 N., R.6 W., Garfield County, Hydrologic Unit 11050002, on left bank, 600 ft below confluence of Boggy Creek, at mile 47.5.

DRAINAGE AREA.--70.3 mi^2.

PERIOD OF RECORD.--February 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,110.48 ft above sea level.

REMARKS.--No estimated daily discharge. Records good. Low flows regulated by releases of effluent from the City of Enid water treatment plant, 1 mile upstream. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of October 10, 1973, stage unknown, discharge 81,000 ft^3/s, from slope-area measurement of peak flow at Southgate Road, one mile below gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

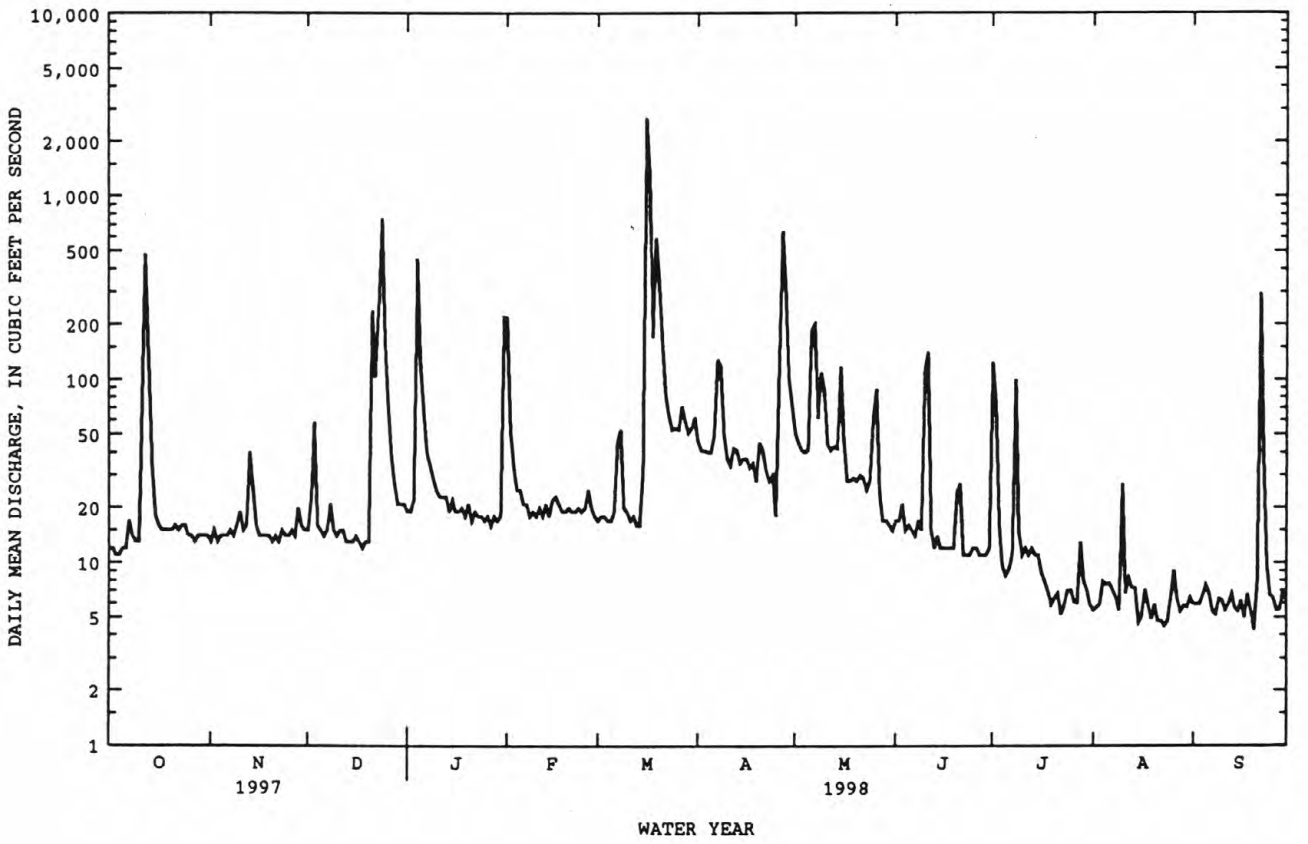
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	13	15	19	216	17	46	51	17	123	5.5	5.9
2	12	15	22	19	53	18	41	45	17	72	5.7	5.9
3	11	13	58	22	33	18	41	41	21	16	5.9	5.9
4	11	14	16	454	25	17	40	40	15	9.5	7.9	6.6
5	12	14	15	126	25	17	40	41	16	8.5	7.6	7.5
6	12	14	14	66	21	19	49	185	15	9.2	7.7	6.7
7	17	15	15	40	21	46	128	199	14	11	7.1	5.4
8	14	14	21	34	18	53	118	61	17	99	6.4	5.2
9	13	16	15	29	19	20	50	109	15	15	5.5	6.3
10	13	19	14	25	18	19	37	86	115	11	27	6.2
11	70	15	15	23	20	17	34	44	140	12	6.8	5.5
12	480	16	15	23	18	18	42	41	15	11	8.2	5.9
13	140	40	13	23	21	16	41	43	12	12	7.3	6.7
14	33	26	13	19	18	16	35	42	14	11	7.3	5.6
15	18	16	13	22	22	32	37	116	12	11	4.7	5.4
16	16	14	14	19	23	2660	37	47	12	8.8	5.1	6.2
17	15	14	13	19	21	1340	33	28	12	7.9	7.1	5.0
18	15	14	12	20	19	170	35	28	12	6.9	5.9	6.7
19	15	14	13	18	19	591	28	29	12	5.9	4.9	5.5
20	15	13	13	21	20	343	45	28	24	6.4	5.9	4.3
21	16	14	237	17	19	161	41	30	27	6.8	4.8	7.8
22	15	13	103	19	19	83	32	29	11	5.2	4.8	293
23	16	15	261	18	20	64	28	25	11	5.8	4.5	38
24	16	14	759	18	19	53	30	28	11	7.0	4.8	9.9
25	14	14	155	17	20	54	18	63	12	7.1	6.4	6.6
26	14	15	70	18	25	53	116	88	12	6.1	9.0	6.4
27	13	14	38	16	20	71	644	24	11	6.0	6.3	5.5
28	14	20	27	18	18	59	312	17	11	13	5.4	5.5
29	14	16	21	17	---	51	101	17	11	7.9	5.8	6.9
30	14	15	21	18	---	54	72	16	12	7.1	5.7	6.3
31	14	---	21	219	---	62	---	15	---	5.9	6.4	---
TOTAL	1104	479	2052	1436	810	6212	2351	1656	656	545.0	213.4	504.3
MEAN	35.6	16.0	66.2	46.3	28.9	200	78.4	53.4	21.9	17.6	6.88	16.8
MAX	480	40	759	454	216	2660	644	199	140	123	27	293
MIN	11	13	12	16	18	16	18	15	11	5.2	4.5	4.3
AC-FT	2190	950	4070	2850	1610	12320	4660	3280	1300	1080	423	1000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

MEAN	33.8	29.2	40.5	29.0	64.8	75.7	71.0	37.1	26.4	53.7	24.7	52.5
MAX	35.6	42.4	66.2	46.3	101	200	126	53.4	33.2	120	45.0	71.4
(WY)	1998	1997	1998	1998	1997	1998	1997	1998	1997	1997	1997	1997
MIN	31.9	16.0	14.7	11.6	28.9	9.82	8.27	9.25	21.9	17.6	6.88	16.8
(WY)	1997	1998	1997	1997	1998	1996	1996	1996	1998	1998	1998	1998

07160350 SKELETON CREEK AT ENID, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1996 - 1998	
ANNUAL TOTAL	20885.6		18018.7			
ANNUAL MEAN	57.2		49.4		52.0	
HIGHEST ANNUAL MEAN					54.7	1997
LOWEST ANNUAL MEAN					49.4	1998
HIGHEST DAILY MEAN	2860	Jul 19	2660	Mar 16	2860	Jul 19 1997
LOWEST DAILY MEAN	8.8	Jul 5	4.3	Sep 20	4.3	Sep 20 1998
ANNUAL SEVEN-DAY MINIMUM	10	Jul 3	5.1	Aug 18	5.1	Aug 18 1998
INSTANTANEOUS PEAK FLOW			3380	Mar 16	5840	Jul 19 1997
INSTANTANEOUS PEAK STAGE			9.91	Mar 16	12.82	Jul 19 1997
ANNUAL RUNOFF (AC-FT)	41430		35740		37700	
10 PERCENT EXCEEDS	73		72		61	
50 PERCENT EXCEEDS	15		17		14	
90 PERCENT EXCEEDS	11		6.2		6.8	



07161450 CIMARRON RIVER NEAR RIPLEY, OK

LOCATION.--Lat 35°59'09", long 96°54'43", in SE ¼ SE ¼ 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 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)
Dec 25	1230	20,200	16.65	Apr 27	1300	16,500	15.30
Mar 18	0500	59,500	21.71				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1450	752	673	2520	1650	1110	3330	4920	1690	453	257	159
2	1220	832	712	2270	3990	1080	2990	3690	1460	449	254	160
3	1060	844	820	2130	5690	1040	2830	3030	1310	442	255	155
4	946	780	806	5880	3330	1010	2670	2580	1200	552	267	150
5	860	752	832	8920	2520	1000	2540	2530	1140	509	319	142
6	794	715	853	10300	2140	983	2450	3520	1070	461	309	137
7	746	692	836	7150	1900	1280	2390	2730	1010	437	278	147
8	725	681	893	5310	1760	1800	2350	3320	1000	461	262	140
9	1190	677	870	3950	1650	1800	2510	3640	963	449	256	130
10	1150	688	845	3270	1600	1720	4040	6380	930	511	254	125
11	1840	677	857	2840	1550	1520	3280	4260	1530	527	263	125
12	1950	687	826	2590	1500	1340	2560	5580	1850	1570	273	125
13	2890	722	804	2390	1460	1290	2270	7120	e1600	1080	283	184
14	6000	745	789	2240	1410	1220	2080	4280	e1300	766	277	180
15	4710	731	770	2090	1370	1270	1970	3410	1110	634	280	153
16	2990	777	766	2000	1340	11900	1850	2910	1040	545	296	142
17	1970	806	749	1900	1380	49800	1760	2620	891	488	282	163
18	1440	794	739	1820	1320	50900	1700	2660	799	441	276	183
19	1190	752	733	1760	1300	29100	1650	2560	734	409	286	163
20	1050	725	724	1700	1280	27400	1630	2190	684	385	262	158
21	961	715	909	1680	1250	19300	1610	1910	645	362	240	167
22	895	705	1100	1650	1290	13100	1560	1750	619	345	227	594
23	854	701	1930	1620	1240	12300	1530	1650	594	329	218	1800
24	832	687	6700	1560	1220	8840	1490	1550	573	316	207	2140
25	824	680	17600	1520	1170	6540	1450	1540	538	306	197	1050
26	910	678	12000	1570	1170	5270	1530	2030	506	291	190	735
27	841	664	8050	1490	1140	4570	12100	3010	480	283	182	613
28	812	683	6050	1560	1130	4080	12000	3390	461	278	179	493
29	797	676	4330	1460	---	3730	12000	3790	442	287	171	404
30	769	670	3340	1390	---	3600	6750	2690	463	278	165	601
31	761	---	2820	1370	---	3840	---	2010	---	267	161	---
TOTAL	45427	21688	80726	89900	49750	273733	100870	99250	28632	14911	7626	11618
MEAN	1465	723	2604	2900	1777	8830	3362	3202	954	481	246	387
MAX	6000	844	17600	10300	5690	50900	12100	7120	1850	1570	319	2140
MIN	725	664	673	1370	1130	983	1450	1540	442	267	161	125
AC-FT	90100	43020	160100	178300	98680	542900	200100	196900	56790	29580	15130	23040

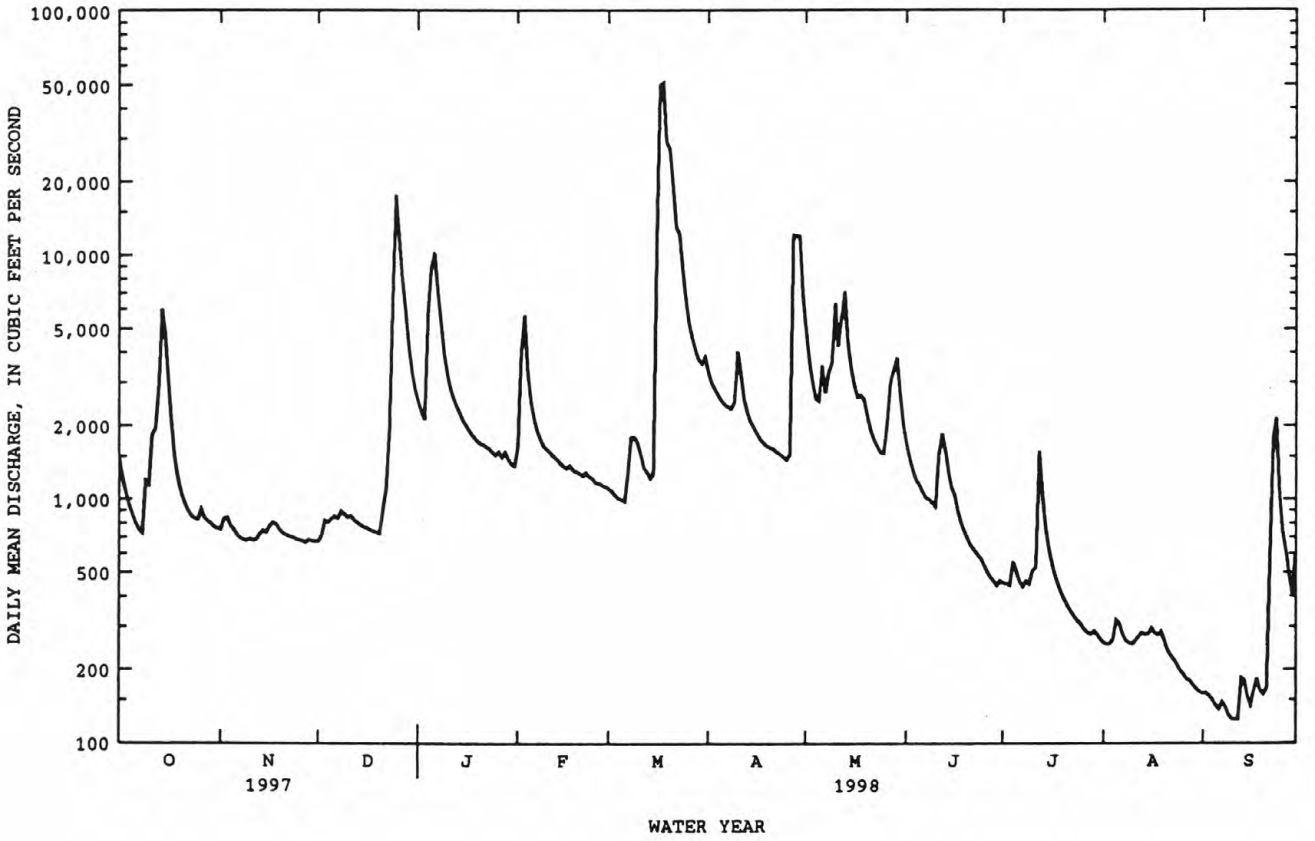
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

MEAN	776	1405	1602	1363	1321	3304	3540	4763	4014	1289	1680	1638
MAX	1465	4070	4300	3541	3766	9824	7456	26790	18300	2973	5520	4554
(WY)	1998	1993	1993	1993	1993	1990	1988	1993	1995	1989	1995	1989
MIN	193	238	233	287	244	234	402	317	593	251	209	263
(WY)	1991	1991	1991	1991	1991	1991	1991	1996	1996	1990	1991	1990

e Estimated

07161450 CIMARRON RIVER NEAR RIPLEY, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1988 - 1998	
ANNUAL TOTAL	802760		824131			
ANNUAL MEAN	2199		2258		2227	
HIGHEST ANNUAL MEAN					4983	1993
LOWEST ANNUAL MEAN					437	1991
HIGHEST DAILY MEAN	42200	Apr 12	50900	Mar 18	137000	May 10 1993
LOWEST DAILY MEAN	480	Sep 22	125	Sep 10-12	84	Oct 23 1991
ANNUAL SEVEN-DAY MINIMUM	555	Sep 9	133	Sep 6	87	Oct 19 1991
INSTANTANEOUS PEAK FLOW			59500	Mar 18	141000	May 10 1993
INSTANTANEOUS PEAK STAGE			21.71	Mar 18	28.36	May 10 1993
ANNUAL RUNOFF (AC-FT)	1592000		1635000		1613000	
10 PERCENT EXCEEDS	4390		4150		4650	
50 PERCENT EXCEEDS	1060		1080		790	
90 PERCENT EXCEEDS	699		257		254	



07164500 ARKANSAS RIVER AT TULSA, OK

LOCATION.--Lat 36°08'26", long 96°00'22", in NE ¼ SW ¼ 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14600	3340	2380	23700	12100	12400	36900	42400	19700	4940	1940	1690
2	15000	1610	2240	24200	11900	12400	37100	41400	16600	2090	439	1570
3	16000	4230	2430	25500	11800	11200	37500	39600	8700	1680	2540	1990
4	11100	7380	2150	26200	11800	12400	36900	33500	8390	1390	1880	1490
5	6890	6070	1590	20200	11700	8300	36300	20700	8570	460	1530	1240
6	7870	6850	2240	25200	2970	8230	35700	22100	9670	2840	1580	1560
7	7880	6890	1710	36600	820	4430	36000	25900	8770	3600	1750	2150
8	4740	5930	3770	27800	711	1140	38300	24800	7590	4640	1080	1490
9	6320	4670	4970	18700	717	10500	37600	21400	7310	6640	478	315
10	8320	5100	6980	28000	533	13400	37400	21100	7590	8340	1100	281
11	10200	4600	7680	27700	4890	13300	37300	22300	7970	4850	1770	275
12	8480	5620	7420	25500	11600	10800	36900	25600	7420	4860	1340	1020
13	13800	5480	4780	22100	11600	12100	36500	23100	5490	6750	1690	634
14	9020	4710	4700	21700	11700	2720	36300	18000	1190	11300	2800	327
15	23600	4630	5660	21700	11800	423	33400	11400	1460	11200	1550	907
16	24700	5650	4240	21300	11800	9070	25700	11200	7550	6210	388	258
17	25900	4900	5070	21000	11700	18600	24200	11200	7630	8360	1340	1230
18	17900	5530	6180	20800	11800	43800	20900	6940	5480	5940	2540	1280
19	17800	4500	7060	20700	11800	64100	20400	10100	6780	3990	3610	936
20	16600	2290	3070	18500	11800	64100	19800	7880	3340	6040	3460	297
21	14800	2210	1960	12700	11800	63900	18900	2880	3880	5040	3410	383
22	14700	2420	4050	12400	11800	63100	17500	79	4600	3740	1910	887
23	13300	2070	6380	12600	11900	58200	14000	310	3350	4750	968	396
24	13000	2520	7750	12500	12100	47000	13300	1080	3790	3700	2630	936
25	6220	2170	4710	12700	12200	38600	10800	670	3710	1920	3200	548
26	4170	1620	12300	12600	12500	34600	10500	3640	1890	269	1770	952
27	6040	2790	12400	12600	12200	27300	18200	10900	1200	1880	1630	259
28	5120	1930	12200	12700	12300	26900	15200	19600	2510	3780	1040	299
29	7120	2500	13800	12700	---	26800	34800	19700	3490	3350	1060	850
30	6360	2580	20400	12600	---	26600	43000	19800	3560	3470	295	333
31	5930	---	20900	12100	---	28500	---	19700	---	2990	790	---
TOTAL	363480	122790	203170	615300	272341	774913	857300	538979	189180	141009	53508	26783
MEAN	11730	4093	6554	19850	9726	25000	28580	17390	6306	4549	1726	893
MAX	25900	7380	20900	36600	12500	64100	43000	42400	19700	11300	3610	2150
MIN	4170	1610	1590	12100	533	423	10500	79	1190	269	295	258
AC-FT	721000	243600	403000	1220000	540200	1537000	1700000	1069000	375200	279700	106100	53120

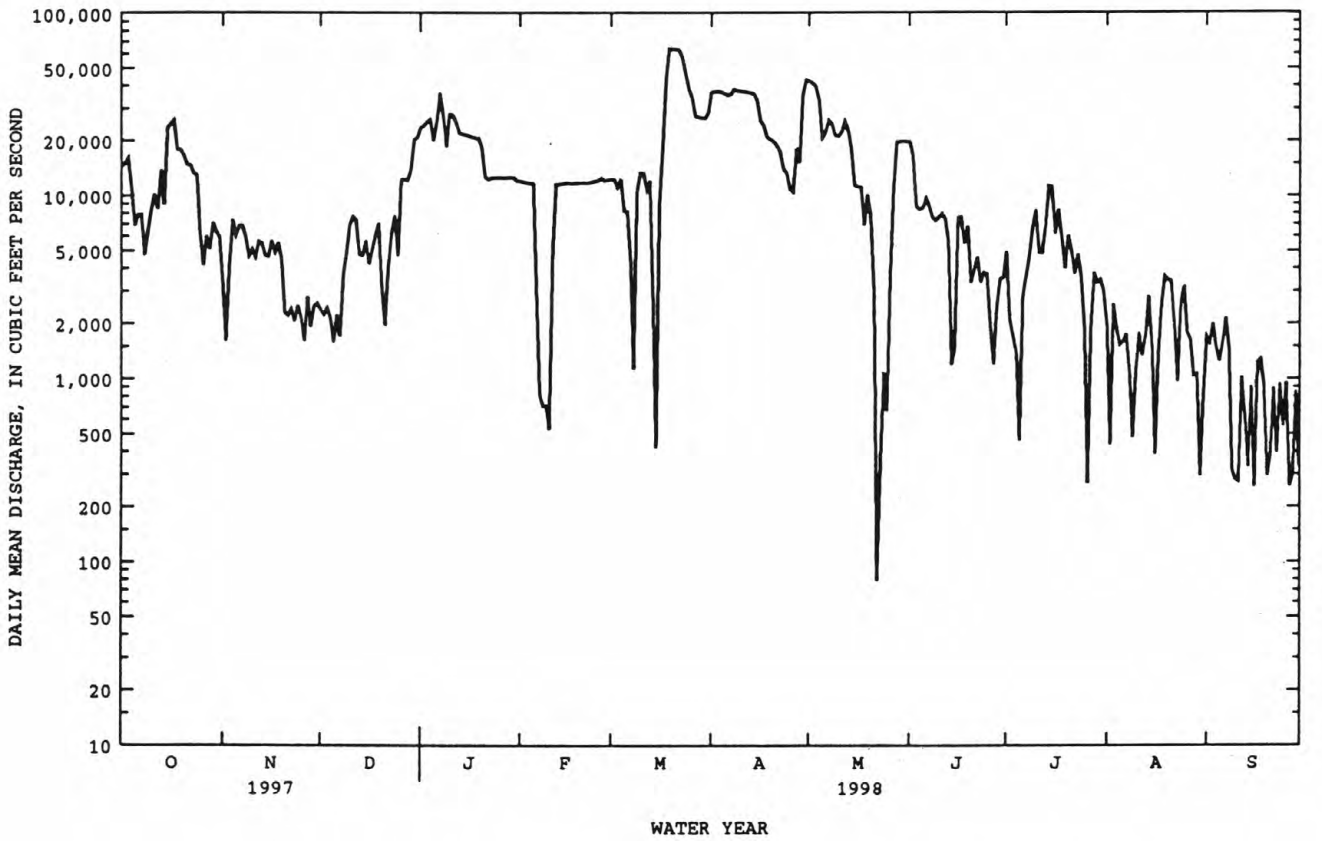
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1998, BY WATER YEAR (WY)

MEAN	7421	6706	4877	5307	5492	10510	12300	13960	14390	8852	5862	5655
MAX	72720	39390	16830	19850	22500	42890	44460	81400	69820	27790	32970	23280
(WY)	1987	1975	1993	1998	1993	1987	1973	1993	1995	1995	1995	1989
MIN	491	457	582	483	494	490	557	881	2595	1314	1129	893
(WY)	1965	1983	1983	1967	1967	1977	1981	1967	1966	1991	1980	1998

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1965 - 1998	
ANNUAL TOTAL	4638386		4158753			
ANNUAL MEAN	12710		11390		[a]8452	
HIGHEST ANNUAL MEAN					22840	1987
LOWEST ANNUAL MEAN					1813	1991
HIGHEST DAILY MEAN	50800	Apr 15	64100	Mar 19, 20	261000	Oct 5 1986
LOWEST DAILY MEAN	90	Jan 26	79	May 22	[b]33	Feb 25 1977
ANNUAL SEVEN-DAY MINIMUM	2110	Dec 1	529	Sep 10	277	Oct 20 1982
INSTANTANEOUS PEAK FLOW			65300	Mar 19	307000	Oct 5 1986
INSTANTANEOUS PEAK STAGE			12.57	Mar 19	25.21	Oct 5 1986
ANNUAL RUNOFF (AC-FT)	9200000		8249000		6123000	
10 PERCENT EXCEEDS	29200		27100		21700	
50 PERCENT EXCEEDS	9430		7310		4100	
90 PERCENT EXCEEDS	2550		1030		671	

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



07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-61, March 1977 to current year. CHEMICAL QUALITY DATA.--Water years 1960-61, March 1977 to September 1995.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1977 to July 1985, October 1987 to May 1998 (discontinued).
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.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 7,820 microsiemens, Feb. 16, 1978; minimum, 299 microsiemens, Nov. 5, 1994.
WATER TEMPERATURE: Maximum, 34.0 C, July 18, 1994; minimum, 0.0 C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded (greater than 20% missing record), 2,490 microsiemens, Dec. 26; minimum recorded, 795 microsiemens, Apr. 1.
WATER TEMPERATURE: Maximum, 33.0°C, July 27; minimum, 1.0°C, Jan. 13.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1580	1220	1390	---	---	---	---	---	---	1440	1330	1410
2	1650	1450	1500	---	---	---	---	---	---	1450	1360	1410
3	1570	1290	1390	---	---	---	---	---	---	1440	1220	1310
4	1360	1300	1320	---	---	---	---	---	---	1230	920	1050
5	---	---	---	---	---	---	---	---	---	1200	1050	1150
6	---	---	---	---	---	---	---	---	---	1200	972	1100
7	---	---	---	---	---	---	---	---	---	1190	1160	1180
8	---	---	---	---	---	---	---	---	---	1370	1180	1240
9	---	---	---	---	---	---	---	---	---	1420	1280	1370
10	---	---	---	---	---	---	---	---	---	1340	1280	1310
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	2070	1390	1680	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	1540	1350	1420	---	---	---	---	---	---	---	---	---
16	1580	1350	1470	---	---	---	---	---	---	---	---	---
17	1460	1310	1380	---	---	---	---	---	---	---	---	---
18	1480	1380	1410	---	---	---	---	---	---	---	---	---
19	1480	1290	1390	---	---	---	---	---	---	---	---	---
20	1340	1150	1250	---	---	---	---	---	---	---	---	---
21	1300	1210	1260	---	---	---	---	---	---	2030	1900	1980
22	1350	1280	1300	---	---	---	---	---	---	1940	1830	1840
23	1360	1300	1330	1950	1790	1880	---	---	---	1940	1880	1920
24	1380	1290	1330	2260	1810	2050	---	---	---	2020	1940	1980
25	---	---	---	---	---	---	---	---	---	2130	2020	2060
26	---	---	---	---	---	---	2490	2310	2410	2100	1960	2000
27	---	---	---	---	---	---	2310	2000	2110	2080	1960	2020
28	---	---	---	---	---	---	2000	1620	1880	2160	2000	2100
29	---	---	---	---	---	---	1730	1440	1660	2150	2090	2130
30	---	---	---	---	---	---	1590	1290	1440	2170	2080	2130
31	---	---	---	---	---	---	1440	1280	1340	2200	2140	2160
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2160	1900	1980	---	---	---	885	795	828	1520	1390	1440
2	2000	1860	1920	---	---	---	1010	854	913	1420	1150	1310
3	1870	1830	1840	---	---	---	1110	982	1020	1160	992	1090
4	1900	1830	1870	---	---	---	1080	1010	1050	1080	968	1010
5	1920	1850	1870	---	---	---	1190	1070	1130	1060	904	953
6	---	---	---	---	---	---	1340	1180	1240	974	800	899
7	---	---	---	---	---	---	1420	1260	1330	896	795	843
8	---	---	---	---	---	---	1360	1270	1310	950	860	895
9	---	---	---	---	---	---	1420	1320	1350	1010	948	984
10	---	---	---	---	---	---	1460	1310	1360	1040	967	993
11	---	---	---	---	---	---	1420	1310	1370	1200	1020	1070
12	1910	1780	1850	---	---	---	1620	1420	1510	1190	1090	1130
13	1940	1770	1820	---	---	---	1530	1270	1410	1150	938	1070
14	1890	1770	1820	---	---	---	1510	1330	1420	1310	970	1180
15	1870	1750	1800	---	---	---	1520	1290	1390	---	---	---
16	1930	1820	1870	---	---	---	1360	1280	1310	---	---	---
17	1970	1810	1910	---	---	---	1430	1280	1360	---	---	---
18	1980	1810	1880	---	---	---	1420	1310	1370	---	---	---
19	1980	1880	1920	---	---	---	1560	1390	1470	---	---	---
20	2080	1910	1950	---	---	---	1620	1330	1480	---	---	---
21	---	---	---	---	---	---	1520	1330	1400	---	---	---
22	---	---	---	---	---	---	1460	921	1350	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	1810	801	1130	---	---	---
26	---	---	---	---	---	---	1140	1080	1110	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	1430	1270	1350	---	---	---
30	---	---	---	---	---	---	1410	1340	1360	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.0	20.0	21.5	15.5	14.0	15.0	10.0	9.0	9.5	6.0	4.5	5.0
2	24.0	21.5	22.5	---	---	---	9.5	9.0	9.5	7.0	5.5	6.0
3	24.5	21.5	23.0	---	---	---	9.5	7.5	9.0	7.5	6.5	7.0
4	24.5	21.5	22.5	14.0	12.0	13.0	---	---	---	---	---	---
5	24.5	20.5	22.5	14.0	12.5	13.5	---	---	---	6.0	2.5	5.5
6	24.5	21.5	23.0	12.5	12.0	12.5	6.5	3.0	5.5	6.0	5.0	6.0
7	23.0	21.5	22.5	12.5	11.5	12.0	6.0	4.5	5.5	5.5	4.5	5.0
8	22.5	22.0	22.0	13.5	11.5	12.5	7.5	5.0	6.0	6.0	4.5	5.5
9	23.0	20.0	22.5	13.0	12.0	12.5	9.5	7.5	8.0	6.0	5.5	6.0
10	24.0	21.5	22.5	12.0	10.5	11.0	8.5	6.5	7.5	5.5	4.5	5.0
11	23.5	21.5	22.5	11.5	10.0	10.5	7.5	6.5	7.0	5.5	4.5	5.0
12	22.5	21.0	21.5	11.0	9.5	10.5	7.0	5.5	6.5	6.0	4.5	5.5
13	22.0	20.0	21.0	11.0	10.0	10.5	7.5	5.5	6.5	5.5	1.0	4.0
14	---	---	---	10.5	9.0	10.0	8.0	6.0	7.0	5.5	5.0	5.0
15	22.0	20.5	21.0	9.5	8.5	9.0	8.0	6.0	7.0	5.5	4.0	5.0
16	21.5	20.0	20.5	10.0	8.0	9.0	8.0	6.5	7.0	6.0	4.5	5.0
17	20.5	17.5	19.5	9.5	7.5	9.0	8.0	6.5	7.0	6.0	5.0	5.5
18	20.0	18.0	19.0	11.0	8.5	9.5	8.0	6.5	7.5	6.0	4.5	5.5
19	20.0	18.0	18.5	10.5	9.0	9.5	8.5	7.0	7.5	5.5	4.0	4.5
20	19.0	17.5	18.5	10.0	9.5	9.5	8.0	6.0	6.5	5.5	3.5	4.5
21	18.5	17.0	17.5	10.0	9.0	9.5	6.5	6.0	6.0	5.0	3.5	4.5
22	18.5	16.5	17.5	9.5	8.0	9.0	6.5	4.5	6.0	4.5	3.5	4.0
23	17.5	16.5	17.0	10.0	8.0	9.5	6.0	4.5	5.5	5.0	3.0	4.0
24	17.5	17.0	17.0	11.0	9.0	10.0	6.0	4.5	5.5	5.5	3.0	4.0
25	17.0	16.0	17.0	---	---	---	6.5	5.0	6.0	5.5	4.0	4.5
26	---	---	---	---	---	---	6.5	4.5	5.5	5.5	3.0	4.5
27	---	---	---	---	---	---	6.5	5.0	5.5	6.0	3.5	4.5
28	15.0	13.5	14.0	---	---	---	6.0	5.0	5.5	6.5	4.0	5.0
29	15.0	14.0	14.5	---	---	---	6.0	3.5	5.0	6.5	2.5	5.0
30	15.5	15.0	15.0	---	---	---	6.0	4.5	5.0	---	---	---
31	17.0	14.5	15.5	---	---	---	6.0	4.0	5.0	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	9.0	7.0	8.0	12.5	10.5	11.5	18.0	15.5	16.5
2	---	---	---	8.0	7.0	7.5	13.5	11.0	12.0	17.0	16.0	16.5
3	---	---	---	10.0	7.0	8.5	12.5	11.5	12.0	17.5	15.0	16.0
4	6.0	5.0	5.5	---	---	---	12.5	12.0	12.5	17.5	15.0	16.5
5	6.5	4.5	5.5	---	---	---	14.5	12.0	13.0	17.5	16.0	16.5
6	---	---	---	---	---	---	15.0	13.0	14.0	18.5	16.0	17.0
7	---	---	---	---	---	---	15.0	13.5	14.0	19.5	15.5	17.5
8	---	---	---	---	---	---	14.5	13.5	14.0	19.0	16.5	18.0
9	---	---	---	---	---	---	15.0	13.5	14.0	18.5	17.5	17.5
10	---	---	---	---	---	---	15.5	13.5	14.5	21.0	17.5	19.0
11	---	---	---	---	---	---	15.5	13.5	14.5	21.0	18.0	19.5
12	7.5	6.0	6.5	---	---	---	16.0	13.5	14.5	21.5	18.0	20.0
13	8.0	5.5	7.0	---	---	---	16.0	14.5	15.0	22.5	19.5	20.5
14	8.0	6.0	7.0	---	---	---	16.5	14.0	15.0	22.0	20.0	21.0
15	7.0	6.5	6.5	---	---	---	16.5	15.0	15.5	22.5	19.5	21.0
16	7.0	6.5	6.5	---	---	---	16.0	14.5	15.0	23.0	19.0	21.0
17	6.5	6.5	6.5	---	---	---	17.0	14.5	15.5	23.0	19.5	21.5
18	8.0	6.0	7.0	---	---	---	17.5	15.0	16.0	24.5	20.5	22.0
19	8.0	6.5	7.5	---	---	---	18.0	15.0	16.5	24.5	21.0	23.0
20	9.0	6.5	7.5	---	---	---	16.5	15.5	16.0	23.5	21.0	22.0
21	8.5	6.5	7.5	---	---	---	17.5	15.0	16.0	25.0	21.5	23.0
22	8.0	7.0	7.5	---	---	---	17.5	15.0	16.5	25.5	24.5	25.0
23	8.5	6.5	7.5	---	---	---	18.5	15.5	17.0	25.0	24.0	24.5
24	9.5	7.0	8.5	---	---	---	18.5	15.5	17.0	25.5	22.5	24.0
25	10.5	8.0	9.0	---	---	---	18.5	16.5	17.5	25.5	21.5	24.0
26	10.0	8.0	9.0	---	---	---	18.0	16.5	17.0	25.0	22.5	23.5
27	9.5	7.5	8.5	---	---	---	16.5	14.0	15.5	25.0	22.0	23.5
28	9.0	7.5	8.0	---	---	---	16.0	15.0	15.0	25.5	22.5	24.0
29	---	---	---	---	---	---	16.5	15.5	16.0	26.0	23.0	24.5
30	---	---	---	---	---	---	17.0	15.5	16.0	26.5	24.0	25.0
31	---	---	---	---	---	---	---	---	---	27.0	24.0	25.0
MONTH	---	---	---	---	---	---	18.5	10.5	14.9	27.0	15.0	20.9

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.0	23.5	25.5	26.5	24.5	25.5	31.0	27.5	29.0	30.0	27.5	28.5
2	28.0	24.5	26.0	29.0	25.0	26.5	31.5	29.0	30.0	31.0	27.5	29.0
3	28.0	25.0	26.5	31.0	26.5	28.5	29.5	27.5	28.0	31.0	27.5	29.5
4	26.0	23.5	24.0	30.5	27.5	29.0	29.5	27.5	28.5	31.5	28.0	30.0
5	24.0	22.5	23.0	32.0	29.0	30.5	29.0	27.0	28.0	31.5	28.5	30.0
6	26.0	22.5	24.0	32.5	29.0	31.0	29.0	26.5	28.0	30.5	27.5	29.0
7	26.0	22.5	24.5	31.0	27.0	28.5	30.0	26.5	28.5	32.0	27.5	29.5
8	24.0	21.5	23.0	31.0	27.0	28.5	29.0	27.0	28.0	30.5	27.5	28.5
9	27.5	23.5	25.5	31.0	27.5	29.0	28.5	26.5	27.5	28.0	25.0	26.5
10	26.0	24.0	25.0	31.5	28.0	29.5	27.5	27.0	27.5	27.0	23.5	25.0
11	26.5	23.5	25.0	30.0	27.5	28.0	29.0	27.0	27.5	28.0	24.0	26.0
12	27.5	23.5	25.5	31.5	27.0	28.5	30.0	26.5	28.5	27.0	25.0	26.0
13	28.5	24.0	26.0	31.0	28.0	29.5	29.5	27.0	28.5	25.0	23.5	24.5
14	27.5	24.5	26.5	31.5	28.0	29.5	30.0	26.5	28.0	27.0	24.0	25.5
15	26.5	25.0	26.0	31.0	27.5	29.5	29.5	26.5	28.5	28.5	26.0	27.0
16	27.0	23.5	25.0	30.5	27.5	29.0	30.0	27.5	28.5	28.5	26.5	27.5
17	27.0	23.5	25.5	31.5	27.5	29.5	28.5	27.0	28.0	28.5	26.0	27.0
18	28.0	24.5	26.0	32.0	27.5	29.5	---	---	---	30.0	26.0	28.0
19	28.5	24.5	26.0	32.5	28.0	30.0	32.5	28.5	30.0	29.5	26.5	28.0
20	30.5	25.0	27.5	31.0	28.0	29.5	32.5	28.0	30.0	30.0	27.0	28.5
21	29.0	25.0	27.0	32.0	28.0	29.5	32.0	28.0	29.5	29.5	28.0	28.5
22	29.5	25.5	27.5	32.0	28.0	29.5	31.0	27.5	29.0	28.0	23.0	25.0
23	30.0	25.5	27.5	31.5	28.0	29.5	31.0	28.0	29.5	24.5	22.5	23.5
24	30.0	25.0	27.0	30.5	27.5	29.0	31.5	28.0	30.0	27.0	24.5	25.5
25	30.5	25.5	27.5	31.5	27.5	29.5	32.0	28.5	30.0	29.0	25.5	27.0
26	30.0	25.5	27.5	32.5	29.5	31.0	31.5	28.5	30.0	28.0	25.5	27.0
27	30.0	26.5	28.5	33.0	29.5	31.0	31.5	28.5	30.0	29.5	26.0	27.5
28	31.0	28.5	29.5	31.0	28.0	29.0	31.5	28.5	29.5	30.5	27.5	29.0
29	32.0	27.0	29.0	31.5	28.0	29.5	31.0	28.0	29.5	30.0	26.5	28.0
30	29.0	25.5	26.5	31.0	27.5	29.0	32.0	28.0	30.0	29.5	26.0	28.0
31	---	---	---	30.0	27.0	28.5	32.0	28.5	30.0	---	---	---
MONTH	32.0	21.5	26.1	33.0	24.5	29.2	---	---	---	32.0	22.5	27.4

Discharge from airshaft site No. 4

07164600 JOE CREEK AT 61ST STREET AT TULSA, OK

LOCATION.--Lat 36°04'32", long 95°57'37", in SE ¼ SE ¼ 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 poor. U.S. Geological Survey satellite telemeter at station.

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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	2.3	2.0	.92	28	.77	3.4	2.9	1.1	294	3.9	1.0
2	2.6	1.7	22	1.3	1.9	.77	10	2.4	1.1	9.6	2.1	1.1
3	2.6	2.0	16	1.4	1.2	.80	22	2.2	.93	2.0	2.6	1.1
4	2.4	2.1	3.7	274	1.0	.80	1.8	2.0	.81	1.5	100	1.2
5	2.4	2.4	3.3	29	.97	.66	2.0	86	1.2	1.2	3.8	1.1
6	2.9	2.7	3.4	123	.80	.71	29	88	.97	1.2	1.6	.97
7	2.2	3.1	21	56	.85	625	23	10	.97	1.1	1.9	.76
8	2.0	3.1	33	104	.97	22	5.4	2.5	106	26	2.3	.85
9	2.4	12	5.0	43	.97	4.6	1.9	38	18	1.9	12	.71
10	e2.2	17	3.1	e7.6	.85	5.2	1.5	3.8	1.1	1.9	5.9	.70
11	2.0	1.8	7.2	e5.3	.70	2.6	1.8	3.4	35	63	6.2	1.1
12	e9.8	2.1	3.0	e4.4	.77	9.0	1.9	2.6	.97	20	2.7	1.0
13	e4.2	20	3.6	e3.7	.77	2.0	1.6	2.0	.98	3.2	9.5	368
14	2.0	7.0	3.1	e4.3	.77	1.6	1.5	1.9	.90	1.0	2.7	10
15	2.3	1.8	2.4	2.9	5.0	232	1.5	2.3	.77	.97	1.6	.99
16	2.2	2.1	2.4	e2.5	1.5	591	1.3	2.2	.77	.91	1.6	.77
17	1.9	2.4	2.4	e2.2	.78	137	1.2	2.2	1.0	1.1	1.7	1.3
18	2.0	2.4	2.7	e2.0	.77	14	1.4	2.0	9.0	2.1	1.4	1.0
19	2.0	2.2	2.8	e1.8	.77	218	1.2	2.2	1.8	1.4	1.2	.99
20	2.0	3.2	2.3	e1.5	.77	15	1.2	2.3	1.2	1.2	1.2	.77
21	1.7	3.5	174	e1.4	.77	7.2	1.2	2.2	65	1.2	1.3	4.4
22	1.6	2.1	7.3	e1.2	.77	5.3	1.6	2.3	.84	1.2	1.6	15
23	6.0	2.0	295	1.1	.81	4.1	1.6	2.4	.79	1.2	1.2	1.2
24	2.1	2.2	206	1.5	.82	3.6	2.1	2.4	.90	2.1	1.6	.75
25	24	2.8	6.7	13	.92	3.5	2.4	142	.85	1.6	1.8	.62
26	2.2	3.6	2.9	24	.84	3.2	136	80	1.0	1.2	1.6	e.58
27	1.6	3.1	2.1	e5.0	.77	12	697	2.0	.90	1.2	2.8	e.52
28	2.0	44	5.9	1.2	.77	2.6	11	1.4	.85	1.4	9.5	e.48
29	2.0	3.8	1.7	.97	---	2.4	5.4	1.1	.95	2.1	2.2	e.46
30	2.0	2.3	1.2	e.91	---	90	3.8	.97	139	2.0	1.2	98
31	2.3	---	1.3	27	---	15	---	.97	---	1.8	1.2	---
TOTAL	101.9	162.8	848.5	748.10	56.58	2032.41	976.7	498.64	395.65	452.28	191.9	517.42
MEAN	3.29	5.43	27.4	24.1	2.02	65.6	32.6	16.1	13.2	14.6	6.19	17.2
MAX	24	44	295	274	28	625	697	142	139	294	100	368
MIN	1.6	1.7	1.2	.91	.70	.66	1.2	.97	.77	.91	1.2	.46
AC-FT	202	323	1680	1480	112	4030	1940	989	785	897	381	1030

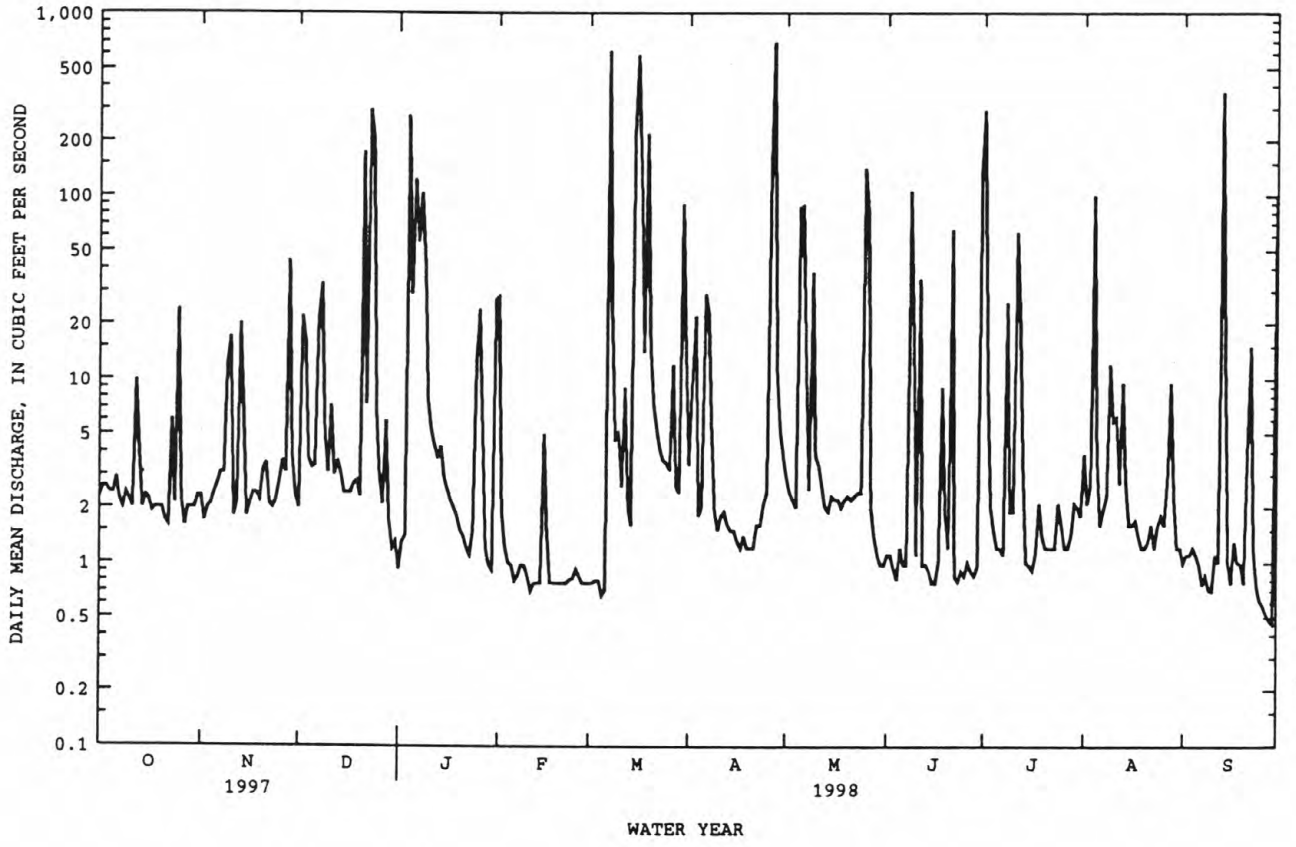
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

MEAN	13.3	21.6	15.3	10.6	15.0	25.0	30.5	36.1	28.1	16.3	14.4	20.6
MAX	32.5	54.1	45.3	24.1	37.2	65.6	52.7	107	86.9	44.6	35.2	42.6
(WY)	1992	1997	1993	1998	1997	1998	1995	1995	1995	1994	1997	1993
MIN	3.29	2.02	2.36	2.47	2.02	5.42	2.85	12.2	1.87	3.22	2.34	7.30
(WY)	1998	1990	1990	1997	1998	1996	1989	1997	1988	1990	1996	1996

e Estimated

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

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1988 - 1998	
ANNUAL TOTAL	8149.8		6982.88			
ANNUAL MEAN	22.3		19.1		21.2	
HIGHEST ANNUAL MEAN					35.2	1995
LOWEST ANNUAL MEAN					9.49	1996
HIGHEST DAILY MEAN	600	Apr 11	697	Apr 27	1010	May 7 1995
LOWEST DAILY MEAN	1.1	Jan 7	.46	Sep 29	.28	Jul 4 1996
ANNUAL SEVEN-DAY MINIMUM	1.1	Jan 24	.66	Sep 23	.59	Jun 25 1996
INSTANTANEOUS PEAK FLOW			3860	Apr 27	11100	Jun 9 1995
INSTANTANEOUS PEAK STAGE			4.86	Apr 27	9.72	Jun 9 1995
ANNUAL RUNOFF (AC-FT)	16170		13850		15340	
10 PERCENT EXCEEDS	31		26		37	
50 PERCENT EXCEEDS	2.9		2.1		2.9	
90 PERCENT EXCEEDS	1.3		.83		1.1	



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

LOCATION.--Lat 36°01'01", long 95°50'55", in NW ¼ NW ¼ 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 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.--No estimated daily discharge. Records fair. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.25	2.3	3.4	4.9	46	2.0	12	3.7	1.5	496	.45	.00
2	.12	2.4	14	4.7	6.9	2.5	8.4	2.9	1.0	17	.37	.00
3	.02	2.7	50	4.9	4.3	2.0	8.3	2.6	.70	4.1	.33	.00
4	.00	2.5	6.0	432	3.7	1.7	5.8	2.4	.62	1.4	.30	.00
5	.00	2.5	3.7	78	3.4	2.0	5.5	46	.64	.76	4.0	.00
6	.00	2.6	3.0	234	3.3	2.4	5.0	5.6	.60	.60	.56	.00
7	.00	2.7	4.7	73	3.2	730	44	28	.55	.66	.38	.00
8	3.9	2.7	104	203	3.1	107	10	3.1	19	57	.37	.00
9	11	3.3	10	103	3.0	16	5.8	16	15	3.9	35	.00
10	1.4	25	5.6	29	3.1	10	4.7	9.1	2.4	.77	2.1	.00
11	.16	3.9	4.0	13	3.0	7.9	5.1	2.2	30	20	2.5	.00
12	130	2.6	3.6	12	2.8	6.3	4.3	1.5	3.6	8.6	3.6	.00
13	41	20	3.2	9.0	2.8	6.2	3.9	1.4	1.3	1.5	6.5	167
14	2.3	15	2.9	11	3.0	5.6	4.1	1.4	.76	.62	.86	92
15	.79	4.4	2.7	8.9	4.0	95	4.1	1.5	.63	.49	.36	1.3
16	.57	2.5	2.4	6.6	6.2	657	4.3	1.7	.55	.41	.23	.40
17	.27	2.0	2.6	5.4	3.9	165	5.1	1.7	.50	.36	.12	.21
18	.18	1.8	2.5	5.0	3.1	26	3.4	1.7	10	.40	.02	.11
19	.14	1.8	3.2	4.5	2.7	225	3.2	2.4	14	.32	.00	.03
20	.14	1.6	2.9	4.4	2.7	25	3.4	2.1	1.4	.32	.00	.00
21	.12	1.7	268	4.1	2.5	14	3.3	1.9	84	.29	.00	.01
22	.03	1.4	25	4.0	2.5	11	3.3	2.0	2.6	.26	.00	27
23	.96	1.3	173	3.8	2.5	9.1	3.0	2.1	.68	.22	.00	1.9
24	3.0	1.2	651	3.6	2.7	8.4	3.1	1.9	.49	.18	.00	.44
25	58	1.7	20	3.6	2.7	7.2	3.0	209	.40	.16	.00	.26
26	9.1	1.8	9.6	15	2.7	6.7	18	138	.31	.17	.00	.12
27	2.3	1.8	6.9	5.6	2.3	7.8	585	7.4	.27	.16	.00	.08
28	1.8	82	6.2	3.9	2.1	8.0	20	2.6	.27	.14	.03	.01
29	1.3	34	7.1	3.7	---	5.8	7.5	1.7	.27	.59	.08	.00
30	1.1	5.0	5.6	3.4	---	122	5.2	1.2	122	1.3	.02	.00
31	1.5	---	5.4	3.3	---	87	---	1.1	---	.63	.04	---
TOTAL	271.45	236.2	1412.2	1300.3	134.2	2381.6	801.8	505.9	316.04	619.31	58.22	290.87
MEAN	8.76	7.87	45.6	41.9	4.79	76.8	26.7	16.3	10.5	20.0	1.88	9.70
MAX	130	82	651	432	46	730	585	209	122	496	35	167
MIN	.00	1.2	2.4	3.3	2.1	1.7	3.0	1.1	.27	.14	.00	.00
AC-FT	538	469	2800	2580	266	4720	1590	1000	627	1230	115	577

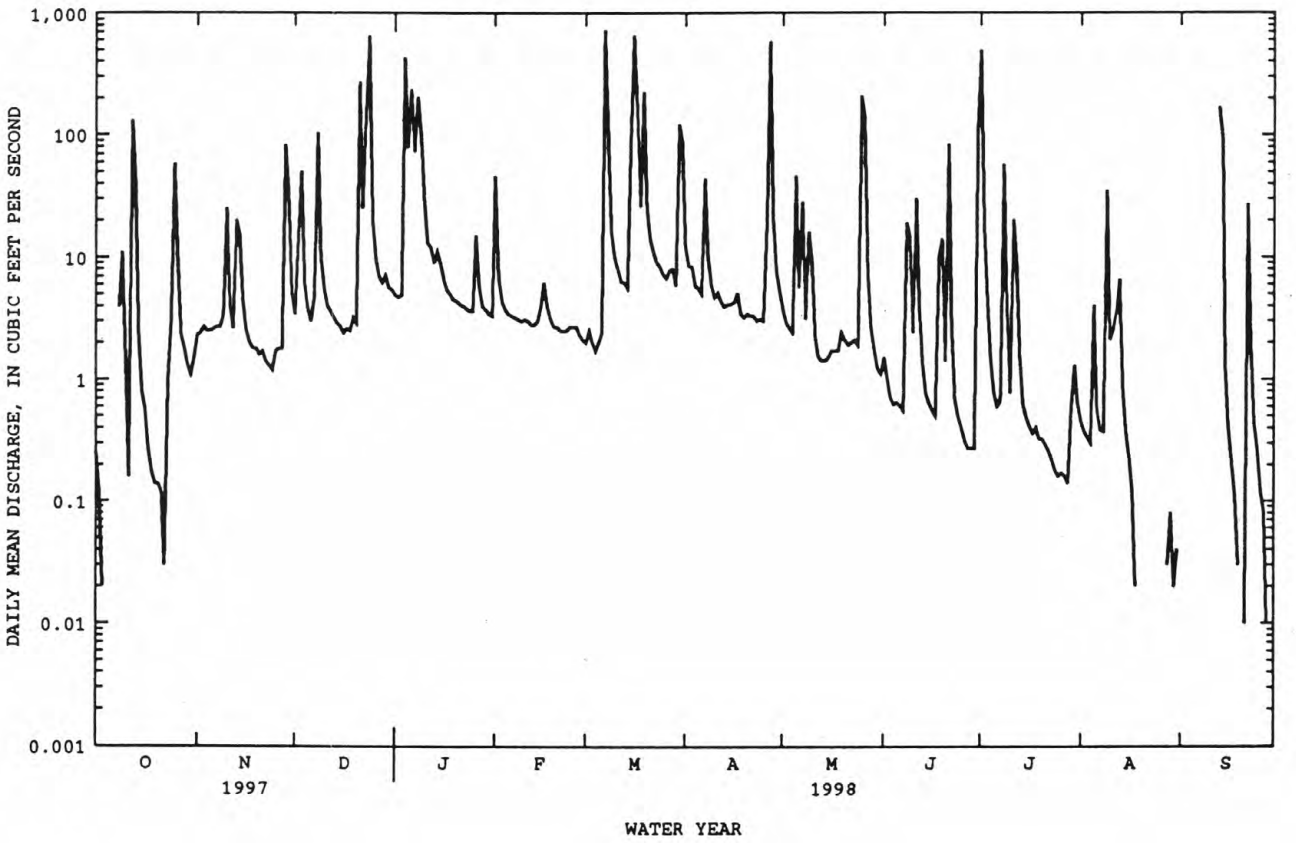
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1998, BY WATER YEAR (WY)

MEAN	15.9	25.6	21.5	14.0	17.8	34.9	35.5	32.2	33.0	21.2	13.1	21.1
MAX	47.0	68.2	62.3	41.9	38.7	120	82.3	67.3	97.2	72.3	49.6	54.3
(WY)	1992	1995	1993	1998	1993	1990	1990	1993	1995	1994	1989	1993
MIN	.74	.39	1.67	1.59	.65	6.22	5.07	13.5	3.63	.47	.36	9.70
(WY)	1989	1996	1990	1997	1996	1991	1989	1996	1990	1990	1991	1998

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

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1989 - 1998	
ANNUAL TOTAL	8018.81		8328.09			
ANNUAL MEAN	22.0		22.8		23.8	
HIGHEST ANNUAL MEAN					33.8	1995
LOWEST ANNUAL MEAN					11.0	1991
HIGHEST DAILY MEAN	651	Dec 24	730	Mar 7	1620	Mar 14 1990
LOWEST DAILY MEAN	.00	Sep 5	.00	at times	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 5	.00	Aug 19	.00	Oct 12 1988
INSTANTANEOUS PEAK FLOW			2230	Mar 7	6470	Apr 10 1995
INSTANTANEOUS PEAK STAGE			15.88	Mar 7	[a]17.42	Apr 10 1995
ANNUAL RUNOFF (AC-FT)	15910		16520		17250	
10 PERCENT EXCEEDS	37		34		40	
50 PERCENT EXCEEDS	3.0		2.7		2.5	
90 PERCENT EXCEEDS	.26		.04		.00	

[a]From high-water mark.



07165565 LITTLE HAIKEY CREEK AT 101ST STREET SOUTH AT TULSA, OK

LOCATION.--Lat 36°01'03", long 95°51'38", in SE ¼ SW ¼ 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 fair. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.44	.58	1.1	1.9	19	e.90	4.8	3.1	1.4	193	.00	.00
2	.29	.85	8.5	1.8	4.0	e1.2	2.8	2.4	.96	38	.02	.00
3	.22	.39	18	1.8	2.8	e1.0	4.5	2.2	.68	4.8	.00	.00
4	.23	.52	2.4	108	3.0	e.90	2.9	1.8	.38	2.9	.00	.00
5	.30	.46	1.3	21	2.3	e1.2	2.0	18	.21	1.5	1.4	.00
6	.31	.25	1.0	57	1.6	e1.6	2.3	13	.18	1.0	.15	.30
7	.40	.26	3.8	29	e1.5	e200	23	13	.18	.78	.02	.14
8	10	.28	31	54	e1.4	e20	5.8	3.4	10	18	.00	.10
9	9.8	.40	5.4	32	e1.4	e9.0	2.6	12	5.8	1.9	.69	.00
10	.83	12	2.3	15	e1.4	e4.1	2.0	6.4	.97	.86	1.3	.00
11	.41	1.1	1.6	8.8	e1.4	e3.0	1.7	2.5	10	12	1.3	.00
12	55	.56	1.4	8.0	e1.2	2.0	1.6	1.9	1.3	5.9	.30	.00
13	12	10	1.2	5.6	e1.2	e1.9	1.4	1.3	.59	1.3	.10	70
14	1.8	7.8	1.1	7.3	e1.4	e1.9	1.2	1.1	.42	.71	.11	20
15	.83	1.4	1.0	5.2	e2.0	e20	1.2	.96	.34	.47	.06	2.8
16	.54	.64	1.0	4.1	e4.0	e178	1.0	1.1	.33	.30	.00	.79
17	.52	.64	1.0	3.2	e2.9	e49	1.0	.85	.27	.23	.00	.55
18	.51	.50	1.0	3.1	e1.8	e15	1.1	.92	13	.26	.00	.24
19	.47	.48	.85	2.8	e1.6	e62	.94	1.1	4.8	.25	.00	.18
20	.64	.48	.90	2.6	e1.6	13	1.1	.80	.85	.22	.00	.09
21	.39	.55	67	2.2	e1.6	6.3	1.1	.58	20	.16	.00	.38
22	.34	.72	12	2.1	e1.6	4.7	.77	.71	2.0	.13	.00	8.3
23	1.3	.74	106	1.9	e1.6	5.1	.87	.79	.73	.31	.00	2.2
24	1.5	.74	120	1.9	e1.9	3.8	.81	.91	.46	.41	.00	.46
25	13	.84	11	1.9	e1.8	2.9	.72	60	.26	.10	.00	.49
26	2.8	.79	5.5	12	e1.8	2.4	12	41	.19	.02	.00	.17
27	.70	.96	3.8	3.3	e1.3	4.2	209	4.6	.17	.00	.00	.06
28	.65	30	4.3	2.3	e1.0	2.9	13	1.6	.14	.00	.01	.01
29	.66	5.5	4.6	2.0	---	2.2	5.5	1.1	.10	.00	.98	.00
30	.49	1.4	2.6	1.9	---	24	3.7	.73	45	.00	.07	.00
31	.46	---	2.2	2.8	---	17	---	.58	---	.00	.00	---
TOTAL	117.83	81.83	424.85	406.5	70.1	661.20	312.41	200.43	121.71	285.51	6.51	107.26
MEAN	3.80	2.73	13.7	13.1	2.50	21.3	10.4	6.47	4.06	9.21	.21	3.58
MAX	55	30	120	108	19	200	209	60	45	193	1.4	70
MIN	.22	.25	.85	1.8	1.0	.90	.72	.58	.10	.00	.00	.00
AC-FT	234	162	843	806	139	1310	620	398	241	566	13	213

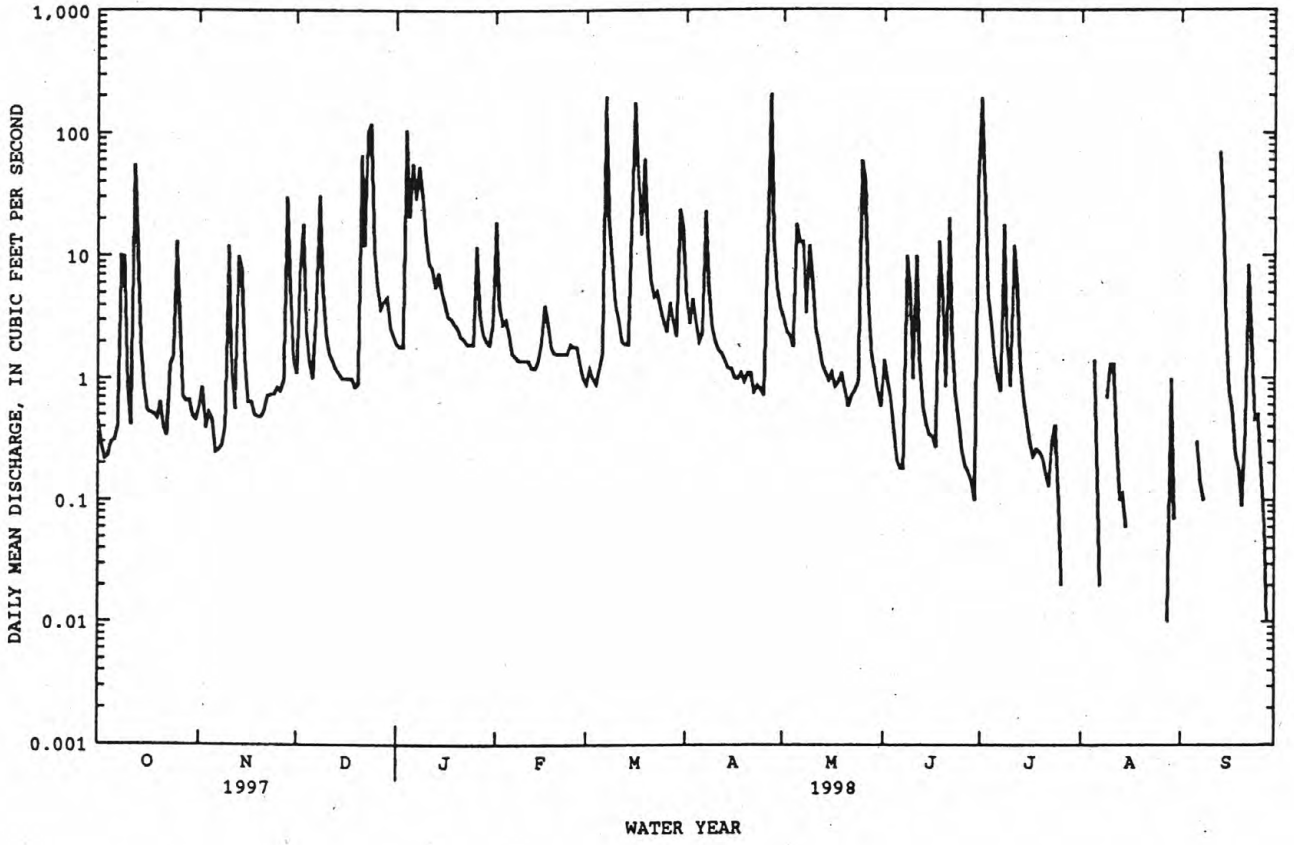
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

MEAN	4.39	8.83	7.44	3.61	4.91	11.0	10.0	12.0	9.35	5.59	4.14	6.51
MAX	11.8	32.9	19.9	13.1	11.5	28.3	19.2	45.2	42.1	17.4	15.4	15.2
(WY)	1992	1995	1993	1998	1997	1990	1995	1995	1995	1994	1997	1993
MIN	.12	.15	.40	.27	.12	1.61	1.44	3.00	.15	.042	.21	2.02
(WY)	1989	1996	1990	1997	1996	1991	1989	1988	1988	1990	1998	1992

e Estimated

07165565 LITTLE HAIKEY CREEK AT 101ST STREET SOUTH AT TULSA, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1988 - 1998	
ANNUAL TOTAL	2910.01		2796.14			
ANNUAL MEAN	7.97		7.66		7.32	
HIGHEST ANNUAL MEAN					15.7	1995
LOWEST ANNUAL MEAN					2.73	1991
HIGHEST DAILY MEAN	328	Aug 18	209	Apr 27	374	Mar 14 1990
LOWEST DAILY MEAN	.00	Jun 1	.00	at times	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 3	.00	Aug 16	.00	Sep 5 1988
INSTANTANEOUS PEAK FLOW			1150	Jul 1	1930	Jun 29 1995
INSTANTANEOUS PEAK STAGE			15.43	Jul 1	16.82	Jun 29 1995
ANNUAL RUNOFF (AC-FT)	5770		5550		5300	
10 PERCENT EXCEEDS	13		14		13	
50 PERCENT EXCEEDS	.79		1.2		.79	
90 PERCENT EXCEEDS	.09		.02		.00	



07165570 ARKANSAS RIVER NEAR HASKELL, OK

LOCATION.--Lat 35°49'15", long 95°38'19", in SW ¼ NW ¼ 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 poor. 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17300	6160	2010	24100	15200	14000	33900	43200	21600	5260	2800	556
2	14700	3290	2120	25300	16100	14100	36100	43500	21800	8880	1780	1470
3	15800	1940	2140	26700	14800	13900	36600	42600	15400	3240	751	1370
4	14700	4950	2450	32300	14400	13500	36100	40000	9940	2200	2280	1680
5	10600	7550	1870	33400	14200	13500	35400	29800	9790	1620	1990	1410
6	7440	6530	1300	27300	12700	10600	34900	24800	10000	820	1570	955
7	8310	7240	1610	39100	4200	11200	35000	29000	10200	2840	1510	1390
8	8040	7130	1490	45100	2600	17500	36500	29500	9720	3790	1590	1630
9	7520	5810	3650	28200	2140	10000	36800	26300	9500	5380	1450	1490
10	9170	4820	5190	28800	1930	16400	36200	25300	8710	7170	738	499
11	10100	6090	7070	31800	1790	16100	36300	24700	9090	8460	930	352
12	10000	5350	7730	30400	7470	15700	35900	27200	8890	5320	1690	321
13	12900	6700	7550	26100	13400	12700	35700	28000	8320	4990	1410	1050
14	12600	6170	4790	24700	13300	13000	35600	24600	5170	7980	1730	1770
15	13800	4950	4600	24200	13300	4180	35300	18300	1800	12400	2520	849
16	22400	5810	5590	23600	13400	9570	28900	14500	2690	10900	1680	925
17	24100	5310	4370	22800	13400	32500	26200	14100	8340	8150	630	493
18	21900	5350	5120	23200	13400	38800	23700	14000	8060	8990	1180	779
19	18400	5740	6100	23000	13500	67300	22300	7640	6800	5340	2480	1210
20	18300	4400	6560	23000	13500	70500	21700	13300	7230	4210	3400	936
21	16300	2300	3260	18300	13600	67600	21100	9470	4420	7120	3320	452
22	15500	1990	5240	15200	13700	67400	20400	3010	3650	4340	3220	345
23	15500	2070	5700	14900	13700	66000	18000	1380	5280	4030	1880	694
24	13800	1730	20000	14900	13900	51700	15200	931	3340	4570	1160	439
25	13700	1980	16700	14800	14100	42300	e13500	1570	3730	3450	2170	651
26	7050	2120	9780	13400	14000	38900	e13000	2800	3410	1830	3040	411
27	3980	1280	15800	13500	14200	30900	25600	7590	1870	764	1990	734
28	6720	2390	14900	14900	14000	28800	27900	16600	1330	1840	1620	419
29	6600	2480	14600	15000	---	28100	31700	22200	2770	3310	1140	306
30	7500	2570	16100	14900	---	27900	41600	21900	3250	3220	1110	500
31	6970	---	24400	14700	---	28400	---	21800	---	3190	536	---
TOTAL	391700	132200	229790	727600	325930	893050	887100	629591	226100	155604	55295	26086
MEAN	12640	4407	7413	23470	11640	28810	29570	20310	7537	5019	1784	870
MAX	24100	7550	24400	45100	16100	70500	41600	43500	21800	12400	3400	1770
MIN	3980	1280	1300	13400	1790	4180	13000	931	1330	764	536	306
AC-FT	776900	262200	455800	1443000	646500	1771000	1760000	1249000	448500	308600	109700	51740

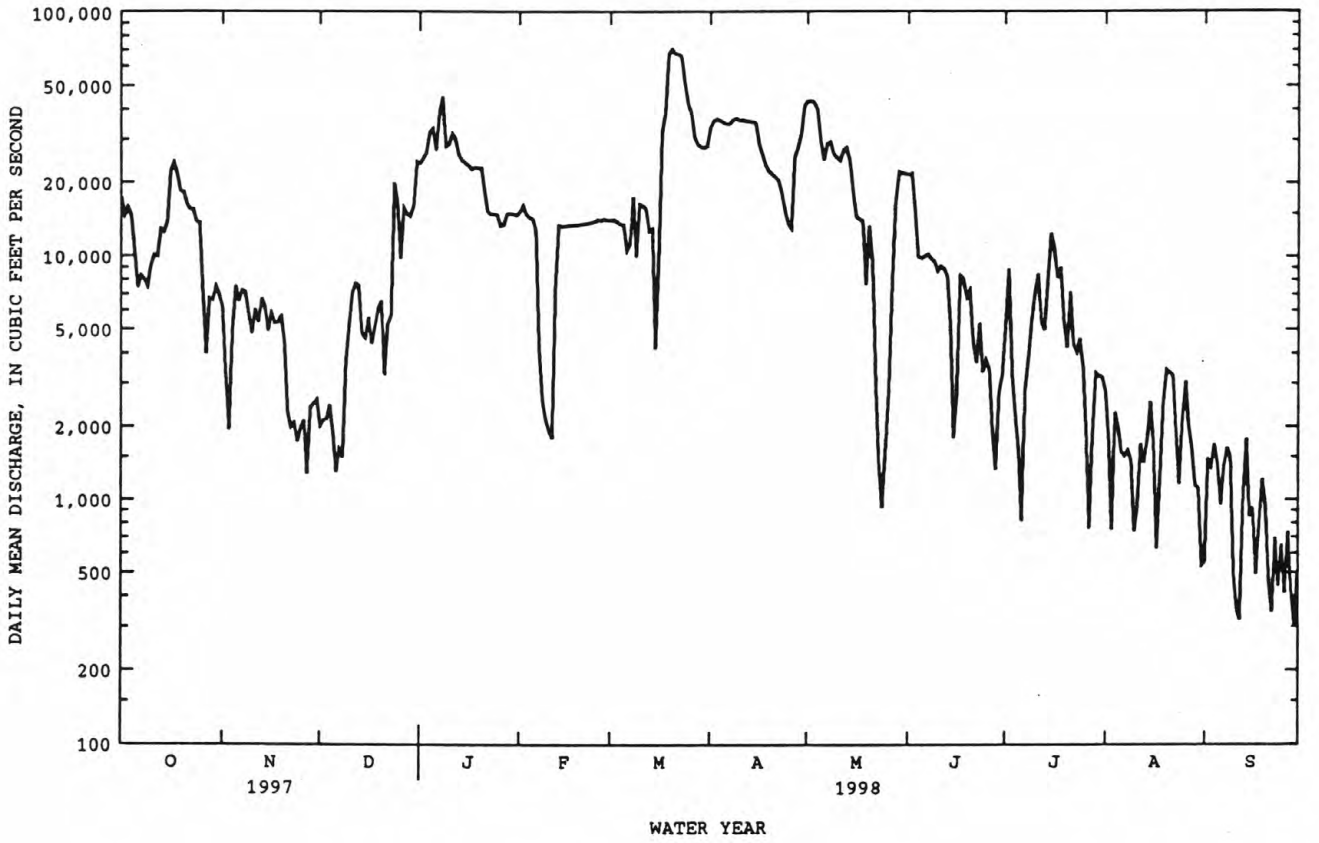
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1978, BY WATER YEAR (WY)

MEAN	10770	11510	5110	6644	8130	15970	13880	15900	18490	7097	4307	6267
MAX	49860	42220	14070	12090	19230	39330	46910	29560	40940	9362	5688	13680
(WY)	1974	1975	1974	1973	1975	1973	1973	1973	1975	1977	1977	1977
MIN	1184	1097	991	1245	549	722	638	8408	6513	3611	1878	1263
(WY)	1977	1977	1977	1977	1977	1977	1977	1976	1976	1973	1978	1976

e Estimated

07165570 ARKANSAS RIVER NEAR HASKELL, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1973 - 1978	
ANNUAL TOTAL	4675870		4680046			
ANNUAL MEAN	12810		12820		10330	
HIGHEST ANNUAL MEAN					16940	1974
LOWEST ANNUAL MEAN					3675	1976
HIGHEST DAILY MEAN	47500	Apr 16	70500	Mar 20	101000	Nov 7 1974
LOWEST DAILY MEAN	1280	Feb 3	306	Sep 29	193	Feb 26 1977
ANNUAL SEVEN-DAY MINIMUM	1850	Dec 2	494	Sep 24	369	Feb 25 1977
INSTANTANEOUS PEAK FLOW			75100	Mar 19	259000	Oct 5 1986
INSTANTANEOUS PEAK STAGE			14.96	Mar 19	22.82	Oct 5 1986
ANNUAL RUNOFF (AC-FT)	9275000		9283000		7486000	
10 PERCENT EXCEEDS	28300		31200		26400	
50 PERCENT EXCEEDS	9670		8460		6140	
90 PERCENT EXCEEDS	2920		1320		760	



07171000 VERDIGRIS RIVER NEAR LENAPAH, OK

LOCATION.--Lat 36°51'04", long 95°35'09", NE ¼, SW ¼, 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, 5.5 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	202	490	6400	753	488	10800	5270	296	44	945	42
2	78	268	e400	6240	743	749	9450	5750	277	43	1010	40
3	67	257	365	6140	718	823	8170	5430	264	262	1300	35
4	59	198	802	12600	699	786	8000	5170	245	187	1340	31
5	55	135	1290	19700	722	531	7400	4990	216	125	1260	29
6	52	100	1430	18000	820	349	7070	5370	156	90	1070	28
7	49	80	1520	11500	1070	794	7060	6410	114	75	1040	30
8	49	67	2830	8460	1050	4040	7190	5340	103	208	847	30
9	50	62	3660	8290	865	4210	6770	5020	640	116	377	27
10	54	59	2900	5210	815	2600	5690	5600	1370	78	202	24
11	52	54	2110	4340	823	2160	5190	3760	575	118	138	20
12	60	51	1180	4140	821	2520	3180	3580	1250	504	97	18
13	345	53	750	3930	810	2420	2190	3470	679	812	77	36
14	571	56	523	3730	789	2370	2120	2810	420	515	69	1200
15	446	55	671	3610	771	2040	1490	2350	350	374	65	1740
16	339	55	934	3500	711	8990	1090	2060	374	311	61	1150
17	236	56	1050	3300	689	21700	923	1350	395	240	56	515
18	169	54	1170	2780	681	18600	881	967	362	148	51	265
19	124	55	1170	2330	672	16800	1100	901	340	103	44	162
20	97	55	1130	2270	648	21400	1340	841	311	82	37	113
21	81	54	1880	1780	641	16700	1330	736	241	80	32	92
22	91	55	5820	1620	733	12600	1310	534	226	139	30	110
23	162	56	5150	1600	781	9670	1200	354	271	147	27	141
24	180	e57	15000	1460	773	8150	762	287	277	145	25	139
25	240	e58	16300	1470	762	7680	559	1460	172	148	23	380
26	682	59	12300	1520	697	7490	815	1420	113	151	22	1030
27	750	57	6370	1570	584	7350	11200	853	79	166	26	1410
28	468	149	4750	1610	611	7370	18900	570	62	210	26	1670
29	345	548	4490	1550	---	7210	8550	415	51	453	32	753
30	248	665	4540	1150	---	7120	4820	356	44	316	45	469
31	192	---	5840	788	---	9470	---	321	---	490	46	---
TOTAL	6480	3730	108815	152588	21252	215180	146550	83745	10273	6880	10420	11729
MEAN	209	124	3510	4922	759	6941	4885	2701	342	222	336	391
MAX	750	665	16300	19700	1070	21700	18900	6410	1370	812	1340	1740
MIN	49	51	365	788	584	349	559	287	44	43	22	18
AC-FT	12850	7400	215800	302700	42150	426800	290700	166100	20380	13650	20670	23260

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1998, BY WATER YEAR (WY)

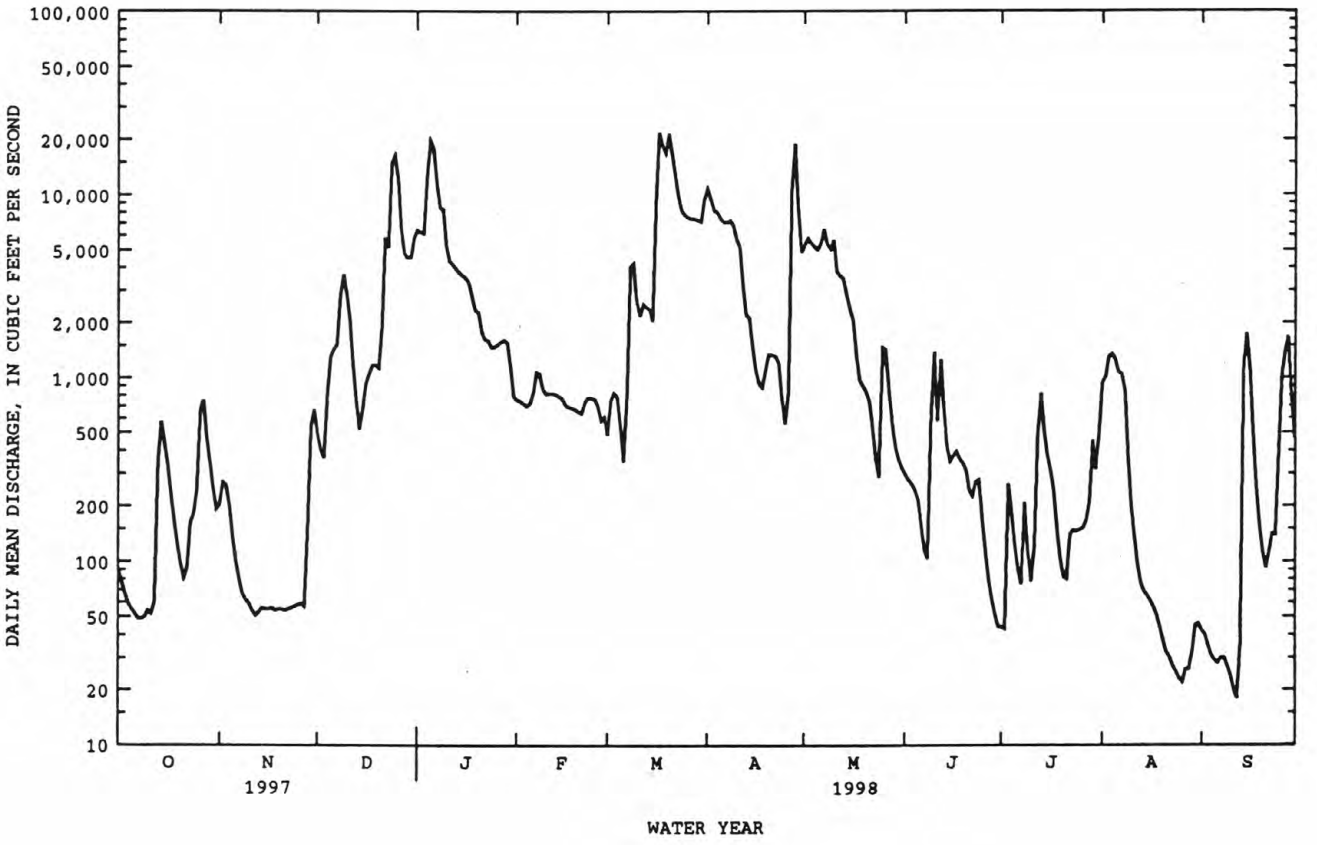
MEAN	2170	2839	2005	1751	2199	4291	4179	4172	4930	2217	879	1105
MAX	27970	15440	11000	7998	8983	17130	16300	12540	19160	13920	5364	5614
(WY)	1987	1975	1993	1973	1985	1973	1988	1994	1995	1976	1985	1989
MIN	15.5	20.0	29.2	17.6	20.0	19.7	30.2	366	84.3	17.9	16.1	9.99
(WY)	1981	1981	1967	1981	1981	1981	1981	1992	1972	1980	1983	1980

e Estimated

07171000 VERDIGRIS RIVER NEAR LENAPAH, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1967 - 1998	
ANNUAL TOTAL	802358		777642			
ANNUAL MEAN	2198		2131		[a]2726	
HIGHEST ANNUAL MEAN					5906	1987
LOWEST ANNUAL MEAN					301	1996
HIGHEST DAILY MEAN	27200	Feb 22	21700	Mar 17	76200	Oct 5 1986
LOWEST DAILY MEAN	49	Oct 7	18	Sep 12	[b]5.5	Sep 30 1980
ANNUAL SEVEN-DAY MINIMUM	52	Oct 5	25	Sep 6	5.7	Sep 26 1980
INSTANTANEOUS PEAK FLOW			22500	Mar 17	[c]78400	Jul 4 1976
INSTANTANEOUS PEAK STAGE			23.15	Mar 17	[d]38.60	Jul 4 1976
ANNUAL RUNOFF (AC-FT)	1591000		1542000		1975000	
10 PERCENT EXCEEDS	6630		6890		8530	
50 PERCENT EXCEEDS	679		672		615	
90 PERCENT EXCEEDS	62		52		38	

[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).



07174400 CANEY RIVER ABOVE COON CREEK AT BARTLESVILLE, OK

LOCATION.--Lat 36°45'20", long 95°58'19", in NE ¼ NE ¼ 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 68.7.

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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	342	251	37	2970	168	99	7310	5980	484	47	36	29
2	336	274	203	3170	171	99	7450	6660	229	32	34	28
3	106	273	334	4870	343	99	7350	6440	81	35	33	30
4	60	273	473	6250	442	102	7050	6350	35	36	32	e29
5	60	107	547	3090	675	102	6910	6250	31	36	33	e29
6	60	38	809	1550	689	103	6730	6230	37	35	34	e28
7	52	36	880	5180	452	232	5110	5610	e40	41	35	e29
8	42	36	986	6440	411	1160	4620	2520	42	121	36	29
9	60	38	980	6380	399	448	4410	1850	43	120	36	25
10	48	39	1090	6140	193	855	3170	2110	42	53	34	27
11	45	39	2190	6030	155	1500	2970	3800	120	414	35	32
12	83	39	2010	5960	159	1620	2950	1440	114	408	36	33
13	143	41	382	5880	158	1550	2670	499	51	255	36	85
14	64	40	241	5790	156	1530	800	424	40	224	37	99
15	397	37	247	5670	162	1530	697	385	36	225	34	55
16	625	37	790	4970	164	4370	843	294	36	222	34	31
17	613	37	874	1830	164	7390	832	313	36	122	37	24
18	272	37	460	1190	163	1620	447	305	36	98	38	32
19	196	37	406	1180	168	5380	259	303	35	103	37	34
20	200	37	95	1170	372	5040	255	247	34	99	39	36
21	200	37	114	1160	420	4500	356	242	33	53	38	35
22	105	36	365	1160	418	7100	385	244	33	35	39	43
23	73	36	2110	1070	409	7630	386	180	28	38	37	34
24	76	36	4500	725	248	7580	385	142	30	37	36	e33
25	82	35	3330	699	206	7480	384	315	36	38	40	e31
26	60	36	2830	699	206	7540	515	362	34	39	47	e29
27	42	35	3120	696	201	7550	5030	1360	32	37	51	e28
28	38	47	3110	696	117	7500	3910	1570	32	37	e45	e26
29	116	43	3090	690	---	7400	1380	1420	e31	45	42	e25
30	211	40	3060	671	---	7310	5620	585	32	42	38	e26
31	215	---	3020	244	---	6840	---	507	---	36	30	---
TOTAL	5022	2127	42683	94220	7989	113259	91184	64937	1923	3163	1149	1054
MEAN	162	70.9	1377	3039	285	3654	3039	2095	64.1	102	37.1	35.1
MAX	625	274	4500	6440	689	7630	7450	6660	484	414	51	99
MIN	38	35	37	244	117	99	255	142	28	32	30	24
AC-FT	9960	4220	84660	186900	15850	224600	180900	128800	3810	6270	2280	2090

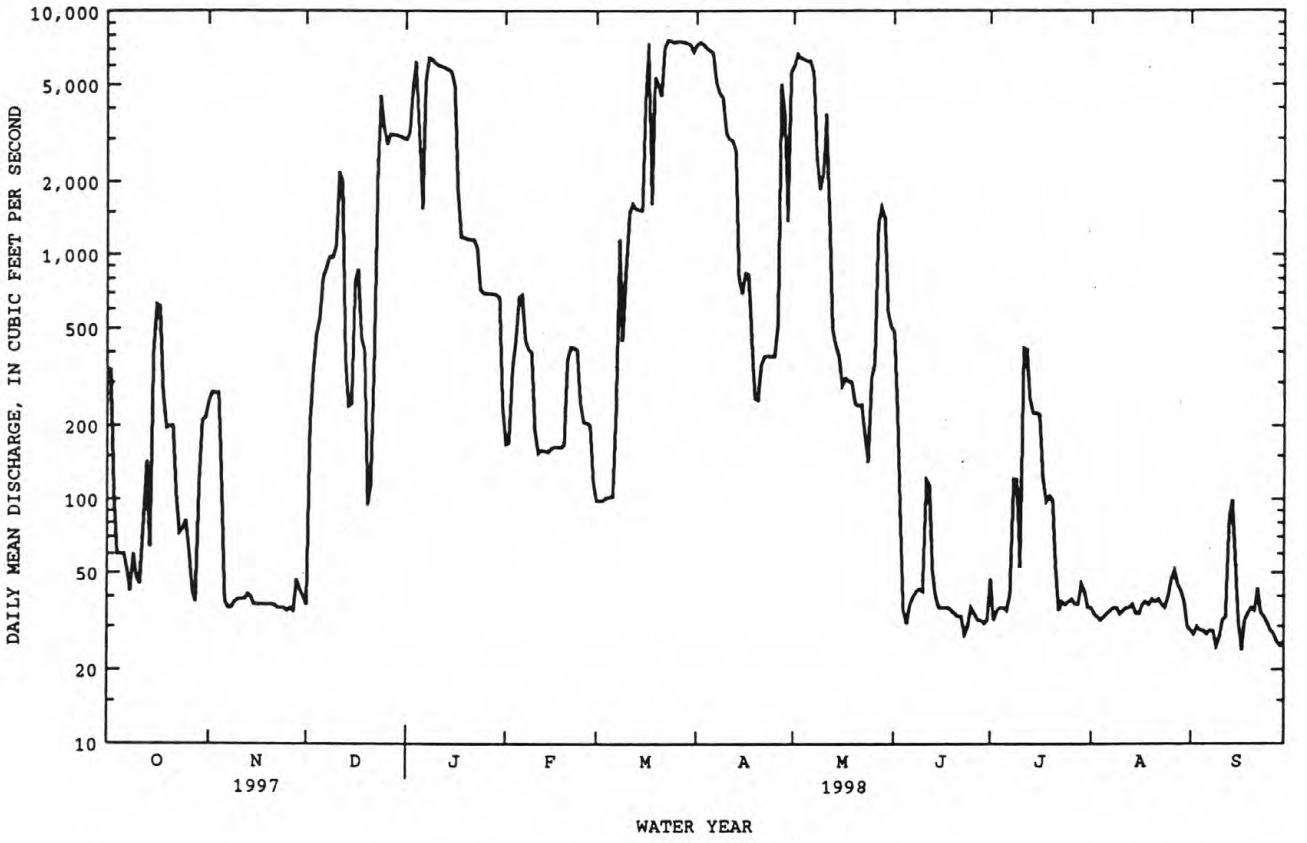
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1998, BY WATER YEAR (WY)

MEAN	1441	1020	947	982	698	1763	1800	1905	2199	1178	230	382
MAX	14800	3096	2663	4075	2721	4606	5185	5054	4590	6486	1448	2635
(WY)	1987	1987	1987	1993	1987	1990	1988	1993	1995	1995	1995	1989
MIN	13.2	30.7	27.7	27.4	24.7	23.2	46.2	31.1	46.5	29.4	22.5	12.8
(WY)	1988	1996	1991	1991	1996	1996	1996	1996	1996	1988	1988	1987

e Estimated

07174400 CANEY RIVER ABOVE COON CREEK AT BARTLESVILLE, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1986 - 1998	
ANNUAL TOTAL	389990.0		428710			
ANNUAL MEAN	1068		1175		1215	
HIGHEST ANNUAL MEAN					2888	1987
LOWEST ANNUAL MEAN					43.7	1996
HIGHEST DAILY MEAN	9060	Feb 21	7630	Mar 23	64900	Oct 5 1986
LOWEST DAILY MEAN	5.7	Feb 1	24	Sep 17	5.7	Feb 1 1997
ANNUAL SEVEN-DAY MINIMUM	6.1	Jan 31	28	Sep 4	6.1	Jan 31 1997
INSTANTANEOUS PEAK FLOW			9110	Mar 17	94500	Oct 4 1986
INSTANTANEOUS PEAK STAGE			9.66	Mar 17	27.70	Oct 4 1986
ANNUAL RUNOFF (AC-FT)	773500		850300		879900	
10 PERCENT EXCEEDS	4290		5140		4200	
50 PERCENT EXCEEDS	200		180		150	
90 PERCENT EXCEEDS	30		34		25	



07175500 CANEY RIVER NEAR RAMONA, OK

LOCATION.--Lat 36°30'32", long 95°50'30", in NE ¼ NW ¼ 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.

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.--Records poor. 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e370	e245	306	e3070	310	236	e7400	5400	881	e54	e51	45
2	e390	e276	192	e3000	290	211	e7450	5950	823	e69	e50	44
3	e381	e298	729	e3240	343	220	e7500	6640	e456	e55	e47	45
4	e140	e295	805	7570	436	233	e7400	6600	e287	e57	45	44
5	e84	e294	626	11600	480	235	e7200	6560	e219	e57	e46	43
6	e80	135	e575	9610	e691	233	e7000	6580	e166	e54	e43	39
7	75	73	e821	5980	e704	1220	e6800	6470	e160	e50	e44	37
8	74	57	1630	7340	e481	5900	e6000	5000	e153	e55	e47	36
9	64	53	1910	8840	e433	2500	e5500	2330	e144	e206	e43	37
10	71	53	1570	6990	e427	e1400	e5000	2430	e189	e420	e46	40
11	82	57	1430	e6280	e286	e1800	e4000	3030	e203	e674	e48	41
12	77	56	e2300	e6120	e252	e2500	e3600	3200	e281	e1160	e49	43
13	439	57	e2250	e6050	280	e2600	e3550	1360	e176	e1030	e49	64
14	483	61	423	e5920	e276	e2500	e2700	761	e121	e825	e50	462
15	286	69	342	e5810	e280	e2700	e850	675	e99	e470	e49	337
16	554	63	379	e5700	273	e8000	e860	571	e85	e350	e48	175
17	e650	58	e825	e5000	284	e12000	e850	570	e76	342	e48	121
18	e600	55	e1000	e1850	e279	e13000	e845	571	e71	235	e46	89
19	364	54	e600	e1220	e281	e11000	e450	554	e68	230	e45	71
20	254	56	e480	e1200	e286	e11500	300	550	e65	240	46	64
21	232	55	633	e1190	459	e8000	324	491	e61	e209	45	58
22	205	52	2850	e1180	475	e6000	390	519	e59	e160	45	74
23	140	52	2130	e1170	471	e7500	449	483	e68	e118	43	124
24	106	52	7960	e1110	460	e8000	537	448	e62	e81	43	93
25	108	52	10100	e790	343	e7800	543	556	e57	e72	41	78
26	358	50	5170	883	312	e7600	884	3070	e55	e67	43	67
27	267	48	2940	859	309	e7650	7650	1750	e54	e63	49	61
28	161	198	e3310	742	295	e7600	12800	2020	e53	e56	58	60
29	126	1410	e3200	702	---	e7590	10600	1900	e55	e52	53	59
30	150	631	e3140	e710	---	e7550	4810	1540	e52	e60	48	60
31	e224	---	e3100	e690	---	e7500	---	929	---	e55	45	---
TOTAL	7595	4965	63726	122416	10496	162778	124242	79508	5299	7626	1453	2611
MEAN	245	166	2056	3949	375	5251	4141	2565	177	246	46.9	87.0
MAX	650	1410	10100	11600	704	13000	12800	6640	881	1160	58	462
MIN	64	48	192	690	252	211	300	448	52	50	41	36
AC-FT	15060	9850	126400	242800	20820	322900	246400	157700	10510	15130	2880	5180

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1998, BY WATER YEAR (WY)

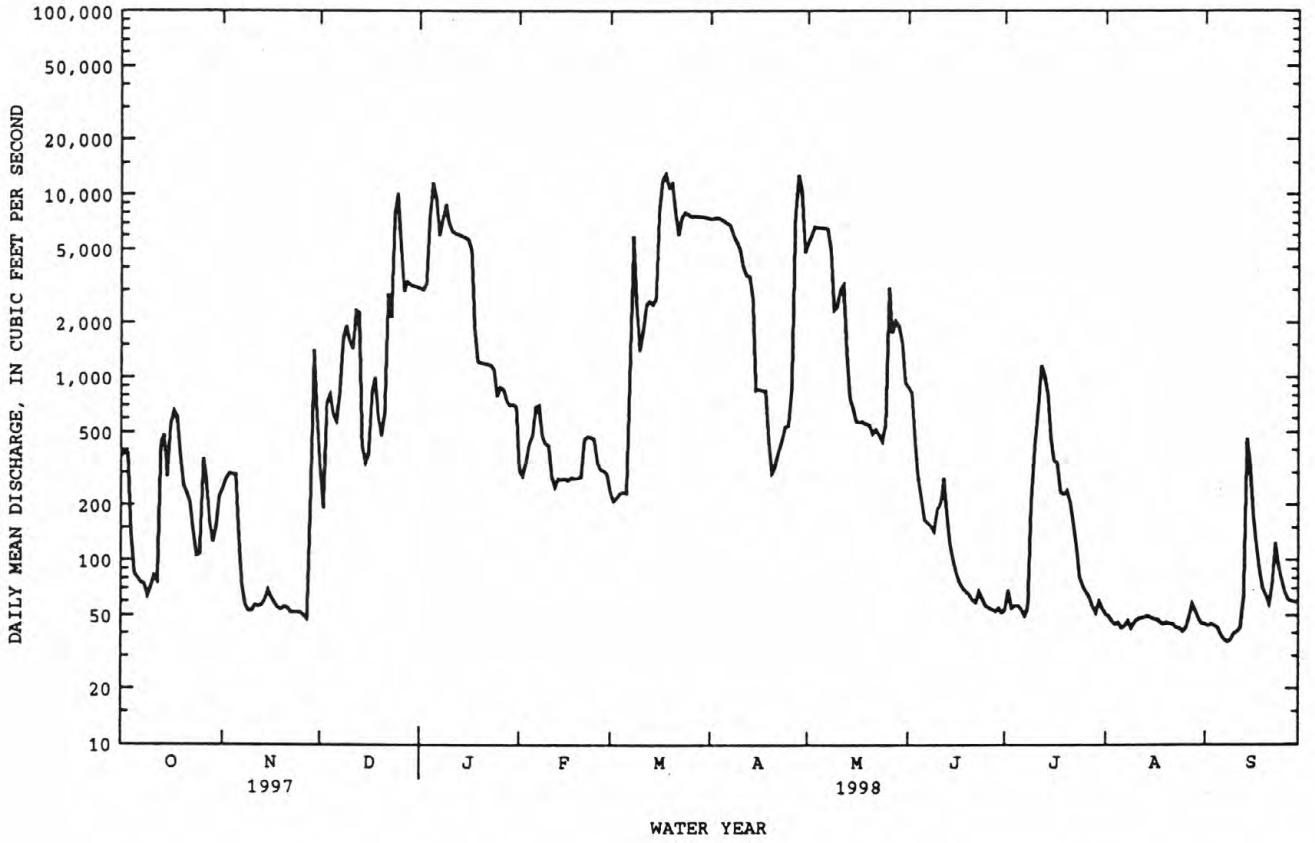
MEAN	1816	1490	1389	1232	1204	2917	3001	2770	2902	1388	325	617
MAX	19540	4390	3596	5204	4208	7228	6989	8547	9766	8233	2021	3178
(WY)	1987	1987	1993	1993	1987	1990	1988	1993	1995	1995	1995	1989
MIN	35.4	50.1	65.5	48.2	43.9	41.4	114	62.7	70.1	30.2	34.9	48.7
(WY)	1993	1996	1996	1996	1996	1996	1996	1996	1988	1984	1984	1984

e Estimated

07175500 CANEY RIVER NEAR RAMONA, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1984 - 1998	
ANNUAL TOTAL	490765		592715			
ANNUAL MEAN	1345		1624		[a]1756	
HIGHEST ANNUAL MEAN					3887	1987
LOWEST ANNUAL MEAN					107	1996
HIGHEST DAILY MEAN	12900	Feb 22	13000	Mar 18	71700	Oct 5 1986
LOWEST DAILY MEAN	48	Nov 27	36	Sep 8	[b]13	Sep 16 1984
ANNUAL SEVEN-DAY MINIMUM	52	Nov 21	39	Sep 5	16	Jul 31 1984
INSTANTANEOUS PEAK FLOW			13800	Mar 18	85600	Oct 5 1986
INSTANTANEOUS PEAK STAGE			unknown	Mar 18	31.16	Oct 5 1986
ANNUAL RUNOFF (AC-FT)	973400		1176000		1272000	
10 PERCENT EXCEEDS	4920		6570		5490	
50 PERCENT EXCEEDS	380		324		335	
90 PERCENT EXCEEDS	70		49		44	

[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- Nov. 3, 1956.



07176000 VERDIGRIS RIVER NEAR CLAREMORE, OK

LOCATION.--Lat 36°18'26", long 95°41'52", NE ¼ NW ¼ 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, non- recording gage at same site and datum.

REMARKS.--Records poor. 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	191	267	955	11200	1920	921	23200	11600	919	e348	e83	e44
2	347	265	732	11100	1510	856	22900	21900	865	e420	e77	e42
3	466	268	853	11100	1030	824	23000	22800	740	561	e75	e43
4	436	284	1570	15200	1090	817	22800	23000	610	468	e77	e39
5	304	287	1120	13100	1190	815	22700	22800	530	e278	e76	e41
6	216	278	922	14800	6480	812	22400	22600	311	e225	66	e39
7	186	214	906	15800	15900	2340	22200	20900	e223	e203	e55	e37
8	180	135	2250	14700	15800	8710	20700	16400	e270	e237	e57	e32
9	185	98	3030	17900	15500	6850	19600	12000	e239	243	e63	e29
10	171	97	2370	20400	15400	7500	19100	11000	e263	531	e65	e29
11	158	86	1890	18100	10500	6730	18100	10900	e275	517	e73	e33
12	192	82	2030	17100	1350	6720	17600	10600	e268	1190	e65	38
13	404	91	1980	17400	1130	6780	17500	5630	546	1560	e76	72
14	849	98	1140	20900	674	6690	17200	2400	457	840	e72	117
15	673	94	685	20800	671	6710	11900	2100	e295	670	e62	435
16	513	96	646	20500	671	13500	1880	2060	e244	627	e58	389
17	721	100	753	19600	666	18900	1980	1930	e220	601	e55	234
18	727	96	1030	17400	664	14400	1970	1980	e203	556	e56	153
19	643	93	806	16200	663	16900	1820	1910	e201	452	e58	e102
20	449	92	682	14300	753	14700	1510	1890	e195	e284	60	e73
21	351	90	1070	8180	1000	11900	1450	6460	e187	e263	e51	e62
22	296	90	3470	2090	1150	6910	1470	15900	e181	e260	e49	e68
23	264	87	3390	2270	1150	6850	1340	15800	e171	e223	e47	e68
24	211	85	10400	2240	1140	7770	907	15700	e160	e177	e47	119
25	161	83	11600	2050	1090	7820	900	15600	e159	e158	e41	101
26	200	82	13700	2240	978	7590	1050	11900	e156	e152	e42	e75
27	467	81	15600	2500	955	11100	9120	2180	e159	e148	e40	e65
28	407	85	14600	2210	943	18300	14100	1970	e168	e150	e43	e55
29	267	1910	14300	2090	---	18400	14000	1930	e169	e155	e53	e50
30	203	1970	14100	2020	---	18400	9550	1770	e188	e106	e56	e52
31	193	---	13200	1990	---	20300	---	1220	---	e77	e48	---
TOTAL	11031	7684	141780	357480	101968	277815	363947	316830	9572	12680	1846	2736
MEAN	356	256	4574	11530	3642	8962	12130	10220	319	409	59.5	91.2
MAX	849	1970	15600	20900	15900	20300	23200	23000	919	1560	83	435
MIN	158	81	646	1990	663	812	900	1220	156	77	40	29
AC-FT	21880	15240	281200	709100	202300	551000	721900	628400	18990	25150	3660	5430

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1998, BY WATER YEAR (WY)

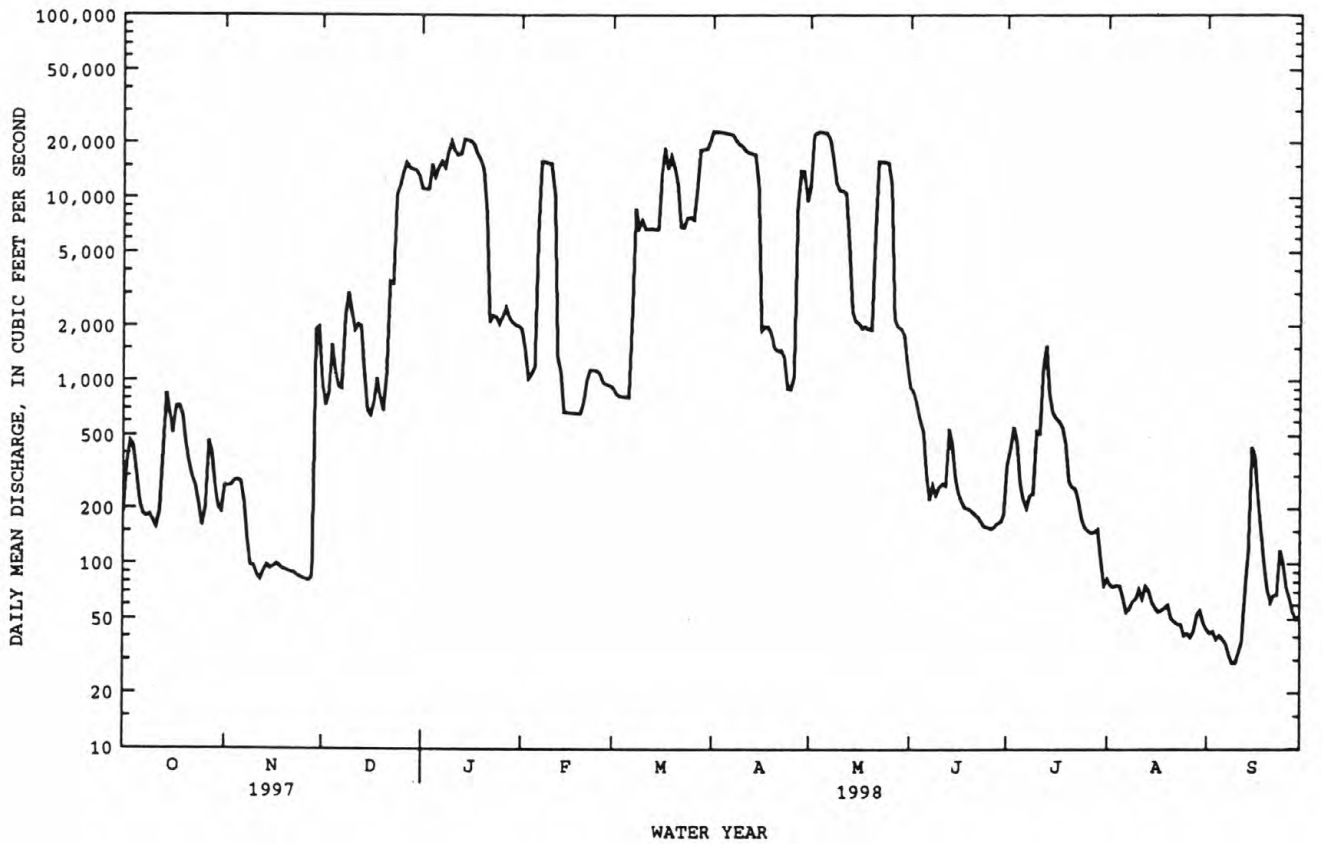
MEAN	3184	4417	3705	3494	3214	6606	7937	6955	7587	4218	1250	1366
MAX	47570	23150	16250	15850	11470	23920	25200	23480	25370	22340	7284	7538
(WY)	1987	1975	1993	1993	1975	1985	1988	1973	1995	1995	1995	1989
MIN	24.1	18.0	47.4	37.9	31.3	23.2	107	87.2	84.0	42.5	52.7	57.4
(WY)	1967	1967	1979	1981	1967	1967	1971	1971	1972	1966	1965	1979

e Estimated

07176000 VERDIGRIS RIVER NEAR CLAREMORE, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1965 - 1998	
ANNUAL TOTAL	1362726.0		1605369			
ANNUAL MEAN	3733		4398		[a]4495	
HIGHEST ANNUAL MEAN					10870	1987
LOWEST ANNUAL MEAN					234	1996
HIGHEST DAILY MEAN	21800	Mar 8	23200	Apr 1	77700	Oct 13 1986
LOWEST DAILY MEAN	3.4	Aug 9	29	Sep 9, 10	[b]3.4	Aug 9 1997
ANNUAL SEVEN-DAY MINIMUM	9.8	Sep 11	34	Sep 6	8.6	Jul 12 1966
INSTANTANEOUS PEAK FLOW			23400	Apr 1	[c]78400	Oct 12 1986
INSTANTANEOUS PEAK STAGE			20.12	Apr 1	[d]44.99	Oct 12 1986
ANNUAL RUNOFF (AC-FT)	2703000		3184000		3256000	
10 PERCENT EXCEEDS	12100		16600		13600	
50 PERCENT EXCEEDS	997		727		1030	
90 PERCENT EXCEEDS	97		64		64	

[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 discharge for period of record, 182,000 ft^3/s, May 21, 1943.
[d]Maximum gage height for period of record, 55.05 ft, May 21, 1943.



07176500 BIRD CREEK AT AVANT, OK

LOCATION.--Lat 36°29'12", long 96°03'50", in SW ¼ NW ¼ 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, published as Bird Creek near Avant Oct. 1, 1973, to Sept. 30, 1993.

GAGE.--Water-stage recorder. Datum of gage is 651.28 ft above sea level.

REMARKS.--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 24	1200	8,710	11.10	Apr 27	1400	19,800	20.87
Jan 4	1200	7,620	10.11	May 25	1600	7,680	10.17
Mar 16	1800	15,900	17.51				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e29	25	52	133	118	49	332	927	83	678	20	19
2	27	18	40	113	281	47	207	805	67	486	19	28
3	25	15	208	104	245	46	152	727	56	148	21	39
4	23	12	242	4440	188	45	116	668	50	72	21	23
5	22	12	147	2980	162	46	100	636	46	49	20	17
6	21	13	82	2290	125	46	90	621	43	39	19	16
7	20	14	61	1320	114	1180	98	787	43	39	18	16
8	21	14	238	2060	105	1890	262	445	51	66	18	16
9	21	15	348	1460	99	540	157	437	123	286	19	15
10	21	19	256	936	98	383	107	745	105	123	19	14
11	22	e19	163	756	94	305	86	432	391	357	30	14
12	44	19	117	681	65	273	77	129	260	607	34	15
13	378	22	91	640	57	259	74	95	129	164	30	79
14	304	25	79	597	49	252	71	80	78	79	32	141
15	145	26	68	522	47	282	71	71	56	53	31	68
16	95	27	62	172	47	9470	70	221	47	41	28	28
17	82	26	58	146	48	9740	69	148	42	35	26	20
18	81	27	53	130	48	1940	67	81	41	31	22	18
19	74	28	49	116	47	3730	67	64	39	27	21	17
20	60	28	45	108	43	2480	67	57	36	22	23	14
21	53	31	577	102	38	1560	69	53	37	21	24	14
22	48	29	1710	96	37	1190	69	49	37	20	21	20
23	46	27	972	87	51	1030	68	48	e40	19	20	39
24	42	26	6110	68	56	932	64	45	38	18	20	48
25	230	28	2000	60	57	878	61	3110	35	18	19	26
26	169	30	1080	75	58	747	1060	1550	34	18	19	18
27	65	28	1050	78	55	568	14100	743	33	19	20	15
28	50	232	897	75	51	565	4380	465	32	19	20	15
29	46	219	865	70	---	551	1330	249	30	19	20	14
30	40	88	761	63	---	525	1150	152	26	19	19	15
31	35	---	420	59	---	1020	---	109	---	19	19	---
TOTAL	2339	1142	18901	20537	2483	42569	24691	14749	2128	3611	692	841
MEAN	75.5	38.1	610	662	88.7	1373	823	476	70.9	116	22.3	28.0
MAX	378	232	6110	4440	281	9740	14100	3110	391	678	34	141
MIN	20	12	40	59	37	45	61	45	26	18	18	14
AC-FT	4640	2270	37490	40740	4930	84440	48970	29250	4220	7160	1370	1670

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1998, BY WATER YEAR (WY)

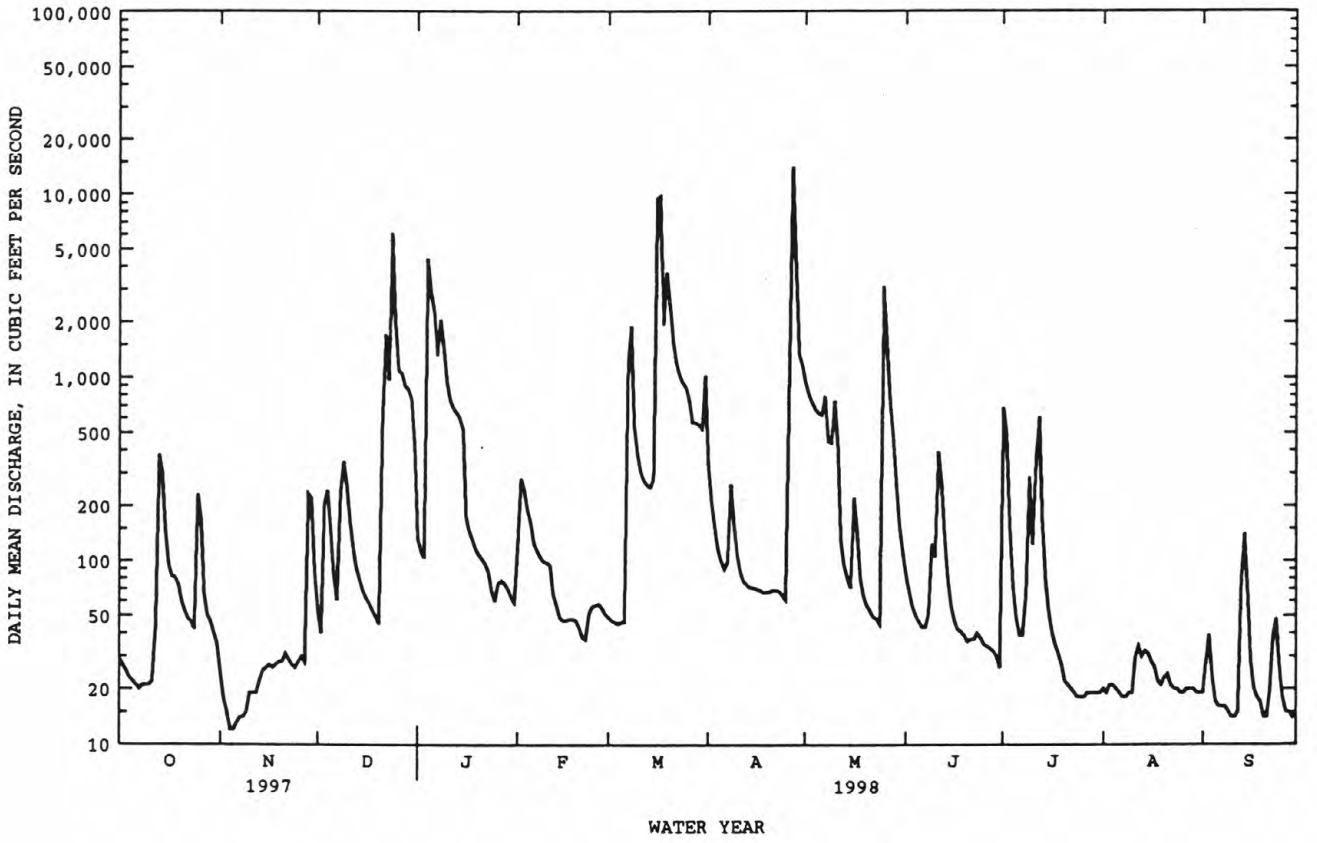
MEAN	170	214	143	120	189	381	377	500	407	171	83.4	167
MAX	1940	1677	863	827	1376	2264	1235	2266	2648	1174	980	1585
(WY)	1987	1975	1972	1973	1985	1990	1973	1957	1957	1995	1950	1961
MIN	.000	.000	.000	.000	.000	.000	.000	.000	1.07	.000	.000	.000
(WY)	1949	1953	1953	1953	1957	1956	1956	1956	1963	1954	1952	1952

e Estimated

07176500 BIRD CREEK AT AVANT, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1946 - 1998	
ANNUAL TOTAL	108853		134683			
ANNUAL MEAN	298		369		243	
HIGHEST ANNUAL MEAN					673	1995
LOWEST ANNUAL MEAN					5.50	1956
HIGHEST DAILY MEAN	9390	Feb 21	14100	Apr 27	28500	Mar 11 1974
LOWEST DAILY MEAN	12	Nov 4	12	Nov 4, 5	.00	at times
ANNUAL SEVEN-DAY MINIMUM	14	Nov 3	14	Nov 3	.00	Jul 19 1946
INSTANTANEOUS PEAK FLOW			19800	Apr 27	[a]32400	Oct 2 1959
INSTANTANEOUS PEAK STAGE			20.87	Apr 27	32.03	Mar 11 1974
ANNUAL RUNOFF (AC-FT)	215900		267100		176400	
10 PERCENT EXCEEDS	745		829		450	
50 PERCENT EXCEEDS	65		60		23	
90 PERCENT EXCEEDS	23		19		.10	

[a]Gage height, 31.40 ft.



07177500 BIRD CREEK NEAR SPERRY, OK

LOCATION.--Lat 36°16'42", long 95°57'14", in NW ¼ NW ¼ 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.--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 24	1700	10,200	22.31	Mar 17	2300	13,900	25.99
Jan 4	2200	10,600	22.71	Apr 28	0800	18,400	27.87

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e185	83	210	1800	590	92	2760	3900	177	340	139	147
2	173	73	165	1620	695	90	893	3960	154	913	140	147
3	173	63	472	1590	836	89	354	3830	138	297	140	156
4	181	59	510	6410	768	95	287	3740	140	135	143	169
5	176	58	359	8560	661	e98	258	3690	137	169	140	155
6	172	58	238	5670	396	100	240	3650	148	152	138	149
7	175	65	184	3940	358	1240	231	3610	146	143	138	147
8	177	82	447	4140	343	5740	292	3090	149	193	138	147
9	175	83	682	5350	307	1550	360	2880	157	277	145	146
10	177	85	487	4040	155	1840	264	3200	225	335	141	146
11	175	82	331	3510	145	1660	225	2920	208	223	143	146
12	208	83	224	3330	137	1500	207	1460	533	1370	146	146
13	371	88	173	3230	114	1030	196	1140	292	516	153	194
14	658	93	145	3160	107	998	194	646	217	262	150	331
15	374	96	128	2890	101	1010	192	223	173	194	151	287
16	183	94	116	1600	103	7000	191	e215	156	167	149	206
17	137	91	106	1340	107	12700	190	e230	147	153	148	171
18	123	90	97	1310	106	11100	192	216	144	146	148	160
19	120	89	93	1300	105	6430	193	180	143	142	146	155
20	111	90	97	1110	104	6230	195	163	141	138	145	152
21	100	90	597	222	101	4570	197	155	139	138	147	161
22	95	94	2500	168	98	4210	198	149	140	145	148	232
23	91	91	1290	157	98	3980	197	145	147	140	149	176
24	91	90	8290	144	99	4100	195	141	142	137	147	193
25	93	86	7300	128	97	4000	188	731	148	135	157	197
26	501	87	1680	197	98	3930	369	3720	145	135	163	178
27	220	89	1240	236	98	3700	10800	984	144	135	147	167
28	129	307	1090	178	95	3610	17300	617	142	135	150	157
29	106	794	1270	187	---	3590	7880	375	142	141	151	157
30	95	351	2410	477	---	3410	3830	270	226	140	148	155
31	92	---	2180	467	---	3330	---	213	---	138	147	---
TOTAL	5837	3684	35111	68461	7022	103022	49068	50443	5240	7784	4535	5230
MEAN	188	123	1133	2208	251	3323	1636	1627	175	251	146	174
MAX	658	794	8290	8560	836	12700	17300	3960	533	1370	163	331
MIN	91	58	93	128	95	89	188	141	137	135	138	146
AC-FT	11580	7310	69640	135800	13930	204300	97330	100100	10390	15440	9000	10370

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1998, BY WATER YEAR (WY)

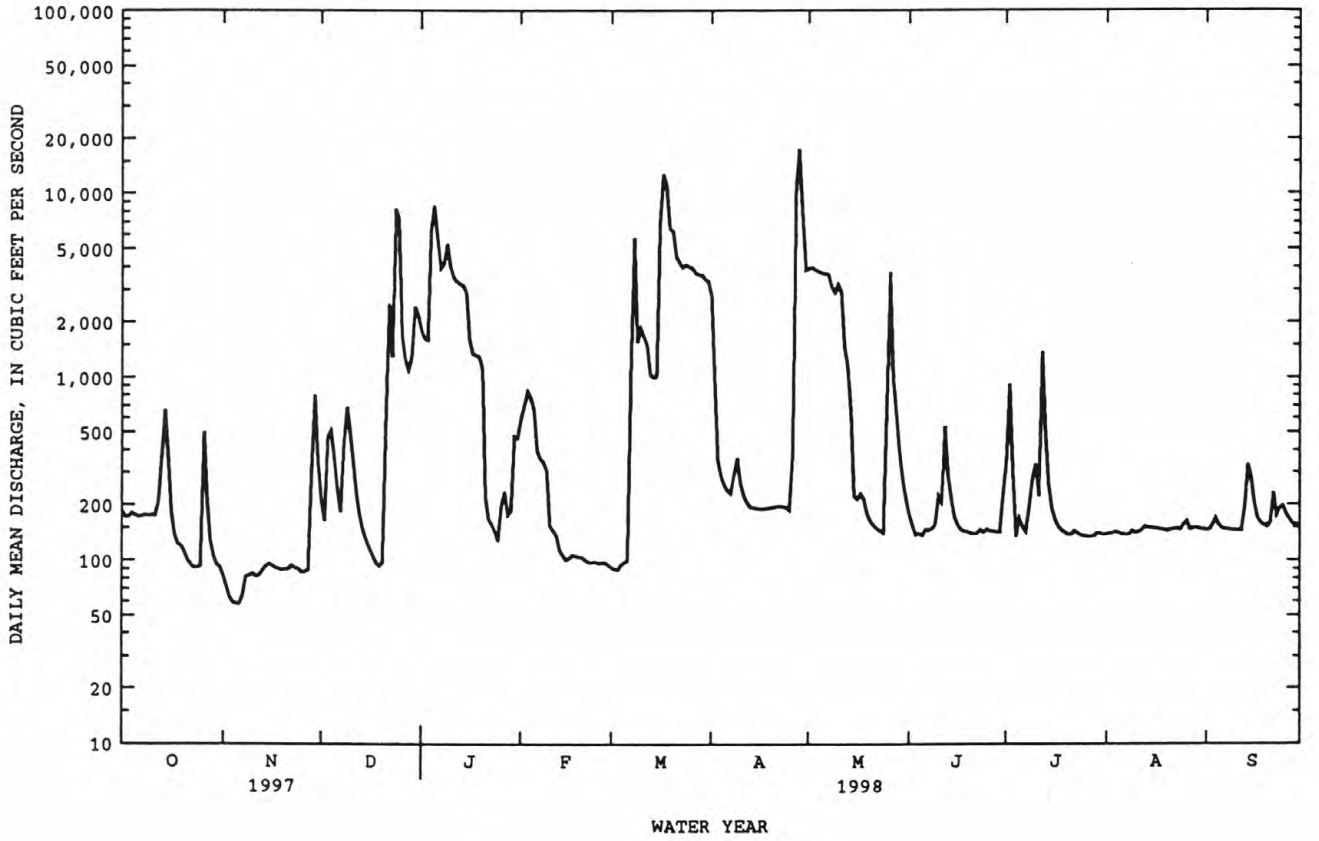
MEAN	175	523	464	557	551	1339	1528	1563	1392	741	343	277
MAX	279	1649	1168	2208	1401	4949	2891	4824	4890	3421	1148	689
(WY)	1997	1995	1993	1998	1997	1990	1994	1995	1995	1995	1997	1996
MIN	112	47.4	61.9	65.2	66.8	59.7	191	151	175	153	146	150
(WY)	1993	1996	1990	1994	1996	1996	1996	1996	1998	1996	1998	1992

e Estimated

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1990 - 1998	
ANNUAL TOTAL	233595		345437			
ANNUAL MEAN	640		946		[a]788	
HIGHEST ANNUAL MEAN					1669	1995
LOWEST ANNUAL MEAN					168	1996
HIGHEST DAILY MEAN	8760	Feb 21	17300	Apr 28	27500	May 10 1993
LOWEST DAILY MEAN	44	Feb 17	58	Nov 5	23	Jul 22 1996
ANNUAL SEVEN-DAY MINIMUM	48	Feb 12	65	Nov 2	[b]34	Oct 19 1995
INSTANTANEOUS PEAK FLOW			18400	Apr 28	[c]30600	May 10 1993
INSTANTANEOUS PEAK STAGE			27.87	Apr 28	[d]29.88	May 10 1993
ANNUAL RUNOFF (AC-FT)	463300		685200		570800	
10 PERCENT EXCEEDS	2090		3540		2340	
50 PERCENT EXCEEDS	165		175		165	
90 PERCENT EXCEEDS	62		95		67	

[a]Prior to regulation, water years 1939-84, 484 ft3/s.
[b]No flow at times in 1939, 1954-57, 1964-66, 1970.
[c]Maximum discharge for period of record, 90,000 ft3/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 and Mar. 31, 1996; 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 (observed), 17.2 mg/L, Dec. 29, 1993; minimum, 1.4 mg/L, Sept. 26, 1996.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded (more than 20 percent missing record), 1,640 microsiemens, Nov. 28; minimum recorded, 114 microsiemens, Jan. 4.
pH: Maximum recorded (more than 20 percent missing record), 8.1 units, June 12, 13; minimum recorded, 7.1 units, Nov. 19, 20, 28, 29, July 2.
WATER TEMPERATURE: Maximum recorded (more than 20 percent missing record), 33.5° C, July 20, 21, 22; minimum recorded 2.5° C, Dec. 14, 15.
DISSOLVED OXYGEN: Maximum recorded (more than 20 percent missing record), 12.5 mg/L, Dec. 25; minimum recorded, 4.3 mg/L, July 5.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	260	233	241	316	295	303
2	---	---	---	---	---	---	284	260	275	298	293	295
3	---	---	---	---	---	---	622	275	351	295	189	280
4	---	---	---	---	---	---	403	280	350	343	114	230
5	---	---	---	---	---	---	351	274	303	255	167	202
6	---	---	---	---	---	---	324	315	319	204	118	178
7	---	---	---	---	---	---	345	324	336	273	187	243
8	309	295	302	---	---	---	411	276	397	277	229	261
9	337	309	326	---	---	---	933	269	351	287	234	263
10	333	316	324	---	---	---	343	294	322	310	268	302
11	341	329	333	---	---	---	404	343	373	305	293	296
12	409	326	337	---	---	---	421	404	416	294	282	290
13	744	327	463	---	---	---	441	421	430	282	255	263
14	420	339	376	---	---	---	465	440	452	267	256	260
15	452	341	399	---	---	---	492	465	478	284	267	275
16	405	385	399	---	---	---	534	492	514	286	282	284
17	---	---	---	---	---	---	560	534	549	286	269	280
18	---	---	---	---	---	---	564	560	561	273	231	266
19	---	---	---	376	359	365	578	560	570	---	---	---
20	---	---	---	362	360	361	643	578	594	---	---	---
21	---	---	---	362	360	361	1580	208	599	---	---	---
22	---	---	---	365	361	362	370	153	281	---	---	---
23	---	---	---	364	360	362	317	192	252	---	---	---
24	---	---	---	360	350	356	---	---	---	---	---	---
25	---	---	---	---	---	---	185	148	163	---	---	---
26	---	---	---	348	344	347	281	184	238	---	---	---
27	---	---	---	353	341	346	310	281	299	---	---	---
28	---	---	---	1640	333	472	323	305	313	---	---	---
29	---	---	---	1550	181	355	394	323	336	---	---	---
30	---	---	---	303	222	238	346	328	338	---	---	---
31	---	---	---	---	---	---	331	315	326	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	254	228	238
10	---	---	---	---	---	---	---	---	---	260	239	248
11	---	---	---	---	---	---	---	---	---	264	235	243
12	---	---	---	---	---	---	---	---	---	264	243	248
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	420	418	419
25	---	---	---	---	---	---	---	---	---	499	264	420
26	---	---	---	---	---	---	---	---	---	267	176	237
27	---	---	---	---	---	---	---	---	---	263	235	246
28	---	---	---	---	---	---	---	---	---	285	263	274
29	---	---	---	---	---	---	---	---	---	298	284	290
30	---	---	---	---	---	---	---	---	---	306	298	302
31	---	---	---	---	---	---	---	---	---	312	306	310
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	323	312	318	602	281	339	278	274	276	297	275	283
2	340	323	330	363	278	324	289	275	278	290	275	282
3	335	330	333	321	308	317	296	276	286	294	275	284
4	336	330	333	318	305	312	298	274	288	305	281	293
5	---	---	---	472	284	361	296	277	288	297	275	286
6	---	---	---	286	282	285	296	277	286	294	273	282
7	330	325	328	---	---	---	294	277	286	290	272	281
8	339	326	331	---	---	---	---	---	---	304	272	281
9	339	337	338	---	---	---	---	---	---	292	270	282
10	360	339	350	---	---	---	---	---	---	288	270	280
11	361	329	342	272	261	268	---	---	---	289	269	281
12	344	308	324	479	267	314	295	276	286	292	269	277
13	330	315	324	349	308	332	298	277	288	293	269	276
14	346	330	340	337	327	332	320	278	291	309	272	289
15	349	344	347	334	281	305	294	275	285	298	257	272
16	---	---	---	282	280	281	325	274	289	274	251	260
17	---	---	---	291	281	285	295	278	286	272	253	262
18	333	326	330	285	279	283	292	273	283	280	259	268
19	327	321	324	285	279	282	295	273	285	280	261	269
20	321	316	319	283	280	282	289	274	283	277	260	268
21	321	315	318	283	280	281	296	273	284	278	256	268
22	324	319	321	280	275	278	291	275	284	320	249	281
23	322	308	315	277	274	276	293	274	282	324	280	295
24	324	305	313	277	275	276	294	275	285	294	285	289
25	311	299	303	277	275	276	296	269	284	292	283	288
26	300	297	299	277	275	276	283	267	275	285	277	281
27	299	297	298	278	276	276	289	268	279	277	272	275
28	302	297	298	278	276	277	448	274	290	274	272	273
29	300	298	299	279	276	278	293	274	283	274	272	273
30	500	287	317	277	276	277	295	275	284	275	272	273
31	---	---	---	278	276	277	292	275	282	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	324	249	278

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	7.3	7.2	7.2	7.8	7.8	7.8
2	---	---	---	---	---	---	7.4	7.2	7.2	7.9	7.8	7.8
3	---	---	---	---	---	---	7.4	7.3	7.3	7.9	7.8	7.9
4	---	---	---	---	---	---	7.5	7.4	7.5	7.9	7.5	7.6
5	---	---	---	---	---	---	7.5	7.4	7.4	7.6	7.4	7.5
6	---	---	---	---	---	---	7.5	7.5	7.5	7.6	7.4	7.5
7	---	---	---	---	---	---	7.5	7.4	7.4	7.6	7.5	7.6
8	7.6	7.4	7.5	---	---	---	7.6	7.4	7.4	7.6	7.6	7.6
9	7.6	7.4	7.5	---	---	---	7.7	7.6	7.6	7.7	7.6	7.7
10	7.6	7.5	7.5	---	---	---	7.7	7.6	7.6	7.8	7.7	7.7
11	7.7	7.4	7.5	---	---	---	7.7	7.7	7.7	7.8	7.7	7.8
12	7.7	7.5	7.6	---	---	---	7.7	7.6	7.7	7.8	7.7	7.8
13	7.6	7.5	7.5	---	---	---	7.7	7.6	7.7	7.8	7.8	7.8
14	7.7	7.5	7.6	---	---	---	7.7	7.6	7.7	7.8	7.8	7.8
15	7.7	7.6	7.6	---	---	---	7.8	7.7	7.7	7.8	7.7	7.8
16	8.0	7.6	7.7	---	---	---	7.7	7.7	7.7	7.8	7.7	7.8
17	---	---	---	---	---	---	7.7	7.7	7.7	7.8	7.7	7.8
18	---	---	---	---	---	---	7.7	7.7	7.7	7.8	7.6	7.8
19	---	---	---	7.3	7.1	7.2	7.7	7.7	7.7	7.8	7.6	7.8
20	---	---	---	7.3	7.1	7.2	7.7	7.7	7.7	---	---	---
21	---	---	---	7.2	7.2	7.2	7.9	7.6	7.7	7.8	7.7	7.8
22	---	---	---	7.3	7.2	7.2	7.9	7.6	7.7	7.8	7.7	7.8
23	---	---	---	7.3	7.2	7.3	7.9	7.7	7.8	7.9	7.7	7.8
24	---	---	---	7.3	7.2	7.3	7.8	7.4	7.5	---	---	---
25	---	---	---	---	---	---	7.6	7.5	7.6	---	---	---
26	---	---	---	---	---	---	7.8	7.6	7.7	7.9	7.7	7.8
27	---	---	---	7.3	7.2	7.3	7.8	7.8	7.8	7.9	7.8	7.8
28	---	---	---	7.3	7.1	7.3	7.8	7.8	7.8	7.9	7.7	7.8
29	---	---	---	7.3	7.1	7.2	7.8	7.7	7.8	7.8	7.7	7.8
30	---	---	---	7.2	7.2	7.2	7.8	7.8	7.8	7.8	7.7	7.7
31	---	---	---	---	---	---	7.8	7.8	7.8	7.8	7.7	7.7
MAX	---	---	---	---	---	---	7.9	7.8	7.8	---	---	---
MIN	---	---	---	---	---	---	7.3	7.2	7.2	---	---	---

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.8	7.6	7.8	7.9	7.7	7.9	---	---	---	---	---	---
2	---	---	---	7.9	7.6	7.9	---	---	---	---	---	---
3	7.9	7.7	7.9	7.9	7.7	7.9	---	---	---	---	---	---
4	7.9	7.7	7.9	---	---	---	---	---	---	---	---	---
5	7.9	7.7	7.9	---	---	---	---	---	---	---	---	---
6	7.9	7.7	7.8	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	7.8	7.6	7.8	---	---	---	---	---	---	---	---	---
9	7.8	7.7	7.8	---	---	---	---	---	---	---	---	---
10	7.9	7.7	7.8	---	---	---	---	---	---	---	---	---
11	7.9	7.7	7.8	---	---	---	---	---	---	---	---	---
12	7.9	7.7	7.9	---	---	---	---	---	---	---	---	---
13	7.9	7.7	7.8	---	---	---	---	---	---	---	---	---
14	7.9	7.8	7.9	---	---	---	---	---	---	---	---	---
15	7.9	7.7	7.8	---	---	---	---	---	---	---	---	---
16	7.8	7.6	7.8	---	---	---	---	---	---	---	---	---
17	7.8	7.6	7.8	---	---	---	---	---	---	---	---	---
18	7.9	7.7	7.8	---	---	---	---	---	---	---	---	---
19	7.9	7.7	7.9	---	---	---	---	---	---	---	---	---
20	7.9	7.8	7.8	---	---	---	---	---	---	---	---	---
21	7.8	7.6	7.8	---	---	---	---	---	---	---	---	---
22	7.8	7.6	7.8	---	---	---	---	---	---	---	---	---
23	7.8	7.7	7.8	---	---	---	---	---	---	---	---	---
24	7.8	7.6	7.8	---	---	---	---	---	---	---	---	---
25	7.9	7.6	7.8	---	---	---	---	---	---	---	---	---
26	7.9	7.5	7.8	---	---	---	---	---	---	---	---	---
27	7.9	7.6	7.9	---	---	---	---	---	---	---	---	---
28	7.9	7.7	7.9	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.6	7.6	7.6	7.4	7.2	7.3	7.8	7.5	7.6	7.7	7.5	7.7
2	7.7	7.5	7.6	7.4	7.1	7.4	7.7	7.5	7.6	7.8	7.6	7.7
3	7.8	7.5	7.6	7.6	7.4	7.5	7.7	7.5	7.6	7.8	7.6	7.7
4	7.7	7.6	7.6	7.5	7.4	7.4	7.7	7.5	7.6	7.7	7.6	7.6
5	---	---	---	7.6	7.2	7.4	7.8	7.6	7.7	7.7	7.5	7.6
6	7.7	7.6	7.7	7.6	7.4	7.4	7.8	7.6	7.7	7.7	7.5	7.6
7	7.7	7.6	7.7	7.6	7.4	7.5	7.8	7.6	7.7	7.7	7.6	7.6
8	7.7	7.6	7.6	7.7	7.4	7.5	7.8	7.6	7.7	7.7	7.6	7.6
9	7.8	7.6	7.7	7.7	7.4	7.5	7.8	7.5	7.6	7.7	7.6	7.7
10	7.8	7.7	7.7	7.7	7.5	7.6	7.7	7.5	7.6	7.7	7.6	7.7
11	7.8	7.6	7.7	7.6	7.5	7.5	7.7	7.5	7.6	7.7	7.5	7.6
12	8.1	7.7	7.8	7.6	7.3	7.4	7.8	7.6	7.6	7.6	7.5	7.5
13	8.1	7.9	8.0	7.6	7.5	7.5	7.8	7.6	7.7	7.6	7.5	7.5
14	8.1	7.8	8.0	7.7	7.6	7.6	7.8	7.6	7.7	7.6	7.5	7.6
15	8.0	7.7	7.8	7.7	7.5	7.6	7.8	7.6	7.7	7.6	7.5	7.5
16	---	---	---	7.7	7.5	7.6	7.9	7.7	7.7	7.5	7.5	7.5
17	---	---	---	7.8	7.5	7.6	7.8	7.7	7.7	7.6	7.5	7.5
18	7.5	7.3	7.5	7.8	7.5	7.6	7.8	7.6	7.7	7.6	7.5	7.6
19	7.5	7.3	7.4	7.8	7.5	7.6	7.7	7.5	7.6	7.6	7.5	7.5
20	7.5	7.2	7.4	7.7	7.5	7.6	7.8	7.6	7.6	7.6	7.4	7.5
21	7.5	7.3	7.3	7.7	7.5	7.6	7.8	7.6	7.7	7.6	7.4	7.5
22	7.5	7.2	7.3	7.7	7.4	7.5	7.8	7.6	7.7	7.5	7.3	7.4
23	7.5	7.3	7.4	7.6	7.4	7.5	7.8	7.6	7.7	7.4	7.3	7.3
24	7.5	7.3	7.4	7.7	7.4	7.5	7.8	7.6	7.7	7.6	7.4	7.4
25	7.6	7.3	7.4	7.8	7.4	7.6	7.8	7.6	7.7	7.6	7.4	7.5
26	7.6	7.3	7.5	7.8	7.4	7.6	7.8	7.6	7.7	7.6	7.4	7.5
27	7.6	7.3	7.5	7.7	7.4	7.6	7.7	7.5	7.6	7.6	7.4	7.5
28	7.6	7.4	7.5	7.7	7.4	7.6	7.7	7.5	7.6	7.6	7.4	7.4
29	7.6	7.4	7.5	7.7	7.4	7.5	7.7	7.5	7.6	7.5	7.4	7.4
30	7.6	7.4	7.4	7.8	7.5	7.6	7.7	7.6	7.6	7.5	7.4	7.4
31	---	---	---	7.7	7.5	7.6	7.7	7.6	7.6	---	---	---
MAX	---	---	---	7.8	7.6	7.6	7.9	7.7	7.7	7.8	7.6	7.7
MIN	---	---	---	7.4	7.1	7.3	7.7	7.5	7.6	7.4	7.3	7.3

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	11.0	10.0	10.5	6.5	6.0	6.5
2	---	---	---	---	---	---	10.0	9.5	9.5	7.5	6.5	7.0
3	24.5	22.5	23.5	---	---	---	9.5	8.5	9.0	8.0	7.5	8.0
4	24.5	23.0	23.5	---	---	---	8.5	7.0	8.0	8.0	6.5	7.5
5	24.0	22.5	23.5	---	---	---	7.0	6.0	6.5	6.5	6.5	6.5
6	24.5	23.0	23.5	---	---	---	6.0	5.0	5.5	7.5	6.5	7.0
7	24.0	23.5	23.5	---	---	---	5.0	5.0	5.0	7.0	6.5	6.5
8	23.5	23.0	23.0	---	---	---	5.0	4.5	4.5	6.5	5.0	5.5
9	23.0	22.5	23.0	---	---	---	5.5	4.5	5.0	6.0	5.0	5.5
10	23.0	22.5	22.5	---	---	---	5.5	5.0	5.0	6.0	6.0	6.0
11	23.0	22.5	23.0	---	---	---	5.0	4.5	4.5	6.0	6.0	6.0
12	23.0	21.0	22.0	---	---	---	4.5	4.0	4.0	6.0	6.0	6.0
13	21.0	18.5	20.0	---	---	---	4.0	3.0	3.5	6.0	5.5	5.5
14	19.5	17.5	18.5	---	---	---	3.5	2.5	3.0	5.5	5.5	5.5
15	19.5	17.5	18.5	---	---	---	4.0	2.5	3.0	5.5	5.0	5.5
16	19.5	17.5	18.5	---	---	---	4.0	3.5	3.5	6.0	5.0	5.5
17	---	---	---	---	---	---	4.0	3.5	4.0	6.5	5.5	6.0
18	---	---	---	---	---	---	4.5	4.0	4.0	6.5	6.0	6.0
19	---	---	---	---	---	---	5.5	4.5	5.0	---	---	---
20	---	---	---	8.5	8.0	8.0	5.5	4.5	5.0	6.0	5.0	5.5
21	---	---	---	9.0	8.5	9.0	5.0	5.0	5.0	5.5	4.5	5.0
22	---	---	---	9.0	8.5	8.5	5.0	4.5	5.0	---	---	---
23	---	---	---	8.5	8.0	8.5	4.5	4.5	4.5	---	---	---
24	---	---	---	9.5	8.5	9.0	4.5	4.5	4.5	---	---	---
25	---	---	---	---	---	---	4.5	4.0	4.5	---	---	---
26	---	---	---	---	---	---	4.5	4.5	4.5	5.5	4.0	5.0
27	---	---	---	11.5	11.0	11.0	4.5	4.0	4.5	---	---	---
28	---	---	---	13.0	11.5	12.0	4.5	4.5	4.5	---	---	---
29	---	---	---	13.0	11.5	12.5	6.0	4.0	4.5	---	---	---
30	---	---	---	11.5	11.0	11.5	6.0	6.0	6.0	7.0	6.0	6.5
31	---	---	---	---	---	---	6.0	5.5	6.0	7.0	6.0	6.5
MONTH	---	---	---	---	---	---	11.0	2.5	5.2	---	---	---

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.0	7.0	7.0	10.5	9.5	10.0	---	---	---	---	---	---
2	7.5	6.5	7.0	10.0	8.0	9.0	---	---	---	---	---	---
3	7.0	6.0	6.5	---	---	---	---	---	---	---	---	---
4	6.5	6.0	6.5	---	---	---	---	---	---	---	---	---
5	6.5	5.5	6.0	---	---	---	---	---	---	---	---	---
6	6.5	5.5	6.0	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	7.0	5.5	6.0	12.0	10.5	11.5	---	---	---	---	---	---
9	7.0	5.5	6.5	---	---	---	---	---	---	---	---	---
10	8.0	5.0	7.0	---	---	---	---	---	---	17.0	15.0	16.0
11	8.5	6.5	7.5	---	---	---	---	---	---	17.0	15.5	16.0
12	8.5	7.0	7.5	---	---	---	---	---	---	17.5	16.0	16.5
13	8.5	7.0	7.5	---	---	---	---	---	---	20.5	15.5	17.0
14	8.5	7.5	8.0	---	---	---	---	---	---	26.5	19.0	22.5
15	9.0	7.5	8.5	---	---	---	---	---	---	---	---	---
16	8.5	8.0	8.5	---	---	---	---	---	---	---	---	---
17	8.5	8.0	8.0	---	---	---	---	---	---	---	---	---
18	8.5	6.5	7.5	---	---	---	---	---	---	---	---	---
19	9.0	8.0	8.5	---	---	---	---	---	---	27.0	24.5	25.5
20	9.5	8.0	9.0	---	---	---	---	---	---	27.0	25.0	26.0
21	10.0	9.0	9.5	23.0	20.0	21.5	---	---	---	26.5	25.5	26.0
22	10.5	9.0	10.0	23.5	20.0	22.0	---	---	---	26.5	25.5	26.0
23	10.5	9.5	10.0	23.5	20.5	22.5	---	---	---	26.0	25.0	25.5
24	11.5	10.0	11.0	24.0	20.5	22.5	---	---	---	27.0	24.5	25.5
25	13.0	11.0	12.5	---	---	---	---	---	---	27.0	22.5	25.5
26	13.5	12.5	13.0	---	---	---	---	---	---	22.5	20.0	22.0
27	13.5	11.0	12.5	---	---	---	---	---	---	23.5	22.0	22.5
28	12.0	10.0	11.0	---	---	---	---	---	---	25.5	23.5	24.5
29	---	---	---	---	---	---	---	---	---	27.5	24.5	25.5
30	---	---	---	---	---	---	---	---	---	28.5	26.0	27.0
31	---	---	---	---	---	---	---	---	---	29.5	26.5	28.0
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	29.5	27.0	28.0	28.0	25.0	26.0	32.0	29.0	30.5	30.5	28.0	29.0
2	30.5	28.0	29.0	27.5	24.5	26.5	32.0	30.0	31.0	30.0	28.0	29.0
3	30.5	28.5	29.5	30.0	26.5	28.0	31.0	29.0	29.5	30.0	27.5	29.0
4	30.0	25.5	27.5	31.0	28.5	29.5	30.0	28.5	29.5	30.5	28.0	29.0
5	---	---	---	31.5	29.0	30.5	30.0	28.5	29.5	30.5	28.5	29.5
6	---	---	---	32.0	29.5	30.5	30.0	28.0	29.5	30.5	28.5	29.5
7	24.5	22.0	23.0	32.0	30.0	31.0	30.5	28.0	29.5	30.5	28.5	29.5
8	24.5	22.0	22.5	31.5	29.5	30.5	30.5	28.0	29.5	30.5	28.5	29.0
9	25.5	22.5	23.5	32.0	29.0	30.5	30.5	28.5	29.0	29.0	27.0	27.5
10	25.5	24.0	25.0	33.0	30.0	31.5	29.5	28.5	29.0	27.0	25.0	26.0
11	27.5	24.5	25.5	32.0	30.0	30.5	30.0	28.0	29.0	27.0	24.5	25.5
12	28.0	25.5	27.0	30.0	27.0	28.5	30.5	28.5	29.5	27.0	25.5	26.0
13	29.0	26.0	27.5	31.0	28.5	29.5	30.5	29.0	30.0	26.5	25.0	25.0
14	29.5	27.0	28.0	32.0	29.5	30.5	30.0	28.0	29.0	26.0	24.5	25.0
15	29.0	26.5	27.0	32.0	29.5	30.5	30.5	28.0	29.5	27.0	25.0	25.5
16	---	---	---	32.0	29.5	31.0	30.5	28.5	29.5	27.0	26.0	26.5
17	---	---	---	32.0	29.5	30.5	31.0	28.5	30.0	26.5	25.5	26.0
18	28.5	26.5	27.5	32.5	29.5	31.0	31.5	29.0	30.5	27.5	25.0	26.0
19	29.0	26.5	27.5	33.0	30.5	31.5	32.0	29.5	30.5	27.5	25.5	26.5
20	30.5	27.5	28.5	33.5	31.0	32.0	32.0	29.5	31.0	28.0	26.0	27.0
21	30.5	28.5	29.0	33.5	31.0	32.0	32.0	29.0	30.5	28.0	26.5	27.0
22	30.5	28.5	29.5	33.5	31.0	32.5	31.0	28.5	30.0	26.5	23.5	25.0
23	30.5	28.5	29.5	33.5	31.0	32.0	31.0	28.5	30.0	24.0	23.0	23.5
24	30.5	28.5	29.5	33.0	30.5	31.5	31.5	29.0	30.0	26.0	24.0	24.5
25	31.0	28.5	30.0	32.5	29.0	30.5	31.5	29.5	30.5	27.0	25.0	25.5
26	31.0	28.5	30.0	33.0	30.0	31.5	31.5	29.5	30.5	27.0	25.5	26.0
27	31.0	29.0	30.0	33.0	30.5	32.0	31.0	29.0	30.0	27.5	25.5	26.0
28	31.5	29.0	30.5	33.0	30.5	31.5	31.0	29.5	30.0	27.5	25.5	26.5
29	32.0	29.5	30.5	32.0	30.0	31.0	30.5	28.5	29.5	27.5	26.0	26.5
30	32.0	28.0	29.5	32.5	30.0	31.0	30.5	28.0	29.0	27.5	25.5	26.5
31	---	---	---	32.5	30.0	31.0	30.5	27.5	29.0	---	---	---
MONTH	---	---	---	33.5	24.5	30.5	32.0	27.5	29.8	30.5	23.0	26.8

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

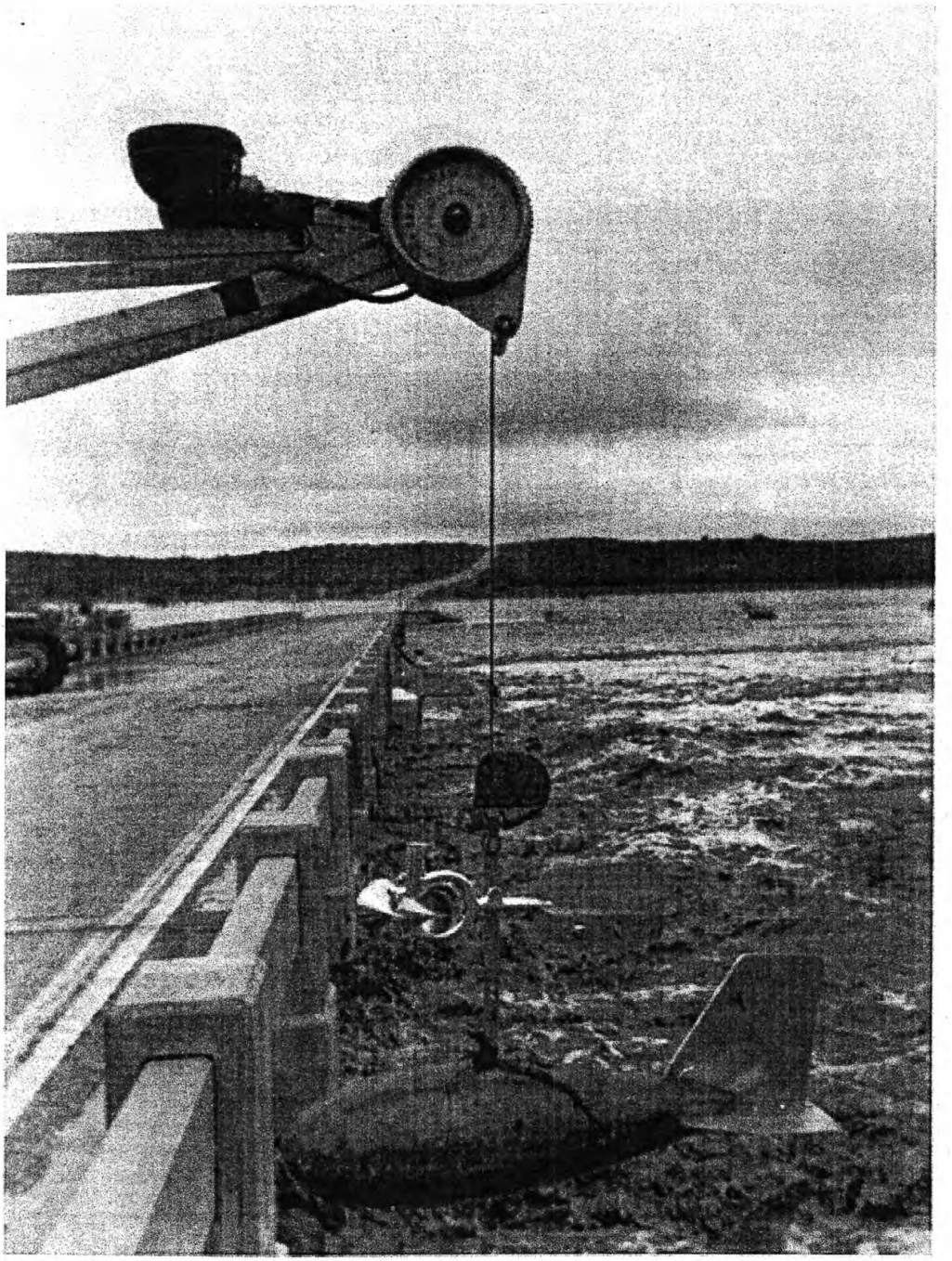
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	9.9	7.3	8.3	12.4	11.9	12.2
2	---	---	---	---	---	---	9.8	8.4	8.9	12.2	11.8	12.0
3	---	---	---	---	---	---	10.0	8.5	9.4	12.0	10.6	11.7
4	---	---	---	---	---	---	10.1	9.8	10.0	11.8	10.5	11.3
5	---	---	---	---	---	---	10.3	9.8	10.1	---	---	---
6	---	---	---	---	---	---	10.2	9.8	10.1	---	---	---
7	---	---	---	---	---	---	10.0	9.6	9.8	---	---	---
8	6.4	5.1	5.6	---	---	---	10.9	9.6	10.3	---	---	---
9	6.4	5.1	5.8	---	---	---	10.9	10.3	10.6	---	---	---
10	6.3	5.3	5.7	---	---	---	10.5	10.0	10.1	---	---	---
11	6.1	5.0	5.5	---	---	---	10.0	9.8	9.9	---	---	---
12	5.5	4.5	4.9	---	---	---	9.8	9.6	9.7	---	---	---
13	6.0	5.0	5.5	---	---	---	9.9	9.5	9.7	---	---	---
14	7.0	5.9	6.6	---	---	---	9.7	9.5	9.6	---	---	---
15	6.4	5.1	6.1	---	---	---	9.6	9.3	9.4	---	---	---
16	6.9	5.0	5.6	---	---	---	9.3	8.8	9.0	---	---	---
17	---	---	---	---	---	---	9.0	8.5	8.7	---	---	---
18	---	---	---	---	---	---	8.7	8.2	8.4	---	---	---
19	---	---	---	---	---	---	8.3	7.7	8.0	---	---	---
20	---	---	---	---	---	---	8.1	7.6	7.9	---	---	---
21	---	---	---	---	---	---	9.5	7.6	8.4	---	---	---
22	---	---	---	---	---	---	10.3	9.1	9.7	---	---	---
23	---	---	---	---	---	---	10.8	10.0	10.5	---	---	---
24	---	---	---	---	---	---	10.6	10.1	10.4	---	---	---
25	---	---	---	---	---	---	11.2	10.5	10.9	---	---	---
26	---	---	---	8.6	8.0	8.4	11.9	11.1	11.6	---	---	---
27	---	---	---	8.8	7.2	8.0	12.0	11.6	11.8	---	---	---
28	---	---	---	9.1	7.1	8.0	11.9	11.4	11.6	---	---	---
29	---	---	---	8.6	7.8	8.2	12.1	11.2	11.8	---	---	---
30	---	---	---	8.2	7.2	7.7	12.3	11.4	12.1	---	---	---
31	---	---	---	---	---	---	12.5	12.2	12.3	---	---	---
MONTH	---	---	---	---	---	---	12.5	7.3	10.0	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	8.6	8.3	8.5
10	---	---	---	---	---	---	---	---	---	8.7	8.3	8.5
11	---	---	---	---	---	---	---	---	---	8.6	7.6	8.3
12	---	---	---	---	---	---	---	---	---	8.1	7.6	7.9
13	---	---	---	---	---	---	---	---	---	9.3	7.6	8.1
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	7.8	5.8	6.9
27	---	---	---	---	---	---	---	---	---	8.1	7.8	7.9
28	---	---	---	---	---	---	---	---	---	7.8	7.4	7.7
29	---	---	---	---	---	---	---	---	---	7.9	7.4	7.6
30	---	---	---	---	---	---	---	---	---	7.8	7.3	7.5
31	---	---	---	---	---	---	---	---	---	8.4	7.0	7.7
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.2	7.2	7.6	6.4	5.5	5.8	7.8	6.1	7.0	6.7	5.6	6.1
2	8.4	6.6	7.4	6.3	5.5	6.0	7.4	6.3	6.9	7.5	5.6	6.5
3	8.8	6.5	7.7	6.8	5.7	6.3	7.6	6.3	6.9	7.7	6.1	7.0
4	8.2	6.6	7.1	5.8	4.8	5.1	7.9	6.5	7.1	7.7	6.4	7.0
5	---	---	---	6.0	4.3	5.1	8.3	6.6	7.4	7.7	6.1	6.9
6	---	---	---	6.4	4.7	5.5	8.7	7.0	7.8	7.7	6.4	7.0
7	8.4	6.6	7.7	6.1	4.6	5.4	8.5	7.0	7.8	7.3	6.4	6.9
8	8.0	7.1	7.4	6.8	5.0	5.8	8.3	7.0	7.6	7.3	6.3	6.9
9	8.4	6.8	7.5	7.1	4.9	5.8	7.6	6.7	7.0	7.5	6.3	6.9
10	8.5	7.3	7.8	6.4	5.7	6.0	7.5	6.4	6.9	7.5	6.5	7.0
11	7.8	7.2	7.4	6.1	5.4	5.7	7.2	6.5	6.9	7.4	6.4	7.0
12	8.6	7.1	7.7	6.5	5.3	5.8	7.4	6.1	6.6	7.3	6.4	6.9
13	8.9	6.7	7.6	6.3	5.5	5.9	7.6	6.2	6.9	7.3	6.5	7.0
14	8.1	6.2	7.1	6.7	5.6	6.1	7.6	6.4	6.8	7.5	6.9	7.2
15	8.2	5.9	6.8	6.9	5.5	6.1	7.4	6.3	6.8	7.4	7.0	7.2
16	---	---	---	6.9	5.0	5.8	7.2	6.0	6.6	7.2	6.5	7.0
17	---	---	---	6.9	4.8	5.9	7.6	6.3	6.9	7.3	6.5	6.8
18	6.9	5.7	6.3	7.0	5.1	5.9	7.2	6.2	6.7	7.3	6.3	6.9
19	6.8	5.3	6.0	6.6	5.0	5.8	7.1	5.9	6.5	7.3	6.3	6.8
20	7.3	5.3	6.2	6.6	4.8	5.7	7.1	5.7	6.3	7.2	6.2	6.7
21	6.6	5.2	6.0	6.7	4.7	5.8	6.9	5.7	6.3	7.2	5.9	6.5
22	7.1	5.2	6.0	6.9	5.0	5.9	6.7	5.5	6.1	7.2	5.8	6.6
23	6.9	5.3	6.1	6.9	4.9	6.0	6.3	5.2	5.8	7.3	5.8	6.7
24	6.8	5.0	5.8	7.2	5.2	6.1	6.3	5.0	5.7	7.7	6.4	7.0
25	7.1	5.3	6.0	7.7	5.7	6.7	6.2	4.9	5.6	7.8	6.7	7.2
26	6.9	5.1	6.0	7.9	5.8	6.7	6.1	5.3	5.7	7.6	6.4	7.0
27	7.0	5.3	6.1	7.6	5.6	6.6	6.1	5.1	5.7	6.9	6.2	6.6
28	7.1	5.1	6.1	7.6	5.8	6.7	6.0	5.3	5.6	7.2	5.8	6.6
29	6.8	4.8	5.9	7.6	6.0	6.7	6.3	5.0	5.6	7.2	6.2	6.6
30	6.3	4.8	5.6	7.8	5.9	6.8	6.6	5.2	5.8	7.1	6.1	6.5
31	---	---	---	7.9	6.2	6.8	6.6	5.5	5.9	---	---	---
MONTH	---	---	---	7.9	4.3	6.0	8.7	4.9	6.6	7.8	5.6	6.8



Measurement equipment used during high water

07177650 FLAT ROCK CREEK AT CINCINNATI AVENUE AT TULSA, OK.

LOCATION.--Lat 36°12'55", long 95°59'42", in SE ¼ NE ¼ 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. U.S. Geological Survey satellite telemeter at station.

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)	Gage height (ft)
Dec 23	2315	1,090	8.64	Mar 16	1000	967	8.40
Jan 4	0645	1,690	9.66	Mar 19	0315	1,000	8.47
Mar 7	1630	985	8.43	Apr 27	0700	2,010	10.14

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	.08	1.1	4.4	46	1.1	7.1	3.5	.78	7.1	.20	.00
2	.22	.08	1.8	5.4	13	1.0	5.0	2.9	.78	2.3	.19	.00
3	.28	.08	14	5.3	9.0	.95	4.7	2.5	.83	1.4	.23	.00
4	.17	.08	3.5	315	6.1	.92	4.2	2.2	.75	1.1	.25	.00
5	.15	.20	2.0	95	3.4	.87	3.9	2.9	.70	1.0	.31	.00
6	e.13	.12	1.4	109	2.9	.86	4.0	2.5	.70	1.1	.30	.00
7	e.11	.12	1.2	73	2.6	249	4.1	2.8	.82	.68	.25	.00
8	e.09	.12	12	104	2.5	54	3.8	2.3	1.2	5.6	.15	.00
9	.08	.18	4.4	67	2.3	9.7	3.6	39	1.1	2.0	.32	.00
10	.08	.57	2.6	30	2.2	6.1	3.3	e8.0	.84	1.5	.19	.00
11	.08	.43	1.8	19	2.1	4.3	3.1	e3.0	1.3	1.4	.31	.00
12	6.7	.39	1.5	17	1.8	e3.2	2.9	e2.0	.98	33	.39	.00
13	3.8	.70	1.1	15	1.8	e3.0	2.9	e1.8	.80	1.9	.34	2.3
14	.97	1.2	1.0	14	1.6	e2.8	2.7	1.5	.78	1.1	.10	1.2
15	.44	.92	.87	11	1.7	68	2.7	e1.6	.72	.50	.01	.35
16	.28	.62	.79	9.2	1.9	367	2.6	e1.4	.75	.43	.00	.25
17	.15	.43	.78	9.2	1.9	180	2.4	e1.2	.82	.32	.00	.08
18	.08	.39	.69	11	1.8	26	2.4	e1.0	.79	.30	.00	.04
19	.08	.35	.62	7.6	1.6	255	2.1	e1.1	.78	.29	.03	.04
20	.08	.32	.62	7.3	2.0	e30	1.3	1.1	.78	.26	.00	.02
21	.08	.31	66	5.6	1.6	e14	1.8	1.0	4.2	.25	.00	3.2
22	.08	.31	12	5.1	1.4	e10	1.6	.96	1.6	.33	.35	27
23	.19	.31	124	4.7	1.4	e9.0	1.6	.96	.85	.43	.28	1.3
24	.12	.31	216	4.7	1.4	e6.0	1.4	.96	.80	.28	.10	.71
25	.46	.31	17	5.4	1.4	e5.8	1.4	1.9	.89	.25	.04	.55
26	.59	.31	10	29	1.4	e5.1	26	2.2	.71	.16	.03	.56
27	.28	.31	7.7	11	1.3	e6.5	650	1.5	.57	e.10	.02	.56
28	.15	11	7.0	8.5	1.2	e5.1	18	1.1	.62	.04	.12	.55
29	.09	3.6	6.8	7.1	---	e4.0	7.1	.98	.62	.06	.05	.43
30	.08	1.8	5.7	6.1	---	8.4	4.6	.95	13	.43	.03	.57
31	.08	---	4.1	8.2	---	15	---	.85	---	.25	.00	---
TOTAL	16.40	25.95	530.07	1023.8	119.3	1352.70	782.3	97.66	40.86	65.86	4.59	39.71
MEAN	.53	.87	17.1	33.0	4.26	43.6	26.1	3.15	1.36	2.12	.15	1.32
MAX	6.7	11	216	315	46	367	650	39	13	33	.39	27
MIN	.08	.08	.62	4.4	1.2	.86	1.3	.85	.57	.04	.00	.00
AC-FT	33	51	1050	2030	237	2680	1550	194	81	131	9.1	79

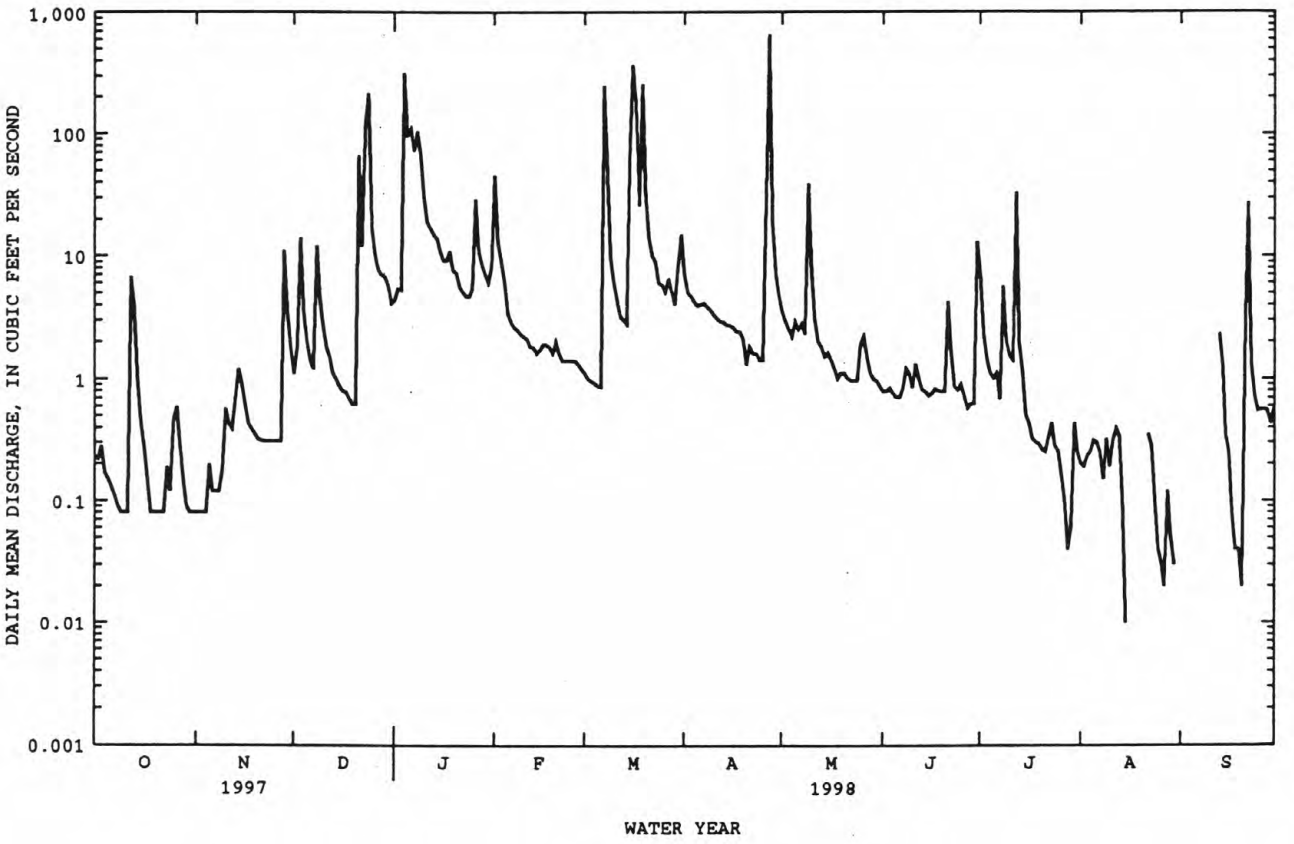
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

MEAN	1.34	8.29	6.81	5.72	5.89	16.6	12.8	11.1	8.88	1.73	3.07	1.36
MAX	6.55	31.1	23.0	33.0	15.5	47.8	26.1	58.4	55.7	8.28	17.7	6.54
(WY)	1997	1997	1988	1998	1997	1988	1998	1995	1995	1994	1997	1993
MIN	.12	.010	.099	.14	.009	.068	.16	.21	.000	.044	.031	.051
(WY)	1993	1996	1996	1996	1996	1996	1996	1988	1988	1991	1990	1992

e Estimated

07177650 FLAT ROCK CREEK AT CINCINNATI AVENUE AT TULSA, OK.--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1988 - 1998	
ANNUAL TOTAL	2482.55		4099.20			
ANNUAL MEAN	6.80		11.2		6.79	
HIGHEST ANNUAL MEAN					15.3	1995
LOWEST ANNUAL MEAN					.56	1996
HIGHEST DAILY MEAN	405	Aug 18	650	Apr 27	833	Jun 9 1995
LOWEST DAILY MEAN	.00	Aug 5	.00	at times	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.08	Oct 29	.00	Aug 31	.00	May 13 1988
INSTANTANEOUS PEAK FLOW			2010	Apr 27	4220	Jun 9 1995
INSTANTANEOUS PEAK STAGE			10.14	Apr 27	12.82	Jun 9 1995
ANNUAL RUNOFF (AC-FT)	4920		8130		4920	
10 PERCENT EXCEEDS	6.9		12		8.2	
50 PERCENT EXCEEDS	.83		1.1		.55	
90 PERCENT EXCEEDS	.12		.08		.00	



07177800 COAL CREEK AT TULSA, OK

LOCATION.--Lat 36°11'40", long 95°54'50", in SE ¼ SW ¼ 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 poor. U.S. Geological Survey satellite telemeter at station.

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)
Dec 23	2225	1,030	9.62	Apr 27	0610	1,450	10.35
Mar 7	1215	1,030	9.62	Jun 30	1335	1,650	10.66

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.63	4.5	4.9	3.2	20	e2.6	5.2	4.6	1.4	80	3.9	.17
2	.80	13	18	e3.1	3.3	e2.5	4.5	3.7	2.3	17	3.3	.21
3	1.1	4.7	22	e3.0	2.7	e2.5	12	3.1	3.4	3.8	3.6	.22
4	.96	2.3	6.2	119	2.5	e2.6	4.1	2.7	4.5	2.3	18	.19
5	1.1	3.5	5.4	21	2.5	e2.5	4.0	16	4.4	1.2	5.5	.18
6	1.0	3.1	5.4	42	2.2	e2.4	4.8	40	2.6	.93	3.6	.56
7	.79	3.5	15	30	2.2	231	13	13	2.2	1.6	3.9	.24
8	2.8	5.0	31	56	2.3	28	7.0	6.5	48	20	3.7	.10
9	1.4	8.5	7.9	24	2.5	8.1	3.5	17	3.4	2.7	12	.20
10	.63	16	6.2	11	2.8	5.5	3.2	5.0	3.8	1.7	4.6	.11
11	.44	2.1	6.1	6.7	2.6	4.7	3.1	4.4	16	16	17	.21
12	59	3.5	5.5	e5.5	2.7	4.1	2.9	5.8	9.2	49	2.5	.49
13	6.2	14	4.8	e4.9	3.1	4.0	3.0	4.1	3.0	3.4	8.8	129
14	2.9	6.0	5.7	e4.4	3.4	3.8	2.8	2.6	2.8	3.7	2.0	9.4
15	e2.5	2.9	5.0	e4.0	5.2	65	2.7	2.3	2.8	2.8	.95	e1.6
16	e2.3	2.6	4.9	3.6	4.2	227	2.7	1.8	3.5	2.4	.50	e.56
17	e2.1	2.5	4.9	3.2	3.3	93	2.6	1.8	3.2	2.4	.55	e.27
18	e2.0	2.9	e4.8	3.3	3.3	17	2.8	2.3	3.9	2.2	.62	e.18
19	e1.9	11	e4.6	3.5	3.3	111	2.7	3.2	3.5	3.4	.53	e.14
20	e1.8	2.3	e4.5	3.8	e3.2	17	2.5	2.5	1.8	e3.0	.89	e.12
21	e1.7	2.9	80	2.6	e3.2	9.1	2.6	2.5	33	e2.0	.71	3.0
22	e1.6	5.0	9.7	2.5	e3.1	7.0	2.6	2.2	2.6	e1.4	.36	25
23	5.0	e2.9	133	2.3	e3.0	5.7	2.6	2.0	3.4	e.84	1.0	e1.5
24	3.4	e2.7	114	2.0	e2.8	5.0	2.5	1.5	2.9	e.73	2.0	e.60
25	12	e2.4	8.4	10	e2.7	4.6	2.6	35	1.3	e.67	.53	e.27
26	3.5	e3.7	5.2	17	e2.6	4.3	47	15	1.5	e.58	.26	e.20
27	3.0	e2.5	3.7	3.3	e2.6	12	347	3.0	26	e.52	1.5	e.17
28	3.1	23	4.7	2.5	e2.5	4.1	17	2.0	6.4	e.48	9.8	e.15
29	3.0	6.6	4.1	2.3	---	3.6	7.8	2.4	5.2	e.41	2.4	e.14
30	3.5	4.8	3.7	2.1	---	45	5.7	1.6	87	5.2	.27	6.8
31	3.8	---	3.3	10	---	12	---	1.3	---	3.8	.21	---
TOTAL	135.95	170.4	542.6	411.8	99.8	946.7	526.5	210.9	295.0	236.16	115.48	181.98
MEAN	4.39	5.68	17.5	13.3	3.56	30.5	17.5	6.80	9.83	7.62	3.73	6.07
MAX	59	23	133	119	20	231	347	40	87	80	18	129
MIN	.44	2.1	3.3	2.0	2.2	2.4	2.5	1.3	1.3	.41	.21	.10
AC-FT	270	338	1080	817	198	1880	1040	418	585	468	229	361

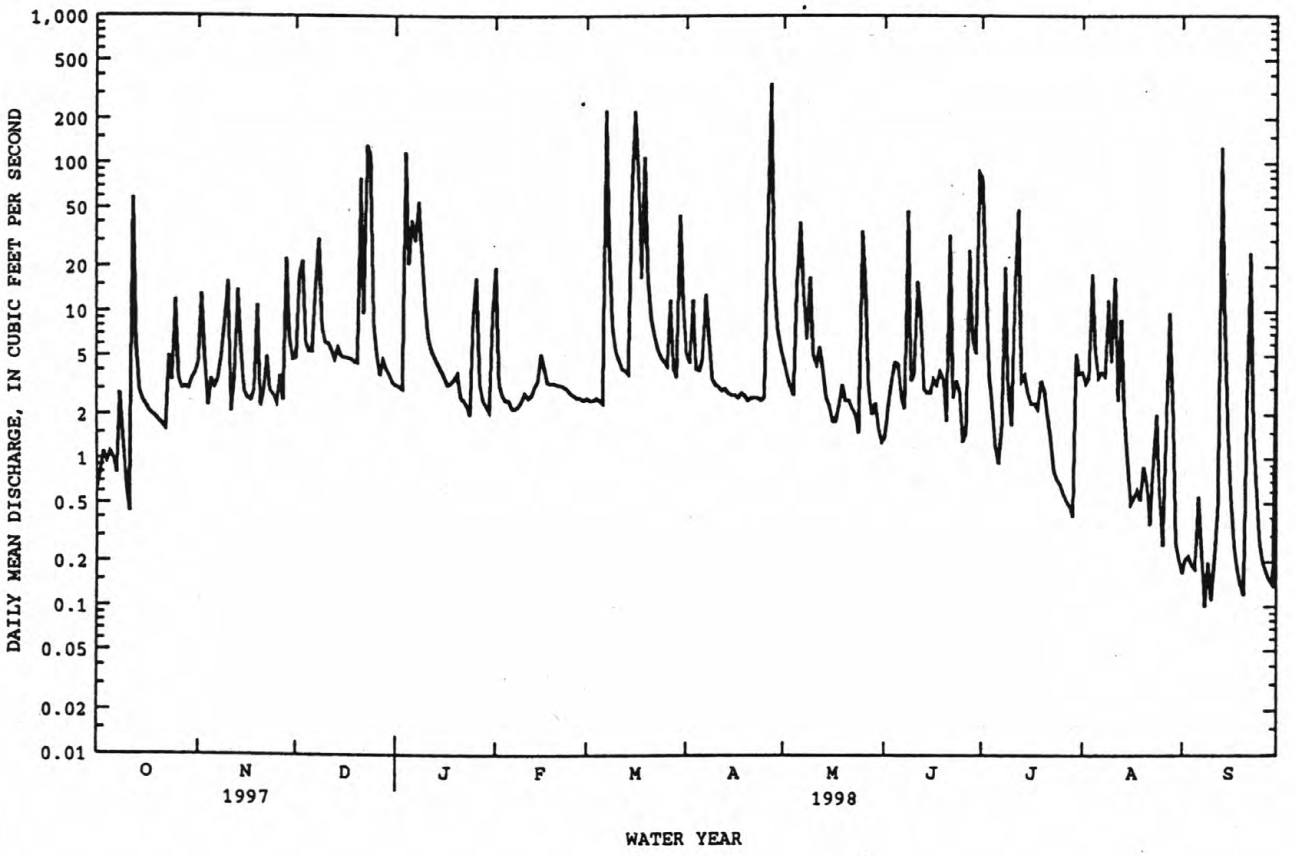
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

MEAN	5.01	9.43	7.90	5.59	5.79	12.5	11.2	12.5	10.5	7.57	5.64	6.29
MAX	10.0	24.9	20.3	13.3	12.2	33.2	17.5	46.3	42.1	24.8	18.7	12.8
(WY)	1997	1995	1993	1998	1990	1990	1998	1995	1995	1994	1997	1988
MIN	1.11	.55	.37	.32	.96	1.71	1.62	2.86	1.79	.29	.75	1.91
(WY)	1993	1996	1997	1997	1996	1992	1989	1988	1988	1991	1991	1992

e Estimated

07177800 COAL CREEK AT TULSA, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1988 - 1998	
ANNUAL TOTAL	3550.13		3873.27			
ANNUAL MEAN	9.73		10.6		8.37	
HIGHEST ANNUAL MEAN					13.5	1995
LOWEST ANNUAL MEAN					3.60	1996
HIGHEST DAILY MEAN	203	Aug 18	347	Apr 27	508	Aug 20 1989
LOWEST DAILY MEAN	.08	Jan 12	.10	Sep 8	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.10	Jan 11	.21	Aug 30	.00	Jul 30 1991
INSTANTANEOUS PEAK FLOW			1650	Jun 30	5190	Jun 23 1995
INSTANTANEOUS PEAK STAGE			10.66	Jun 30	14.18	Jun 23 1995
ANNUAL RUNOFF (AC-FT)	7040		7680		6060	
10 PERCENT EXCEEDS	16		17		16	
50 PERCENT EXCEEDS	3.5		3.2		2.0	
90 PERCENT EXCEEDS	.33		.61		.25	



07178000 BIRD CREEK NEAR OWASSO, OK

LOCATION.--Lat 36°14'54", long 95°52'01", in NW ¼ NW ¼ 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. WRD OK-94-1; 1993 (M).

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 fair. 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 24	1945	12,000	17.76	Mar 18	1130	14,100	20.13
Jan 5	0715	11,700	17.41	Apr 28	2130	17,300	22.53
Mar 8	0600	9,120	14.21				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	199	112	e300	2100	722	155	3030	3540	254	671	177	194
2	193	105	e250	1900	790	155	1310	3470	233	1110	178	192
3	190	89	e490	1870	858	152	502	3420	196	458	181	192
4	188	83	620	6870	827	151	376	3350	192	213	182	205
5	188	85	455	10800	750	148	332	3310	190	187	194	e200
6	188	85	325	6720	482	148	312	3330	185	196	189	e192
7	186	92	255	4390	409	2900	298	3430	185	185	185	e189
8	186	122	467	4060	392	7620	298	3010	247	306	182	e180
9	211	131	804	5880	376	2280	393	2840	225	283	187	e193
10	279	158	636	4000	237	2150	340	3040	230	386	193	e197
11	279	139	461	3410	202	2070	294	3080	257	292	197	183
12	383	136	325	3230	196	1950	266	1880	492	1890	204	181
13	543	151	256	3150	177	1280	248	1470	361	881	200	396
14	743	173	223	3110	173	1180	244	790	263	364	200	482
15	574	162	202	3020	170	1220	240	294	213	254	200	377
16	342	154	182	2040	169	8740	236	234	192	218	193	282
17	267	149	168	1690	169	13500	234	300	181	199	192	229
18	243	148	155	1640	169	13700	230	276	177	188	192	209
19	233	153	147	1610	169	9900	230	236	173	178	193	200
20	225	158	139	1510	169	7330	230	212	173	186	192	196
21	212	158	685	434	169	4310	224	202	228	185	192	196
22	203	149	2560	248	164	3940	221	200	192	185	192	740
23	194	143	1840	233	159	3680	221	200	192	183	192	307
24	192	136	10800	219	151	3710	221	200	174	181	192	236
25	191	125	9710	203	156	3680	221	319	173	180	191	233
26	420	120	2410	334	158	3620	392	3730	173	177	198	217
27	297	118	1480	337	158	3490	10900	1370	173	177	200	203
28	177	e370	1300	275	158	3390	16600	796	173	174	197	197
29	142	e960	1220	232	---	3370	14300	484	173	173	209	193
30	129	e500	2440	408	---	3350	5170	344	407	175	197	192
31	123	---	2410	464	---	3220	---	303	---	177	196	---
TOTAL	8120	5364	43715	76387	8879	116489	58113	49660	6677	10612	5967	7383
MEAN	262	179	1410	2464	317	3758	1937	1602	223	342	192	246
MAX	743	960	10800	10800	858	13700	16600	3730	492	1890	209	740
MIN	123	83	139	203	151	148	221	200	173	173	177	180
AC-FT	16110	10640	86710	151500	17610	231100	115300	98500	13240	21050	11840	14640

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1998, BY WATER YEAR (WY)

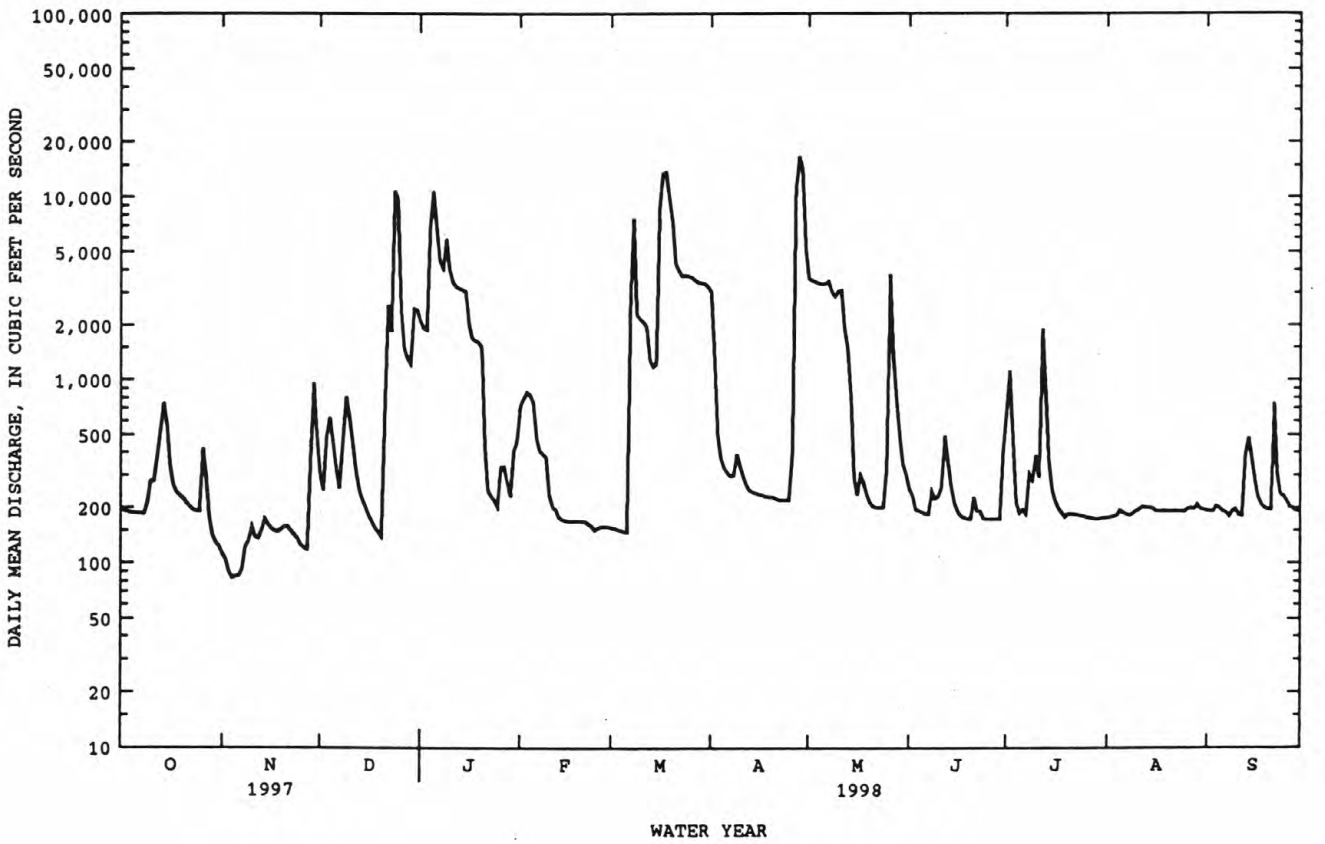
MEAN	230	685	596	640	626	1579	1806	1814	1575	799	376	326
MAX	382	2362	1561	2464	1551	5861	3589	5565	5579	3195	1255	747
(WY)	1997	1995	1993	1998	1997	1990	1994	1995	1995	1995	1997	1996
MIN	131	74.0	85.7	86.1	83.9	91.9	240	160	223	181	176	165
(WY)	1993	1996	1990	1996	1996	1991	1996	1996	1998	1991	1991	1992

e Estimated

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1990 - 1998	
ANNUAL TOTAL	266647		397366			
ANNUAL MEAN	731		1089		921	
HIGHEST ANNUAL MEAN					1906	1995
LOWEST ANNUAL MEAN					202	1996
HIGHEST DAILY MEAN	10800	Dec 24	16600	Apr 28	27700	May 11 1993
LOWEST DAILY MEAN	62	Feb 19	83	Nov 4	[a]45	Nov 6 1993
ANNUAL SEVEN-DAY MINIMUM	65	Feb 13	93	Nov 1	58	Jan 1 1994
INSTANTANEOUS PEAK FLOW			17300	Apr 28	29200	May 11 1993
INSTANTANEOUS PEAK STAGE			22.53	Apr 28	26.94	May 11 1993
ANNUAL RUNOFF (AC-FT)	528900		788200		667400	
10 PERCENT EXCEEDS	2290		3340		2680	
50 PERCENT EXCEEDS	201		229		199	
90 PERCENT EXCEEDS	85		157		86	

[a]Minimum 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, 1,950 microsiemens, Apr. 1, 1996; 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, 1.2 mg/L, Sept. 8, 1995.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, >1,000 microsiemens, Nov. 29; minimum, 106 microsiemens, Apr. 28.
pH: Maximum recorded (greater than 20 percent missing record), 8.4 units, Feb. 27; minimum recorded, 7.1 units, Sept. 14, 24, 25.
WATER TEMPERATURE: Maximum recorded (greater than 20 percent missing record), 34.0°C, July 22; minimum recorded, 3.5°C, Dec. 13, 14, 15.
DISSOLVED OXYGEN: Maximum recorded (greater than 20 percent missing record), 11.9 mg/L, Feb. 14; minimum recorded, 2.9 mg/L, Aug. 1.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	315	312	313	375	354	365	350	323	329	241	237	239
2	312	308	310	379	365	373	333	324	328	243	241	243
3	313	305	308	379	336	360	426	333	363	244	242	243
4	313	305	307	388	239	347	464	355	386	327	130	208
5	306	302	303	407	387	397	386	353	369	182	131	159
6	302	299	300	395	238	354	353	329	335	182	130	160
7	305	299	301	423	373	407	347	334	343	209	127	180
8	305	299	302	442	413	429	411	328	353	214	206	210
9	300	298	299	413	362	377	501	343	381	218	192	204
10	312	275	287	380	366	374	388	334	363	233	218	224
11	275	271	273	406	356	376	351	338	346	239	233	237
12	306	254	271	399	379	384	365	351	360	240	238	239
13	392	251	317	410	381	399	377	365	373	241	239	240
14	457	333	370	404	390	400	383	377	380	242	240	240
15	333	291	310	418	390	410	385	379	382	253	242	243
16	335	291	320	424	411	417	391	382	385	265	253	260
17	336	297	307	435	411	423	404	388	395	272	255	259
18	297	295	296	429	400	410	414	396	408	273	255	257
19	307	294	299	400	383	392	425	401	416	268	250	259
20	307	299	303	383	359	367	436	425	432	284	267	270
21	305	302	304	363	356	360	515	334	423	330	284	308
22	308	301	305	359	350	355	692	257	334	407	330	367
23	315	308	311	382	359	369	353	275	309	445	407	434
24	316	311	313	387	368	381	308	126	182	462	445	454
25	330	316	324	388	366	381	154	129	143	471	461	466
26	379	319	340	404	384	395	199	154	176	531	465	485
27	351	332	341	404	387	394	225	199	214	842	489	622
28	348	318	339	391	363	386	232	224	227	823	520	599
29	327	312	316	>1000	384	438	241	232	238	520	506	511
30	346	324	336	387	350	457	253	229	234	513	430	497
31	359	339	348	---	---	---	238	234	236	430	341	352
MONTH	457	251	312	1000	238	389	692	126	327	842	127	312

> Actual value is known to be greater than the value shown.

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	429	338	374	549	547	548	319	269	282	247	241	244
2	511	362	416	548	541	545	329	292	316	246	244	246
3	374	358	362	542	539	540	386	316	348	246	238	244
4	364	337	352	539	534	537	452	386	416	244	240	242
5	351	348	350	539	531	533	452	443	448	245	239	241
6	390	350	361	557	535	545	451	439	445	272	236	243
7	399	379	388	584	250	472	465	439	444	272	243	247
8	381	374	377	584	206	262	482	463	468	252	240	244
9	381	371	376	256	249	252	482	424	446	314	245	257
10	387	371	375	268	245	257	426	414	420	280	245	268
11	445	387	410	282	268	278	441	417	429	267	251	257
12	492	445	474	282	271	276	463	441	452	284	264	272
13	512	492	500	293	261	284	481	463	473	270	263	264
14	507	494	501	290	285	287	486	481	483	308	270	292
15	516	507	512	294	279	288	487	481	484	329	294	308
16	519	514	516	356	160	249	491	484	488	408	329	369
17	531	517	524	179	136	151	492	488	490	454	407	428
18	540	524	530	177	142	153	491	484	487	446	395	428
19	543	536	540	242	162	187	491	483	488	447	435	440
20	542	537	539	194	161	179	493	486	490	474	447	466
21	537	533	535	230	189	220	492	486	490	466	460	463
22	534	528	531	240	228	236	496	489	492	474	443	464
23	556	533	539	245	238	243	494	487	491	444	440	442
24	575	550	563	247	243	245	496	481	487	453	441	449
25	632	549	584	253	246	249	490	475	480	458	439	447
26	630	558	584	249	246	248	520	478	488	488	190	290
27	568	557	561	255	245	251	687	116	298	284	265	269
28	573	548	561	258	246	254	121	106	112	298	267	284
29	---	---	---	260	257	258	197	121	149	313	297	306
30	---	---	---	309	258	262	245	197	234	331	313	320
31	---	---	---	318	276	292	---	---	---	353	324	338
MONTH	632	337	473	584	136	309	687	106	417	488	190	325

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	349	336	342	413	200	307	322	304	312	318	314	316
2	359	349	354	407	315	364	308	304	305	317	313	315
3	364	356	359	---	---	---	306	302	304	319	315	317
4	387	363	373	348	335	340	317	299	308	320	316	318
5	399	383	389	359	345	354	308	301	303	---	---	---
6	413	388	397	433	349	364	318	303	311	---	---	---
7	389	380	385	443	334	391	312	304	308	---	---	---
8	381	356	373	337	291	318	308	301	304	---	---	---
9	417	359	383	344	305	327	305	301	303	---	---	---
10	390	370	384	345	321	329	312	301	305	---	---	---
11	401	384	389	322	301	314	316	307	311	---	---	---
12	420	369	390	304	225	271	316	307	311	298	294	296
13	386	354	363	302	236	274	313	302	306	298	196	284
14	---	---	---	313	297	306	310	302	307	305	191	249
15	---	---	---	323	313	319	316	308	313	318	302	309
16	---	---	---	---	---	---	316	312	314	308	290	296
17	---	---	---	---	---	---	317	312	314	299	290	296
18	---	---	---	302	296	299	318	311	315	295	286	289
19	---	---	---	304	297	300	313	304	308	291	287	289
20	---	---	---	303	300	301	312	302	307	293	290	291
21	387	376	381	303	299	301	309	301	304	295	275	293
22	410	332	366	310	301	303	308	304	305	513	172	250
23	395	367	384	316	303	309	311	305	307	566	255	330
24	468	395	446	304	298	301	311	306	309	294	274	286
25	444	399	415	301	298	300	310	306	308	297	285	292
26	399	382	391	302	298	300	311	307	309	298	295	296
27	382	365	372	303	299	301	312	303	306	297	291	294
28	365	361	364	307	301	303	307	303	305	291	285	288
29	361	356	359	314	306	310	316	307	310	286	283	284
30	357	264	340	311	308	310	330	311	318	286	282	284
31	---	---	---	314	306	310	318	314	315	---	---	---
MONTH	---	---	---	---	---	---	330	299	309	---	---	---

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	7.6	7.4	7.5	---	---	---	7.7	7.5	7.6
2	---	---	---	7.7	7.5	7.6	---	---	---	7.7	7.6	7.7
3	---	---	---	7.7	7.6	7.6	---	---	---	7.7	7.6	7.7
4	---	---	---	7.6	7.5	7.5	---	---	---	8.0	7.5	7.8
5	---	---	---	---	---	---	---	---	---	7.7	7.5	7.6
6	---	---	---	---	---	---	---	---	---	7.7	7.5	7.6
7	---	---	---	---	---	---	---	---	---	7.7	7.5	7.7
8	---	---	---	---	---	---	---	---	---	7.8	7.7	7.8
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	8.0	7.9	7.9
12	---	---	---	---	---	---	---	---	---	8.0	7.6	7.8
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	7.8	7.5	7.7	---	---	---	---	---	---	---	---	---
16	7.9	7.7	7.8	---	---	---	---	---	---	---	---	---
17	7.9	7.6	7.8	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	7.6	7.5	7.6	---	---	---
27	---	---	---	---	---	---	7.8	7.6	7.8	---	---	---
28	---	---	---	---	---	---	7.8	7.7	7.8	---	---	---
29	7.5	7.4	7.4	---	---	---	7.8	7.7	7.7	---	---	---
30	7.5	7.4	7.4	---	---	---	7.8	7.6	7.7	---	---	---
31	7.5	7.4	7.5	---	---	---	7.8	7.6	7.7	8.1	7.3	7.5
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.1	7.6	8.0	8.1	7.5	8.0	---	---	---	---	---	---
2	8.0	7.6	7.8	8.0	7.9	7.9	---	---	---	---	---	---
3	7.7	7.6	7.6	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	8.0	7.8	7.9	---	---	---	---	---	---
6	---	---	---	8.1	7.8	7.9	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	8.4	8.1	8.2	---	---	---	---	---	---	---	---	---
28	8.2	7.8	8.1	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.7	7.5	7.6	---	---	---	7.5	7.3	7.4	7.8	7.5	7.6
2	7.7	7.5	7.6	---	---	---	7.5	7.3	7.4	7.8	7.5	7.6
3	7.8	7.5	7.6	---	---	---	7.4	7.2	7.3	7.7	7.5	7.6
4	7.7	7.4	7.5	---	---	---	7.4	7.2	7.3	7.8	7.5	7.6
5	7.6	7.5	7.5	---	---	---	7.6	7.4	7.5	---	---	---
6	7.7	7.4	7.5	---	---	---	7.7	7.5	7.5	---	---	---
7	7.9	7.5	7.7	---	---	---	7.8	7.5	7.6	---	---	---
8	7.9	7.5	7.7	---	---	---	7.6	7.4	7.5	---	---	---
9	7.8	7.3	7.5	---	---	---	7.7	7.4	7.5	---	---	---
10	7.4	7.2	7.3	---	---	---	7.6	7.4	7.5	---	---	---
11	7.9	7.3	7.7	---	---	---	7.5	7.4	7.4	7.6	7.5	7.5
12	7.7	7.4	7.5	---	---	---	7.8	7.4	7.5	7.6	7.4	7.5
13	7.9	7.3	7.5	---	---	---	7.8	7.5	7.6	7.5	7.2	7.4
14	7.8	7.4	7.6	---	---	---	7.8	7.5	7.6	7.3	7.1	7.2
15	7.7	7.4	7.6	---	---	---	7.9	7.5	7.6	7.4	7.3	7.3
16	7.7	7.4	7.5	---	---	---	7.8	7.5	7.6	7.3	7.3	7.3
17	---	---	---	7.9	7.4	7.8	7.9	7.6	7.6	7.3	7.2	7.3
18	---	---	---	7.9	7.6	7.7	8.0	7.5	7.7	7.4	7.2	7.3
19	---	---	---	8.0	7.6	7.7	8.0	7.6	7.7	7.5	7.3	7.3
20	---	---	---	7.9	7.4	7.7	7.9	7.6	7.7	7.4	7.2	7.3
21	---	---	---	7.7	7.3	7.4	7.9	7.5	7.6	7.3	7.2	7.3
22	---	---	---	7.6	7.3	7.4	7.8	7.5	7.6	---	---	---
23	---	---	---	7.8	7.4	7.5	7.8	7.5	7.6	---	---	---
24	---	---	---	7.7	7.4	7.5	7.8	7.5	7.6	7.1	7.1	7.1
25	---	---	---	7.7	7.4	7.5	7.7	7.5	7.5	7.3	7.1	7.2
26	---	---	---	7.6	7.3	7.5	7.7	7.5	7.5	7.5	7.3	7.3
27	---	---	---	7.5	7.3	7.4	7.7	7.4	7.5	7.5	7.3	7.3
28	---	---	---	7.5	7.3	7.4	7.6	7.4	7.5	7.4	7.2	7.3
29	---	---	---	7.6	7.4	7.5	7.7	7.5	7.6	7.4	7.2	7.2
30	---	---	---	7.4	7.2	7.3	7.7	7.5	7.6	7.4	7.2	7.2
31	---	---	---	7.5	7.3	7.3	7.8	7.5	7.6	---	---	---
MAX	---	---	---	---	---	---	8.0	7.6	7.7	---	---	---
MIN	---	---	---	---	---	---	7.4	7.2	7.3	---	---	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.5	21.5	22.5	14.5	13.0	13.5	11.5	10.5	11.0	6.5	6.0	6.0
2	23.5	21.5	22.5	14.5	13.0	13.5	10.5	10.0	10.5	7.5	6.5	7.0
3	24.5	22.0	23.0	14.0	12.5	13.0	10.0	9.0	9.5	8.5	7.5	8.0
4	24.5	22.5	23.5	13.0	11.5	12.5	9.0	7.5	8.0	8.5	7.0	8.0
5	25.0	23.0	24.0	13.0	12.0	12.5	7.5	6.0	7.0	7.0	6.5	6.5
6	25.0	23.0	24.0	12.0	11.0	11.5	6.0	5.5	5.5	7.5	6.5	7.0
7	24.5	23.5	24.0	11.0	10.5	11.0	5.5	5.0	5.0	7.5	6.5	7.0
8	24.0	23.5	23.5	11.5	10.5	10.5	5.0	4.5	5.0	6.5	5.0	5.5
9	23.5	23.0	23.5	10.5	10.0	10.5	5.5	4.5	5.0	6.0	5.0	5.5
10	24.0	23.0	23.5	10.5	9.5	10.0	5.5	5.0	5.5	6.0	6.0	6.0
11	24.0	23.5	23.5	9.5	8.5	9.0	5.0	4.5	5.0	6.5	6.0	6.0
12	23.5	22.0	23.0	8.5	8.0	8.5	4.5	4.0	4.5	6.5	6.0	6.5
13	22.0	20.0	20.5	8.5	8.0	8.0	4.5	3.5	4.0	6.5	6.0	6.0
14	20.0	18.0	19.0	8.5	7.5	8.0	4.5	3.5	3.5	6.0	6.0	6.0
15	19.0	18.0	18.5	8.0	7.0	7.5	4.5	3.5	4.0	6.0	6.0	6.0
16	19.5	18.5	19.0	7.5	6.5	7.0	5.0	4.0	4.5	6.0	5.5	5.5
17	19.5	18.5	19.0	7.0	6.0	6.5	5.0	4.0	4.5	---	---	---
18	19.0	18.0	18.5	7.0	6.0	6.5	5.5	4.0	5.0	---	---	---
19	19.0	17.5	18.0	7.5	6.5	6.5	6.0	4.5	5.5	---	---	---
20	18.5	17.5	18.0	7.5	7.0	7.5	5.5	5.0	5.0	---	---	---
21	18.0	16.5	17.5	8.5	7.5	8.0	5.5	5.0	5.5	---	---	---
22	17.0	15.5	16.0	8.5	8.0	8.0	5.5	5.0	5.0	---	---	---
23	15.5	15.0	15.0	9.0	8.0	8.0	5.0	5.0	5.0	---	---	---
24	15.0	14.0	14.5	9.5	8.0	9.0	5.0	4.5	5.0	---	---	---
25	14.5	14.0	14.5	10.5	8.5	9.5	4.5	4.5	4.5	---	---	---
26	14.0	12.5	13.5	11.0	10.0	10.0	5.0	4.5	4.5	---	---	---
27	13.0	12.0	12.5	11.0	10.0	10.5	4.5	4.5	4.5	---	---	---
28	12.5	11.5	12.0	12.5	11.0	11.5	4.5	4.5	4.5	---	---	---
29	11.5	11.0	11.5	13.0	12.0	13.0	4.5	4.0	4.5	---	---	---
30	13.0	11.5	12.0	12.5	11.5	12.0	6.0	4.5	5.5	---	---	---
31	14.0	12.5	13.0	---	---	---	6.0	5.5	6.0	---	---	---
MONTH	25.0	11.0	18.8	14.5	6.0	9.8	11.5	3.5	5.5	---	---	---

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	13.0	12.0	12.5	---	---	---
3	---	---	---	---	---	---	13.5	12.5	13.0	---	---	---
4	---	---	---	---	---	---	13.5	13.0	13.5	---	---	---
5	---	---	---	---	---	---	14.0	12.5	13.0	---	---	---
6	---	---	---	---	---	---	15.0	13.0	14.0	---	---	---
7	---	---	---	---	---	---	16.0	14.5	15.0	---	---	---
8	---	---	---	---	---	---	16.0	15.5	15.5	---	---	---
9	---	---	---	---	---	---	15.5	14.5	15.0	---	---	---
10	---	---	---	---	---	---	15.5	14.0	14.5	---	---	---
11	---	---	---	---	---	---	16.0	14.5	15.0	---	---	---
12	---	---	---	---	---	---	16.5	15.0	16.0	---	---	---
13	---	---	---	---	---	---	18.0	16.0	17.0	14.0	13.0	13.5
14	---	---	---	---	---	---	20.0	17.0	18.0	16.0	13.5	15.0
15	---	---	---	---	---	---	20.0	17.5	18.5	17.0	14.5	16.0
16	---	---	---	---	---	---	19.0	17.0	18.0	21.0	16.0	18.5
17	---	---	---	---	---	---	18.0	16.5	17.0	22.0	20.0	21.0
18	---	---	---	---	---	---	17.0	15.5	16.5	23.0	21.0	22.0
19	---	---	---	---	---	---	17.5	15.5	16.5	23.5	22.0	22.5
20	---	---	---	---	---	---	16.5	15.5	16.0	24.0	22.0	23.0
21	---	---	---	---	---	---	16.0	14.5	15.5	24.0	22.5	23.0
22	---	---	---	---	---	---	16.5	14.0	15.0	23.5	22.5	23.0
23	---	---	---	---	---	---	17.0	14.5	15.5	23.0	22.0	22.5
24	---	---	---	---	---	---	17.5	15.0	16.5	23.5	21.5	22.5
25	---	---	---	---	---	---	18.5	16.0	17.5	23.0	21.5	22.0
26	---	---	---	---	---	---	18.5	17.5	18.0	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	26.0	23.5	25.0	32.5	29.5	31.0	30.0	28.0	29.0
2	---	---	---	26.5	24.0	25.5	32.0	30.0	31.0	30.0	28.0	29.0
3	---	---	---	28.0	26.0	27.0	31.0	30.0	30.0	30.0	28.0	29.0
4	---	---	---	29.5	27.0	28.5	30.0	28.5	29.5	30.5	28.0	29.5
5	---	---	---	30.5	28.5	29.5	29.5	28.0	29.0	---	---	---
6	---	---	---	31.5	29.0	30.5	30.0	27.5	28.5	---	---	---
7	---	---	---	31.5	29.5	30.5	30.5	27.5	29.0	---	---	---
8	---	---	---	30.5	28.5	30.0	30.0	28.0	29.0	---	---	---
9	---	---	---	31.0	28.5	30.0	29.5	28.0	28.5	---	---	---
10	---	---	---	32.0	30.0	31.0	28.5	27.5	28.0	---	---	---
11	---	---	---	31.0	30.0	30.5	29.0	27.5	28.0	---	---	---
12	---	---	---	30.0	25.5	27.5	30.0	27.5	28.5	26.0	25.0	25.5
13	28.5	26.5	27.0	29.0	27.0	28.0	30.0	28.0	29.0	25.5	24.0	25.0
14	28.5	27.0	27.5	30.5	28.5	29.5	30.0	28.0	29.0	25.5	24.0	24.5
15	28.0	26.5	27.5	31.0	29.0	30.0	30.0	28.0	29.0	26.0	24.5	25.5
16	28.0	25.5	27.0	---	---	---	30.0	28.0	29.0	26.0	25.5	25.5
17	27.5	25.5	26.5	---	---	---	30.5	28.5	29.5	27.0	25.5	26.0
18	28.0	26.0	27.0	33.0	30.0	31.5	31.5	28.5	30.0	28.0	25.5	26.5
19	28.5	26.5	27.5	33.0	30.0	31.5	32.0	29.0	30.5	27.5	25.5	26.5
20	30.0	27.5	28.5	33.0	30.5	32.0	32.0	29.5	30.5	28.0	26.0	27.0
21	29.5	28.0	28.5	33.5	31.0	32.0	32.0	29.5	30.5	28.0	26.5	27.0
22	29.5	26.5	28.5	34.0	31.0	32.5	31.5	29.0	30.0	26.5	23.5	24.5
23	30.5	28.5	29.5	33.0	31.5	32.0	31.0	29.0	30.0	24.0	23.0	23.5
24	30.5	28.5	29.5	32.5	31.0	32.0	31.0	29.0	30.0	24.5	23.0	23.5
25	30.5	28.5	29.5	33.0	30.5	32.0	31.0	29.0	30.0	26.0	24.0	25.0
26	30.5	28.5	29.5	33.0	30.5	32.0	31.0	29.0	30.0	27.0	25.5	26.0
27	31.0	28.5	30.0	33.0	30.5	31.5	31.5	29.5	30.5	27.5	25.5	26.5
28	31.5	29.0	30.0	32.5	31.0	31.5	31.0	29.5	30.0	28.0	26.0	27.0
29	31.5	29.5	30.5	32.0	30.5	31.5	31.0	28.5	29.5	28.5	26.5	27.0
30	30.5	24.5	29.0	32.5	30.0	31.0	30.5	28.0	29.0	28.0	26.5	27.0
31	---	---	---	32.0	29.5	30.5	30.5	28.0	29.0	---	---	---
MONTH	---	---	---	---	---	---	32.5	27.5	29.5	---	---	---

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

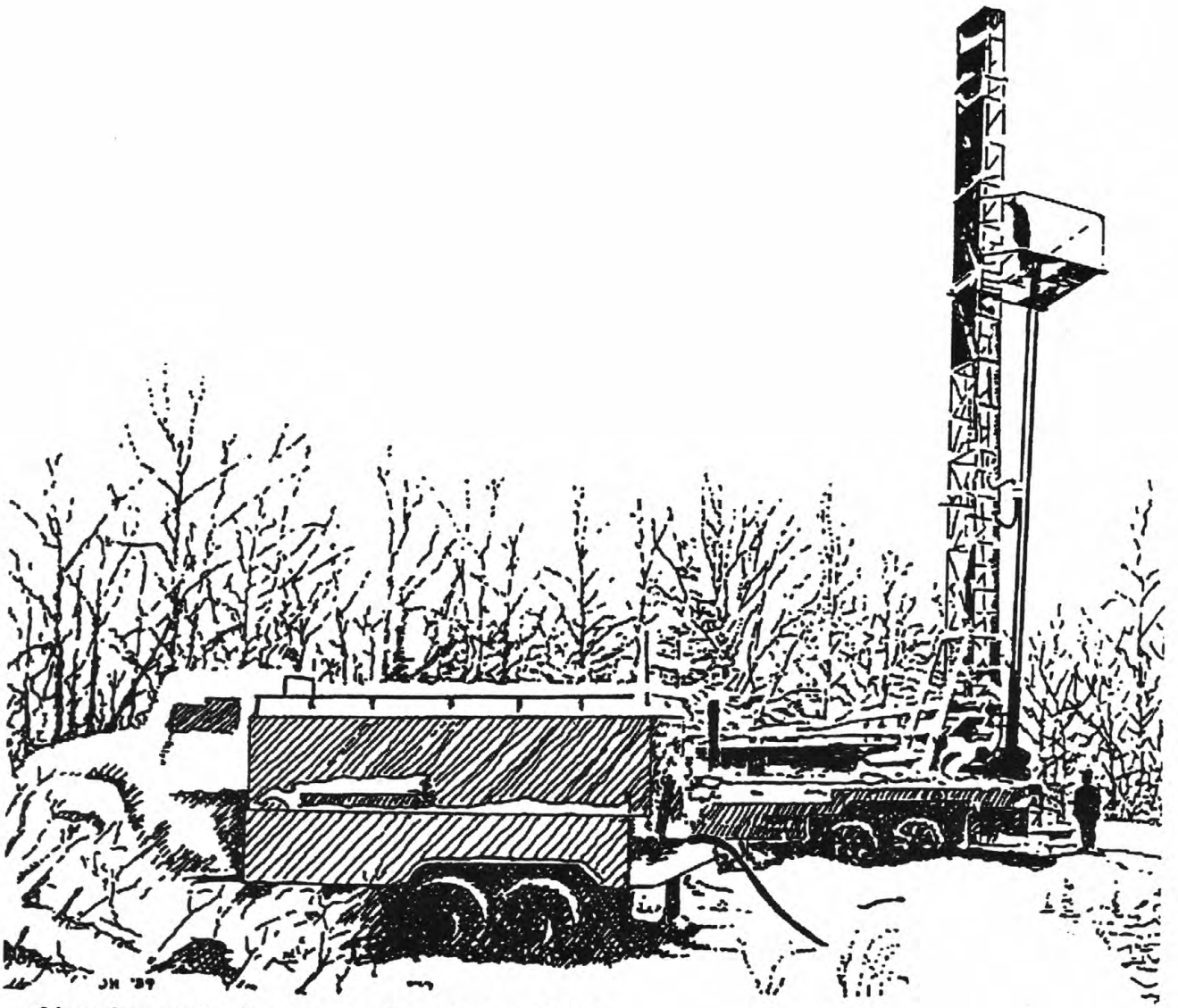
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	7.3	6.4	6.8	---	---	---	---	---	---
2	---	---	---	7.2	6.2	6.6	---	---	---	---	---	---
3	---	---	---	7.2	6.1	6.7	---	---	---	---	---	---
4	---	---	---	7.4	6.2	6.7	8.6	7.9	8.3	---	---	---
5	---	---	---	7.2	6.2	6.7	9.3	8.5	8.7	---	---	---
6	---	---	---	7.6	6.3	6.8	9.5	8.9	9.1	---	---	---
7	---	---	---	7.3	6.5	6.9	9.6	9.2	9.4	10.6	9.9	10.3
8	---	---	---	7.8	6.3	7.0	9.7	9.4	9.5	11.2	10.6	10.8
9	---	---	---	7.9	7.1	7.5	10.1	9.5	9.7	11.3	11.0	11.2
10	---	---	---	7.9	7.0	7.4	9.8	9.4	9.6	11.6	11.2	11.4
11	---	---	---	8.3	7.2	7.6	9.9	9.6	9.8	11.6	11.5	11.6
12	---	---	---	7.9	7.1	7.5	10.0	9.7	9.9	11.6	11.5	11.6
13	---	---	---	8.1	7.4	7.8	10.5	9.9	10.1	11.7	11.5	11.6
14	---	---	---	8.5	7.5	7.9	10.9	10.0	10.3	11.8	11.7	11.8
15	7.2	6.3	6.8	8.6	7.5	7.9	11.0	10.0	10.3	11.8	11.7	11.8
16	7.3	6.3	6.8	9.0	7.7	8.1	10.8	10.0	10.3	11.8	11.3	11.5
17	7.3	6.2	6.7	9.1	8.0	8.4	10.9	9.8	10.2	11.8	11.2	11.4
18	7.3	6.2	6.7	9.4	8.2	8.6	10.5	9.7	10.1	11.5	11.1	11.3
19	7.3	6.3	6.7	9.3	8.2	8.7	10.5	9.6	10.0	11.8	11.2	11.4
20	7.5	6.4	6.9	8.5	8.0	8.3	9.9	9.4	9.6	11.6	11.1	11.3
21	7.5	6.5	6.9	8.8	7.7	8.1	9.8	9.2	9.5	11.4	10.7	11.0
22	7.8	6.4	7.0	8.6	7.5	7.9	9.8	9.3	9.5	11.0	10.7	10.7
23	7.7	6.7	7.1	8.4	7.4	7.8	10.2	9.6	10.0	11.1	10.7	10.8
24	7.5	6.5	7.1	8.6	7.2	7.8	10.2	9.5	9.7	11.6	10.8	11.0
25	7.3	6.6	6.9	8.4	7.0	7.7	10.5	9.7	10.1	11.3	10.8	11.0
26	7.3	6.5	6.8	8.1	6.9	7.4	11.0	10.3	10.6	11.2	10.6	10.8
27	7.6	6.9	7.2	---	---	---	11.3	10.8	10.9	11.1	10.3	10.9
28	7.5	6.9	7.3	---	---	---	11.0	10.9	10.9	10.9	10.2	10.6
29	7.4	6.7	7.0	---	---	---	11.3	10.8	10.9	10.7	10.1	10.4
30	7.2	6.7	7.0	---	---	---	11.3	10.5	10.8	11.1	10.1	10.4
31	7.4	6.6	7.0	---	---	---	11.7	10.8	11.0	11.1	10.2	10.6
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	10.8	9.7	10.3	10.5	8.9	9.6	---	---	---	---	---	---
2	10.8	10.1	10.3	10.6	9.1	9.7	10.4	9.4	9.8	---	---	---
3	11.1	10.3	10.6	11.0	9.4	10.1	9.7	8.6	9.1	---	---	---
4	10.9	10.6	10.8	10.6	9.2	9.9	9.0	8.3	8.6	9.1	8.5	8.9
5	11.3	10.7	10.9	10.0	9.1	9.5	9.3	8.3	8.8	8.9	8.4	8.7
6	11.2	10.8	10.9	10.2	8.9	9.5	9.6	8.5	9.0	9.1	8.0	8.8
7	11.4	10.7	10.9	9.5	8.2	9.0	9.3	8.5	8.8	8.9	8.0	8.6
8	11.3	10.7	10.9	9.4	8.5	8.8	9.2	8.0	8.5	9.0	8.2	8.6
9	11.3	10.3	10.7	10.1	9.1	9.7	9.0	8.0	8.5	8.9	8.0	8.5
10	11.3	10.2	10.6	10.7	10.0	10.4	9.5	8.4	8.9	---	---	---
11	11.1	10.2	10.5	10.6	10.4	10.5	10.1	8.5	9.2	---	---	---
12	11.3	10.0	10.5	10.7	10.4	10.5	10.0	8.4	9.2	---	---	---
13	11.5	10.2	10.7	10.6	10.1	10.4	10.2	8.2	9.2	8.9	8.1	8.5
14	11.9	10.4	10.9	10.5	9.6	10.0	10.0	7.9	8.8	8.4	7.7	7.9
15	11.0	10.2	10.5	10.0	9.5	9.8	9.4	7.7	8.5	7.9	7.0	7.6
16	10.5	9.8	10.2	9.9	8.9	9.3	8.8	7.3	8.0	7.9	6.4	7.2
17	10.6	9.7	10.1	9.4	8.5	8.9	9.3	7.5	8.3	8.0	6.1	7.1
18	11.5	9.8	10.5	9.2	7.5	8.4	9.6	7.8	8.6	8.5	6.3	7.2
19	11.4	10.3	10.8	9.0	7.2	8.3	9.9	8.1	8.9	8.4	6.1	7.2
20	11.8	10.3	11.0	9.7	8.9	9.2	9.3	7.9	8.6	7.1	5.7	6.3
21	11.6	10.3	10.7	10.6	9.2	10.0	9.7	7.9	8.7	---	---	---
22	10.9	9.9	10.4	---	---	---	10.1	7.9	8.9	---	---	---
23	11.1	9.6	10.3	10.5	9.9	10.2	10.8	8.0	9.2	---	---	---
24	11.0	9.3	10.1	11.0	10.2	10.5	10.8	7.9	9.1	---	---	---
25	10.4	9.1	9.8	10.8	10.1	10.5	10.2	7.7	8.7	---	---	---
26	10.4	8.6	9.5	10.4	9.7	10.1	8.2	4.1	7.3	---	---	---
27	10.0	8.5	9.3	10.4	9.9	10.1	7.2	4.1	6.7	---	---	---
28	10.4	8.6	9.3	10.6	9.7	10.2	7.1	6.4	6.7	---	---	---
29	---	---	---	10.2	9.6	10.0	7.1	5.7	6.3	---	---	---
30	---	---	---	---	---	---	9.1	6.1	8.0	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	11.9	8.5	10.4	---	---	---	---	---	---	---	---	---

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	6.0	2.9	4.6	8.9	6.2	7.5
2	---	---	---	---	---	---	6.3	4.3	5.3	9.1	6.5	7.5
3	---	---	---	---	---	---	6.3	5.1	5.7	9.5	7.1	7.9
4	---	---	---	---	---	---	6.0	4.2	5.1	---	---	---
5	---	---	---	---	---	---	7.1	5.5	6.1	---	---	---
6	---	---	---	---	---	---	8.0	5.2	6.3	---	---	---
7	---	---	---	---	---	---	9.4	5.1	6.5	---	---	---
8	---	---	---	---	---	---	8.5	4.8	6.1	---	---	---
9	---	---	---	---	---	---	8.2	5.9	6.7	---	---	---
10	---	---	---	---	---	---	6.9	5.8	6.3	---	---	---
11	---	---	---	---	---	---	7.3	5.5	6.4	---	---	---
12	---	---	---	---	---	---	9.0	6.5	7.2	---	---	---
13	---	---	---	---	---	---	8.3	6.0	6.9	---	---	---
14	---	---	---	---	---	---	8.5	6.0	6.9	---	---	---
15	---	---	---	---	---	---	8.0	6.1	7.1	---	---	---
16	---	---	---	---	---	---	8.4	5.6	6.8	---	---	---
17	---	---	---	---	---	---	7.0	5.4	6.4	---	---	---
18	---	---	---	---	---	---	7.8	5.3	6.2	---	---	---
19	---	---	---	---	---	---	8.9	5.5	7.0	---	---	---
20	---	---	---	---	---	---	8.4	6.0	7.4	---	---	---
21	---	---	---	7.3	4.5	6.3	8.6	5.6	7.1	---	---	---
22	---	---	---	7.6	4.5	6.2	8.1	5.6	6.8	---	---	---
23	---	---	---	7.8	4.2	6.4	7.9	4.9	6.5	---	---	---
24	---	---	---	6.9	4.6	6.1	7.6	5.9	6.6	---	---	---
25	---	---	---	7.3	5.3	6.0	6.3	5.0	5.8	---	---	---
26	---	---	---	6.8	3.8	5.5	6.3	5.1	5.7	---	---	---
27	---	---	---	6.6	4.2	5.6	8.7	5.1	7.2	---	---	---
28	---	---	---	5.8	3.4	5.1	7.8	6.2	7.0	---	---	---
29	---	---	---	6.8	4.5	5.7	8.7	6.7	7.5	---	---	---
30	---	---	---	5.9	3.4	5.2	8.0	5.5	6.9	---	---	---
31	---	---	---	6.2	3.6	4.6	8.6	6.7	7.3	---	---	---
MONTH	---	---	---	---	---	---	9.4	2.9	6.5	---	---	---



Cleaning and plugging wells, winter 1984

07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK

LOCATION.--Lat 36°13'14", long 95°51'30", in SW ¼ SE ¼ 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 June 1998 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 562.60 ft above sea level (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records fair. 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 24	0245	5,250	15.00	Mar 16	1330	4,900	14.47
Mar 07	1815	6,400	17.00	Apr 27	1100	7,260	18.27

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	8.5	19	23	184	9.3	44	35	10	---	---	---
2	5.3	6.4	44	23	42	9.0	33	27	7.7	---	---	---
3	5.8	4.9	166	23	31	9.7	90	22	6.0	---	---	---
4	4.2	4.1	34	1520	27	9.5	32	18	7.0	---	---	---
5	3.9	4.2	21	e500	25	9.2	25	136	7.4	---	---	---
6	3.4	3.9	18	661	23	9.0	22	207	3.0	---	---	---
7	3.9	4.3	25	346	21	2410	173	270	2.2	---	---	---
8	122	4.3	337	667	20	621	67	34	236	---	---	---
9	39	3.8	60	430	18	90	25	66	54	---	---	---
10	12	101	36	170	18	49	20	46	13	---	---	---
11	7.7	16	28	87	19	39	18	19	85	---	---	---
12	448	9.6	26	80	19	32	15	14	16	---	---	---
13	204	72	20	60	17	31	13	12	8.4	---	---	---
14	28	55	18	65	15	29	13	9.8	7.2	---	---	---
15	19	19	17	55	18	295	13	9.4	6.9	---	---	---
16	14	12	16	44	33	3100	10	14	5.5	---	---	---
17	13	10	15	38	21	e1710	9.6	14	4.6	---	---	---
18	11	10	14	34	16	e369	9.2	13	5.0	---	---	---
19	8.6	9.3	13	29	15	1400	11	12	18	---	---	---
20	7.1	8.7	13	28	15	208	9.8	10	7.0	---	---	---
21	6.4	10	702	26	15	68	9.4	9.8	175	---	---	---
22	6.0	20	132	24	14	51	8.6	11	15	---	---	---
23	6.9	10	448	22	13	40	9.7	9.5	11	---	---	---
24	23	8.3	3310	21	13	35	13	8.2	4.2	---	---	---
25	103	12	407	22	12	31	10	322	2.9	---	---	---
26	45	14	68	125	12	27	190	172	2.4	---	---	---
27	14	9.6	47	35	11	49	4610	28	1.4	---	---	---
28	11	217	42	28	10	32	e2250	15	1.1	---	---	---
29	9.7	96	42	24	---	25	e383	10	1.0	---	---	---
30	9.0	27	31	22	---	206	49	9.9	447	---	---	---
31	8.7	---	26	24	---	248	---	10	---	---	---	---
TOTAL	1209.2	790.9	6195	5256	697	11250.7	8185.3	1593.6	1170.9	---	---	---
MEAN	39.0	26.4	200	170	24.9	363	273	51.4	39.0	---	---	---
MAX	448	217	3310	1520	184	3100	4610	322	447	---	---	---
MIN	3.4	3.8	13	21	10	9.0	8.6	8.2	1.0	---	---	---
AC-FT	2400	1570	12290	10430	1380	22320	16240	3160	2320	---	---	---
CFSM	.65	.44	3.34	2.83	.42	6.06	4.55	.86	.65	---	---	---
IN.	.75	.49	3.85	3.26	.43	6.99	5.08	.99	.73	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

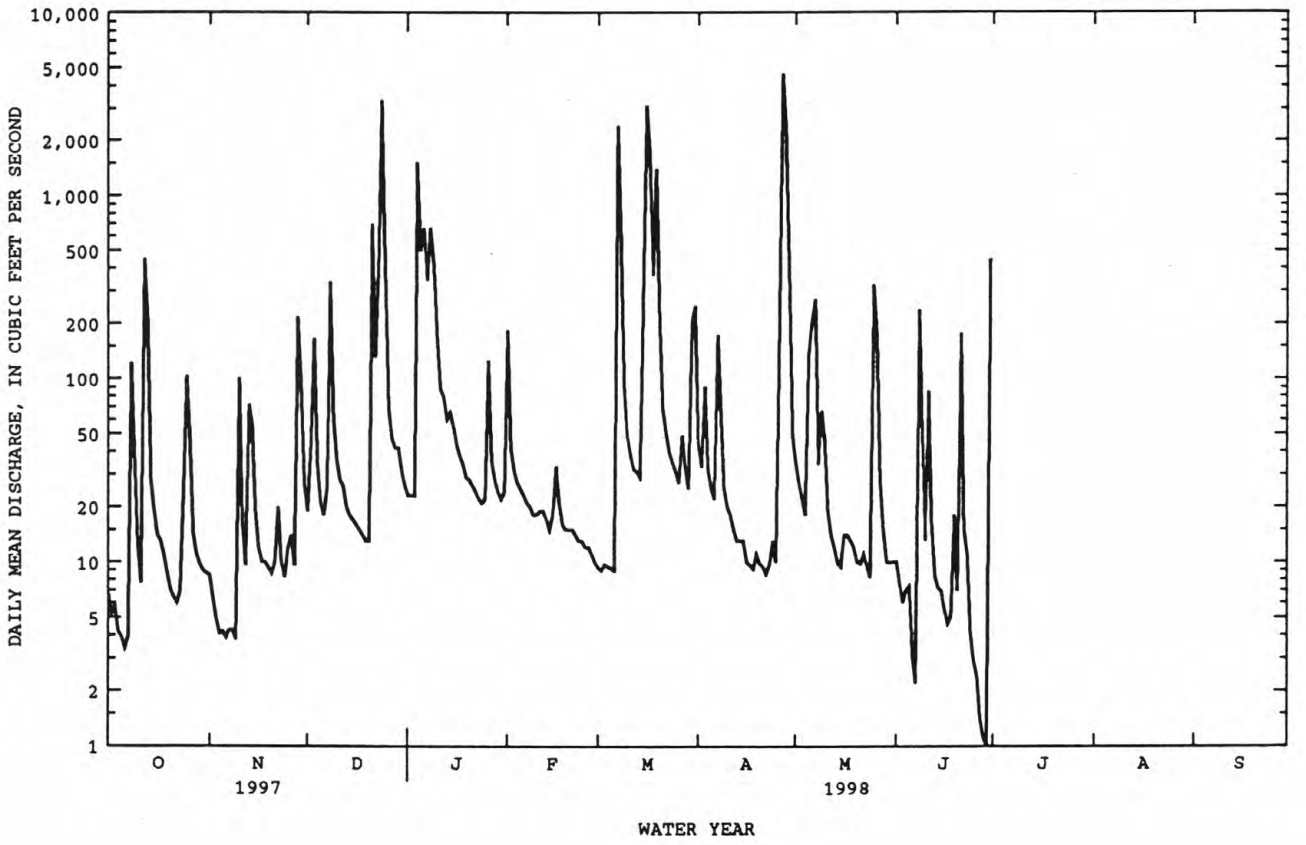
MEAN	44.7	102	101	59.9	56.1	131	139	127	95.0	60.4	48.3	72.1
MAX	124	295	302	170	128	363	281	399	353	195	166	134
(WY)	1997	1995	1988	1998	1989	1998	1994	1995	1995	1994	1989	1993
MIN	13.0	4.47	4.31	10.2	4.54	16.4	16.0	20.3	6.23	4.69	5.80	23.1
(WY)	1993	1996	1990	1996	1996	1991	1989	1997	1988	1991	1991	1992

e Estimated

07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		WATER YEARS 1988 - 1998	
ANNUAL TOTAL	29240.2			
ANNUAL MEAN	80.1		83.7	
HIGHEST ANNUAL MEAN			132	1995
LOWEST ANNUAL MEAN			27.7	1996
HIGHEST DAILY MEAN	3310	Dec 24	4610	Apr 27 1998
LOWEST DAILY MEAN	1.6	Jun 7	.35	Sep 4 1996
ANNUAL SEVEN-DAY MINIMUM	2.5	Jun 1	.58	Aug 30 1996
INSTANTANEOUS PEAK FLOW			[a]9920	Aug 20 1989
INSTANTANEOUS PEAK STAGE			[b]21.92	Aug 20 1989
ANNUAL RUNOFF (AC-FT)	58000		60610	
ANNUAL RUNOFF (CFSM)	1.34		1.40	
ANNUAL RUNOFF (INCHES)	18.16		18.98	
10 PERCENT EXCEEDS	150		166	
50 PERCENT EXCEEDS	14		14	
90 PERCENT EXCEEDS	4.0		2.5	

[a]In backwater, discharge computed from peak at 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 June 1998 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1987 to June 1998 (discontinued).
pH: May 1987 to June 1998 (discontinued).
WATER TEMPERATURE: May 1987 to June 1998 (discontinued).
DISSOLVED OXYGEN: May 1987 to June 1998 (discontinued).

INSTRUMENTATION.--Water-quality monitor since May 1987.

REMARKS.--Interruptions in record were due to malfunction of the recording instrument. Dissolved oxygen data for March 8, 1998 to June 30, 1998 not considered reliable; therefore not published. Original data available upon request from district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,570 microsiemens, Feb. 7, 1996; minimum, 58 microsiemens, June 23, 1997.
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, many days during winter periods.
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, 818 microsiemens, Jan. 15; minimum, 119 microsiemens, Apr. 27.
pH: Maximum, 8.4 units, June 30; minimum, 7.1 units, several days during the year.
WATER TEMPERATURE: Maximum, 26.5°C, June 3; minimum, 2.5°C, Dec. 13, 14, Jan. 8.
DISSOLVED OXYGEN: Maximum observed (more than 20 percent missing record), 13.1 mg/L, Jan. 22; minimum recorded, 4.7 mg/L, Nov. 28.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	634	627	631	593	552	580	554	503	529	691	679	684
2	645	631	638	608	593	602	581	537	568	705	691	699
3	674	645	655	619	600	608	537	301	358	713	705	710
4	679	673	676	624	618	620	509	412	467	711	172	353
5	675	664	669	632	624	627	575	509	545	438	309	383
6	664	641	646	635	632	632	628	575	609	456	221	331
7	646	621	628	636	634	635	671	521	648	471	340	404
8	621	248	518	639	633	636	613	264	365	551	332	408
9	316	252	284	650	639	643	522	422	476	449	389	417
10	370	316	349	645	302	401	612	522	572	527	448	479
11	389	367	379	368	307	337	657	612	638	632	527	585
12	440	134	331	413	368	391	678	657	669	662	632	654
13	385	173	307	473	341	417	699	661	683	674	644	656
14	483	385	435	385	316	340	714	681	696	796	674	706
15	573	483	529	450	385	420	729	677	707	818	765	795
16	629	573	599	490	450	471	736	716	726	767	740	755
17	638	629	636	544	490	521	747	709	732	747	734	742
18	635	623	628	596	544	578	758	745	750	739	728	733
19	638	632	635	592	576	581	752	732	745	743	715	732
20	644	632	638	622	592	608	734	726	730	753	734	744
21	637	625	633	674	622	647	758	184	414	761	753	758
22	625	617	620	696	666	678	455	297	382	761	737	755
23	617	595	610	668	649	664	534	148	453	751	732	743
24	611	594	604	649	580	613	358	138	222	753	730	742
25	610	253	536	592	572	577	512	358	445	756	627	747
26	359	269	329	602	580	589	585	512	554	684	453	513
27	441	359	405	638	602	622	626	578	604	601	511	563
28	463	441	453	648	230	471	648	626	638	668	601	639
29	490	463	478	438	280	389	665	647	655	688	668	676
30	527	490	510	503	438	474	652	647	650	707	688	698
31	552	527	536	---	---	---	679	637	662	723	697	715
MONTH	679	134	533	696	230	546	758	138	577	818	172	630

07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	697	388	471	749	723	741	526	423	479	630	610	622
2	574	477	523	759	744	753	603	526	579	642	625	634
3	653	574	623	766	735	753	595	384	461	657	636	648
4	697	653	676	766	754	760	568	465	522	651	637	646
5	704	696	699	776	766	773	638	568	605	679	281	476
6	713	704	709	778	773	775	664	638	650	477	146	409
7	718	695	704	775	154	445	661	294	389	403	150	317
8	700	691	695	463	204	354	442	392	414	493	403	455
9	710	691	703	585	461	538	507	431	477	543	449	516
10	717	709	713	633	577	607	584	507	547	449	376	397
11	728	708	718	653	620	640	620	584	596	477	421	452
12	711	699	708	695	650	675	625	620	623	523	477	493
13	699	665	680	732	673	708	646	623	636	580	523	560
14	704	673	689	736	716	729	664	639	650	597	553	571
15	701	685	692	765	230	642	681	658	667	600	597	598
16	716	684	700	312	178	232	678	668	671	612	600	605
17	711	682	699	423	254	331	674	668	673	621	612	617
18	692	681	686	550	423	493	676	665	668	627	621	623
19	689	683	686	550	226	327	709	676	693	641	627	633
20	709	689	698	546	384	479	710	703	705	650	630	646
21	733	709	725	608	546	580	719	710	716	655	648	652
22	723	719	721	646	608	633	714	677	693	662	655	660
23	732	723	727	662	644	654	733	677	696	662	659	661
24	738	725	732	671	656	662	742	710	727	671	660	665
25	750	736	739	673	646	661	710	700	704	685	169	380
26	743	734	739	680	646	666	715	240	501	320	215	256
27	739	727	734	734	604	646	287	119	186	348	256	310
28	742	728	737	627	571	592	465	287	389	394	348	368
29	---	---	---	638	604	624	575	465	523	429	394	415
30	---	---	---	661	232	592	611	575	598	488	429	461
31	---	---	---	423	239	358	---	---	---	497	488	493
MONTH	750	388	690	778	154	594	742	119	581	685	146	524

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	510	497	501	---	---	---	---	---	---	---	---	---
2	532	510	524	---	---	---	---	---	---	---	---	---
3	533	518	529	---	---	---	---	---	---	---	---	---
4	518	488	504	---	---	---	---	---	---	---	---	---
5	488	466	475	---	---	---	---	---	---	---	---	---
6	469	461	464	---	---	---	---	---	---	---	---	---
7	467	456	462	---	---	---	---	---	---	---	---	---
8	471	176	348	---	---	---	---	---	---	---	---	---
9	315	227	285	---	---	---	---	---	---	---	---	---
10	398	298	366	---	---	---	---	---	---	---	---	---
11	397	261	324	---	---	---	---	---	---	---	---	---
12	315	269	291	---	---	---	---	---	---	---	---	---
13	408	315	361	---	---	---	---	---	---	---	---	---
14	490	408	453	---	---	---	---	---	---	---	---	---
15	543	490	529	---	---	---	---	---	---	---	---	---
16	541	529	534	---	---	---	---	---	---	---	---	---
17	576	541	555	---	---	---	---	---	---	---	---	---
18	608	576	597	---	---	---	---	---	---	---	---	---
19	609	519	563	---	---	---	---	---	---	---	---	---
20	591	534	566	---	---	---	---	---	---	---	---	---
21	599	182	325	---	---	---	---	---	---	---	---	---
22	298	240	271	---	---	---	---	---	---	---	---	---
23	314	298	309	---	---	---	---	---	---	---	---	---
24	325	313	320	---	---	---	---	---	---	---	---	---
25	335	325	328	---	---	---	---	---	---	---	---	---
26	346	335	340	---	---	---	---	---	---	---	---	---
27	360	346	353	---	---	---	---	---	---	---	---	---
28	362	355	358	---	---	---	---	---	---	---	---	---
29	369	362	366	---	---	---	---	---	---	---	---	---
30	383	123	277	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	609	123	416	---	---	---	---	---	---	---	---	---

07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.6	7.3	7.4	7.6	7.4	7.5	8.0	7.2	7.3	8.1	8.1	8.1
2	7.6	7.2	7.4	7.5	7.3	7.4	8.3	7.3	7.4	8.1	8.0	8.0
3	7.6	7.1	7.3	7.5	7.3	7.4	8.3	8.1	8.1	8.0	8.0	8.0
4	7.7	7.1	7.4	7.5	7.3	7.3	8.2	7.9	8.0	8.1	7.8	7.9
5	7.7	7.2	7.4	7.4	7.2	7.3	8.1	7.7	7.8	7.9	7.8	7.8
6	7.7	7.3	7.4	7.3	7.2	7.2	8.2	8.0	8.1	7.9	7.8	7.8
7	7.6	7.3	7.5	7.2	7.1	7.2	8.2	8.0	8.2	7.9	7.8	7.9
8	8.0	7.4	7.5	7.4	7.1	7.2	8.3	8.0	8.0	7.9	7.7	7.8
9	7.8	7.2	7.4	7.6	7.1	7.1	8.0	7.6	7.8	7.8	7.7	7.8
10	---	---	---	8.0	7.2	7.9	7.6	7.5	7.5	7.8	7.8	7.8
11	---	---	---	7.6	7.3	7.5	7.6	7.4	7.5	7.9	7.8	7.9
12	---	---	---	7.5	7.2	7.3	7.5	7.4	7.4	7.9	7.9	7.9
13	---	---	---	8.0	7.2	7.4	7.6	7.5	7.5	7.9	7.8	7.9
14	---	---	---	7.9	7.8	7.8	7.6	7.4	7.5	7.9	7.8	7.8
15	7.7	7.6	7.7	7.9	7.8	7.8	7.6	7.4	7.5	7.8	7.8	7.8
16	7.8	7.6	7.7	8.1	7.9	8.0	7.6	7.4	7.5	7.8	7.7	7.8
17	7.8	7.5	7.7	8.1	8.0	8.1	7.6	7.4	7.4	7.8	7.7	7.8
18	7.9	7.5	7.6	8.2	8.1	8.1	7.6	7.4	7.5	7.8	7.7	7.8
19	7.7	7.5	7.5	8.1	8.0	8.1	7.7	7.4	7.5	7.8	7.7	7.8
20	7.8	7.4	7.6	8.1	8.0	8.0	7.8	7.5	7.5	7.8	7.7	7.7
21	7.9	7.6	7.8	8.0	7.9	8.0	8.1	7.5	7.9	7.8	7.7	7.8
22	8.0	7.8	7.9	8.0	7.9	7.9	8.0	7.9	7.9	7.8	7.7	7.8
23	8.0	7.9	8.0	8.0	7.8	7.9	8.2	7.9	8.0	7.9	7.7	7.8
24	7.9	7.8	7.9	7.9	7.8	7.8	8.2	7.9	7.9	7.9	7.9	7.9
25	7.9	7.7	7.8	7.8	7.7	7.7	8.0	8.0	8.0	7.9	7.7	7.9
26	7.9	7.7	7.8	7.8	7.6	7.7	8.1	8.0	8.1	7.9	7.7	7.8
27	7.7	7.6	7.7	7.7	7.6	7.7	8.1	8.0	8.0	8.0	7.7	7.8
28	7.7	7.6	7.6	8.0	7.6	7.7	8.1	8.0	8.0	8.1	7.7	7.9
29	7.6	7.5	7.6	8.0	7.5	7.9	8.1	8.1	8.1	8.0	7.9	7.9
30	7.6	7.5	7.5	7.5	7.3	7.4	8.1	8.0	8.1	8.0	7.8	7.9
31	7.6	7.4	7.5	---	---	---	8.1	8.0	8.1	8.0	7.8	7.9
MAX	---	---	---	8.2	8.1	8.1	8.3	8.1	8.2	8.1	8.1	8.1
MIN	---	---	---	7.2	7.1	7.1	7.5	7.2	7.3	7.8	7.7	7.7

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.8	7.6	7.7	---	---	---	7.5	7.2	7.3	7.8	7.7	7.7
2	8.0	7.6	7.8	---	---	---	7.7	7.3	7.5	7.8	7.7	7.7
3	8.1	7.7	7.9	---	---	---	7.5	7.2	7.3	7.8	7.7	7.7
4	8.1	7.9	8.0	---	---	---	7.5	7.2	7.3	7.8	7.7	7.7
5	8.1	7.9	8.0	---	---	---	7.7	7.4	7.5	7.8	7.4	7.6
6	8.1	7.9	8.0	---	---	---	7.7	7.5	7.6	7.9	7.3	7.4
7	---	---	---	---	---	---	7.6	7.2	7.3	7.9	7.5	7.6
8	---	---	---	---	---	---	7.3	7.1	7.3	7.7	7.5	7.5
9	---	---	---	---	---	---	7.5	7.2	7.3	7.8	7.5	7.6
10	---	---	---	---	---	---	7.6	7.4	7.5	7.7	7.4	7.4
11	---	---	---	---	---	---	7.6	7.4	7.5	7.6	7.4	7.4
12	---	---	---	---	---	---	7.6	7.5	7.5	7.6	7.2	7.5
13	---	---	---	---	---	---	7.6	7.5	7.6	7.6	7.5	7.6
14	---	---	---	---	---	---	7.6	7.5	7.5	7.6	7.5	7.6
15	---	---	---	---	---	---	7.5	7.4	7.5	7.6	7.5	7.6
16	---	---	---	---	---	---	7.5	7.4	7.5	7.6	7.5	7.6
17	---	---	---	---	---	---	7.5	7.4	7.5	7.7	7.5	7.6
18	---	---	---	---	---	---	7.5	7.4	7.5	7.7	7.6	7.6
19	---	---	---	---	---	---	7.5	7.4	7.5	7.7	7.5	7.6
20	---	---	---	---	---	---	7.5	7.5	7.5	7.7	7.5	7.6
21	---	---	---	---	---	---	7.6	7.4	7.5	7.7	7.5	7.6
22	---	---	---	---	---	---	7.6	7.5	7.5	7.7	7.6	7.6
23	---	---	---	---	---	---	7.6	7.5	7.5	7.7	7.5	7.6
24	---	---	---	---	---	---	7.6	7.5	7.5	7.7	7.5	7.6
25	---	---	---	7.9	7.6	7.8	7.6	7.5	7.5	8.0	7.3	7.6
26	---	---	---	7.9	7.6	7.8	7.6	7.2	7.5	7.5	7.2	7.3
27	---	---	---	7.8	7.5	7.6	7.8	7.2	7.6	7.3	7.2	7.2
28	---	---	---	7.8	7.4	7.6	7.6	7.5	7.6	7.3	7.2	7.3
29	---	---	---	7.7	7.4	7.6	7.7	7.6	7.6	7.3	7.2	7.3
30	---	---	---	7.6	7.5	7.5	7.8	7.7	7.7	7.5	7.2	7.3
31	---	---	---	7.6	7.3	7.4	---	---	---	7.5	7.3	7.4
MAX	---	---	---	---	---	---	7.8	7.7	7.7	8.0	7.7	7.7
MIN	---	---	---	---	---	---	7.3	7.1	7.3	7.3	7.2	7.2

07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.5	7.3	7.4	---	---	---	---	---	---	---	---	---
2	7.6	7.4	7.4	---	---	---	---	---	---	---	---	---
3	7.6	7.4	7.5	---	---	---	---	---	---	---	---	---
4	7.5	7.4	7.4	---	---	---	---	---	---	---	---	---
5	7.6	7.3	7.4	---	---	---	---	---	---	---	---	---
6	7.7	7.4	7.5	---	---	---	---	---	---	---	---	---
7	7.7	7.5	7.5	---	---	---	---	---	---	---	---	---
8	8.0	7.5	7.7	---	---	---	---	---	---	---	---	---
9	7.6	7.4	7.4	---	---	---	---	---	---	---	---	---
10	7.4	7.3	7.4	---	---	---	---	---	---	---	---	---
11	7.6	7.4	7.5	---	---	---	---	---	---	---	---	---
12	7.5	7.4	7.4	---	---	---	---	---	---	---	---	---
13	7.5	7.4	7.4	---	---	---	---	---	---	---	---	---
14	7.6	7.4	7.5	---	---	---	---	---	---	---	---	---
15	7.6	7.5	7.5	---	---	---	---	---	---	---	---	---
16	7.7	7.5	7.6	---	---	---	---	---	---	---	---	---
17	7.7	7.5	7.6	---	---	---	---	---	---	---	---	---
18	7.7	7.5	7.6	---	---	---	---	---	---	---	---	---
19	7.7	7.6	7.6	---	---	---	---	---	---	---	---	---
20	7.8	7.5	7.6	---	---	---	---	---	---	---	---	---
21	8.0	7.4	7.6	---	---	---	---	---	---	---	---	---
22	7.4	7.3	7.4	---	---	---	---	---	---	---	---	---
23	7.6	7.4	7.5	---	---	---	---	---	---	---	---	---
24	7.6	7.5	7.5	---	---	---	---	---	---	---	---	---
25	7.8	7.4	7.6	---	---	---	---	---	---	---	---	---
26	7.8	7.5	7.6	---	---	---	---	---	---	---	---	---
27	7.8	7.6	7.6	---	---	---	---	---	---	---	---	---
28	7.8	7.5	7.6	---	---	---	---	---	---	---	---	---
29	7.8	7.5	7.7	---	---	---	---	---	---	---	---	---
30	8.4	7.5	7.7	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	8.4	7.6	7.7	---	---	---	---	---	---	---	---	---
MIN	7.4	7.3	7.4	---	---	---	---	---	---	---	---	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21.5	20.0	21.0	15.0	14.0	14.0	11.5	10.0	10.5	5.5	4.0	4.5
2	21.5	20.5	21.0	14.0	12.0	13.0	10.0	9.0	9.5	9.0	5.5	7.0
3	22.5	21.5	22.0	12.0	11.0	11.5	9.5	8.0	9.0	12.0	9.0	10.5
4	22.5	22.0	22.0	11.0	10.5	11.0	8.0	6.5	7.5	12.0	7.5	9.0
5	22.5	21.0	22.0	12.0	11.0	11.5	6.5	4.5	5.0	8.5	7.0	7.5
6	22.5	21.5	22.0	11.0	9.5	10.0	5.0	4.0	4.5	9.5	8.0	9.0
7	22.5	22.0	22.5	9.5	9.5	9.5	4.5	3.5	3.5	8.0	5.0	6.5
8	22.5	21.5	22.0	9.5	8.5	9.0	5.5	3.5	4.5	5.0	2.5	3.5
9	22.5	22.0	22.5	10.0	9.5	10.0	7.0	5.5	6.0	5.0	3.5	4.0
10	22.5	21.5	22.0	9.5	7.0	8.5	6.5	6.0	6.0	4.5	3.0	3.5
11	22.5	22.0	22.5	7.0	6.0	6.5	6.0	4.5	5.0	4.0	3.0	3.5
12	22.0	18.5	21.0	7.0	6.5	7.0	4.5	3.5	3.5	4.5	4.0	4.5
13	18.5	16.0	17.0	8.0	6.5	7.0	3.5	2.5	3.0	4.5	3.0	4.0
14	18.0	15.0	16.0	8.0	7.0	7.5	3.5	2.5	3.0	3.5	3.0	3.0
15	17.5	15.5	16.5	7.0	5.5	6.0	4.5	3.0	3.5	4.0	3.5	3.5
16	17.5	15.5	16.5	6.0	5.0	5.5	5.5	4.0	5.0	5.0	3.0	4.0
17	17.5	16.5	17.0	5.5	4.0	5.0	5.5	4.5	5.0	6.0	3.5	5.0
18	17.0	15.0	16.0	6.0	4.0	5.0	6.5	5.0	5.5	6.5	5.0	5.5
19	16.5	15.0	16.0	7.0	5.0	6.0	7.5	6.0	6.5	6.0	4.5	5.0
20	16.5	15.5	16.0	7.0	6.0	6.5	7.0	5.5	6.5	5.5	4.5	5.0
21	16.0	14.5	15.0	7.5	7.0	7.0	6.5	5.5	6.0	5.5	4.5	5.0
22	14.5	13.0	14.0	8.0	7.0	7.5	6.5	6.0	6.5	5.5	4.0	4.5
23	14.0	13.5	13.5	8.5	7.0	7.5	6.0	5.0	6.0	4.0	3.5	4.0
24	14.0	13.5	13.5	9.0	7.5	8.5	6.5	5.0	5.5	4.5	3.0	3.5
25	16.0	13.5	14.5	10.5	8.0	9.0	6.0	6.0	6.0	6.5	3.5	4.5
26	15.5	11.0	13.0	11.0	10.5	10.5	6.5	5.5	6.0	7.0	6.0	6.5
27	11.0	10.0	10.5	12.0	10.0	11.0	6.0	4.5	5.5	8.0	6.0	7.0
28	10.5	9.5	10.0	15.5	12.0	13.5	5.5	4.0	4.5	8.0	6.0	7.0
29	10.5	9.0	10.0	15.0	12.5	14.0	5.0	4.0	4.5	8.5	7.0	7.5
30	12.5	10.0	11.0	12.5	11.5	12.0	5.5	3.5	4.5	8.5	6.5	7.5
31	15.0	12.5	13.5	---	---	---	5.0	3.5	4.5	8.5	7.0	8.0
MONTH	22.5	9.0	17.2	15.5	4.0	9.0	11.5	2.5	5.5	12.0	2.5	5.6

07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9.0	8.0	8.5	9.0	7.0	8.0	16.5	14.0	15.0	---	---	---
2	8.5	7.5	8.0	8.0	6.5	7.0	16.5	12.5	14.5	18.0	14.5	16.0
3	7.5	6.0	6.5	8.0	5.0	6.5	16.0	11.5	13.0	---	---	---
4	6.5	5.5	6.0	8.0	6.5	7.5	11.5	10.5	11.0	---	---	---
5	5.5	5.0	5.0	7.5	6.5	7.0	---	---	---	18.0	16.5	17.5
6	6.0	4.5	5.0	7.0	6.0	6.5	14.0	12.0	13.0	20.5	18.0	19.0
7	6.0	4.0	5.0	7.5	6.5	7.0	14.5	12.0	13.5	---	---	---
8	6.5	5.0	5.5	7.5	4.5	6.0	16.5	11.0	12.5	22.5	19.0	20.5
9	7.0	5.5	6.0	5.0	2.5	3.5	12.5	10.0	11.0	21.0	17.0	18.5
10	8.5	7.0	7.5	5.5	3.0	4.0	---	---	---	19.5	16.0	17.5
11	8.5	7.0	8.0	5.5	3.0	4.0	---	---	---	21.0	16.5	18.5
12	8.0	7.0	7.5	4.0	2.0	3.0	---	---	---	21.5	19.5	21.0
13	8.5	6.0	7.5	7.5	1.5	4.5	19.5	15.0	17.0	---	---	---
14	9.0	7.0	8.0	9.5	6.0	7.5	19.5	16.5	18.5	---	---	---
15	8.5	8.0	8.5	9.5	8.5	9.0	20.0	18.0	19.0	---	---	---
16	8.5	8.0	8.5	10.0	9.0	9.5	19.0	15.5	16.5	---	---	---
17	8.0	7.0	7.5	11.0	9.0	10.0	---	---	---	21.5	19.0	20.5
18	8.0	6.0	7.0	11.0	8.5	10.0	---	---	---	22.5	19.5	21.0
19	8.5	7.5	8.0	11.0	7.5	9.0	---	---	---	23.0	20.5	22.0
20	9.5	7.5	8.5	8.5	5.5	7.5	15.5	13.5	15.0	22.5	21.0	22.0
21	10.0	8.5	9.5	10.0	6.0	8.0	15.5	12.0	13.5	23.0	20.5	21.5
22	10.5	9.5	10.0	12.0	7.0	9.5	---	---	---	22.5	21.5	22.0
23	11.0	8.5	9.5	14.5	9.0	11.5	---	---	---	21.5	20.5	21.0
24	12.0	9.0	10.5	15.0	10.0	13.0	16.0	14.5	15.5	22.5	19.5	21.0
25	13.5	11.5	12.0	18.0	10.5	14.5	19.5	14.5	17.0	22.0	16.5	19.0
26	13.0	12.0	12.5	17.5	15.0	16.5	19.0	13.5	17.0	19.5	18.0	19.0
27	12.0	10.5	11.5	17.5	15.0	16.0	---	---	---	22.5	19.5	21.0
28	10.5	9.0	9.5	18.5	14.5	16.5	---	---	---	23.0	21.0	22.0
29	---	---	---	18.0	16.0	17.0	---	---	---	23.5	21.5	22.5
30	---	---	---	18.0	16.5	17.5	---	---	---	25.0	22.0	23.5
31	---	---	---	16.5	14.0	14.5	---	---	---	---	---	---
MONTH	13.5	4.0	8.1	18.5	1.5	9.4	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	26.0	23.5	25.0	---	---	---	---	---	---	---	---	---
3	26.5	24.0	25.0	---	---	---	---	---	---	---	---	---
4	24.5	20.5	22.0	---	---	---	---	---	---	---	---	---
5	20.5	18.0	19.0	---	---	---	---	---	---	---	---	---
6	19.0	16.5	18.0	---	---	---	---	---	---	---	---	---
7	19.5	16.0	17.5	---	---	---	---	---	---	---	---	---
8	18.5	16.0	17.0	---	---	---	---	---	---	---	---	---
9	20.0	17.0	18.5	---	---	---	---	---	---	---	---	---
10	20.0	18.5	19.5	---	---	---	---	---	---	---	---	---
11	21.0	18.0	19.5	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.2	6.0	6.6	7.8	6.8	7.3	7.6	6.7	7.1	10.7	9.9	10.3
2	6.9	5.6	6.1	8.3	6.7	7.5	8.5	7.6	7.9	10.3	9.0	9.5
3	---	---	---	8.2	6.9	7.6	8.9	8.4	8.6	9.0	7.9	8.5
4	---	---	---	8.5	7.5	7.9	9.3	8.4	8.9	10.5	7.5	9.4
5	---	---	---	8.3	7.3	7.8	10.1	9.1	9.6	9.8	9.4	9.7
6	---	---	---	8.4	7.4	7.8	10.3	9.5	9.8	9.9	9.3	9.6
7	---	---	---	7.8	7.4	7.6	10.4	9.6	10.2	10.5	9.5	9.7
8	---	---	---	8.6	7.4	7.9	10.9	9.7	10.4	9.5	5.6	7.6
9	---	---	---	8.1	7.6	7.8	9.7	9.0	9.5	---	---	---
10	---	---	---	8.4	7.4	8.1	9.3	9.0	9.2	---	---	---
11	---	---	---	8.3	7.9	8.2	10.2	9.1	9.7	---	---	---
12	---	---	---	7.9	7.4	7.7	10.6	9.9	10.3	---	---	---
13	---	---	---	8.2	7.3	7.7	10.7	10.1	10.4	---	---	---
14	---	---	---	7.9	7.6	7.7	10.7	10.4	10.5	---	---	---
15	8.1	7.0	7.5	8.0	7.6	7.8	10.4	9.8	10.1	---	---	---
16	8.4	7.3	7.7	8.1	7.9	8.0	9.9	9.3	9.6	---	---	---
17	8.3	7.1	7.6	8.7	7.9	8.3	9.9	9.1	9.4	---	---	---
18	8.7	7.2	7.9	9.0	8.2	8.6	9.7	8.9	9.3	---	---	---
19	8.7	7.1	7.9	8.5	7.9	8.2	9.4	8.6	8.9	---	---	---
20	9.3	7.0	8.1	8.1	7.7	7.9	8.9	8.5	8.7	---	---	---
21	8.5	6.8	7.7	8.0	7.4	7.6	9.6	8.3	9.1	---	---	---
22	8.8	7.5	8.2	7.5	7.1	7.3	9.3	9.0	9.1	---	---	---
23	8.5	7.7	8.2	7.7	7.1	7.3	10.4	9.0	9.3	---	---	---
24	7.9	6.7	7.4	7.5	6.9	7.2	10.4	9.5	9.9	---	---	---
25	7.3	6.5	7.0	7.2	6.3	6.9	9.8	9.6	9.7	---	---	---
26	7.5	6.8	7.1	6.5	5.8	6.2	9.8	9.5	9.6	---	---	---
27	8.4	7.5	8.0	5.9	5.3	5.7	10.0	9.5	9.8	---	---	---
28	9.0	8.1	8.6	7.0	4.7	5.7	9.9	9.6	9.8	---	---	---
29	8.8	8.3	8.6	6.5	5.7	6.0	10.3	9.7	9.9	---	---	---
30	8.8	7.8	8.3	6.7	5.8	6.3	10.3	9.6	9.8	11.8	9.3	10.5
31	7.9	7.1	7.6	---	---	---	10.4	9.5	10.0	11.7	9.3	10.3
MONTH	---	---	---	9.0	4.7	7.5	10.9	6.7	9.5	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9.7	8.7	9.1	10.5	7.7	9.1	---	---	---	---	---	---
2	10.6	8.7	9.5	10.7	8.3	9.5	---	---	---	---	---	---
3	11.9	9.0	10.3	11.2	8.7	9.9	---	---	---	---	---	---
4	12.0	9.4	10.6	10.4	8.9	9.6	---	---	---	---	---	---
5	12.3	9.7	11.1	9.7	8.4	9.0	---	---	---	---	---	---
6	12.8	10.2	11.4	10.2	8.5	9.3	---	---	---	---	---	---
7	12.7	10.5	11.5	11.4	8.6	9.7	---	---	---	---	---	---
8	12.8	10.3	11.4	---	---	---	---	---	---	---	---	---
9	12.0	10.1	10.9	---	---	---	---	---	---	---	---	---
10	11.6	9.4	10.2	---	---	---	---	---	---	---	---	---
11	11.4	9.0	10.0	---	---	---	---	---	---	---	---	---
12	11.3	9.1	10.0	---	---	---	---	---	---	---	---	---
13	11.5	9.7	10.3	---	---	---	---	---	---	---	---	---
14	11.3	9.3	10.1	---	---	---	---	---	---	---	---	---
15	9.6	8.7	9.2	---	---	---	---	---	---	---	---	---
16	9.1	8.1	8.5	---	---	---	---	---	---	---	---	---
17	8.5	7.4	7.9	---	---	---	---	---	---	---	---	---
18	10.2	7.9	9.0	---	---	---	---	---	---	---	---	---
19	10.5	8.3	9.3	---	---	---	---	---	---	---	---	---
20	10.8	9.0	9.7	---	---	---	---	---	---	---	---	---
21	10.4	8.5	9.3	---	---	---	---	---	---	---	---	---
22	9.1	7.7	8.4	---	---	---	---	---	---	---	---	---
23	9.8	7.6	8.5	---	---	---	---	---	---	---	---	---
24	9.8	7.9	8.6	---	---	---	---	---	---	---	---	---
25	9.2	7.5	8.1	---	---	---	---	---	---	---	---	---
26	8.7	7.0	7.6	---	---	---	---	---	---	---	---	---
27	9.4	6.8	8.0	---	---	---	---	---	---	---	---	---
28	10.0	7.4	8.5	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	12.8	6.8	9.5	---	---	---	---	---	---	---	---	---

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK

LOCATION.--Lat 36°13'23", long 95°49'09", in SE ¼ SE ¼ 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.--No estimated daily discharge. 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 24	1200	12,400	23.17	Mar 18	1300	14,600	25.35
Jan 5	0800	12,000	22.79	Apr 28	2200	18,100	28.41
Mar 7	2200	9,980	20.67				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

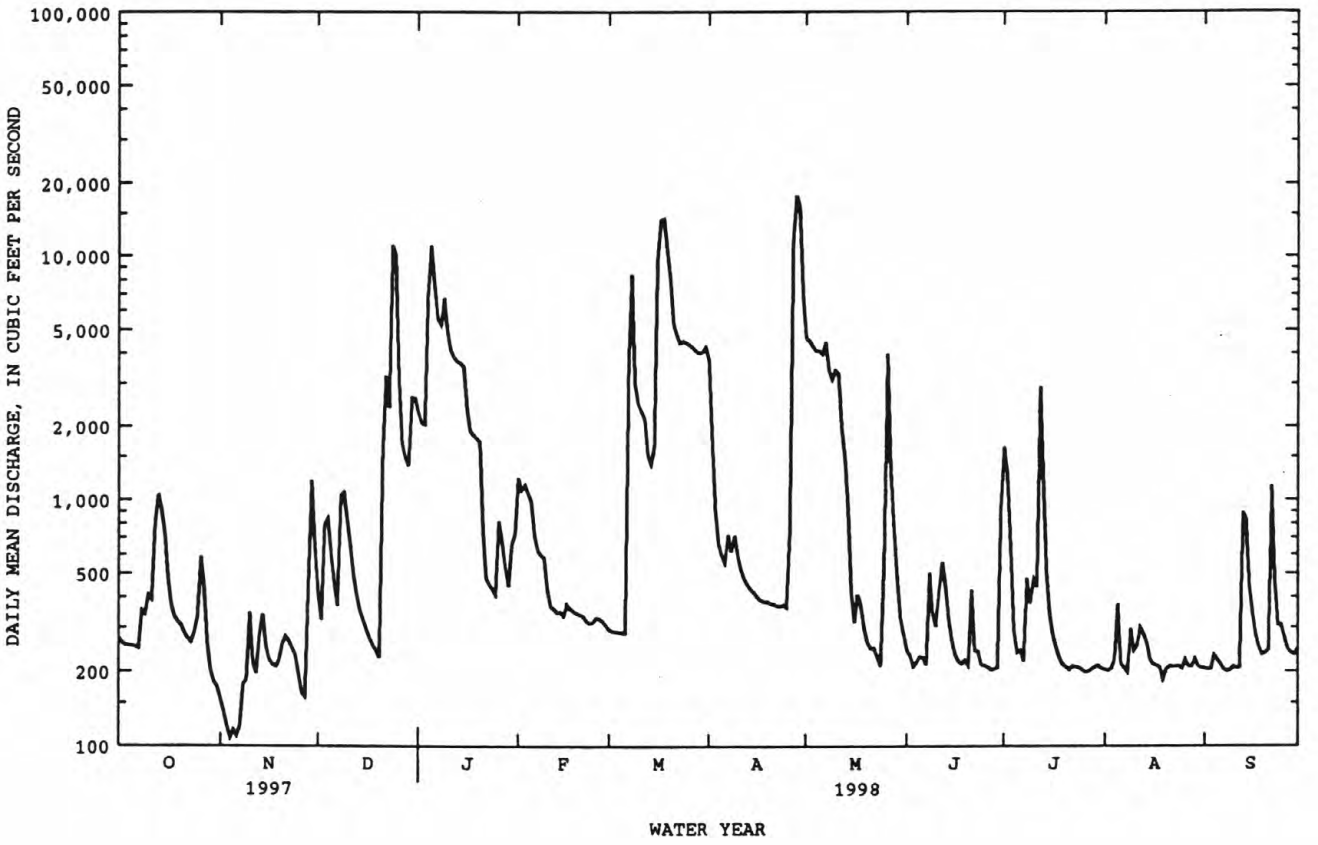
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	273	156	407	2280	1230	296	3750	4610	243	1630	204	207
2	261	139	324	2060	1100	292	1720	4490	233	1260	202	204
3	256	120	793	2030	1150	290	903	4260	210	616	206	205
4	256	108	841	7000	1060	290	664	4070	218	292	223	233
5	254	116	599	11100	982	287	593	4070	230	239	375	224
6	252	110	455	7570	718	287	554	3950	229	244	216	214
7	248	120	370	5520	623	3710	720	4430	213	220	207	204
8	354	178	1040	5230	594	8390	616	3380	501	476	199	201
9	343	186	1070	6720	582	2980	715	3110	342	378	298	203
10	408	347	835	4930	433	2470	593	3390	304	474	244	210
11	393	215	648	4110	367	2310	517	3290	422	442	255	207
12	816	197	496	3850	359	2160	476	1950	554	2890	301	208
13	1050	286	408	3710	347	1530	451	1500	448	1190	285	888
14	911	341	355	3640	350	1400	431	906	325	498	263	829
15	727	253	322	3540	336	1620	420	421	266	340	224	445
16	477	224	295	2390	374	9690	401	316	234	281	214	345
17	372	213	273	1910	360	14100	389	410	220	249	212	282
18	333	210	255	1850	351	14300	384	371	215	226	209	253
19	317	223	243	1790	345	10600	385	301	223	214	186	234
20	308	259	228	1730	339	8050	377	263	212	209	204	239
21	285	278	1530	742	338	5250	375	247	427	203	211	244
22	272	267	3220	477	320	4750	369	249	243	211	209	1140
23	263	249	2390	453	314	4400	367	228	242	209	210	473
24	287	234	11100	434	316	4490	373	211	213	208	211	307
25	332	195	10100	412	330	4410	364	548	212	203	206	309
26	583	164	3120	818	328	4320	742	3950	209	199	224	275
27	440	158	1690	670	319	4200	11800	1360	203	201	210	246
28	260	455	1480	527	308	4060	17700	769	205	205	210	238
29	203	1200	1380	445	---	4010	16100	476	208	210	225	234
30	182	661	2620	659	---	4050	6860	328	939	212	210	247
31	175	---	2610	729	---	4240	---	283	---	206	207	---
TOTAL	11891	7862	51497	89326	14573	133232	70109	58137	8943	14635	7060	9748
MEAN	384	262	1661	2881	520	4298	2337	1875	298	472	228	325
MAX	1050	1200	11100	11100	1230	14300	17700	4610	939	2890	375	1140
MIN	175	108	228	412	308	287	364	211	203	199	186	201
AC-FT	23590	15590	102100	177200	28910	264300	139100	115300	17740	29030	14000	19340

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1998, BY WATER YEAR (WY)

MEAN	352	853	747	800	812	1798	2041	2020	1753	916	477	460
MAX	639	2603	1854	2881	2072	6393	3646	5724	5658	3195	1596	917
(WY)	1997	1995	1993	1998	1997	1990	1994	1995	1995	1995	1997	1996
MIN	168	109	152	143	109	149	288	228	298	214	208	221
(WY)	1993	1996	1990	1996	1996	1996	1996	1996	1998	1991	1991	1992

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1990 - 1998	
ANNUAL TOTAL	348001		477013			
ANNUAL MEAN	953		1307		1086	
HIGHEST ANNUAL MEAN					2024	1995
LOWEST ANNUAL MEAN					278	1996
HIGHEST DAILY MEAN	11100	Dec 24	17700	Apr 28	25900	May 11 1993
LOWEST DAILY MEAN	104	Feb 5	108	Nov 4	62	Nov 6 1993
ANNUAL SEVEN-DAY MINIMUM	124	Nov 1	124	Nov 1	73	Oct 22 1992
INSTANTANEOUS PEAK FLOW			18100	Apr 28	27400	May 11 1993
INSTANTANEOUS PEAK STAGE			28.41	Apr 28	33.22	May 11 1993
INSTANTANEOUS LOW FLOW			87	Nov 4	62	Nov 6 1993
ANNUAL RUNOFF (AC-FT)	690300		946200		786600	
10 PERCENT EXCEEDS	2560		4030		2950	
50 PERCENT EXCEEDS	347		351		296	
90 PERCENT EXCEEDS	152		207		140	



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, 1,420 microsiemens, Apr. 2, 1996; minimum, 48 microsiemens, June 1, 1996.
pH: Maximum, 9.4 units, July 17, 1989; minimum, 6.0 units, May 12, 1991.
WATER TEMPERATURE: Maximum, 32.0°C, Aug. 1, 1993, July 22, 1996, July 10, 11, 22, 23, 1998; minimum, 1.5°C, Dec. 23, 1989, Jan. 20, 1993, Feb. 4, 1996.
DISSOLVED OXYGEN: Maximum, 14.9 mg/l, Jan. 19, 1998; minimum, 1.9 mg/l, July 24, 1996.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded (more than 20 percent missing record), 707 microsiemens, Feb. 26; minimum recorded, 115 microsiemens, Apr. 28.
pH: Maximum recorded (more than 20 percent missing record), 8.2 units, many days during the year; minimum recorded, 7.0 units, July 12.
WATER TEMPERATURE: Maximum recorded (more than 20 percent missing record), 32.0°C, July 10, 11, 22, 23; minimum recorded, 4.5°C, Dec. 8, 13, Mar. 10.
DISSOLVED OXYGEN: Maximum observed (more than 20 percent missing record), 14.9 mg/L, Jan. 19; minimum recorded, 4.3 mg/L, May 30.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	438	404	417	481	456	473	283	264	274	---	---	---
2	421	392	411	504	458	491	322	263	282	---	---	---
3	423	363	404	510	465	498	348	266	299	---	---	---
4	376	272	330	529	487	516	333	266	310	---	---	---
5	287	264	279	536	504	526	319	300	310	---	---	---
6	339	284	308	536	510	528	311	294	305	---	---	---
7	399	339	353	548	510	534	351	303	317	---	---	---
8	408	379	398	533	487	511	415	263	333	---	---	---
9	406	340	362	518	450	494	433	338	362	---	---	---
10	369	342	356	547	416	463	364	324	350	---	---	---
11	349	321	338	429	402	418	361	312	345	---	---	---
12	361	205	321	474	429	452	380	357	369	---	---	---
13	364	210	305	462	450	457	403	380	389	---	---	---
14	458	353	390	466	415	439	411	389	400	---	---	---
15	373	340	353	463	426	435	411	387	402	---	---	---
16	407	340	364	472	448	463	436	405	419	---	---	---
17	404	369	389	479	452	470	445	418	431	---	---	---
18	391	358	377	493	465	482	457	430	442	---	---	---
19	387	352	372	484	459	476	466	438	452	---	---	---
20	401	373	384	481	416	456	464	439	451	---	---	---
21	395	369	381	441	387	408	468	331	416	---	---	---
22	398	366	386	437	388	411	566	284	343	---	---	---
23	402	373	393	437	392	416	---	---	---	555	501	528
24	424	399	412	446	409	424	---	---	---	571	544	554
25	539	390	415	458	432	445	---	---	---	570	551	563
26	539	357	369	496	445	487	---	---	---	589	513	546
27	393	355	374	529	481	513	---	---	---	665	541	603
28	450	393	415	519	421	488	---	---	---	832	649	724
29	450	395	423	491	252	366	---	---	---	650	615	629
30	442	418	431	278	237	268	---	---	---	630	581	605
31	466	442	456	---	---	---	---	---	---	583	436	488
MONTH	539	205	376	548	237	460	---	---	---	---	---	---

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	512	402	449	661	617	639	311	232	282	257	242	253
2	557	450	485	642	621	635	372	311	346	257	250	254
3	454	417	430	637	620	630	---	---	---	257	247	253
4	435	415	426	638	620	632	---	---	---	---	---	---
5	429	413	424	638	611	630	---	---	---	---	---	---
6	467	429	447	647	617	630	---	---	---	---	---	---
7	503	467	489	647	196	462	---	---	---	---	---	---
8	492	462	479	468	212	271	---	---	---	---	---	---
9	492	462	480	310	278	292	---	---	---	---	---	---
10	532	487	504	303	278	291	---	---	---	---	---	---
11	567	527	541	320	301	310	---	---	---	---	---	---
12	619	565	590	320	303	311	---	---	---	---	---	---
13	654	617	631	342	310	330	---	---	---	---	---	---
14	624	586	605	348	328	339	---	---	---	---	---	---
15	617	593	606	---	---	---	---	---	---	---	---	---
16	624	608	616	---	---	---	---	---	---	---	---	---
17	634	614	625	---	---	---	---	---	---	---	---	---
18	637	609	627	---	---	---	---	---	---	---	---	---
19	648	625	635	---	---	---	---	---	---	---	---	---
20	646	616	633	---	---	---	---	---	---	---	---	---
21	640	616	630	---	---	---	---	---	---	---	---	---
22	638	609	625	---	---	---	---	---	---	---	---	---
23	632	611	620	---	---	---	---	---	---	---	---	---
24	668	627	639	---	---	---	---	---	---	---	---	---
25	667	634	652	268	254	264	---	---	---	---	---	---
26	707	658	688	268	255	264	---	---	---	---	---	---
27	682	641	659	---	---	---	---	---	---	---	---	---
28	660	640	650	---	---	---	128	115	121	---	---	---
29	---	---	---	270	264	267	190	128	152	---	---	---
30	---	---	---	345	247	271	254	190	231	---	---	---
31	---	---	---	319	280	298	---	---	---	---	---	---
MONTH	707	402	567	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	435	401	416	391	364	381
2	---	---	---	---	---	---	431	387	411	399	367	385
3	---	---	---	---	---	---	411	382	400	403	384	390
4	---	---	---	---	---	---	412	382	400	396	360	383
5	---	---	---	---	---	---	489	311	360	386	378	381
6	---	---	---	---	---	---	412	385	396	392	375	384
7	---	---	---	488	414	450	419	389	401	391	363	381
8	---	---	---	476	337	405	431	374	402	392	375	384
9	---	---	---	386	352	374	405	370	394	391	356	379
10	---	---	---	370	331	350	390	351	368	394	361	382
11	---	---	---	383	338	352	383	369	379	386	360	379
12	---	---	---	338	200	260	408	369	385	391	353	377
13	---	---	---	321	234	266	413	349	388	458	224	317
14	---	---	---	367	318	333	395	366	384	282	208	250
15	---	---	---	396	356	371	---	---	---	355	282	330
16	---	---	---	422	383	398	---	---	---	361	340	351
17	---	---	---	435	411	418	---	---	---	370	337	356
18	---	---	---	435	404	418	---	---	---	380	340	366
19	---	---	---	443	405	421	---	---	---	411	338	368
20	---	---	---	423	398	413	---	---	---	383	337	364
21	---	---	---	436	406	422	412	378	393	377	343	362
22	---	---	---	440	414	427	401	365	387	355	228	267
23	---	---	---	439	422	431	396	363	384	509	306	392
24	---	---	---	450	417	430	393	364	382	362	323	338
25	---	---	---	436	401	421	392	366	381	394	335	358
26	---	---	---	435	399	416	391	366	379	397	350	374
27	---	---	---	431	400	414	395	369	382	397	356	377
28	---	---	---	430	391	409	398	365	385	390	352	374
29	---	---	---	431	409	415	397	357	378	384	349	371
30	---	---	---	435	407	421	395	369	382	385	359	373
31	---	---	---	431	406	419	399	359	380	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	509	208	362

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.7	7.6	7.6	---	---	---	7.3	7.3	7.3	---	---	---
2	7.7	7.6	7.6	---	---	---	7.5	7.3	7.3	---	---	---
3	7.7	7.6	7.6	---	---	---	7.6	7.4	7.5	---	---	---
4	7.7	7.6	7.6	---	---	---	7.5	7.4	7.4	---	---	---
5	7.7	7.6	7.6	---	---	---	7.5	7.5	7.5	---	---	---
6	7.7	7.6	7.6	---	---	---	7.5	7.5	7.5	---	---	---
7	7.6	7.5	7.6	---	---	---	7.7	7.5	7.5	---	---	---
8	7.7	7.5	7.6	---	---	---	7.8	7.6	7.7	---	---	---
9	7.7	7.6	7.6	---	---	---	7.7	7.6	7.6	---	---	---
10	7.7	7.6	7.6	---	---	---	7.6	7.6	7.6	---	---	---
11	7.8	7.6	7.7	---	---	---	7.7	7.6	7.7	---	---	---
12	7.8	7.7	7.7	---	---	---	7.6	7.6	7.6	---	---	---
13	7.9	7.7	7.8	---	---	---	7.6	7.6	7.6	---	---	---
14	7.8	7.7	7.8	---	---	---	7.6	7.6	7.6	---	---	---
15	7.9	7.8	7.8	---	---	---	7.6	7.6	7.6	---	---	---
16	8.0	7.5	7.8	---	---	---	7.7	7.6	7.6	---	---	---
17	7.9	7.8	7.8	---	---	---	7.7	7.6	7.6	---	---	---
18	8.0	7.8	7.8	---	---	---	7.6	7.6	7.6	---	---	---
19	8.0	7.8	7.9	---	---	---	7.6	7.6	7.6	---	---	---
20	8.0	7.8	7.9	7.5	7.3	7.4	7.6	7.5	7.6	---	---	---
21	8.0	7.8	7.9	7.5	7.4	7.4	7.7	7.6	7.6	---	---	---
22	8.0	7.8	7.9	7.5	7.4	7.5	---	---	---	---	---	---
23	8.0	7.8	7.9	7.5	7.4	7.5	---	---	---	7.7	7.5	7.7
24	8.0	7.8	7.9	7.5	7.4	7.5	---	---	---	7.7	7.6	7.7
25	8.0	7.8	7.9	7.5	7.4	7.4	---	---	---	7.7	7.6	7.7
26	8.0	7.9	7.9	7.4	7.3	7.4	---	---	---	7.8	7.5	7.7
27	8.0	7.9	8.0	7.4	7.3	7.3	---	---	---	7.7	7.5	7.7
28	8.0	7.9	7.9	7.6	7.4	7.5	---	---	---	7.7	7.5	7.7
29	7.9	7.8	7.9	7.5	7.2	7.3	---	---	---	7.7	7.5	7.7
30	7.8	7.8	7.8	7.4	7.3	7.4	---	---	---	7.8	7.5	7.7
31	7.8	7.7	7.8	---	---	---	---	---	---	7.8	7.7	7.8
MAX	8.0	7.9	8.0	---	---	---	---	---	---	---	---	---
MIN	7.6	7.5	7.6	---	---	---	---	---	---	---	---	---

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.9	7.8	7.8	8.1	8.0	8.0	---	---	---	---	---	---
2	7.8	7.7	7.8	8.1	8.0	8.1	---	---	---	---	---	---
3	7.9	7.8	7.9	8.2	8.0	8.1	---	---	---	---	---	---
4	7.9	7.9	7.9	8.1	8.0	8.0	---	---	---	---	---	---
5	7.9	7.9	7.9	8.0	7.9	7.9	---	---	---	---	---	---
6	7.9	7.9	7.9	8.0	7.9	7.9	---	---	---	---	---	---
7	7.9	7.6	7.9	8.0	7.6	7.9	---	---	---	---	---	---
8	7.9	7.6	7.8	7.8	7.5	7.7	---	---	---	---	---	---
9	7.9	7.8	7.8	8.0	7.7	7.9	---	---	---	---	---	---
10	7.9	7.8	7.8	8.1	7.8	7.9	---	---	---	---	---	---
11	7.9	7.8	7.8	8.2	8.0	8.1	---	---	---	---	---	---
12	7.9	7.8	7.9	8.2	8.0	8.1	---	---	---	---	---	---
13	8.0	7.8	7.9	8.2	7.9	8.0	---	---	---	---	---	---
14	8.0	7.8	7.9	8.2	8.0	8.2	---	---	---	---	---	---
15	8.0	7.9	7.9	---	---	---	---	---	---	---	---	---
16	7.9	7.9	7.9	---	---	---	---	---	---	---	---	---
17	7.9	7.8	7.9	---	---	---	---	---	---	---	---	---
18	8.0	7.8	7.9	---	---	---	---	---	---	---	---	---
19	8.0	7.9	8.0	---	---	---	---	---	---	---	---	---
20	8.0	7.9	8.0	---	---	---	---	---	---	---	---	---
21	8.0	7.9	8.0	---	---	---	---	---	---	---	---	---
22	8.0	7.9	8.0	---	---	---	---	---	---	---	---	---
23	8.1	7.9	8.0	---	---	---	---	---	---	---	---	---
24	8.0	7.9	8.0	---	---	---	---	---	---	---	---	---
25	8.1	7.9	8.0	7.9	7.5	7.8	---	---	---	---	---	---
26	8.1	7.9	8.0	7.8	7.5	7.7	---	---	---	---	---	---
27	8.1	7.9	8.0	7.9	7.8	7.9	---	---	---	---	---	---
28	8.1	7.9	8.0	8.0	7.9	7.9	---	---	---	---	---	---
29	---	---	---	8.1	8.0	8.0	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	8.1	7.9	8.0	---	---	---	---	---	---	---	---	---
MIN	7.8	7.6	7.8	---	---	---	---	---	---	---	---	---

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	7.6	7.3	7.4	7.6	7.5	7.6
2	---	---	---	---	---	---	7.6	7.4	7.5	7.6	7.5	7.6
3	---	---	---	---	---	---	7.6	7.3	7.4	7.6	7.5	7.6
4	---	---	---	---	---	---	7.5	7.3	7.4	7.6	7.5	7.6
5	---	---	---	---	---	---	7.5	7.4	7.5	7.6	7.5	7.5
6	---	---	---	---	---	---	7.5	7.3	7.4	7.6	7.5	7.5
7	---	---	---	7.4	7.2	7.3	7.6	7.3	7.4	7.6	7.5	7.6
8	---	---	---	7.4	7.3	7.4	7.6	7.3	7.4	7.6	7.4	7.5
9	---	---	---	7.4	7.2	7.3	7.6	7.4	7.5	7.6	7.4	7.6
10	---	---	---	7.5	7.2	7.4	7.5	7.3	7.4	7.6	7.5	7.6
11	---	---	---	7.4	7.3	7.4	7.5	7.3	7.4	7.6	7.5	7.6
12	---	---	---	7.5	7.0	7.4	7.6	7.3	7.4	7.6	7.5	7.5
13	---	---	---	7.4	7.1	7.2	7.6	7.4	7.5	7.7	7.4	7.5
14	---	---	---	7.4	7.2	7.3	7.6	7.5	7.5	7.5	7.4	7.4
15	---	---	---	7.5	7.2	7.3	---	---	---	7.5	7.4	7.5
16	---	---	---	7.5	7.2	7.3	---	---	---	7.5	7.4	7.5
17	---	---	---	7.6	7.3	7.4	---	---	---	7.5	7.4	7.4
18	---	---	---	7.6	7.3	7.4	---	---	---	7.5	7.4	7.4
19	---	---	---	7.6	7.3	7.5	---	---	---	7.5	7.4	7.5
20	---	---	---	7.6	7.4	7.5	7.8	7.2	7.7	7.6	7.5	7.5
21	---	---	---	7.7	7.4	7.5	7.7	7.5	7.7	7.7	7.4	7.5
22	---	---	---	7.7	7.4	7.6	7.7	7.6	7.7	7.7	7.4	7.5
23	---	---	---	7.7	7.5	7.6	7.7	7.5	7.7	7.4	7.2	7.3
24	---	---	---	7.6	7.5	7.5	7.7	7.6	7.7	7.4	7.3	7.3
25	---	---	---	7.6	7.3	7.5	7.7	7.5	7.6	7.5	7.4	7.4
26	---	---	---	7.6	7.3	7.5	7.6	7.5	7.6	7.6	7.5	7.5
27	---	---	---	7.6	7.3	7.5	7.6	7.5	7.6	7.6	7.5	7.6
28	---	---	---	7.6	7.3	7.5	7.6	7.4	7.5	7.6	7.5	7.5
29	---	---	---	7.5	7.3	7.4	7.6	7.5	7.5	7.6	7.5	7.5
30	---	---	---	7.5	7.3	7.4	7.6	7.5	7.5	7.6	7.5	7.5
31	---	---	---	7.6	7.3	7.4	7.6	7.5	7.5	---	---	---
MAX	---	---	---	---	---	---	---	---	---	7.7	7.5	7.6
MIN	---	---	---	---	---	---	---	---	---	7.4	7.2	7.3

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.0	21.5	22.5	16.0	14.5	15.5	12.0	11.5	11.5	---	---	---
2	23.0	22.0	22.5	15.5	14.0	15.0	11.5	11.0	11.0	---	---	---
3	24.0	23.0	23.5	14.5	13.5	14.0	11.0	9.5	10.0	---	---	---
4	24.0	23.0	23.5	14.0	13.0	13.5	9.5	8.0	8.5	---	---	---
5	24.0	23.0	23.5	14.5	13.5	14.0	8.0	7.0	7.5	---	---	---
6	24.0	23.5	24.0	14.0	12.5	13.5	7.0	6.0	6.5	---	---	---
7	24.5	23.5	24.0	13.0	12.0	12.5	6.5	5.5	6.0	---	---	---
8	23.5	23.0	23.5	12.5	11.5	12.0	6.0	4.5	5.5	---	---	---
9	23.0	23.0	23.0	12.5	11.5	12.0	6.0	5.0	5.5	---	---	---
10	24.0	22.5	23.0	12.0	10.0	11.0	6.0	5.5	6.0	---	---	---
11	24.0	23.0	23.5	10.5	9.5	10.0	6.0	5.5	6.0	---	---	---
12	23.5	20.0	22.5	10.5	9.5	10.0	6.0	5.0	5.5	---	---	---
13	20.0	19.0	19.5	10.0	9.0	9.5	6.0	4.5	5.0	---	---	---
14	19.5	18.0	19.0	9.0	8.5	9.0	6.0	5.0	5.5	---	---	---
15	19.5	17.5	18.5	9.0	8.0	8.5	6.5	5.0	5.5	---	---	---
16	19.5	18.0	19.0	9.0	7.5	8.0	7.0	6.0	6.0	---	---	---
17	19.5	18.5	19.0	8.5	7.5	8.0	7.0	6.0	6.5	---	---	---
18	19.5	18.0	18.5	8.5	8.0	8.5	7.5	6.5	7.0	---	---	---
19	19.0	18.0	18.5	9.0	8.0	8.5	8.0	7.0	7.5	---	---	---
20	19.0	18.0	18.5	9.5	8.5	9.0	8.0	6.5	7.5	---	---	---
21	18.5	17.0	17.5	10.0	9.5	9.5	7.5	6.0	6.5	---	---	---
22	17.5	16.5	16.5	10.0	9.5	9.5	6.0	5.0	5.5	---	---	---
23	17.0	15.5	16.0	10.0	9.5	9.5	---	---	---	6.0	5.0	5.5
24	16.0	15.5	15.5	10.5	10.0	10.5	---	---	---	6.0	5.0	5.0
25	16.0	15.0	15.5	11.5	10.5	11.0	---	---	---	6.5	5.5	5.5
26	15.0	13.0	14.0	13.0	11.5	12.5	---	---	---	6.5	5.5	6.0
27	13.0	12.5	13.0	12.5	12.0	12.5	---	---	---	7.0	6.0	6.5
28	13.0	12.5	12.5	14.5	12.0	13.5	---	---	---	8.0	6.5	7.0
29	13.5	12.5	13.0	14.0	12.5	13.5	---	---	---	8.5	7.0	7.5
30	14.0	13.0	13.5	13.5	11.0	12.5	---	---	---	8.5	7.0	7.5
31	15.5	14.0	15.0	---	---	---	---	---	---	8.0	7.0	7.5
MONTH	24.5	12.5	19.1	16.0	7.5	11.2	---	---	---	---	---	---

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.5	7.5	8.0	10.5	10.0	10.0	12.0	11.5	12.0	15.5	14.5	15.0
2	8.0	7.5	7.5	10.0	8.5	9.5	14.0	12.0	13.0	15.5	15.0	15.5
3	7.5	6.5	7.0	9.5	8.5	9.0	14.0	10.0	12.0	16.0	15.0	15.5
4	6.5	6.0	6.5	10.0	9.0	9.5	11.5	9.0	10.0	16.5	15.5	16.0
5	6.5	6.0	6.0	9.5	8.5	9.0	---	---	---	16.5	15.5	16.0
6	7.0	5.5	6.5	9.0	8.5	8.5	---	---	---	18.0	15.5	16.0
7	7.0	5.5	6.5	9.0	7.5	8.5	---	---	---	---	---	---
8	7.5	6.0	6.5	7.5	6.0	6.5	---	---	---	---	---	---
9	7.5	6.0	7.0	6.0	5.0	5.5	---	---	---	---	---	---
10	8.5	7.5	7.5	6.0	4.5	5.5	---	---	---	---	---	---
11	8.5	8.0	8.0	6.0	5.5	5.5	---	---	---	---	---	---
12	8.5	8.0	8.5	5.5	5.0	5.5	---	---	---	---	---	---
13	9.0	8.0	8.5	6.5	5.0	6.0	---	---	---	---	---	---
14	9.5	8.5	9.0	8.0	6.5	7.0	---	---	---	---	---	---
15	9.5	8.5	9.0	---	---	---	---	---	---	---	---	---
16	9.0	8.5	9.0	---	---	---	---	---	---	---	---	---
17	9.0	8.5	9.0	---	---	---	---	---	---	---	---	---
18	9.5	8.0	8.5	---	---	---	---	---	---	---	---	---
19	9.5	9.0	9.0	---	---	---	---	---	---	---	---	---
20	10.0	9.0	9.5	---	---	---	---	---	---	---	---	---
21	10.5	9.5	10.0	---	---	---	---	---	---	---	---	---
22	10.5	10.0	10.5	---	---	---	---	---	---	---	---	---
23	11.0	10.0	10.0	---	---	---	---	---	---	---	---	---
24	12.0	10.5	11.0	---	---	---	---	---	---	---	---	---
25	13.0	11.5	12.0	9.5	8.0	9.0	---	---	---	---	---	---
26	13.0	12.5	12.5	10.5	9.5	10.5	---	---	---	25.5	20.0	22.5
27	13.0	11.5	12.0	10.5	10.0	10.5	18.0	14.0	15.5	23.5	22.5	23.0
28	12.0	10.5	11.0	11.0	10.0	10.5	14.0	13.5	13.5	25.0	23.0	23.5
29	---	---	---	11.5	10.5	11.0	13.5	13.0	13.5	26.5	24.0	25.0
30	---	---	---	13.5	11.5	12.0	14.5	13.5	14.0	27.5	25.0	26.0
31	---	---	---	13.5	12.0	12.5	---	---	---	28.5	26.0	27.0
MONTH	13.0	5.5	8.8	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	28.5	26.0	27.5	26.0	23.5	24.5	30.5	29.5	30.0	29.0	28.5	29.0
2	29.5	25.0	28.0	26.5	24.5	25.5	31.0	30.0	30.5	29.0	28.5	29.0
3	---	---	---	28.5	26.5	27.5	30.5	29.0	29.5	29.0	28.5	28.5
4	---	---	---	29.5	27.5	28.5	29.0	28.5	29.0	29.5	28.5	29.0
5	---	---	---	30.0	26.5	29.0	29.0	26.5	27.5	29.5	29.0	29.5
6	---	---	---	30.5	29.0	30.0	28.5	27.5	28.0	29.5	29.0	29.5
7	---	---	---	30.5	29.5	30.0	29.0	28.0	28.5	29.5	28.5	29.0
8	23.0	20.0	21.5	30.5	29.0	29.5	29.0	28.0	28.5	29.5	28.5	29.0
9	24.5	21.5	22.5	31.5	28.5	29.5	29.0	27.5	28.0	30.0	27.5	28.5
10	24.5	23.5	24.0	32.0	30.0	31.0	27.5	27.0	27.5	27.5	26.5	27.0
11	26.0	24.0	25.0	32.0	29.0	30.5	28.0	27.5	27.5	26.5	26.0	26.5
12	27.5	24.5	26.0	29.0	25.5	27.0	29.0	27.0	28.0	26.5	26.0	26.5
13	29.0	26.0	27.0	29.0	27.5	28.0	29.0	28.0	28.5	26.0	23.5	25.0
14	28.5	27.0	28.0	30.5	28.5	29.5	29.0	28.0	28.5	25.5	24.5	25.0
15	28.5	26.5	27.0	31.0	29.0	30.0	---	---	---	26.5	25.0	25.5
16	27.0	24.5	26.5	31.0	29.0	30.0	---	---	---	26.5	25.5	26.0
17	27.0	26.5	27.0	31.0	29.0	30.0	---	---	---	27.0	25.5	26.0
18	27.5	26.0	27.0	31.0	29.5	30.5	---	---	---	27.0	26.0	26.5
19	28.0	26.0	27.0	31.0	30.0	31.0	---	---	---	27.0	26.5	27.0
20	29.0	27.5	28.5	31.5	30.5	31.0	30.5	30.0	30.5	27.5	27.0	27.0
21	29.0	26.5	28.0	31.5	30.5	31.0	30.5	30.0	30.5	27.5	27.0	27.5
22	29.5	28.0	28.5	32.0	30.5	31.5	30.5	29.5	30.0	27.0	24.0	25.0
23	30.0	28.0	29.0	32.0	31.0	31.5	30.0	29.5	30.0	24.5	23.5	24.0
24	29.5	28.0	29.0	31.0	30.5	31.0	30.0	29.5	30.0	25.0	23.5	24.0
25	30.0	28.5	29.5	31.5	30.0	31.0	30.0	29.5	30.0	26.5	24.5	25.0
26	30.0	28.5	29.5	31.5	31.0	31.5	30.5	29.5	30.0	26.5	25.5	26.0
27	30.5	28.5	29.5	31.5	31.0	31.0	30.5	29.5	30.0	27.0	26.0	26.5
28	31.0	29.0	30.0	31.0	30.0	30.5	30.5	29.5	30.0	27.5	26.5	27.0
29	31.0	30.0	30.5	31.0	30.0	30.5	30.0	29.0	29.5	27.5	27.0	27.5
30	30.5	24.5	28.0	31.0	30.0	30.5	29.5	28.5	29.0	27.5	27.0	27.5
31	---	---	---	31.0	30.0	30.5	29.0	28.5	29.0	---	---	---
MONTH	---	---	---	32.0	23.5	29.8	---	---	---	30.0	23.5	27.0

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

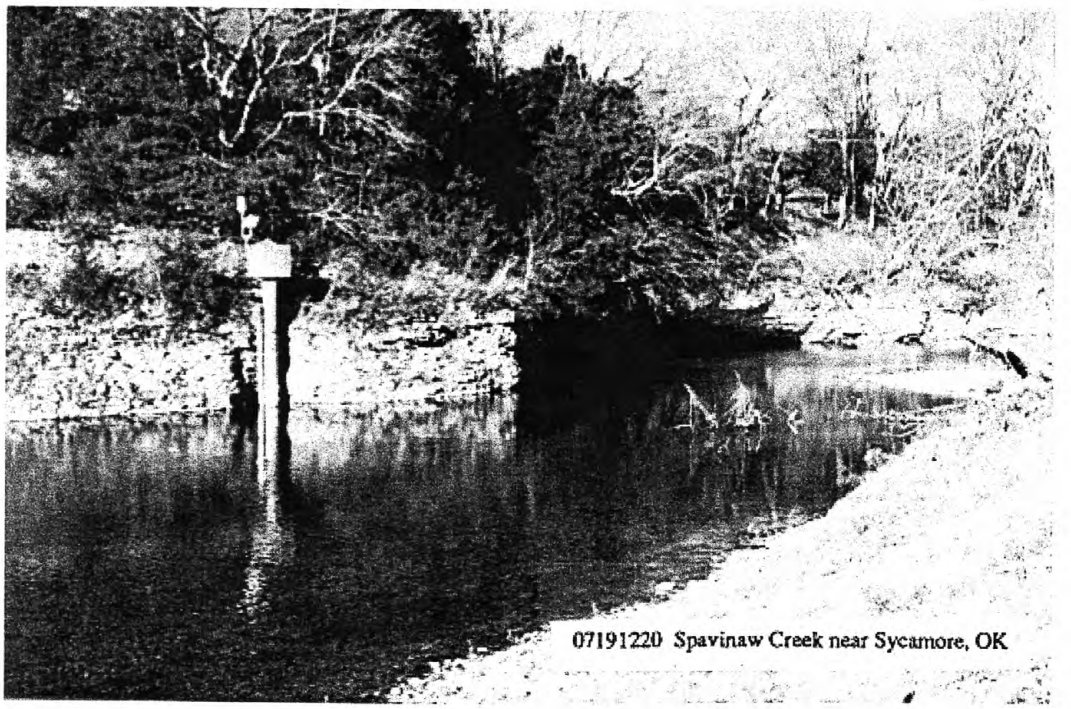
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.2	8.4	8.7	8.3	7.8	8.0	9.2	9.0	9.1	---	---	---
2	9.2	8.4	8.8	8.4	7.9	8.1	9.6	9.0	9.2	---	---	---
3	9.2	8.2	8.6	8.7	7.9	8.3	10.4	9.6	10.0	---	---	---
4	9.0	8.0	8.5	8.6	8.1	8.3	11.3	10.4	10.7	---	---	---
5	8.9	7.8	8.4	8.8	8.1	8.4	11.8	11.2	11.5	---	---	---
6	8.9	7.7	8.3	8.8	8.1	8.4	12.3	11.8	12.1	---	---	---
7	8.7	7.7	8.1	9.3	8.6	9.0	12.8	12.1	12.3	---	---	---
8	8.5	7.3	7.9	9.9	9.1	9.5	13.2	12.8	12.9	---	---	---
9	8.3	7.0	7.4	10.1	9.7	9.9	13.0	12.5	12.8	---	---	---
10	8.8	7.8	8.1	10.8	10.1	10.5	12.6	12.4	12.5	12.5	11.5	12.0
11	9.0	7.9	8.4	10.9	10.3	10.7	12.8	12.5	12.7	12.4	12.0	12.2
12	8.7	7.9	8.2	11.2	10.3	10.7	13.1	12.7	12.9	12.1	11.9	12.0
13	9.3	8.5	9.0	11.2	10.5	10.8	13.3	12.9	13.1	12.2	12.0	12.1
14	9.8	9.2	9.5	11.6	11.0	11.3	13.3	12.9	13.1	13.3	12.0	12.2
15	9.9	9.2	9.7	11.9	11.3	11.6	13.2	12.8	12.9	12.8	11.9	12.2
16	9.2	8.2	8.6	12.4	11.8	12.0	12.8	12.3	12.5	14.0	11.7	13.0
17	8.7	7.9	8.3	12.6	11.9	12.3	12.7	12.2	12.4	14.1	11.2	12.4
18	8.8	7.9	8.4	12.3	12.0	12.2	12.3	11.9	12.1	14.3	10.5	12.2
19	9.0	7.8	8.4	12.5	11.7	12.2	11.9	11.4	11.6	14.9	10.5	13.0
20	9.0	7.9	8.5	12.4	11.0	11.7	11.7	11.2	11.5	12.6	10.7	11.7
21	9.0	7.9	8.4	11.3	10.7	11.0	12.4	11.5	11.9	---	---	---
22	9.3	8.2	8.8	11.1	10.6	10.9	---	---	---	---	---	---
23	9.2	8.4	8.8	11.2	10.6	10.9	---	---	---	13.1	12.5	12.9
24	9.0	8.4	8.8	11.1	10.3	10.6	---	---	---	13.5	13.0	13.3
25	8.9	8.5	8.7	10.8	9.5	10.1	---	---	---	13.3	12.9	13.2
26	9.6	8.2	8.9	9.8	9.1	9.5	---	---	---	13.1	12.5	12.8
27	9.9	9.6	9.8	9.4	8.9	9.2	---	---	---	12.8	12.4	12.6
28	9.7	9.3	9.5	8.9	8.5	8.7	---	---	---	12.6	12.1	12.4
29	9.6	9.1	9.3	8.9	7.4	8.3	---	---	---	12.1	11.8	12.0
30	9.2	8.4	8.8	9.0	8.1	8.8	---	---	---	12.4	11.8	12.1
31	8.6	8.0	8.3	---	---	---	---	---	---	12.6	12.1	12.3
MONTH	9.9	7.0	8.6	12.6	7.4	10.1	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.2	11.5	11.8	11.7	9.9	10.8	9.1	8.5	8.8	7.7	7.2	7.5
2	12.3	11.8	12.1	11.6	10.0	11.1	9.0	7.6	8.3	7.7	7.4	7.6
3	13.0	12.2	12.6	12.2	10.5	11.4	10.3	7.6	8.7	7.8	7.5	7.6
4	13.2	12.9	13.0	11.8	10.3	10.9	10.7	8.8	9.5	7.7	7.5	7.6
5	13.4	13.0	13.2	10.9	10.0	10.5	10.8	6.5	8.5	7.7	7.3	7.4
6	13.4	13.1	13.2	11.3	10.4	10.9	9.5	5.7	7.7	7.7	6.7	7.4
7	13.4	13.1	13.2	11.5	10.2	11.0	8.5	6.4	7.4	8.0	6.2	7.1
8	13.2	12.9	13.1	11.9	11.1	11.4	9.5	7.6	8.7	---	---	---
9	12.9	12.5	12.8	13.0	11.9	12.4	9.7	7.1	8.7	---	---	---
10	12.5	12.0	12.2	13.6	12.8	13.3	11.4	6.7	8.7	---	---	---
11	12.4	11.5	11.9	13.6	13.3	13.5	10.1	5.4	8.1	---	---	---
12	12.4	11.7	12.0	---	---	---	8.5	6.9	7.7	---	---	---
13	12.4	11.5	12.1	---	---	---	8.7	6.7	7.4	---	---	---
14	12.4	11.5	12.0	---	---	---	9.5	6.6	7.8	---	---	---
15	12.4	11.2	11.6	---	---	---	8.7	6.8	7.3	---	---	---
16	11.6	11.1	11.3	---	---	---	9.8	8.3	9.0	---	---	---
17	11.7	10.7	11.2	---	---	---	10.9	8.0	9.2	---	---	---
18	12.2	10.9	11.6	---	---	---	10.3	7.4	8.8	---	---	---
19	12.2	11.0	11.7	---	---	---	10.3	7.2	8.6	---	---	---
20	12.2	10.8	11.6	---	---	---	9.8	8.3	9.2	---	---	---
21	12.0	10.8	11.4	---	---	---	10.7	7.7	9.0	9.6	8.1	8.8
22	11.7	10.4	10.9	---	---	---	10.7	7.4	8.9	9.0	8.0	8.6
23	11.6	10.2	11.0	---	---	---	10.7	7.1	8.7	9.5	8.4	8.9
24	11.5	10.0	10.7	---	---	---	9.9	6.7	7.9	10.1	7.8	8.9
25	10.8	9.2	10.0	10.3	9.7	10.0	7.5	6.6	7.0	10.3	5.4	7.9
26	10.3	8.8	9.6	9.7	9.2	9.4	8.3	5.5	6.9	6.9	5.3	6.0
27	10.9	8.9	10.0	9.3	9.1	9.2	6.4	5.2	6.1	7.4	6.3	6.7
28	11.1	9.3	10.4	9.3	9.1	9.2	6.4	5.9	6.1	7.5	5.3	6.7
29	---	---	---	9.3	8.9	9.1	6.0	5.0	5.5	7.3	4.7	6.3
30	---	---	---	9.1	8.2	8.9	7.2	5.1	6.2	7.0	4.3	6.2
31	---	---	---	8.9	8.1	8.6	---	---	---	6.9	5.5	6.4
MONTH	13.4	8.8	11.7	---	---	---	11.4	5.0	8.0	---	---	---

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.8	5.8	6.4	---	---	---	---	---	---	6.8	5.9	6.4
2	---	---	---	---	---	---	---	---	---	6.7	5.9	6.4
3	---	---	---	---	---	---	---	---	---	6.7	5.9	6.4
4	---	---	---	---	---	---	---	---	---	6.7	5.8	6.4
5	---	---	---	---	---	---	---	---	---	6.8	5.8	6.3
6	---	---	---	---	---	---	---	---	---	6.4	5.8	6.2
7	---	---	---	---	---	---	---	---	---	6.6	5.8	6.2
8	---	---	---	---	---	---	---	---	---	6.6	5.8	6.2
9	---	---	---	---	---	---	---	---	---	6.8	5.7	6.4
10	---	---	---	---	---	---	---	---	---	7.0	6.4	6.8
11	---	---	---	---	---	---	---	---	---	7.1	6.3	6.8
12	---	---	---	---	---	---	---	---	---	7.1	6.5	6.8
13	---	---	---	---	---	---	---	---	---	6.9	5.1	6.4
14	---	---	---	---	---	---	---	---	---	6.2	5.7	5.9
15	---	---	---	---	---	---	---	---	---	6.6	5.8	6.3
16	---	---	---	---	---	---	---	---	---	6.5	6.0	6.2
17	---	---	---	---	---	---	---	---	---	6.4	5.9	6.1
18	---	---	---	---	---	---	---	---	---	6.4	5.9	6.1
19	---	---	---	---	---	---	---	---	---	6.6	5.8	6.2
20	---	---	---	---	---	---	---	---	---	6.7	6.1	6.4
21	---	---	---	---	---	---	6.8	5.4	6.2	6.7	5.5	6.3
22	---	---	---	---	---	---	6.8	5.6	6.2	6.7	4.9	5.8
23	---	---	---	---	---	---	6.7	5.6	6.2	5.9	5.3	5.6
24	---	---	---	---	---	---	6.7	5.6	6.2	6.2	5.7	5.9
25	---	---	---	---	---	---	6.5	5.5	6.1	6.4	6.0	6.2
26	---	---	---	---	---	---	6.5	5.5	6.0	6.5	5.9	6.2
27	---	---	---	---	---	---	6.5	5.7	6.2	6.5	6.0	6.2
28	---	---	---	---	---	---	6.6	5.7	6.1	6.5	5.9	6.2
29	---	---	---	---	---	---	6.6	5.8	6.2	6.6	6.0	6.3
30	---	---	---	---	---	---	6.6	5.8	6.3	6.8	6.0	6.3
31	---	---	---	---	---	---	6.8	5.8	6.4	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	7.1	4.9	6.3



07191220 Spavinaw Creek near Sycamore, OK

07178520 DOG CREEK SOUTH OF CLAREMORE, OK

LOCATION.--Lat 36°16'42", long 95°36'41", in NW ¼ NW ¼ sec.28, T.21 N., R.16 E., Rogers County, Hydrologic Unit 11070105, on right downstream abutment of county road bridge, 2.4 mi south of Claremore, 1.5 mi downstream from Cat Creek, and 3.1 mi upstream from Panther Creek.

DRAINAGE AREA.--74.9 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1997 to current year.

GAGE.--Water-stage recorder. Datum of gage is 548.52 ft above sea level from topographic map.

REMARKS.--Records good. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	5.8
2	---	---	---	---	---	---	---	---	---	---	---	3.4
3	---	---	---	---	---	---	---	---	---	---	---	2.9
4	---	---	---	---	---	---	---	---	---	---	---	2.5
5	---	---	---	---	---	---	---	---	---	---	---	1.8
6	---	---	---	---	---	---	---	---	---	---	---	4.6
7	---	---	---	---	---	---	---	---	---	---	---	2.3
8	---	---	---	---	---	---	---	---	---	---	---	5.6
9	---	---	---	---	---	---	---	---	---	---	---	2.8
10	---	---	---	---	---	---	---	---	---	---	---	2.5
11	---	---	---	---	---	---	---	---	---	---	---	1.9
12	---	---	---	---	---	---	---	---	---	---	---	1.2
13	---	---	---	---	---	---	---	---	---	---	---	13
14	---	---	---	---	---	---	---	---	---	---	---	3.5
15	---	---	---	---	---	---	---	---	---	---	---	2.6
16	---	---	---	---	---	---	---	---	---	---	---	2.4
17	---	---	---	---	---	---	---	---	---	---	---	2.3
18	---	---	---	---	---	---	---	---	---	---	---	5.2
19	---	---	---	---	---	---	---	---	---	---	---	2.4
20	---	---	---	---	---	---	---	---	---	---	---	4.4
21	---	---	---	---	---	---	---	---	---	---	---	2.2
22	---	---	---	---	---	---	---	---	---	---	---	2.5
23	---	---	---	---	---	---	---	---	---	---	---	153
24	---	---	---	---	---	---	---	---	---	---	---	31
25	---	---	---	---	---	---	---	---	---	---	---	11
26	---	---	---	---	---	---	---	---	---	---	---	7.6
27	---	---	---	---	---	---	---	---	---	---	---	5.8
28	---	---	---	---	---	---	---	---	---	---	---	3.9
29	---	---	---	---	---	---	---	---	---	---	3.1	3.5
30	---	---	---	---	---	---	---	---	---	---	4.7	3.4
31	---	---	---	---	---	---	---	---	---	---	19	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	297.0
MEAN	---	---	---	---	---	---	---	---	---	---	---	9.90
MAX	---	---	---	---	---	---	---	---	---	---	---	153
MIN	---	---	---	---	---	---	---	---	---	---	---	1.2
AC-FT	---	---	---	---	---	---	---	---	---	---	---	589

07178520 DOG CREEK SOUTH OF CLAREMORE, OK--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	4.3	34	9.6	53	8.0	115	41	6.4	113	7.0	5.0
2	2.9	6.4	24	9.7	51	8.0	73	36	4.7	12	4.3	4.9
3	2.2	8.6	50	10	47	8.3	70	28	4.6	5.6	4.4	3.8
4	1.4	9.3	37	141	34	5.2	60	18	7.4	5.5	4.7	2.5
5	5.1	9.2	27	180	23	22	45	25	9.7	2.9	4.9	7.9
6	2.8	11	18	208	18	22	47	52	5.2	2.9	4.5	4.1
7	2.7	12	19	153	16	613	71	387	3.5	2.8	4.4	3.8
8	7.0	9.8	115	232	17	1140	70	111	17	73	4.2	4.1
9	4.8	8.9	77	254	18	254	54	112	6.6	7.6	9.1	4.2
10	2.5	23	45	147	20	124	37	82	4.3	3.6	15	4.3
11	6.3	12	30	99	30	110	30	51	11	48	7.0	4.4
12	72	6.0	23	83	13	58	23	32	4.1	144	5.2	4.5
13	93	17	19	71	9.2	56	21	23	2.4	14	24	70
14	34	27	18	61	10	60	24	16	6.1	8.9	7.0	132
15	22	13	17	59	13	101	20	12	3.3	5.9	5.1	9.0
16	10	6.9	16	55	24	1130	33	9.1	3.0	5.1	4.9	4.1
17	8.5	5.9	15	51	27	1150	22	7.4	3.0	5.8	5.1	4.2
18	8.0	5.6	15	51	14	372	12	6.4	3.2	8.3	5.1	7.9
19	3.7	5.7	14	45	14	878	11	5.4	2.8	5.3	4.0	5.0
20	6.4	6.0	21	44	14	626	18	5.4	1.9	5.2	3.3	4.9
21	19	e6.1	68	46	13	231	17	4.4	5.1	5.3	8.1	5.0
22	6.9	6.4	100	46	12	149	15	2.6	3.0	5.2	5.0	19
23	2.9	6.9	69	37	13	113	12	6.4	2.9	5.4	4.8	5.9
24	2.4	8.0	310	38	12	84	6.1	3.8	3.0	4.4	5.1	5.0
25	31	9.7	138	38	11	71	4.5	38	2.4	3.6	5.1	4.2
26	25	7.8	45	50	15	63	27	41	1.5	7.0	5.2	2.3
27	9.6	7.6	25	47	12	67	358	51	4.9	4.6	5.3	7.0
28	4.6	34	20	39	8.2	65	186	25	2.5	4.5	5.1	4.1
29	3.8	96	17	31	---	54	75	14	2.6	5.0	5.1	4.2
30	3.5	59	16	27	---	93	49	11	49	4.8	4.8	13
31	3.5	---	10	25	---	251	---	5.8	---	2.5	4.9	---
TOTAL	410.6	449.1	1452	2387.3	561.4	7986.5	1605.6	1262.7	187.1	531.7	191.7	360.3
MEAN	13.2	15.0	46.8	77.0	20.1	258	53.5	40.7	6.24	17.2	6.18	12.0
MAX	93	96	310	254	53	1150	358	387	49	144	24	132
MIN	1.4	4.3	10	9.6	8.2	5.2	4.5	2.6	1.5	2.5	3.3	2.3
AC-FT	814	891	2880	4740	1110	15840	3180	2500	371	1050	380	715

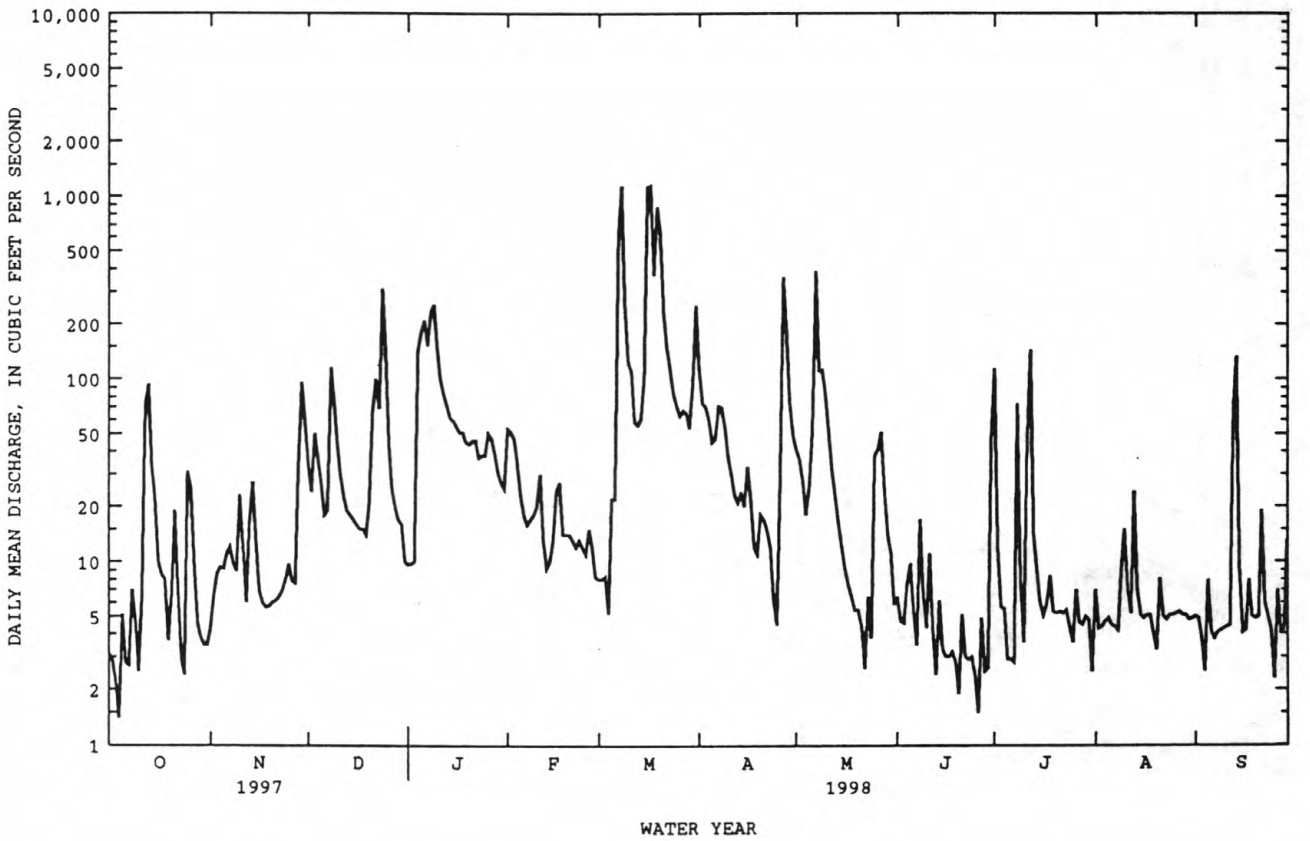
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1998, BY WATER YEAR (WY)

MEAN	13.2	15.0	46.8	77.0	20.0	258	53.5	40.7	6.24	17.2	6.18	11.0
MAX	13.2	15.0	46.8	77.0	20.0	258	53.5	40.7	6.24	17.2	6.18	12.0
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998
MIN	13.2	15.0	46.8	77.0	20.0	258	53.5	40.7	6.24	17.2	6.18	9.90
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1997

e Estimated

07178520 DOG CREEK SOUTH OF CLAREMORE, OK--Continued

SUMMARY STATISTICS	FOR 1998 WATER YEAR		WATER YEARS 1997 - 1998	
ANNUAL TOTAL	17386.0			
ANNUAL MEAN	47.6		47.6	
HIGHEST ANNUAL MEAN			47.6	1998
LOWEST ANNUAL MEAN			47.6	1998
HIGHEST DAILY MEAN	1150	Mar 17	1150	Mar 17 1998
LOWEST DAILY MEAN	1.4	Oct 4	1.2	Sep 12 1997
ANNUAL SEVEN-DAY MINIMUM	2.8	Jun 20	2.8	Jun 20 1998
INSTANTANEOUS PEAK FLOW	1640	Mar 7	1640	Mar 7 1998
INSTANTANEOUS PEAK STAGE	17.98	Mar 7	17.98	Mar 7 1998
ANNUAL RUNOFF (AC-FT)	34490		34510	
10 PERCENT EXCEEDS	97		93	
50 PERCENT EXCEEDS	12		10	
90 PERCENT EXCEEDS	3.7		3.0	



07178520 DOG CREEK SOUTH OF CLAREMORE, OK --Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--August 1997 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: August 1997 to current year.

INSTRUMENTATION.--Water temperature recorder provides continuous readings.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 32.0°C, July 10, 1998; minimum, 2.0°C, Jan. 24, 1998.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 32.0°C, July 10; minimum, 2.0°C, Jan. 24.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	---	---	---	26.5	24.5	25.5
2	---	---	---	---	---	---	---	---	---	28.0	25.0	26.5
3	---	---	---	---	---	---	---	---	---	27.0	25.5	26.5
4	---	---	---	---	---	---	---	---	---	25.5	23.0	24.0
5	---	---	---	---	---	---	---	---	---	24.0	21.0	22.5
6	---	---	---	---	---	---	---	---	---	24.5	21.0	22.5
7	---	---	---	---	---	---	---	---	---	25.5	22.5	23.5
8	---	---	---	---	---	---	---	---	---	26.5	23.0	24.5
9	---	---	---	---	---	---	---	---	---	26.5	24.0	25.0
10	---	---	---	---	---	---	---	---	---	24.5	21.5	23.0
11	---	---	---	---	---	---	---	---	---	23.0	19.5	21.5
12	---	---	---	---	---	---	---	---	---	23.0	18.5	21.0
13	---	---	---	---	---	---	---	---	---	22.5	20.5	21.5
14	---	---	---	---	---	---	---	---	---	25.5	21.5	23.5
15	---	---	---	---	---	---	---	---	---	26.0	23.0	24.5
16	---	---	---	---	---	---	---	---	---	27.0	24.0	25.5
17	---	---	---	---	---	---	---	---	---	26.0	24.5	25.5
18	---	---	---	---	---	---	---	---	---	26.0	23.5	24.5
19	---	---	---	---	---	---	---	---	---	27.0	23.5	25.0
20	---	---	---	---	---	---	---	---	---	26.0	22.0	24.0
21	---	---	---	---	---	---	---	---	---	22.5	20.5	21.5
22	---	---	---	---	---	---	---	---	---	22.5	21.0	22.0
23	---	---	---	---	---	---	---	---	---	22.0	20.0	21.0
24	---	---	---	---	---	---	---	---	---	20.5	19.5	19.5
25	---	---	---	---	---	---	---	---	---	21.0	19.0	20.0
26	---	---	---	---	---	---	---	---	---	22.0	19.0	20.5
27	---	---	---	---	---	---	---	---	---	22.5	19.5	21.0
28	---	---	---	---	---	---	---	---	---	22.0	20.0	21.0
29	---	---	---	---	---	---	---	---	---	21.5	18.0	19.5
30	---	---	---	---	---	---	28.0	25.0	26.5	21.5	18.0	20.0
31	---	---	---	---	---	---	26.5	24.5	25.5	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	28.0	18.0	22.9

07178520 DOG CREEK SOUTH OF CLAREMORE, OK --Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21.5	18.0	20.0	16.5	14.5	15.5	10.0	9.5	9.5	5.5	3.5	4.5
2	22.0	19.0	20.5	14.5	12.0	13.5	10.0	9.5	9.5	9.5	5.5	7.0
3	23.0	20.0	21.5	12.0	11.0	11.5	9.5	8.5	9.0	11.5	9.5	10.5
4	23.5	20.0	22.0	12.0	9.0	10.5	8.5	7.0	7.5	11.5	6.5	8.5
5	23.0	19.5	21.5	12.0	11.0	11.5	7.0	5.5	6.0	7.5	6.5	7.0
6	24.0	21.0	22.5	11.0	10.0	10.5	5.5	4.0	4.5	8.5	7.0	8.0
7	23.0	21.5	22.0	10.0	9.0	9.5	5.0	4.5	4.5	7.0	6.0	6.5
8	22.5	22.0	22.0	10.5	8.0	9.0	6.5	3.5	5.0	6.0	4.0	5.0
9	22.5	21.0	22.0	10.5	9.5	10.0	7.0	6.5	6.5	6.0	5.5	5.5
10	23.0	21.0	22.0	10.5	8.0	9.5	7.0	5.0	6.0	5.5	4.5	5.0
11	23.0	21.5	22.5	8.0	6.5	7.5	5.0	4.5	5.0	4.5	4.5	4.5
12	22.5	18.5	21.5	7.5	6.5	7.0	5.0	4.5	4.5	4.5	4.5	4.5
13	19.0	16.5	17.5	9.0	7.5	8.0	4.5	3.0	3.5	4.5	3.0	3.5
14	17.5	15.0	16.5	8.5	7.0	8.0	5.0	3.0	4.0	4.0	3.5	3.5
15	17.5	16.0	17.0	7.0	5.5	6.5	5.5	3.5	4.5	3.5	3.0	3.5
16	18.5	17.0	17.5	6.5	4.5	5.5	6.0	5.0	5.5	5.0	2.5	3.5
17	18.0	16.0	16.5	6.0	3.5	5.0	6.0	5.0	5.5	5.5	3.0	4.5
18	17.0	14.5	15.5	7.5	4.5	6.0	6.5	5.5	6.0	5.5	4.5	5.0
19	18.0	16.0	17.0	8.5	6.0	7.5	8.0	6.0	7.0	4.5	3.0	4.0
20	17.5	15.5	16.5	9.0	7.5	8.0	7.5	5.5	6.5	5.0	4.0	4.5
21	16.0	14.0	15.5	---	---	---	6.0	5.5	5.5	5.0	4.0	4.5
22	14.5	12.5	13.5	---	---	---	5.5	5.5	5.5	5.0	3.5	4.0
23	13.5	12.5	13.0	10.0	7.5	8.5	5.5	5.0	5.5	4.0	3.0	3.5
24	14.5	13.0	14.0	11.0	8.5	9.5	5.0	5.0	5.0	4.0	2.0	3.0
25	18.0	14.0	15.0	12.5	9.0	10.5	5.5	5.0	5.0	5.5	3.5	4.5
26	15.5	10.5	12.5	12.5	11.5	12.0	5.5	5.0	5.0	6.0	5.0	5.5
27	11.0	9.5	10.5	13.5	11.0	12.0	5.5	4.0	4.5	6.0	4.5	5.5
28	11.5	9.0	10.0	15.0	13.5	14.0	5.0	4.0	4.5	7.0	5.5	6.0
29	12.0	10.0	11.0	14.5	10.5	12.5	5.0	3.5	4.5	9.0	5.5	6.5
30	14.5	12.0	13.5	10.5	10.0	10.0	5.0	4.0	4.5	7.0	5.5	6.5
31	17.0	14.5	15.5	---	---	---	4.5	3.5	4.0	7.5	6.0	7.0
MONTH	24.0	9.0	17.4	---	---	---	10.0	3.0	5.6	11.5	2.0	5.3

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.0	7.0	7.5	8.0	6.0	7.0	16.5	12.5	14.5	18.5	15.0	16.5
2	7.5	5.5	6.0	6.5	5.5	6.0	17.0	13.5	15.5	19.5	17.0	18.5
3	6.5	5.5	6.0	8.0	4.0	6.0	17.0	13.5	14.5	19.5	16.5	18.5
4	5.5	5.0	5.5	7.5	6.0	7.0	13.5	12.5	13.0	20.0	17.0	19.0
5	5.5	4.5	5.0	8.0	7.0	7.5	15.5	11.5	13.0	20.5	19.0	19.5
6	6.0	4.5	5.5	7.0	6.5	7.0	17.0	14.5	15.5	22.0	19.5	20.5
7	6.0	4.0	5.0	7.5	7.0	7.0	17.0	15.0	16.0	23.0	19.0	20.5
8	7.0	5.0	6.0	7.0	5.5	6.5	16.0	14.0	15.0	23.0	20.0	21.5
9	7.0	6.0	6.5	6.5	4.5	5.5	15.0	13.0	14.0	22.0	18.0	20.0
10	8.0	7.0	7.5	6.0	3.0	4.5	16.5	13.0	14.5	22.0	18.0	19.5
11	7.5	6.5	7.0	6.0	4.0	5.0	17.5	14.0	16.0	23.5	21.0	22.0
12	7.5	6.0	6.5	4.5	3.0	3.5	---	---	---	23.5	22.0	23.0
13	8.5	5.5	6.5	7.5	3.0	5.0	---	---	---	24.5	22.0	23.5
14	9.0	6.5	7.5	8.0	7.0	7.5	---	---	---	24.0	23.0	23.5
15	8.5	8.0	8.0	8.5	7.0	7.5	---	---	---	26.0	23.5	24.0
16	8.0	7.5	7.5	8.5	6.5	7.0	19.0	15.5	17.0	25.0	21.5	23.0
17	7.5	6.5	7.0	7.5	6.5	7.0	16.0	13.5	15.0	24.5	21.5	23.0
18	8.0	5.5	6.5	9.5	7.0	8.0	17.5	14.5	15.5	25.5	22.0	23.5
19	8.5	7.5	8.0	9.5	7.0	8.0	17.5	14.0	15.5	26.5	22.5	24.5
20	10.0	7.5	8.5	8.0	7.0	7.5	16.0	14.5	15.5	26.0	23.0	24.5
21	10.0	8.5	9.0	10.0	6.5	8.0	16.0	13.0	14.5	26.0	23.0	24.5
22	10.5	9.5	10.0	11.5	7.5	9.0	16.5	13.5	15.0	25.0	24.0	24.5
23	11.0	8.5	9.5	11.0	8.0	9.5	18.5	14.5	16.0	24.5	23.0	23.5
24	12.0	9.5	10.5	13.0	9.0	11.0	19.0	15.0	16.5	26.0	21.5	23.5
25	13.0	11.0	12.0	14.5	10.5	12.5	20.5	16.5	18.5	25.0	20.5	22.5
26	13.5	12.0	12.5	14.5	12.5	14.0	19.5	17.5	18.0	23.5	21.5	22.5
27	12.0	9.0	10.5	14.5	13.5	14.0	17.5	14.5	16.0	24.5	23.0	24.0
28	9.0	7.0	8.5	16.5	12.5	14.5	16.0	15.5	16.0	25.5	23.0	24.5
29	---	---	---	16.5	15.0	16.0	15.5	15.0	15.0	26.5	24.5	25.5
30	---	---	---	---	---	---	15.5	14.5	15.0	27.5	25.0	26.0
31	---	---	---	---	---	---	---	---	---	29.0	25.5	27.0
MONTH	13.5	4.0	7.7	---	---	---	---	---	---	29.0	15.0	22.5

07178520 DOG CREEK SOUTH OF CLAREMORE, OK --Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	28.5	25.0	26.5	24.0	22.5	23.5	30.0	27.0	28.5	27.5	24.5	26.0
2	29.5	25.5	27.5	25.5	23.5	24.5	30.5	27.0	28.5	28.0	25.0	26.5
3	29.5	25.5	27.5	29.0	25.0	26.5	29.0	27.0	27.5	28.0	24.5	26.0
4	27.0	22.0	24.5	29.5	26.5	27.5	28.0	25.5	26.5	29.0	24.5	27.0
5	22.0	20.0	21.0	30.5	26.5	28.5	26.5	25.0	26.0	29.0	26.0	27.5
6	21.5	19.0	20.0	31.0	27.0	29.0	27.5	24.0	25.5	29.0	26.0	27.5
7	22.5	18.0	20.0	29.5	27.5	28.0	27.0	23.5	25.5	28.5	25.0	27.0
8	21.0	19.5	20.0	28.5	26.5	27.5	28.0	24.5	26.0	27.5	25.5	26.5
9	24.5	20.0	22.0	30.5	27.0	28.5	27.0	25.0	25.5	26.0	23.0	24.5
10	25.0	23.0	24.0	32.0	28.0	29.5	26.0	24.5	25.0	24.0	21.0	22.5
11	25.0	23.0	24.0	30.0	26.0	27.5	27.5	25.0	26.0	24.5	20.5	22.5
12	28.0	23.0	25.0	27.5	24.5	26.0	28.5	25.0	26.5	24.0	22.0	23.5
13	28.5	23.5	26.0	29.5	27.0	28.0	27.5	25.0	26.0	24.0	22.5	23.5
14	28.0	25.5	26.5	30.0	27.0	28.5	27.5	25.0	26.0	24.5	24.0	24.0
15	25.5	23.5	24.5	30.0	26.5	28.0	28.0	24.5	26.5	26.0	23.5	24.5
16	26.0	21.5	24.0	30.0	26.5	28.0	28.5	25.0	27.0	25.5	24.0	24.5
17	27.0	23.0	25.0	30.5	26.0	28.0	29.5	25.5	27.0	25.5	23.5	24.5
18	28.0	25.0	26.0	29.5	26.0	28.0	30.0	26.0	28.0	26.5	23.5	24.5
19	28.5	24.0	26.5	31.0	26.5	28.5	30.0	26.5	28.0	27.0	24.5	25.5
20	30.5	26.5	28.0	31.5	27.0	29.0	30.0	26.0	28.0	27.0	24.0	25.5
21	28.5	26.0	27.5	31.5	27.5	29.0	29.0	26.0	27.5	26.0	24.5	25.5
22	30.0	26.0	27.5	31.5	27.5	29.0	29.0	25.5	27.0	25.0	22.5	23.5
23	30.0	26.0	28.0	30.5	27.5	29.0	29.5	25.5	27.5	23.5	21.5	22.5
24	30.0	26.0	28.0	29.5	27.0	28.0	29.0	25.5	27.5	23.5	22.0	22.5
25	30.0	26.5	28.0	31.0	27.0	28.5	29.5	26.0	28.0	26.5	23.5	24.5
26	30.5	26.0	28.0	31.0	27.5	29.0	30.0	26.5	28.0	26.0	24.0	25.0
27	30.0	26.5	28.0	31.0	27.5	29.0	30.0	26.5	28.5	26.5	23.5	25.0
28	31.0	26.5	28.5	29.5	27.5	28.5	28.5	27.0	27.5	27.5	24.5	26.0
29	31.0	27.5	29.0	29.5	27.0	28.0	28.5	25.5	27.0	27.0	24.5	26.0
30	29.5	23.5	26.0	30.5	26.5	28.5	28.0	24.5	26.5	26.0	24.5	25.0
31	---	---	---	30.5	26.0	28.5	28.0	24.0	26.0	---	---	---
MONTH	31.0	18.0	25.6	32.0	22.5	28.0	30.5	23.5	26.9	29.0	20.5	25.0

07185000 NEOSHO RIVER NEAR COMMERCE, OK

LOCATION.--Lat 36°55'43", long 94°57'26", in SW ¼ SE ¼ 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.--No estimated daily discharges. 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)
Dec 25	1600	25,100	16.72	Apr 28	1900	23,300	16.15
Jan 6	1900	28,600	18.03	Jul 3	0300	20,100	14.34
Mar 20	2200	28,200	17.91	Sep 16	1100	29,100	18.18

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	538	539	5160	7180	1690	1330	15900	9970	1450	7820	9690	112
2	490	480	4090	7010	1470	1160	14700	7000	1780	18400	5630	123
3	438	434	2850	7180	1430	1050	10800	7320	1740	17100	5040	150
4	404	403	2910	11400	1490	1000	9840	6980	1510	4560	5940	158
5	381	379	4090	23700	2040	977	9240	6640	1530	2690	5580	158
6	418	411	3650	27700	2310	956	7630	6300	1160	2120	5370	139
7	823	669	3360	26000	2300	1830	6870	6340	704	1930	4430	144
8	1010	723	4710	19600	2280	10500	6610	6180	518	1770	4080	144
9	980	633	7280	19500	2260	12400	6330	5900	2030	1460	5450	137
10	684	400	6980	13200	2250	9620	6470	6510	3160	1430	8850	133
11	338	284	6180	7540	2240	4360	7700	4670	1510	1230	4760	131
12	236	262	5300	5640	2210	2690	7700	4120	929	3210	2310	137
13	1130	270	3770	4960	2200	2620	7410	3910	978	3410	1710	179
14	2970	278	2120	5320	2190	2770	7160	3780	853	1990	1840	13500
15	2570	266	1350	6600	2110	2730	6960	3980	682	1210	1470	26400
16	1460	257	1100	6440	1810	9040	6930	4530	915	1380	952	27900
17	969	257	968	6140	1650	20600	7420	4210	1120	1770	753	13300
18	1270	239	1080	5230	1650	24200	7030	3280	855	1740	676	3020
19	1240	213	1270	3800	1640	26000	6320	3080	704	1720	625	1740
20	1210	206	1200	3550	1640	27900	5960	3040	599	2000	578	1100
21	1180	193	2670	3470	1610	27200	5670	2860	528	2090	455	2730
22	1160	167	13400	3410	1580	22800	5350	2200	445	2060	334	2150
23	1140	151	12700	3390	1560	13800	5020	1960	374	2050	276	942
24	1120	145	17500	3260	1530	9100	4590	1880	2390	2050	248	2870
25	865	143	24500	2980	1510	7700	3180	1810	3320	1690	208	5230
26	1630	146	22800	2210	1510	7100	2730	1800	2110	5630	167	16600
27	3200	142	14100	1820	1290	7040	9810	1600	1350	5060	138	12700
28	1620	472	6200	1690	1120	6850	22000	1400	1040	4670	127	4900
29	1030	6790	4520	1610	---	7000	21500	1240	926	7060	112	3500
30	774	7740	4140	1810	---	7070	18700	1130	922	7940	106	3250
31	620	---	4960	1930	---	10900	---	1050	---	13300	109	---
TOTAL	33898	23692	196908	245270	50570	290293	263530	126670	38132	132540	78014	143677
MEAN	1093	790	6352	7912	1806	9364	8784	4086	1271	4275	2517	4789
MAX	3200	7740	24500	27700	2310	27900	22000	9970	3320	18400	9690	27900
MIN	236	142	968	1610	1120	956	2730	1050	374	1210	106	112
AC-FT	67240	46990	390600	486500	100300	575800	522700	251200	75630	262900	154700	285000

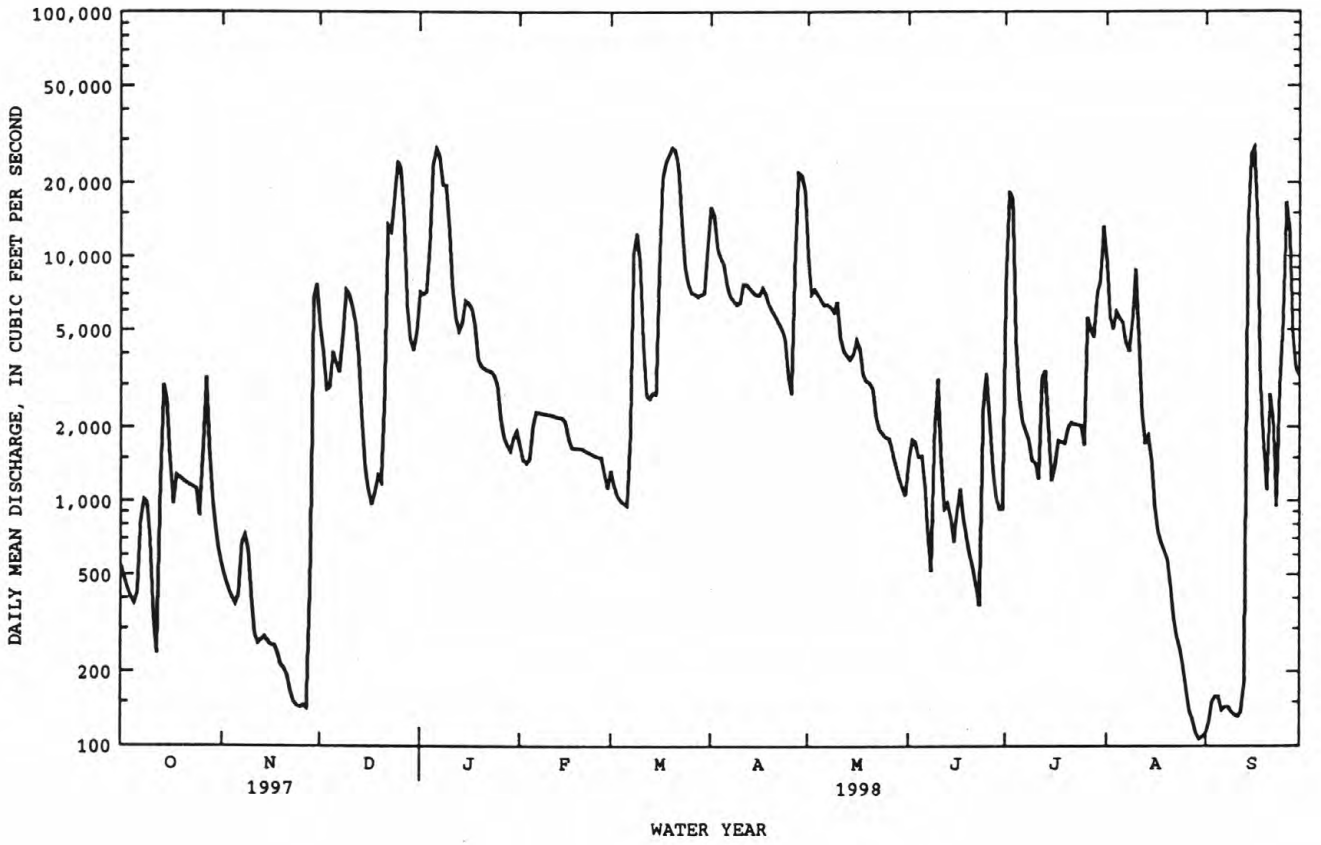
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1998, BY WATER YEAR (WY)

MEAN	3161	3151	2188	1964	2520	4405	5623	5969	6588	5030	1764	2790
MAX	33400	19190	17280	10090	13980	21630	23270	29560	27950	53350	11680	16930
(WY)	1987	1986	1993	1973	1985	1973	1945	1961	1995	1951	1993	1951
MIN	.000	1.60	6.33	8.60	24.9	11.9	62.6	395	290	21.1	.000	1.52
(WY)	1957	1940	1940	1957	1954	1956	1981	1956	1980	1954	1954	1953

07185000 NEOSHO RIVER NEAR COMMERCE, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1940 - 1998	
ANNUAL TOTAL	1392376		1623194			
ANNUAL MEAN	3815		4447		3763	
HIGHEST ANNUAL MEAN					11140	1993
LOWEST ANNUAL MEAN					246	1953
HIGHEST DAILY MEAN	30500	Feb 24	27900	Mar 20, Sep 16	251000	Jul 15 1951
LOWEST DAILY MEAN	142	Nov 27	106	Aug 30	[a].00	Aug 21 1953
ANNUAL SEVEN-DAY MINIMUM	155	Nov 21	118	Aug 27	.00	Sep 27 1953
INSTANTANEOUS PEAK FLOW			29100	Sep 16	[b]267000	Jul 15 1951
INSTANTANEOUS PEAK STAGE			18.18	Sep 16	[c]34.03	Jul 16 1951
ANNUAL RUNOFF (AC-FT)	2762000		3220000		2726000	
10 PERCENT EXCEEDS	8230		10800		11100	
50 PERCENT EXCEEDS	2190		2120		938	
90 PERCENT EXCEEDS	380		268		59	

[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.



07185080 NEOSHO RIVER AT MIAMI, OK

LOCATION.--Lat 36°51'53", long 94°52'43", in NW ¼ SE ¼ sec.31, T.28 N., R.23 E., Ottawa County, Hydrologic Unit 11070206, near left downstream wingwall of State Highway 125 bridge, on southwest side of Miami, 1.5 mi upstream from Tar Creek, 2.8 mi downstream from Coal Creek and at mile 143.7.

DRAINAGE AREA.--6,001 mi^2.

PERIOD OF RECORD.--October 1994 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is 1.10 ft above sea level (U.S. Army Corps of Engineers' datum).

REMARKS.--Records poor. At high flow, drawdown on stage may be as great as .20 ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 766.33 ft, June 12, 1995; minimum gage height, 740.67 ft, Sept. 11, 1998.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 16, 1951, reached a stage of 778.53 ft at site on old U.S. Highway 66 at Miami bridge currently Highway 169, .5 mi upstream from present site, and at same datum.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 755.44 ft, Mar. 21; minimum gage height, 740.67 ft, Sept. 11.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	741.14	740.98	741.06	742.20	741.93	742.05	744.75	743.75	744.21	746.88	746.65	746.78
2	741.25	741.06	741.14	742.29	741.96	742.12	743.81	743.68	743.76	746.83	746.71	746.76
3	741.26	741.03	741.15	742.29	741.91	742.13	743.68	743.16	743.40	746.83	746.72	746.79
4	741.11	740.97	741.03	742.38	742.11	742.22	743.34	743.14	743.23	750.29	746.67	747.94
5	741.07	740.87	740.97	742.33	742.13	742.22	743.55	743.27	743.46	752.69	750.29	751.75
6	741.13	740.85	740.93	742.30	742.09	742.19	743.51	743.14	743.32	753.99	752.69	753.42
7	741.10	740.84	740.98	742.31	742.16	742.25	743.19	743.13	743.15	754.07	753.36	753.86
8	741.43	741.04	741.18	742.31	742.21	742.26	744.35	743.16	743.66	753.36	751.95	752.50
9	741.28	741.13	741.19	742.33	742.18	742.26	744.83	744.35	744.63	752.27	751.89	752.17
10	741.30	741.08	741.18	742.30	742.11	742.24	744.87	744.47	744.71	751.89	749.98	750.87
11	741.31	740.99	741.08	742.38	742.24	742.31	744.49	744.31	744.40	749.98	749.19	749.52
12	741.57	741.00	741.20	742.35	742.18	742.27	744.33	743.93	744.15	749.19	748.73	748.94
13	---	---	---	742.38	742.26	742.32	743.93	743.39	743.69	748.73	748.42	748.56
14	---	---	---	742.51	742.24	742.39	743.39	742.95	743.16	748.42	748.25	748.30
15	---	---	---	742.54	742.36	742.45	742.96	742.73	742.85	748.28	748.16	748.23
16	---	---	---	742.55	742.43	742.49	742.88	742.62	742.74	748.16	747.93	748.03
17	741.81	741.64	741.73	742.68	742.50	742.58	742.68	742.52	742.61	747.93	747.65	747.79
18	741.96	741.79	741.90	742.68	742.53	742.62	742.68	742.49	742.56	747.67	747.14	747.40
19	742.03	741.95	741.99	742.76	742.56	742.65	742.70	742.49	742.58	747.14	746.61	746.85
20	742.05	741.89	741.97	742.75	742.60	742.67	742.53	742.34	742.43	746.76	746.45	746.65
21	741.95	741.85	741.91	742.71	742.58	742.64	744.61	742.43	742.95	746.45	746.03	746.22
22	741.98	741.85	741.92	742.80	742.62	742.69	747.74	744.61	746.76	746.09	745.73	745.89
23	742.08	741.92	741.98	742.79	742.65	742.73	747.72	746.39	747.04	745.73	745.25	745.49
24	742.06	741.91	742.00	742.94	742.69	742.80	751.09	746.41	749.06	745.57	745.04	745.37
25	742.22	741.97	742.09	742.97	742.68	742.81	752.02	751.09	751.62	745.52	745.24	745.42
26	742.73	742.12	742.33	742.89	742.58	742.72	752.06	751.19	751.81	745.30	745.09	745.18
27	743.01	742.69	742.88	742.82	742.53	742.71	751.19	748.05	749.62	745.09	744.91	745.00
28	742.71	742.38	742.58	742.76	742.51	742.64	748.05	747.10	747.45	744.93	744.70	744.83
29	742.45	742.15	742.34	745.39	742.72	744.47	747.10	746.68	746.87	744.71	744.49	744.60
30	742.27	742.03	742.17	745.36	744.73	744.99	746.68	746.18	746.45	744.49	744.33	744.42
31	742.16	741.95	742.06	---	---	---	746.65	746.28	746.39	744.33	744.17	744.26
MONTH	---	---	---	745.39	741.91	742.60	752.06	742.34	744.99	754.07	744.17	747.74

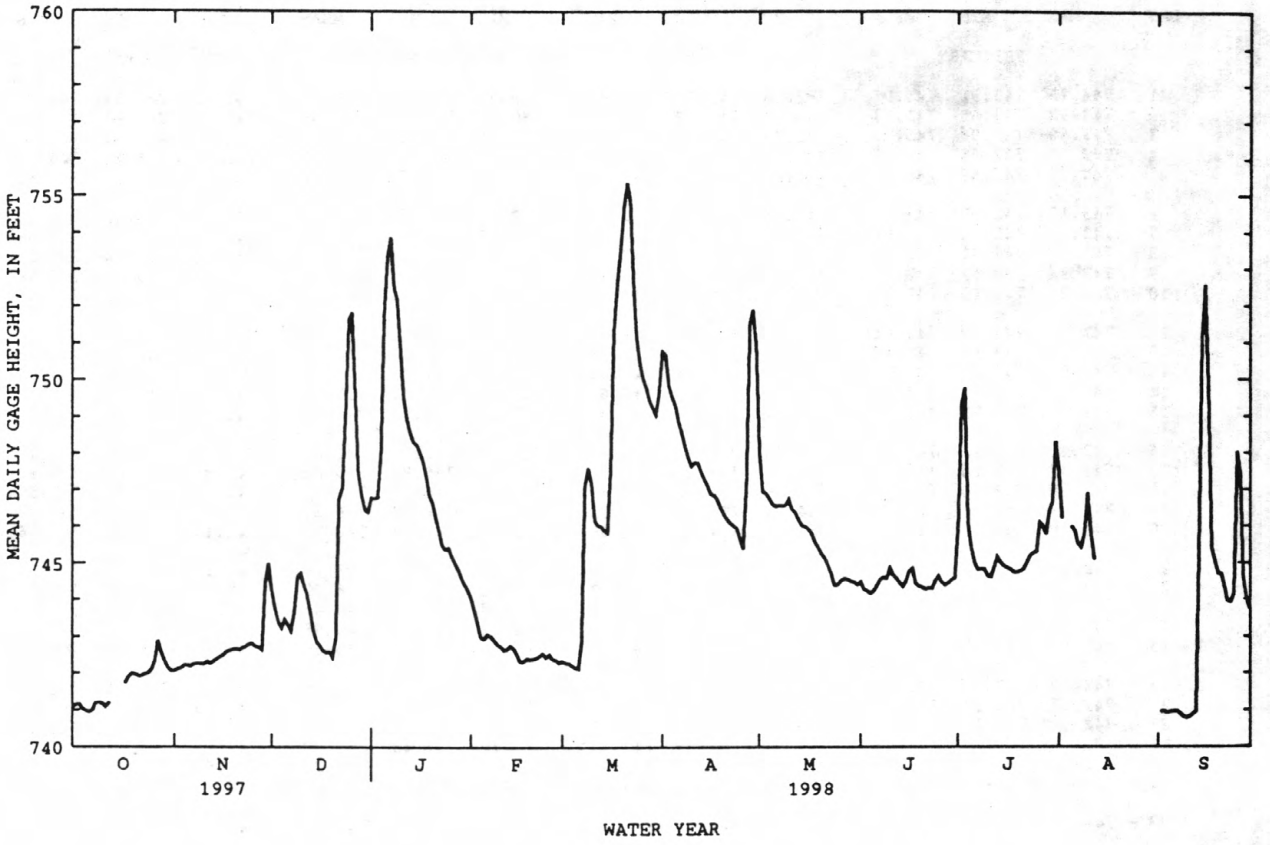
07185080 NEOSHO RIVER AT MIAMI, OK--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	744.23	743.91	744.05	742.38	742.27	742.33	750.91	750.35	750.77	749.82	747.03	748.03
2	743.92	743.55	743.73	742.38	742.19	742.29	750.85	750.30	750.68	747.05	746.87	746.94
3	743.69	743.06	743.35	742.42	742.15	742.28	750.31	749.61	749.83	746.98	746.85	746.91
4	743.09	742.85	742.97	742.32	742.13	742.21	749.65	749.47	749.53	746.86	746.66	746.77
5	743.26	742.59	742.94	742.27	742.07	742.16	749.49	749.05	749.31	746.69	746.50	746.61
6	743.15	742.97	743.06	742.24	742.08	742.13	749.05	748.70	748.87	746.72	746.41	746.55
7	743.11	742.90	743.02	745.61	742.12	742.85	748.79	748.33	748.57	746.72	746.39	746.58
8	743.03	742.81	742.91	747.47	745.61	747.12	748.37	748.03	748.20	746.72	746.34	746.56
9	742.94	742.67	742.79	747.69	747.42	747.60	748.05	747.74	747.88	746.79	746.37	746.58
10	742.84	742.55	742.74	747.68	746.55	747.22	747.75	747.54	747.65	746.93	746.60	746.74
11	742.71	742.49	742.64	746.55	746.01	746.17	747.83	747.67	747.75	746.62	746.36	746.48
12	742.71	742.62	742.66	746.07	745.97	746.03	747.90	747.53	747.74	746.50	746.28	746.39
13	742.98	742.63	742.75	746.11	745.95	746.00	747.64	747.30	747.50	746.31	746.04	746.19
14	742.77	742.59	742.68	746.00	745.80	745.89	747.38	747.17	747.29	746.14	745.93	746.03
15	742.63	742.39	742.53	745.87	745.78	745.83	747.27	746.94	747.11	746.14	745.78	745.99
16	742.42	742.23	742.33	750.25	745.87	747.63	746.99	746.82	746.88	746.03	745.78	745.93
17	742.37	742.26	742.31	752.17	750.25	751.31	746.95	746.80	746.85	745.99	745.66	745.82
18	742.50	742.30	742.40	752.99	752.17	752.63	746.86	746.61	746.73	745.76	745.44	745.59
19	742.46	742.32	742.38	754.13	752.99	753.52	746.63	746.40	746.51	745.54	745.25	745.43
20	742.48	742.32	742.39	755.17	754.13	754.69	746.51	746.21	746.33	745.43	745.03	745.26
21	742.49	742.34	742.42	755.44	755.17	755.36	746.56	746.08	746.19	745.26	744.97	745.14
22	742.55	742.40	742.47	755.39	753.97	754.90	746.22	745.94	746.09	745.11	744.64	744.93
23	742.64	742.42	742.54	753.97	751.75	752.74	746.08	745.93	746.01	744.89	744.44	744.71
24	742.59	742.32	742.44	751.75	750.75	751.21	746.12	745.70	745.95	744.55	744.23	744.39
25	742.64	742.38	742.51	750.75	750.15	750.45	745.89	745.41	745.65	744.83	744.11	744.41
26	742.49	742.27	742.39	750.17	749.82	750.04	745.53	745.26	745.39	744.81	744.38	744.53
27	742.55	742.26	742.36	749.93	749.61	749.78	750.59	745.29	747.24	744.73	744.43	744.57
28	742.36	742.20	742.29	749.67	749.25	749.43	752.20	750.59	751.53	744.62	744.43	744.55
29	---	---	---	749.30	749.10	749.23	752.20	751.48	751.90	744.86	744.32	744.50
30	---	---	---	749.20	748.92	749.05	751.48	749.82	750.92	744.56	744.39	744.48
31	---	---	---	750.35	748.97	749.64	---	---	---	744.54	744.25	744.41
MONTH	744.23	742.20	742.72	755.44	742.07	748.06	752.20	745.26	747.96	749.82	744.11	745.74

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	744.68	744.23	744.49	748.46	744.58	745.99	748.70	746.53	747.56	---	---	---
2	744.56	744.18	744.28	750.15	748.21	749.35	746.57	745.97	746.23	741.02	740.90	740.94
3	744.61	743.87	744.24	750.51	747.44	749.77	---	---	---	741.07	740.89	740.96
4	744.38	743.99	744.17	747.44	745.42	746.09	---	---	---	740.98	740.88	740.91
5	744.41	744.08	744.25	745.72	745.11	745.41	746.21	745.83	745.99	741.03	740.90	740.93
6	744.55	744.21	744.40	745.36	744.85	745.02	746.01	745.66	745.87	741.04	740.90	740.96
7	744.72	744.39	744.55	745.10	744.60	744.82	745.72	745.39	745.53	741.03	740.89	740.95
8	744.93	744.39	744.62	745.09	744.61	744.83	745.50	745.36	745.43	740.91	740.79	740.87
9	744.96	744.13	744.58	745.07	744.54	744.84	746.83	745.34	745.78	740.97	740.70	740.80
10	745.07	744.64	744.86	744.93	744.39	744.64	747.13	746.64	746.89	740.83	740.68	740.77
11	744.91	744.40	744.66	744.96	744.25	744.61	746.64	745.34	745.85	740.91	740.67	740.80
12	744.84	744.31	744.58	745.19	744.69	744.88	745.38	744.91	745.10	741.03	740.78	740.87
13	744.94	744.27	744.46	745.48	744.86	745.16	---	---	---	741.20	740.82	740.95
14	744.66	744.16	744.36	745.16	744.81	745.02	---	---	---	750.14	741.20	746.32
15	744.84	744.22	744.50	745.06	744.64	744.91	---	---	---	751.96	750.11	751.15
16	745.17	744.50	744.78	745.04	744.62	744.87	---	---	---	752.97	751.93	752.56
17	745.18	744.55	744.85	745.04	744.56	744.82	---	---	---	752.98	745.80	749.86
18	744.89	744.21	744.44	745.10	744.62	744.75	---	---	---	745.80	745.13	745.40
19	744.50	744.23	744.36	744.83	744.65	744.74	---	---	---	745.17	744.83	745.03
20	744.56	744.17	744.34	744.84	744.65	744.78	---	---	---	744.87	744.51	744.70
21	744.56	743.89	744.28	744.94	744.70	744.82	---	---	---	745.29	744.28	744.68
22	744.47	744.11	744.32	745.21	744.86	744.99	---	---	---	744.85	744.07	744.39
23	744.43	744.20	744.31	745.48	745.05	745.19	---	---	---	744.09	743.83	743.97
24	744.86	744.20	744.50	745.54	745.08	745.27	---	---	---	744.04	743.71	743.94
25	744.79	744.36	744.64	745.47	745.11	745.31	---	---	---	746.13	743.64	744.16
26	744.58	744.31	744.47	746.69	745.28	746.10	---	---	---	748.76	746.13	748.01
27	744.62	744.26	744.40	746.65	745.49	746.02	---	---	---	748.73	745.35	747.39
28	744.80	744.25	744.45	746.15	745.42	745.78	---	---	---	745.37	744.21	744.65
29	744.72	744.36	744.55	746.75	746.01	746.42	---	---	---	744.24	743.82	744.03
30	745.06	744.28	744.59	747.32	746.40	746.66	---	---	---	743.90	743.54	743.75
31	---	---	---	748.78	747.32	748.30	---	---	---	---	---	---
MONTH	745.18	743.87	744.48	750.51	744.25	745.62	---	---	---	---	---	---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MEAN DAILY GAGE HEIGHT, IN FEET
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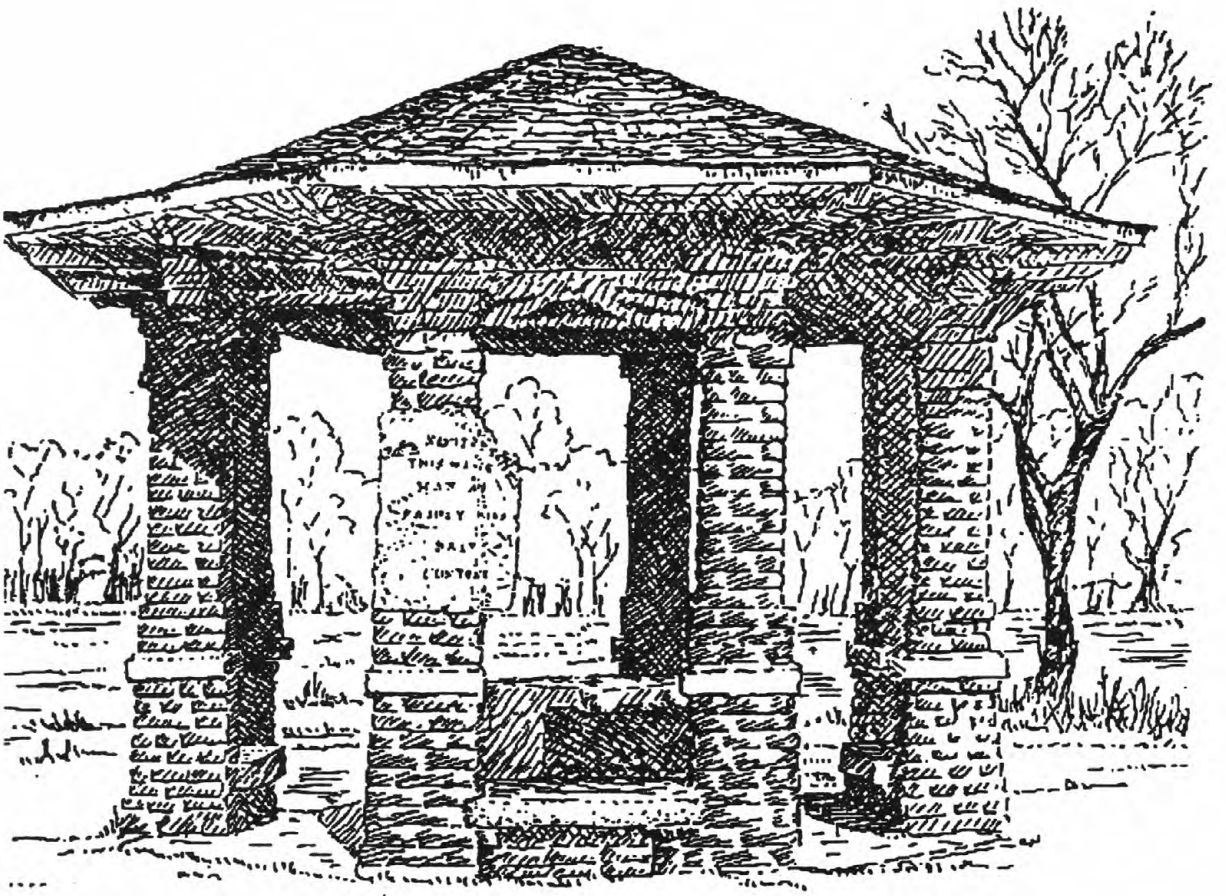
WATER YEAR



Pavilion at Mineral Wells Park, Guthrie

07188000 SPRING RIVER NEAR QUAPAW, OK

LOCATION.--Lat 36°56'04", long 94°44'46", in NE ¼ SW ¼ 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 fair. 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)
Mar 8	1100	19,100	16.03	Apr 27	1900	18,200	15.70

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	415	563	2960	1710	1510	1300	7660	2920	907	2710	702	275
2	383	519	1620	1580	1520	1250	5340	2490	789	865	568	268
3	355	487	1150	1470	1450	1200	3920	2160	719	809	1480	270
4	337	465	982	3170	1380	1160	3540	1930	661	575	2800	268
5	320	447	917	10300	1310	1130	3180	1750	640	490	1110	264
6	306	447	846	12100	1270	1100	2780	1740	613	436	743	253
7	298	436	763	10600	1220	2490	e2590	2410	600	395	644	241
8	294	419	1240	12600	1180	17400	e2520	2600	597	387	557	235
9	323	401	2640	14700	1160	13000	2450	2370	3100	381	571	218
10	312	395	2980	9060	1140	7920	2330	3510	3520	365	642	211
11	304	392	2470	6060	1120	4710	2210	3980	2130	2850	506	214
12	335	388	1990	4660	1650	3300	2090	3070	1480	4220	440	218
13	1250	389	1620	4120	3120	2860	2010	2350	1050	1710	474	271
14	1070	405	1400	3720	2410	2630	1910	2020	848	1090	1390	4980
15	923	409	1250	3400	1990	2570	1860	1790	735	890	724	5550
16	689	408	1150	3110	1840	6220	1750	1640	765	713	595	2280
17	587	404	1060	2870	1810	14800	1710	1470	703	593	505	1220
18	527	401	1000	2640	2040	13300	1640	1350	665	519	468	835
19	482	392	934	2450	1990	10600	1580	1260	654	471	412	819
20	453	388	872	2310	1780	16000	1530	1170	611	429	385	684
21	419	381	1570	2190	1650	e13000	1490	1110	697	397	364	664
22	398	380	6160	2060	1560	e10000	1440	1050	616	374	340	733
23	384	374	4920	1940	1500	e8500	1390	1000	550	359	324	692
24	374	370	8240	1820	1450	e6390	1350	961	498	428	311	727
25	464	361	10300	1730	1410	4850	e1300	1900	463	922	297	1470
26	1370	360	6020	1730	1350	e4000	e1200	1930	430	1090	289	2140
27	1730	351	3610	1760	1330	e3610	8970	1530	409	722	292	1380
28	1340	403	2590	1730	1320	e3550	13200	1290	400	867	302	919
29	916	3040	2300	1660	---	e3500	6880	1080	382	1350	308	728
30	709	4890	2100	1580	---	3440	3900	1370	2690	1030	298	646
31	618	---	1910	1500	---	6330	---	1200	---	931	284	---
TOTAL	18685	19465	79564	132330	44460	192110	95720	58401	28922	29368	19125	29673
MEAN	603	649	2567	4269	1588	6197	3191	1884	964	947	617	989
MAX	1730	4890	10300	14700	3120	17400	13200	3980	3520	4220	2800	5550
MIN	294	351	763	1470	1120	1100	1200	961	382	359	284	211
AC-FT	37060	38610	157800	262500	88190	381100	189900	115800	57370	58250	37930	58860
CFSM	.24	.26	1.02	1.70	.63	2.47	1.27	.75	.38	.38	.25	.39
IN.	.28	.29	1.18	1.96	.66	2.85	1.42	.87	.43	.44	.28	.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1998, BY WATER YEAR (WY)

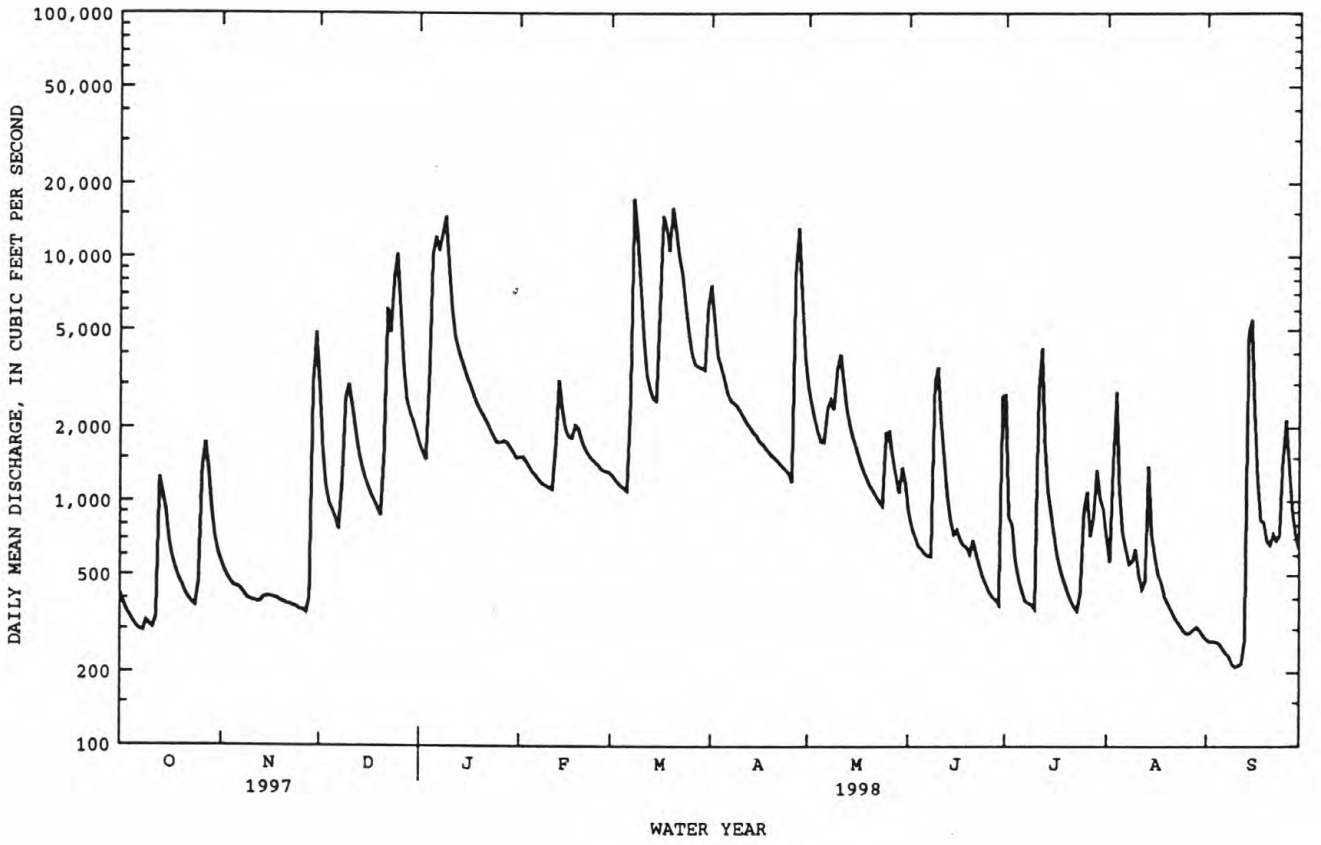
MEAN	1610	2361	1750	1578	2092	2954	3367	3560	2962	1750	800	1455
MAX	14880	14810	10720	6495	13300	12050	15100	26940	12780	10140	8622	18390
(WY)	1987	1986	1993	1973	1985	1973	1945	1943	1995	1976	1950	1993
MIN	75.8	111	116	116	129	123	169	481	233	34.3	29.3	76.0
(WY)	1957	1954	1964	1964	1954	1954	1954	1964	1954	1954	1954	1953

e Estimated

07188000 SPRING RIVER NEAR QUAPAW, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1940 - 1998	
ANNUAL TOTAL	605487		747823			
ANNUAL MEAN	1659		2049		2183	
HIGHEST ANNUAL MEAN					6623	1993
LOWEST ANNUAL MEAN					191	1954
HIGHEST DAILY MEAN	26000	Feb 22	17400	Mar 8	210000	Sep 26 1993
LOWEST DAILY MEAN	116	Aug 30	211	Sep 10	5.8	Jul 8 1954
ANNUAL SEVEN-DAY MINIMUM	291	Sep 16	227	Sep 6	7.3	Sep 12 1954
INSTANTANEOUS PEAK FLOW			19100	Mar 8	230000	Sep 26 1993
INSTANTANEOUS PEAK STAGE			16.03	Mar 8	[a]46.60	Sep 26 1993
ANNUAL RUNOFF (AC-FT)	1201000		1483000		1582000	
ANNUAL RUNOFF (CFSM)	.66		.82		.87	
ANNUAL RUNOFF (INCHES)	8.97		11.08		11.82	
10 PERCENT EXCEEDS	3450		4400		4380	
50 PERCENT EXCEEDS	910		1200		840	
90 PERCENT EXCEEDS	374		361		208	

[a]From floodmark.



07189000 ELK RIVER NEAR TIFF CITY, MO

LOCATION.--Lat 36°37'53", long 94°35'12", in NE ¼ NE ¼ 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 good. 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)
Jan 5	1000	12,200	13.17	Mar 20	1000	12,100	13.10

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	410	225	769	962	765	803	1650	1080	446	247	85	76
2	365	210	702	866	753	766	1680	943	399	236	80	72
3	328	202	658	797	724	722	1580	833	361	231	82	68
4	296	195	640	1900	697	649	1450	740	347	233	113	e65
5	269	196	624	9760	673	630	1320	674	325	211	281	e62
6	248	195	595	6020	653	619	1210	956	310	189	273	e60
7	230	191	559	5570	630	643	1180	1500	299	172	239	e58
8	223	184	673	5530	604	1640	1110	1560	290	189	193	56
9	241	178	1090	6430	579	2690	1030	1220	318	320	169	54
10	250	182	1290	4580	562	2370	969	1420	337	290	213	54
11	243	185	1290	3510	603	1980	899	1590	326	273	220	54
12	232	187	1180	2840	993	1640	840	1260	310	281	185	55
13	331	214	1040	2340	1260	1430	801	1040	307	263	165	66
14	726	244	919	2000	1200	1290	767	888	310	240	225	410
15	752	272	815	1700	1110	1180	733	777	297	211	287	799
16	641	298	743	1480	1050	1630	690	685	287	187	240	536
17	550	309	676	1310	1060	4430	646	613	277	165	195	419
18	480	311	617	1170	1020	4700	606	557	265	151	163	331
19	425	298	561	1060	966	4540	574	508	260	140	142	272
20	385	285	521	980	918	9850	545	475	254	126	129	228
21	347	276	521	916	861	5830	522	442	250	118	124	202
22	316	267	610	849	809	4090	501	415	237	110	115	202
23	297	255	719	792	768	3210	482	394	223	108	104	203
24	287	244	1270	750	732	2590	461	384	211	108	96	193
25	280	236	3030	712	720	2180	445	399	193	111	88	173
26	272	239	2780	738	723	1880	453	513	186	106	83	158
27	266	237	2170	819	796	1670	719	633	174	98	79	146
28	256	237	1740	833	832	1570	1720	583	168	103	93	137
29	246	301	1470	828	---	1440	1560	516	165	106	102	128
30	238	594	1270	796	---	1330	1280	504	192	99	90	121
31	231	---	1090	766	---	1440	---	494	---	92	82	---
TOTAL	10661	7447	32632	69604	23061	71432	28423	24596	8324	5514	4735	5458
MEAN	344	248	1053	2245	824	2304	947	793	277	178	153	182
MAX	752	594	3030	9760	1260	9850	1720	1590	446	320	287	799
MIN	223	178	521	712	562	619	445	384	165	92	79	54
AC-FT	21150	14770	64730	138100	45740	141700	56380	48790	16510	10940	9390	10830
CFSM	.39	.28	1.21	2.57	.94	2.64	1.09	.91	.32	.20	.18	.21
IN.	.45	.32	1.39	2.97	.98	3.05	1.21	1.05	.36	.24	.20	.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1998, BY WATER YEAR (WY)

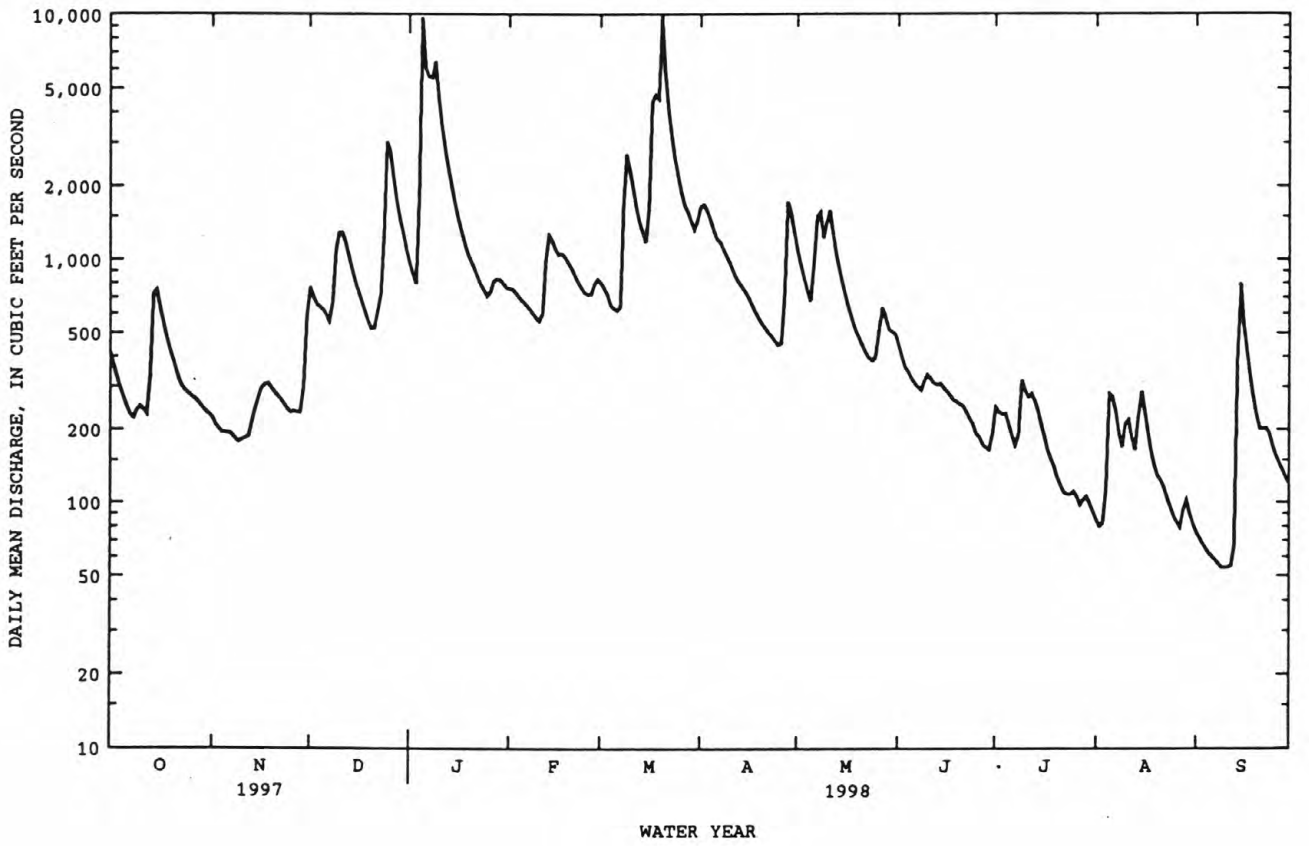
MEAN	423	752	787	707	870	1344	1632	1517	963	471	265	303
MAX	2938	4094	3651	2509	2971	5020	6119	8964	4245	2565	2418	2164
(WY)	1942	1975	1993	1985	1951	1945	1945	1943	1995	1976	1950	1993
MIN	25.7	49.8	58.5	55.9	70.7	75.7	145	227	78.6	14.3	12.0	30.9
(WY)	1957	1964	1964	1964	1954	1956	1956	1964	1954	1954	1954	1953

e Estimated

07189000 ELK RIVER NEAR TIFF CITY, MO--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1940 - 1998	
ANNUAL TOTAL	251290		291887			
ANNUAL MEAN	688		800		835	
HIGHEST ANNUAL MEAN					1881	1993
LOWEST ANNUAL MEAN					135	1954
HIGHEST DAILY MEAN	17000	Feb 21	9850	Mar 20	68600	Apr 19 1941
LOWEST DAILY MEAN	104	Aug 6	54	Sep 9, 10, 11	5.1	Sep 5 1954
ANNUAL SEVEN-DAY MINIMUM	106	Aug 4	56	Sep 6	5.6	Sep 2 1954
INSTANTANEOUS PEAK FLOW			12200	Jan 5	[a]137000	Apr 19 1941
INSTANTANEOUS PEAK STAGE			13.17	Jan 5	[b]28.40	Apr 19 1941
ANNUAL RUNOFF (AC-FT)	498400		579000		604900	
ANNUAL RUNOFF (CFSM)	.79		.92		.96	
ANNUAL RUNOFF (INCHES)	10.72		12.45		13.01	
10 PERCENT EXCEEDS	1350		1610		1760	
50 PERCENT EXCEEDS	376		461		342	
90 PERCENT EXCEEDS	177		114		86	

[a]From rating curve extended above 60,000 ft3/s on basis of slope-area measurement of peak flow.
[b]From flood mark.



07189540 CAVE SPRINGS BRANCH NEAR SOUTHWEST CITY, MO

LOCATION.--Lat 36°32'62", long 94°37'04", in SE ¼ NE ¼, sec. 22, T.24 N., R.25 E., Delaware County, Hydrologic Unit 11070206, on right bank of downstream side of bridge on Stateline Highway 5, 2.5 mi northwest of Southwest City, Mo, 4.7 mi upstream from Honey Springs and at mile 4.7.

DRAINAGE AREA.--7.9 mi^2.

PERIOD OF RECORD.--August 1997 to current year.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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)
SEP											
15...	1400	.50	27.0	750	1028	1028	1.6	4.98	2120	6.6	7.4
15...	1401	1.50	27.0	750	1028	1028	1.6	4.98	2150	6.7	7.5
15...	1402	2.50	27.5	750	1028	1028	1.6	4.98	2130	6.9	7.5
15...	1403	3.50	27.5	750	1028	1028	1.6	4.98	2130	6.7	7.5
15...	1404	4.50	27.5	750	1028	1028	1.6	4.98	2130	6.8	7.5
15...	1405	5.50	27.5	750	1028	1028	1.6	4.98	2130	6.8	7.5
15...	1406	6.50	27.5	750	1028	1028	1.6	4.98	2130	6.8	7.5
15...	1407	7.50	27.5	750	1028	1028	1.6	4.98	2130	6.9	7.5
15...	1408	8.50	27.5	750	1028	1028	1.6	4.98	2130	7.0	7.5
15...	1409	9.50	27.5	750	1028	1028	1.6	4.98	2130	7.0	7.5
15...	1410	10.5	27.5	750	1028	1028	1.6	4.98	2120	7.2	7.5
15...	1411	11.5	28.0	750	1028	1028	1.6	4.98	2120	7.4	7.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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)
AUG											
26...	0945	1028	80020	2.1	2020	7.3	26.0	24.0	753	5.3	64
SEP											
15...	1420	1028	80020	1.6	2130	7.5	32.0	27.5	750	6.9	89

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	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 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)
AUG										
26...	58	47	5000	207	0	170	81.5	360	1.01	3.3
SEP										
15...	390	170	2200	208	0	171	10.3	45	.748	2.5

DATE	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, 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, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)
AUG										
26...	82.6	.856	1.1	1.6	2.4	85	8.34	8.15	1.12	3.4
SEP										
15...	11.0	.107	.14	1.3	1.4	12	7.62	7.28	7.20	22

07189540 CAVE SPRINGS BRANCH NEAR SOUTHWEST CITY, MO--Continued

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
19...	0945	15.0	12.0	751	1028	1028	4.0	5.13	1190	10.1	7.3
19...	0949	13.0	12.0	751	1028	1028	4.0	5.13	1190	10.0	7.4
19...	0950	11.0	12.0	751	1028	1028	4.0	5.13	1190	9.9	7.4
19...	0951	9.00	12.0	751	1028	1028	4.0	5.13	1190	9.9	7.4
19...	0953	7.00	12.0	751	1028	1028	4.0	5.13	1190	9.9	7.4
19...	0954	5.00	12.0	751	1028	1028	4.0	5.13	1190	9.6	7.4
19...	1000	3.00	12.5	751	1028	1028	4.0	5.13	1190	9.3	7.4
19...	1001	1.00	12.5	751	1028	1028	4.0	5.13	1190	9.6	7.4
MAR											
11...	1037	2.00	9.5	768	1028	1028	4.6	5.16	299	12.0	7.1
11...	1038	4.00	10.0	768	1028	1028	4.6	5.16	301	11.7	7.1
11...	1039	6.00	10.0	768	1028	1028	4.6	5.16	301	11.5	7.0
11...	1040	8.00	10.0	768	1028	1028	4.6	5.16	301	11.4	7.0
11...	1041	10.0	10.0	768	1028	1028	4.6	5.16	301	11.5	7.0
11...	1042	12.0	10.0	768	1028	1028	4.6	5.16	301	11.5	7.1
11...	1043	14.0	10.0	768	1028	1028	4.6	5.16	301	11.4	7.1
11...	1044	16.0	10.0	768	1028	1028	4.6	5.16	301	11.5	7.1
AUG											
19...	1125	2.00	29.0	744	1028	1028	1.4	5.05	2170	8.2	7.6
19...	1126	3.00	29.0	744	1028	1028	1.4	5.05	2170	8.2	7.5
19...	1127	4.00	29.0	744	1028	1028	1.4	5.05	2170	8.1	7.5
19...	1128	5.00	29.0	744	1028	1028	1.4	5.05	2170	8.1	7.6
19...	1129	6.00	29.0	744	1028	1028	1.4	5.05	2170	8.1	7.6
19...	1130	7.00	29.0	744	1028	1028	1.4	5.05	2170	8.1	7.6
19...	1131	8.00	29.0	744	1028	1028	1.4	5.05	2170	8.1	7.6
19...	1132	9.00	29.0	744	1028	1028	1.4	5.05	2170	8.1	7.6
19...	1133	10.0	29.0	744	1028	1028	1.4	5.05	2170	8.1	7.6

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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											
15...	1345	1028	80020	3.8	1560	7.0	20.0	21.5	757	6.7	77
NOV											
18...	1400	1028	80020	4.0	2090	7.5	15.0	12.5	755	10.0	95
DEC											
15...	1645	1028	80020	3.6	1230	7.0	9.5	12.0	753	8.5	80
JAN											
14...	1040	1028	80020	8.1	677	6.9	3.0	11.0	752	9.4	87
FEB											
19...	1010	1028	80020	4.0	1170	7.4	6.5	12.0	751	9.9	94
MAR											
11...	1045	1028	80020	4.6	301	7.0	-2.5	10.0	768	11.4	101
APR											
24...	1000	1028	80020	3.6	1490	7.6	22.0	16.5	749	12.8	134
MAY											
12...	0925	1028	80020	5.5	1590	7.4	22.5	20.5	740	9.9	114
JUN											
03...	0910	1028	80020	2.3	1870	7.5	30.5	24.5	734	6.0	75
JUL											
15...	0910	1028	80020	1.2	2170	7.4	29.5	26.2	741	6.4	82
AUG											
19...	1115	1028	80020	1.4	2170	7.6	34.5	29.0	744	8.1	108
SEP											
23...	1005	1028	80020	1.7	1940	7.7	22.5	22.5	748	8.3	99

07189540 CAVE SPRINGS BRANCH NEAR SOUTHWEST CITY, MO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	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)	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)
OCT 15...	130	120	3200	168	0	138	56.7	250	.874	2.9
NOV 18...	220	110	1100	170	0	139	92.8	410	.961	3.2
DEC 15...	15	K6	140	131	0	107	46.9	210	.589	1.9
JAN 14...	21	34	600	95	0	78	22.6	100	2.66	8.7
FEB 19...	K27	K11	K28	168	0	138	40.2	180	4.59	15
MAR 11...	K17	K2	120	109	0	89	--	--	<.010	--
APR 24...	<1	K3	490	168	0	138	66.4	290	.241	.79
MAY 12...	230	K57	80	143	0	117	36.9	160	.244	.80
JUN 03...	590	190	540	166	0	136	92.2	410	.828	2.7
JUL 15...	1200	300	980	139	0	114	104	460	.884	2.9
AUG 19...	1900	790	2000	132	0	108	117	520	.392	1.3
SEP 23...	530	320	1900	167	0	137	89.8	400	.369	1.2

DATE	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, 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-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
OCT 15...	57.5	.519	.67	1.3	1.8	59	5.71	5.46	5.28	16
NOV 18...	93.7	.911	1.2	1.5	2.4	96	9.33	7.62	10.3	32
DEC 15...	47.5	.820	1.1	1.2	2.0	49	5.53	5.17	5.28	16
JAN 14...	25.3	.374	.48	.89	1.3	27	1.78	1.76	1.52	4.7
FEB 19...	44.8	3.25	4.2	.65	3.9	49	5.07	4.47	4.14	13
MAR 11...	6.57	.110	.14	.21	.32	6.9	.119	.106	.110	.34
APR 24...	66.7	.035	.05	.97	1.0	68	--	5.52	5.55	17
MAY 12...	37.2	.059	.08	1.2	1.2	38	7.68	5.88	4.12	13
JUN 03...	93.0	.341	.44	.97	1.3	94	5.77	5.35	6.11	19
JUL 15...	105	.188	.24	1.3	1.5	110	6.68	6.28	5.87	18
AUG 19...	117	.171	.22	1.2	1.4	120	8.81	8.15	7.74	24
SEP 23...	90.2	.111	.14	1.0	1.1	91	7.81	--	7.56	23

07189542 HONEY CREEK NEAR SOUTHWEST CITY, MO

LOCATION.--Lat 36°32'56", long 94°41'01", in SE ¼ NE ¼, sec. 24, T.24 N., R.24 E., Delaware County, Hydrologic Unit 11070206, on left downstream abutment of county road bridge , .4 mi downstream from Cave Springs Creek, 2.3 mi southeast of Dodge, Ok, and 5.1 mi above Grand Lake and at mile 5.1.

DRAINAGE AREA.--48.2 mi^2.

PERIOD OF RECORD.--August 1997 to current year.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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)
SEP											
15...	1558	24.0	23.0	750	1028	1028	9.5	4.81	590	8.2	7.6
15...	1559	22.0	23.0	750	1028	1028	9.5	4.81	594	7.9	7.6
15...	1600	20.0	23.0	750	1028	1028	9.5	4.81	594	8.0	7.6
15...	1601	18.0	23.0	750	1028	1028	9.5	4.81	594	7.8	7.6
15...	1602	16.0	23.0	750	1028	1028	9.5	4.81	594	7.8	7.6
15...	1603	14.0	23.0	750	1028	1028	9.5	4.81	594	7.6	7.6
15...	1604	12.0	23.0	750	1028	1028	9.5	4.81	594	7.8	7.6
15...	1605	10.0	23.0	750	1028	1028	9.5	4.81	594	7.6	7.6
15...	1606	8.00	23.0	750	1028	1028	9.5	4.81	594	7.5	7.5
15...	1607	6.00	23.0	750	1028	1028	9.5	4.81	594	7.7	7.5
15...	1608	4.00	23.0	750	1028	1028	9.5	4.81	594	7.5	7.5
15...	1609	2.00	23.0	750	1028	1028	9.5	4.81	594	7.4	7.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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)
AUG										
26...	1130	1028	80020	10	606	7.6	27.0	23.0	750	7.8
SEP										
15...	1615	1028	80020	9.5	594	7.6	31.5	23.0	750	7.7

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	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 DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)
AUG										
26...	93	K13	K4	1500	169	0	139	14.8	66	.011
SEP										
15...	92	45	82	730	168	0	138	--	--	<.010

DATE	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, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	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)
AUG									
26...	.04	14.8	.018	.02	<.20	.665	.619	.667	2.0
SEP									
15...	--	13.7	<.015	--	<.20	.634	.658	<.010	--

07189542 HONEY CREEK NEAR SOUTHWEST CITY, MO--Continued

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
19...	0838	38.0	8.5	751	1028	1028	30	5.08	391	10.6	7.8
19...	0839	34.0	8.5	751	1028	1028	30	5.08	392	10.6	7.8
19...	0840	30.0	8.5	751	1028	1028	30	5.08	392	10.5	7.8
19...	0841	26.0	8.5	751	1028	1028	30	5.08	386	10.6	7.8
19...	0842	22.0	8.5	751	1028	1028	30	5.08	387	10.6	7.8
19...	0843	18.0	8.5	751	1028	1028	30	5.08	382	10.6	7.8
19...	0844	14.0	8.5	751	1028	1028	30	5.08	386	10.7	7.8
19...	0845	10.0	8.5	751	1028	1028	30	5.08	391	10.5	7.8
19...	0846	6.00	8.5	751	1028	1028	30	5.08	391	10.6	7.8
19...	0847	2.00	8.5	751	1028	1028	30	5.08	392	10.5	7.8
MAR											
11...	0935	45.0	7.5	768	1028	1028	79	5.44	248	11.6	7.8
11...	0936	40.0	7.5	768	1028	1028	79	5.44	248	11.6	7.8
11...	0937	35.0	7.5	768	1028	1028	79	5.44	249	11.6	7.8
11...	0938	30.0	7.5	768	1028	1028	79	5.44	248	11.6	7.8
11...	0939	25.0	7.5	768	1028	1028	79	5.44	248	11.6	7.8
11...	0940	20.0	7.5	768	1028	1028	79	4.55	248	11.6	7.8
11...	0941	15.0	7.5	768	1028	1028	79	5.44	248	11.6	7.8
11...	0942	10.0	7.5	768	1028	1028	79	5.44	248	11.6	7.8
11...	0943	5.00	7.5	768	1028	1028	79	5.44	248	11.6	7.8
AUG											
19...	1000	4.00	24.5	747	1028	1028	8.2	4.76	641	6.3	7.7
19...	1001	8.00	24.5	747	1028	1028	8.2	4.76	641	6.4	7.7
19...	1002	12.0	24.5	747	1028	1028	8.2	4.76	641	6.4	7.7
19...	1003	16.0	24.5	747	1028	1028	8.2	4.76	641	6.4	7.7
19...	1004	20.0	24.5	747	1028	1028	8.2	4.76	641	6.4	7.7
19...	1005	24.0	24.5	747	1028	1028	8.2	4.76	641	6.5	7.7
19...	1006	28.0	24.5	747	1028	1028	8.2	4.76	641	6.7	7.7
19...	1007	32.0	24.5	747	1028	1028	8.2	4.76	641	6.7	7.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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											
15...	1450	1028	80020	20	534	7.4	23.0	17.5	760	9.0	94
NOV											
18...	1605	1028	80020	7.8	712	7.8	14.0	10.0	750	12.5	113
DEC											
15...	1736	1028	80020	27	446	7.5	9.0	8.5	753	10.9	94
JAN											
14...	0945	1028	80020	101	277	7.4	2.5	10.0	752	10.3	93
FEB											
19...	0830	1028	80020	30	387	7.8	5.5	8.5	751	10.6	92
MAR											
11...	0945	1028	80020	79	248	7.8	-2.0	7.5	768	11.6	96
APR											
24...	0900	1028	80020	25	414	7.8	17.0	13.5	750	9.4	91
MAY											
12...	0805	1028	80020	24	434	7.8	20.5	17.5	738	8.5	92
JUN											
03...	0805	1028	80020	15	490	7.7	24.0	22.0	737	5.6	66
JUL											
15...	0800	1028	80020	11	552	7.7	23.0	23.5	744	5.6	68
AUG											
19...	0950	1028	80020	8.2	641	7.7	27.0	24.5	747	6.7	82
SEP											
23...	0810	1028	80020	11	616	7.9	18.5	21.0	750	6.4	73

07189542 HONEY CREEK NEAR SOUTHWEST CITY, MO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	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)	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)
OCT 15...	86	40	450	164	0	134	--	--	<.010	--
NOV 18...	29	22	250	167	0	137	--	--	<.010	--
DEC 15...	K6	K2	K63	142	0	116	10.1	45	.012	.04
JAN 14...	38	14	520	116	0	95	6.13	27	.023	.08
FEB 19...	K15	K13	100	143	0	117	7.86	35	.035	.12
MAR 11...	K12	K7	K58	93	0	76	--	--	<.010	--
APR 24...	<1	K9	K43	143	0	117	--	--	<.010	--
MAY 12...	350	92	90	149	0	122	8.78	39	.013	.04
JUN 03...	270	73	160	159	0	130	10.8	48	.015	.05
JUL 15...	200	85	340	164	0	134	13.8	61	.015	.05
AUG 19...	480	480	410	162	0	133	18.9	84	.392	1.3
SEP 23...	150	160	840	162	0	133	17.4	77	.012	.04

DATE	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, 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-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
OCT 15...	10.9	.027	.03	--	<.20	--	.734	.688	.693	2.1
NOV 18...	--	<.020	--	--	.25	--	1.02	1.07	1.07	3.3
DEC 15...	10.1	<.020	--	--	.27	10	.718	.703	.732	2.2
JAN 14...	6.15	<.020	--	--	<.10	--	.184	.180	.201	.62
FEB 19...	7.89	<.020	--	--	.19	8.1	.515	.508	.536	1.6
MAR 11...	3.71	.105	.14	.00	.10	3.8	.095	.089	.096	.29
APR 24...	4.41	.022	.03	.25	.28	4.7	.371	.236	.225	.69
MAY 12...	8.80	.037	.05	.25	.28	9.1	.446	.507	.504	1.5
JUN 03...	10.8	.026	.03	.30	.32	11	.512	.476	.444	1.4
JUL 15...	13.8	.026	.03	.22	.24	14	.495	.510	.496	1.5
AUG 19...	19.3	.171	.22	.11	.28	20	.571	.536	.543	1.7
SEP 23...	17.4	<.020	--	--	.23	18	.695	.671	.677	2.1

07190000 LAKE O' THE CHEROKEES AT LANGLEY, OK

LOCATION.--Lat 36°28'07", long 95°02'28", in SW ¼ SW ¼ 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.--No estimated record. Reservoir is formed by multiple-arch concrete dam, with tops of taintor-type spillway gates at gage height 755.0 ft. Storage began Mar. 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 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, 2,003,000 acre-ft, Mar. 22, gage height, 751.61 ft; minimum, 1,485,000 acre-ft, Oct. 6, 7, gage height, 740.49.

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	1,452,000	755	2,198,000

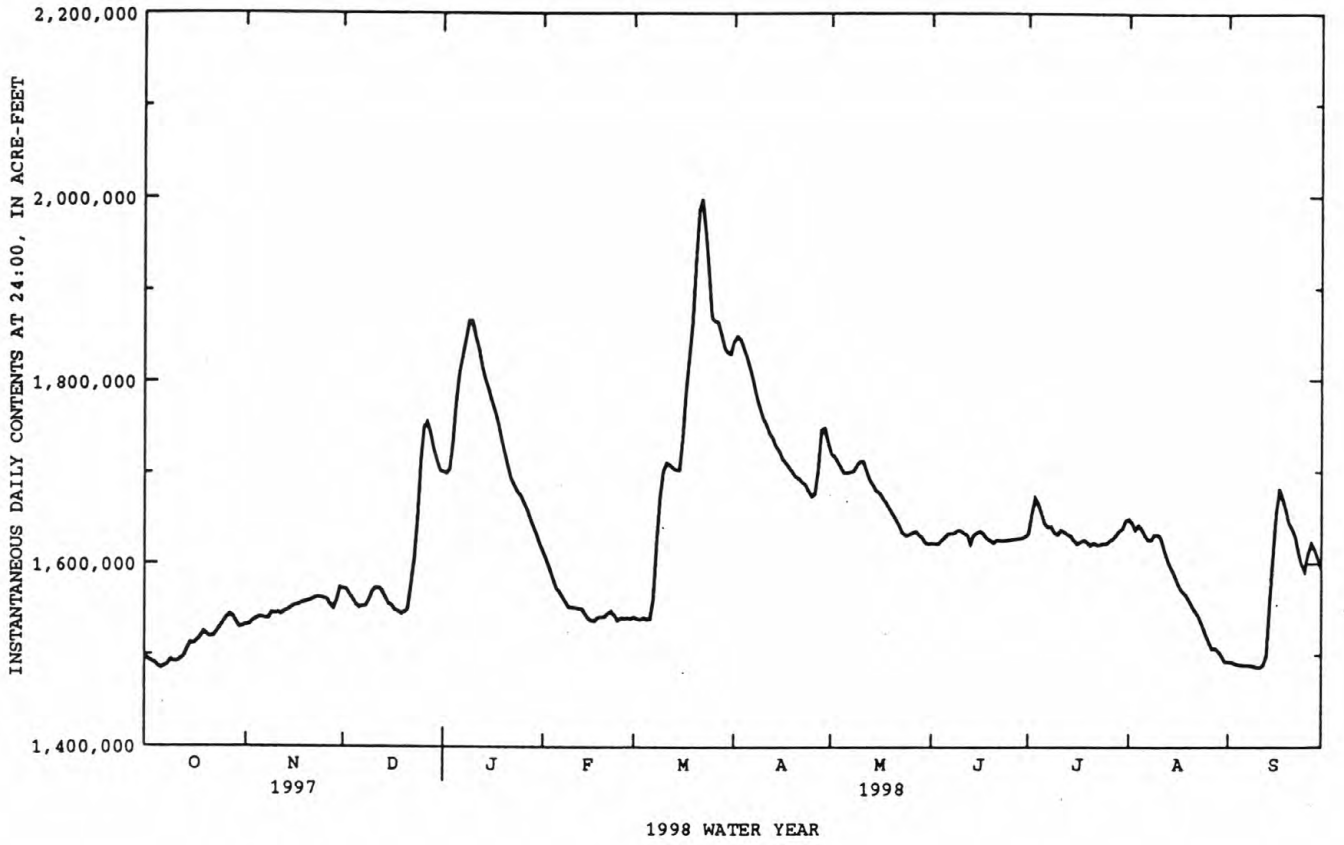
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1497000	1533000	1573000	1701000	1613000	1542000	1844000	1721000	1623000	1633000	1649000	1493000
2	1495000	1533000	1572000	1699000	1604000	1540000	1849000	1718000	1622000	1654000	1645000	1493000
3	1492000	1537000	1566000	1704000	1594000	1539000	1846000	1712000	1622000	1672000	1637000	1491000
4	1491000	1539000	1561000	1734000	1584000	1541000	1836000	1706000	1626000	1666000	1642000	1490000
5	1487000	1541000	1555000	1777000	1574000	1539000	1826000	1700000	1629000	1655000	1638000	1489000
6	1485000	1541000	1552000	1810000	1570000	1540000	1814000	1700000	1633000	1644000	1631000	1489000
7	1487000	1540000	1554000	1828000	1564000	1562000	1800000	1701000	1633000	1640000	1626000	1489000
8	1489000	1540000	1554000	1846000	1558000	1624000	1784000	1702000	1634000	1641000	1626000	1489000
9	1494000	1546000	1561000	1866000	1552000	1672000	1771000	1708000	1637000	1634000	1632000	1488000
10	1492000	1545000	1570000	1866000	1552000	1702000	1760000	1713000	1637000	1632000	1632000	1487000
11	1492000	1546000	1574000	1849000	1552000	1711000	1753000	1713000	1633000	1637000	1628000	1487000
12	1495000	1544000	1574000	1836000	1551000	1709000	1743000	1702000	1632000	1635000	1616000	1489000
13	1498000	1548000	1570000	1816000	1551000	1705000	1738000	1692000	1622000	1632000	1605000	1499000
14	1506000	1549000	1563000	1802000	1545000	1703000	1729000	1686000	1632000	1631000	1597000	1555000
15	1513000	1552000	1556000	1792000	1540000	1703000	1724000	1680000	1634000	1625000	1590000	1607000
16	1512000	1554000	1554000	1779000	1538000	1738000	1715000	1678000	1636000	1622000	1581000	1655000
17	1515000	1555000	1549000	1768000	1538000	1788000	1711000	1672000	1633000	1624000	1573000	1682000
18	1519000	1557000	1548000	1755000	1542000	1827000	1706000	1667000	1628000	1626000	1569000	1672000
19	1525000	1558000	1545000	1738000	1542000	1866000	1701000	1661000	1626000	1624000	1565000	1659000
20	1522000	1559000	1547000	1722000	1542000	1934000	1696000	1655000	1623000	1620000	1559000	1644000
21	1519000	1560000	1550000	1707000	1546000	1988000	1694000	1649000	1626000	1623000	1552000	1638000
22	1520000	1562000	1576000	1693000	1548000	1999000	1690000	1642000	1626000	1621000	1547000	1629000
23	1525000	1563000	1605000	1686000	1544000	1967000	1687000	1634000	1625000	1621000	1541000	1612000
24	1530000	1563000	1650000	1679000	1538000	1923000	1680000	1631000	1626000	1622000	1532000	1599000
25	1535000	1562000	1712000	1675000	1541000	1870000	1674000	1632000	1626000	1622000	1523000	1592000
26	1541000	1561000	1750000	1667000	1540000	1866000	1677000	1634000	1627000	1625000	1515000	1610000
27	1544000	1555000	1755000	1659000	1541000	1865000	1704000	1636000	1627000	1627000	1507000	1622000
28	1542000	1551000	1744000	1649000	1540000	1851000	1747000	1632000	1628000	1631000	1508000	1616000
29	1535000	1560000	1726000	1640000	---	1837000	1749000	1629000	1628000	1636000	1504000	1606000
30	1530000	1574000	1713000	1631000	---	1831000	1734000	1623000	1630000	1638000	1499000	1596000
31	1531000	---	1702000	1621000	---	1830000	---	1622000	---	1647000	1493000	---
MAX	1544000	1574000	1755000	1866000	1613000	1999000	1849000	1721000	1637000	1672000	1649000	1682000
MIN	1485000	1533000	1545000	1621000	1538000	1539000	1674000	1622000	1622000	1620000	1493000	1487000
(‡)	741.87	742.84	745.63	743.89	742.07	748.27	746.32	743.90	744.09	744.46	740.97	743.32
(‡‡)	+37,000	+43,000	+128,000	-81,000	-81,000	+290,000	-96,000	-112,000	+8,000	+17,000	-154,000	+103,000

CAL YR 1997 MAX 1820000 MIN 1478000 (‡‡) +164,000
WTR YR 1998 MAX 1999000 MIN 1485000 (‡‡) +102,000

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

07190000 LAKE O' THE CHEROKEES AT LANGLEY, OK--Continued



07190500 NEOSHO RIVER NEAR LANGLEY, OK

LOCATION.--Lat 36°26'20", long 95°02'54", in SW ¼, SE ¼ 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 poor. 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	401	102	8940	11900	10100	2450	16600	24900	1980	9920	10100	376
2	1800	125	7780	10800	10100	5310	17900	14500	3950	9990	10100	32
3	3310	241	8660	10100	9560	4010	18100	14500	3690	9880	10100	1240
4	1630	161	8440	10100	9980	3250	18000	14400	140	9740	10100	885
5	3780	625	8710	23900	9970	4520	17900	14100	275	9790	10100	157
6	2160	1290	8070	36900	6600	3200	17700	12700	e25	8560	10100	384
7	1030	1430	8460	39800	8310	6350	17400	11900	1740	5840	8790	266
8	1490	2870	8700	42600	8280	10200	17200	11300	2590	4480	5410	709
9	1100	53	9080	37400	8170	10300	17100	9740	3870	5560	6100	688
10	2590	1190	9810	30300	4950	8840	15700	9800	8090	3850	9380	659
11	1550	849	e9810	25100	4980	9080	14500	10900	7660	3510	9690	749
12	1720	1700	e9810	19500	6470	10100	14800	14800	4740	9690	9720	457
13	4970	70	e9810	19600	6590	10300	15000	13500	4740	8800	9250	439
14	1760	91	e9810	17500	9120	10300	14800	10200	114	5010	8140	8050
15	927	160	e8270	16300	10200	10300	14400	9400	1130	4720	6400	8290
16	4620	99	e5750	16700	6350	10300	14100	9130	2110	4080	6670	8270
17	519	e65	6350	16800	4550	20100	12900	8290	3210	822	5760	8950
18	103	e50	4530	16700	3940	29200	12000	9090	4660	1730	4100	10200
19	73	e705	4840	16500	5090	31100	11900	8740	3000	2460	3800	10300
20	4020	e849	3890	16100	5650	31800	10800	8730	3280	4310	4520	10300
21	3250	e614	5920	16300	3550	32800	9870	8440	330	372	4000	10200
22	1180	e362	9030	14700	2840	39000	9840	7260	2510	4260	3160	10300
23	114	e35	10100	11100	5880	43600	9260	8170	1010	3080	3660	10200
24	320	e844	10100	9600	8650	37500	9440	7910	2580	1870	4650	10200
25	82	e751	10200	9800	3040	25700	9180	5120	3110	2610	5950	10200
26	64	e2430	14600	9980	4200	18600	8420	6030	2450	4830	5260	10200
27	4830	e4020	19600	10100	3340	16300	9270	4910	1930	5340	4160	10200
28	4450	e6180	19500	10100	3670	15600	17900	5530	541	5350	63	10200
29	6360	9170	18800	10100	---	15000	30800	5210	3120	4880	2580	10200
30	5490	9610	16200	10100	---	14700	33700	5720	5420	9540	3310	10200
31	1400	---	13300	10100	---	15300	---	5750	---	9870	3250	---
TOTAL	67093	46741	306870	556580	184130	505110	456480	310670	83995	174744	198373	173501
MEAN	2164	1558	9899	17950	6576	16290	15220	10020	2800	5637	6399	5783
MAX	6360	9610	19600	42600	10200	43600	33700	24900	8090	9990	10100	10300
MIN	64	35	3890	9600	2840	2450	8420	4910	25	372	63	32
AC-FT	133100	92710	608700	1104000	365200	1002000	905400	616200	166600	346600	393500	344100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1998, BY WATER YEAR (WY)

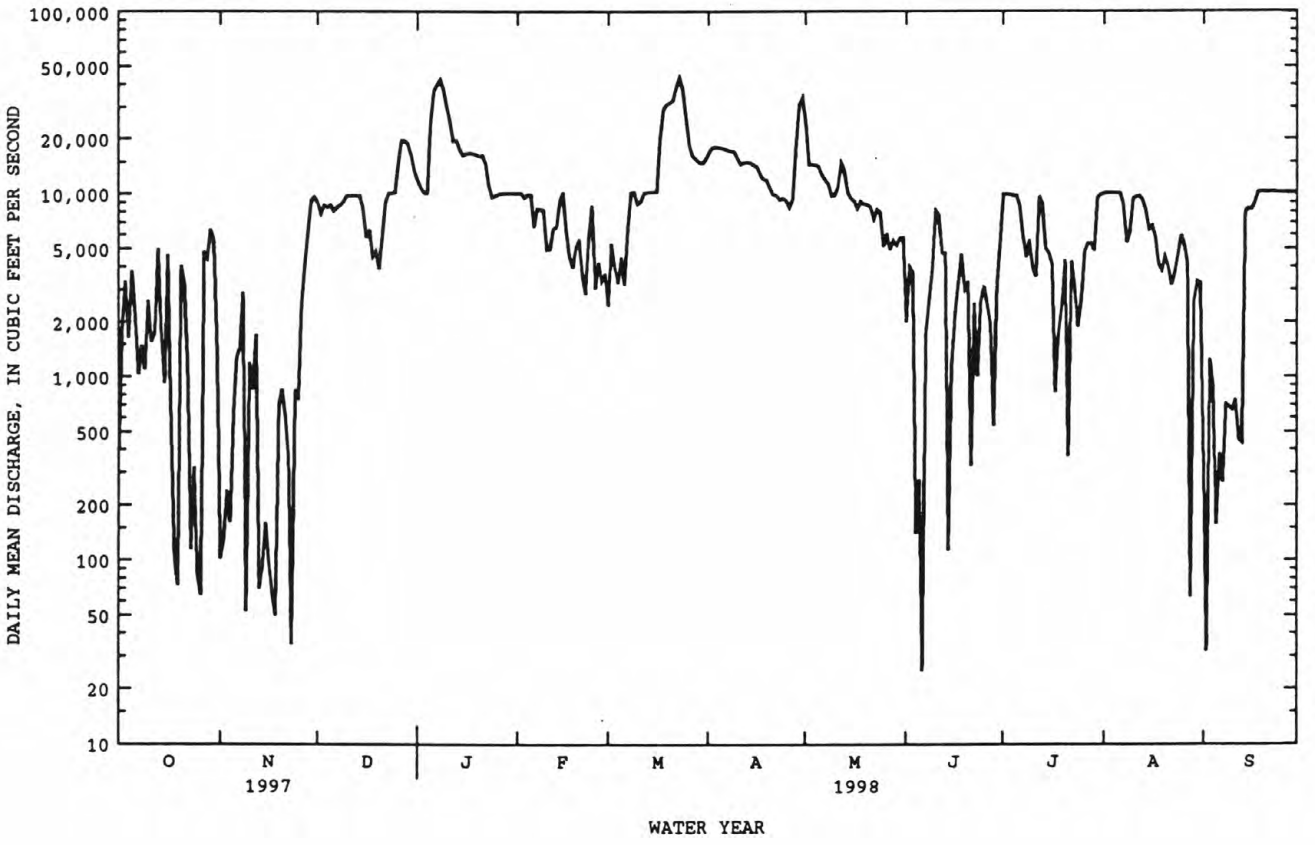
MEAN	5960	6824	5709	5003	5954	8596	11290	11790	11030	9014	4483	5191
MAX	51120	38870	35580	21440	23470	33250	50780	77710	43540	67920	20910	30350
(WY)	1987	1986	1993	1993	1949	1973	1945	1943	1995	1951	1950	1993
MIN	37.5	63.0	40.9	144	243	321	38.1	71.4	33.1	26.5	25.6	77.1
(WY)	1981	1957	1981	1954	1981	1967	1971	1940	1940	1940	1940	1953

e Estimated

07190500 NEOSHO RIVER NEAR LANGLEY, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1940 - 1998	
ANNUAL TOTAL	2662123		3064287			
ANNUAL MEAN	7293		8395		7572	
HIGHEST ANNUAL MEAN					21710	1993
LOWEST ANNUAL MEAN					210	1940
HIGHEST DAILY MEAN	40200	Feb 25	43600	Mar 23	287000	May 20 1943
LOWEST DAILY MEAN	35	Nov 23	25	Jun 6	[a]9.0	Mar 25 1940
ANNUAL SEVEN-DAY MINIMUM	177	Nov 13	177	Nov 13	15	Apr 11 1971
INSTANTANEOUS PEAK FLOW			46100	Mar 22	[b]300000	May 20 1943
INSTANTANEOUS PEAK STAGE			25.46	Mar 23	[c]45.50	May 20 1943
ANNUAL RUNOFF (AC-FT)	5280000		6078000		5485000	
10 PERCENT EXCEEDS	12900		16700		16700	
50 PERCENT EXCEEDS	5530		8070		3900	
90 PERCENT EXCEEDS	727		585		115	

[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 ¼, NE ¼ 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 estimated daily discharge. 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)
Dec 24	1900	10,400	29.85	Mar 16	2400	12,000	31.44
Mar 8	0800	13,300	32.66	Sep 14	1400	9,260	28.65

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	18	333	168	204	52	593	239	60	53	3.7	.23
2	13	18	194	149	332	55	295	193	46	53	4.8	.33
3	10	19	175	141	223	49	279	154	35	19	5.4	.51
4	8.9	19	206	3210	169	42	300	121	26	10	6.1	.64
5	7.7	19	150	5010	143	40	224	97	21	5.6	8.8	.65
6	6.9	18	99	5100	127	40	185	281	18	4.1	9.3	.68
7	6.6	18	79	2370	116	2760	206	596	16	3.4	23	.65
8	7.1	17	1840	5160	107	12300	196	387	17	43	15	.47
9	9.2	17	1230	4990	101	1970	157	242	18	124	15	.46
10	9.8	21	1280	1400	98	545	128	841	17	37	982	.46
11	9.6	25	571	713	95	353	109	373	23	41	145	.45
12	21	28	326	595	92	268	97	197	27	79	42	.54
13	853	31	234	491	84	223	88	128	20	62	20	5.5
14	272	63	175	369	78	204	80	91	15	44	12	6720
15	99	76	143	336	75	291	73	70	13	26	43	2730
16	47	43	128	294	78	7460	66	55	12	18	23	222
17	33	26	112	253	96	9210	61	45	12	14	13	80
18	25	21	97	220	107	2190	57	39	10	10	8.2	36
19	20	20	83	193	99	4540	53	34	8.8	7.6	4.7	18
20	16	20	72	174	90	4460	52	29	8.0	6.1	2.2	12
21	15	19	1520	164	78	1100	50	28	7.6	4.7	1.1	7.7
22	15	21	3150	148	71	588	47	26	11	3.4	.84	460
23	14	23	741	133	69	416	44	25	15	2.9	.58	220
24	13	22	7440	122	65	325	43	26	9.6	2.5	.38	81
25	14	20	4170	119	63	274	43	60	5.8	2.0	.26	37
26	43	19	682	278	59	234	645	2170	4.4	1.2	.21	23
27	32	23	415	515	59	211	4100	2020	3.8	.74	.21	15
28	23	444	314	293	56	221	2880	327	3.5	.51	.20	8.7
29	21	3350	327	213	---	207	554	173	3.3	.39	.23	4.7
30	21	989	295	170	---	181	320	112	6.1	.84	.21	2.8
31	20	---	216	146	---	1040	---	80	---	2.7	.21	---
TOTAL	1720.8	5467	26797	33637	3034	51849	12025	9259	492.9	681.68	1390.63	10689.47
MEAN	55.5	182	864	1085	108	1673	401	299	16.4	22.0	44.9	356
MAX	853	3350	7440	5160	332	12300	4100	2170	60	124	982	6720
MIN	6.6	17	72	119	56	40	43	25	3.3	.39	.20	.23
AC-FT	3410	10840	53150	66720	6020	102800	23850	18370	978	1350	2760	21200
CFSM	.12	.40	1.92	2.41	.24	3.72	.89	.66	.04	.05	.10	.79
IN.	.14	.45	2.22	2.78	.25	4.29	.99	.77	.04	.06	.11	.88

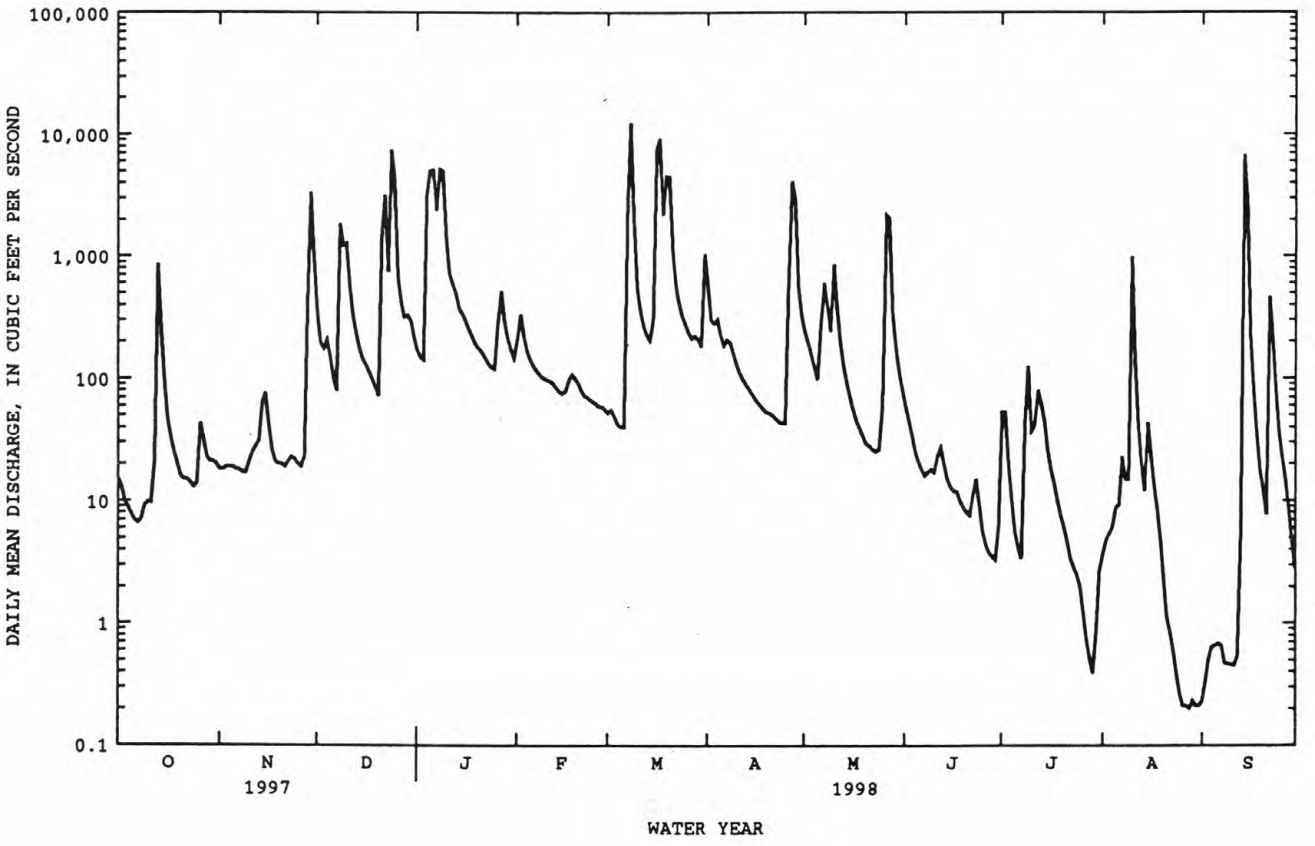
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1998, BY WATER YEAR (WY)

MEAN	260	441	307	233	315	579	490	604	441	211	86.6	223
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	30.0	20.3	2.47	.53	.41	.22
(WY)	1957	1956	1956	1954	1954	1956	1954	1963	1988	1954	1954	1954

07191000 BIG CABIN CREEK NEAR BIG CABIN, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1948 - 1998	
ANNUAL TOTAL	102286.1		157043.48			
ANNUAL MEAN	280		430		349	
HIGHEST ANNUAL MEAN					1044	1993
LOWEST ANNUAL MEAN					37.9	1956
HIGHEST DAILY MEAN	8040	Feb 21	12300	Mar 8	46300	Oct 3 1959
LOWEST DAILY MEAN	5.7	Sep 3	.20	Aug 28	.10	Oct 4 1954
ANNUAL SEVEN-DAY MINIMUM	6.3	Sep 1	.21	Aug 26	.11	Sep 11 1956
INSTANTANEOUS PEAK FLOW			13300	Mar 8	[a]52000	Oct 3 1959
INSTANTANEOUS PEAK STAGE			32.66	Mar 8	46.65	Feb 23 1985
ANNUAL RUNOFF (AC-FT)	202900		311500		252700	
ANNUAL RUNOFF (CFSM)	.62		.96		.78	
ANNUAL RUNOFF (INCHES)	8.46		12.98		10.53	
10 PERCENT EXCEEDS	607		724		512	
50 PERCENT EXCEEDS	44		55		32	
90 PERCENT EXCEEDS	7.8		3.4		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 ¼ NW ¼ 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 discharge. 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 18°80'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)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

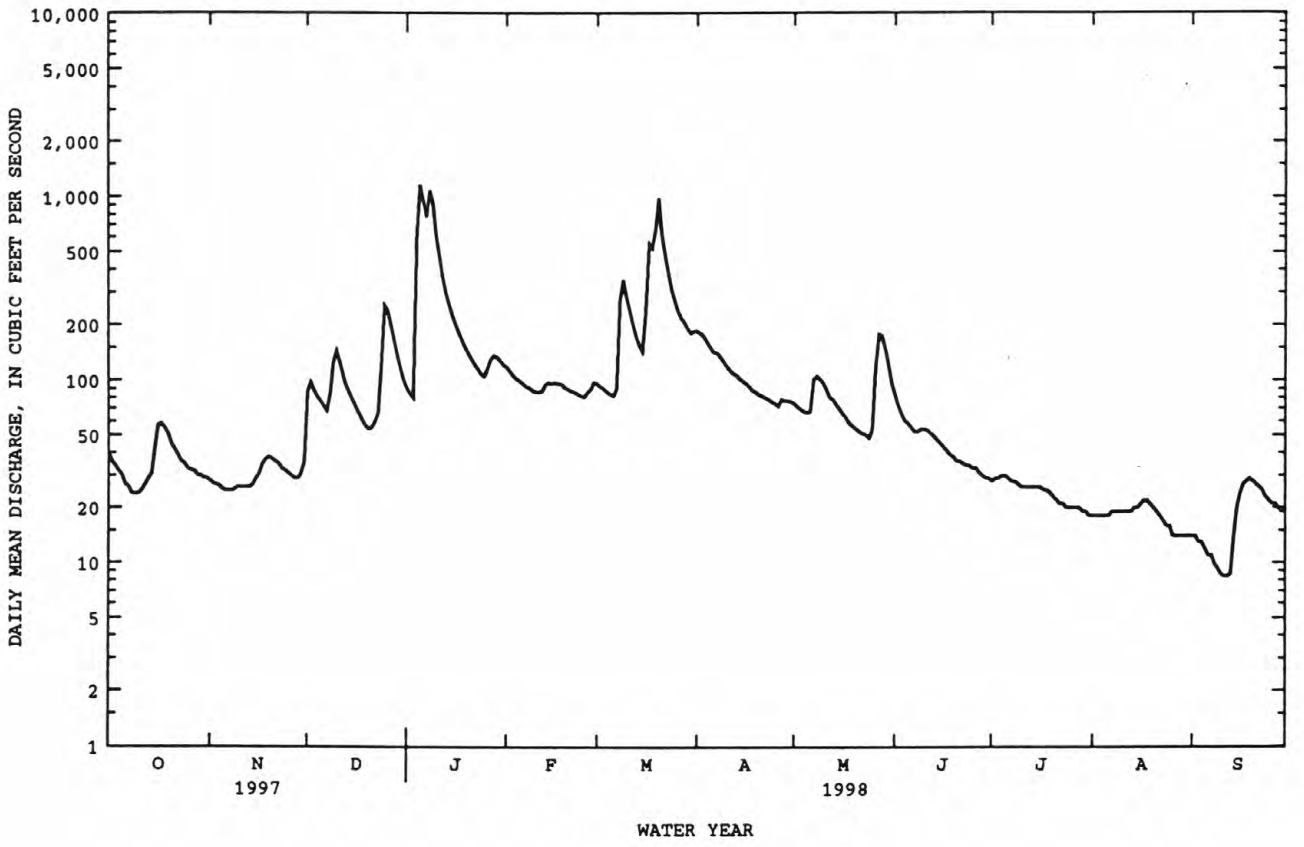
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	28	87	90	118	96	185	74	83	28	18	14
2	36	27	97	84	112	92	180	71	72	29	18	14
3	34	27	88	80	106	90	173	69	65	29	18	13
4	32	26	81	593	102	86	162	67	60	30	18	13
5	30	25	77	1160	99	84	151	66	58	30	18	12
6	27	25	72	957	96	82	142	67	55	29	18	11
7	26	25	68	772	92	90	141	101	52	28	19	11
8	24	25	84	1080	91	273	135	105	52	28	19	9.8
9	24	26	125	923	88	351	127	101	54	27	19	9.3
10	24	26	144	610	86	286	120	96	54	26	19	8.7
11	25	26	126	474	86	238	114	88	53	26	19	8.4
12	27	26	107	366	87	201	109	80	51	26	19	8.4
13	29	26	93	298	95	173	107	78	49	26	19	8.7
14	31	27	85	257	97	154	102	73	47	26	20	14
15	43	29	78	225	96	143	99	69	45	26	20	20
16	57	31	71	202	97	240	96	65	43	26	21	24
17	58	35	66	182	96	556	92	62	41	25	22	27
18	55	37	61	166	95	527	88	58	39	25	22	28
19	51	38	57	151	91	656	86	56	38	24	21	29
20	45	37	54	140	89	984	83	54	36	23	20	28
21	42	36	55	130	87	620	82	52	36	22	19	27
22	39	35	59	122	86	482	80	51	35	21	18	26
23	36	33	66	115	84	385	78	50	34	21	17	25
24	35	32	118	108	82	313	76	48	34	20	16	23
25	33	31	254	105	81	270	74	53	33	20	16	22
26	32	30	238	115	86	237	72	117	33	20	14	21
27	32	29	201	131	89	217	78	177	31	20	14	21
28	30	29	165	136	97	206	77	173	30	20	14	20
29	30	31	137	133	---	191	77	145	29	19	14	19
30	29	36	115	127	---	180	76	119	29	19	14	19
31	29	---	100	121	---	185	---	95	---	18	14	---
TOTAL	1084	894	3229	10153	2611	8688	3262	2580	1371	757	557	534.3
MEAN	35.0	29.8	104	328	93.3	280	109	83.2	45.7	24.4	18.0	17.8
MAX	58	38	254	1160	118	984	185	177	83	30	22	29
MIN	24	25	54	80	81	82	72	48	29	18	14	8.4
AC-FT	2150	1770	6400	20140	5180	17230	6470	5120	2720	1500	1100	1060
CFSM	.26	.22	.78	2.46	.70	2.11	.82	.63	.34	.18	.14	.13
IN.	.30	.25	.90	2.84	.73	2.43	.91	.72	.38	.21	.16	.15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1998, BY WATER YEAR (WY)

MEAN	57.9	119	132	111	123	193	205	148	142	60.2	30.7	51.9
MAX	382	683	585	328	367	563	600	550	880	483	78.5	248
(WY)	1987	1974	1993	1998	1997	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

07191220 SPAVINAW CREEK NEAR SYCAMORE, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1962 - 1998	
ANNUAL TOTAL	37081		35720.3			
ANNUAL MEAN	102		97.9		114	
HIGHEST ANNUAL MEAN					265	1974
LOWEST ANNUAL MEAN					18.0	1967
HIGHEST DAILY MEAN	4490	Feb 21	1160	Jan 5	11700	Jul 27 1975
LOWEST DAILY MEAN	21	Aug 5	8.4	Sep 11, 12	1.3	Aug 9 1964
ANNUAL SEVEN-DAY MINIMUM	21	Aug 4	9.2	Sep 7	1.6	Aug 3 1964
INSTANTANEOUS PEAK FLOW			1680	Jan 4	39800	Jul 27 1975
INSTANTANEOUS PEAK STAGE			7.74	Jan 4	22.07	Jul 27 1975
INSTANTANEOUS LOW FLOW			8.2	Sep 11	1.2	Aug 9 1964
ANNUAL RUNOFF (AC-FT)	73550		70850		82750	
ANNUAL RUNOFF (CFSM)	.76		.74		.86	
ANNUAL RUNOFF (INCHES)	10.37		9.99		11.67	
10 PERCENT EXCEEDS	197		185		235	
50 PERCENT EXCEEDS	51		55		55	
90 PERCENT EXCEEDS	25		19		14	



07191300 SPAVINAW LAKE AT SPAVINAW, OK

LOCATION.--Lat 36°22'59", long 95°02'52", in SW ¼ SE ¼ 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, 32,770 acre-ft, Jan. 9, elevation 681.37 ft; minimum, 30,000 acre-ft, Dec. 6, 7, elevation 679.65 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

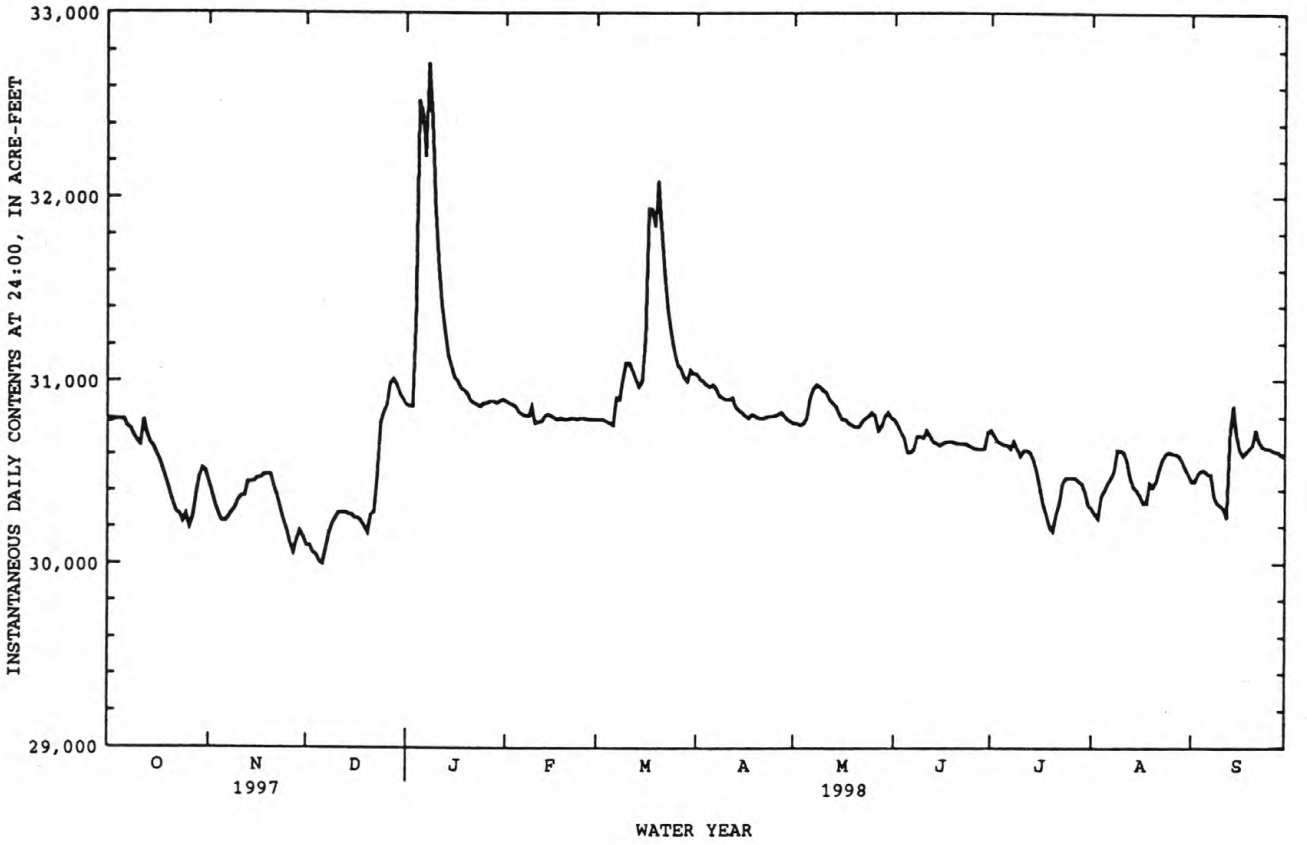
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30790	30450	30100	30870	30890	30790	31040	30770	30790	30730	30300	30450
2	30780	30390	30100	30860	30880	30790	31010	30770	30760	30700	30270	30450
3	30790	30320	30060	30860	30870	30790	31000	30760	30720	30670	30250	30490
4	30790	30270	30050	31350	30860	30780	30980	30770	30690	30660	30370	30510
5	30790	30230	30010	32530	30830	30770	30970	30800	30610	30650	30400	30510
6	30790	30230	30000	32470	30820	30760	30980	30910	30610	30650	30440	30490
7	30750	30250	30080	32220	30810	30910	30960	30960	30630	30630	30470	30490
8	30740	30280	30170	32730	30810	30900	30920	30980	30700	30670	30510	30370
9	30700	30300	30220	32450	30860	31010	30910	30970	30700	30630	30620	30330
10	30670	30350	30250	31960	30770	31100	30900	30950	30690	30590	30620	30320
11	30650	30370	30280	31650	30780	31100	30900	30940	30730	30620	30610	30300
12	30790	30370	30280	31420	30780	31060	30910	30900	30700	30620	30560	30250
13	30710	30450	30280	31270	30810	31010	30860	30880	30670	30610	30470	30730
14	30660	30450	30270	31140	30820	30970	30840	30860	30660	30570	30420	30860
15	30640	30450	30270	31080	30810	31000	30830	30820	30650	30510	30400	30700
16	30600	30470	30250	31020	30800	31230	30810	30790	30660	30420	30370	30620
17	30560	30470	30250	31000	30790	31940	30800	30790	30670	30330	30330	30590
18	30510	30490	30230	30960	30800	31940	30820	30770	30670	30270	30330	30610
19	30450	30490	30200	30950	30790	31840	30810	30760	30670	30200	30440	30630
20	30390	30490	30170	30930	30790	32090	30800	30750	30660	30180	30420	30650
21	30330	30420	30270	30890	30800	31820	30800	30750	30660	30270	30450	30730
22	30280	30370	30280	30880	30800	31580	30800	30780	30660	30330	30520	30670
23	30270	30300	30490	30870	30790	31390	30810	30800	30660	30440	30570	30640
24	30230	30230	30770	30860	30800	31270	30810	30810	30650	30470	30600	30630
25	30270	30180	30830	30880	30800	31160	30810	30830	30640	30470	30610	30630
26	30200	30110	30870	30880	30790	31090	30820	30810	30630	30470	30600	30620
27	30250	30060	30990	30890	30790	31070	30830	30730	30630	30470	30600	30610
28	30370	30130	31010	30890	30790	31020	30810	30750	30630	30450	30590	30610
29	30470	30180	30980	30880	---	31000	30790	30810	30630	30440	30560	30590
30	30520	30150	30930	30890	---	31060	30780	30830	30720	30390	30520	30590
31	30510	---	30900	30900	---	31040	---	30800	---	30320	30490	---
MAX	30790	30490	31010	32730	30890	32090	31040	30980	30790	30730	30620	30860
MIN	30200	30060	30000	30860	30770	30760	30780	30730	30610	30180	30250	30250
(‡)	679.95	679.74	680.29	680.29	680.19	680.42	680.18	680.20	680.12	679.84	679.94	680.00
(‡‡)	-280	-360	+750	0	-110	+250	-260	+20	-80	-400	+170	+100

CAL YR 1997 MAX 34460 MIN 29680 (‡‡) +130
WTR YR 1998 MAX 32730 MIN 30000 (‡‡) -200

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

07191300 SPAVINAW LAKE AT SPAVINAW, OK--Continued



07191400 LAKE HUDSON NEAR LOCUST GROVE, OK

LOCATION.--Lat 36°13'48", long 95°10'55", in SE ¼ NW ¼ 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 443,600 acre-ft, Oct. 4, 1986 and June 15, 1995, 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, 358,500 acre-ft, Mar. 23, elevation, 631.02 ft; minimum, 147,900 acre-ft, Nov. 18, elevation, 613.73 ft.

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

615	159,600	630	342,600
620	211,300	635	426,100
625	272,000	640	525,100

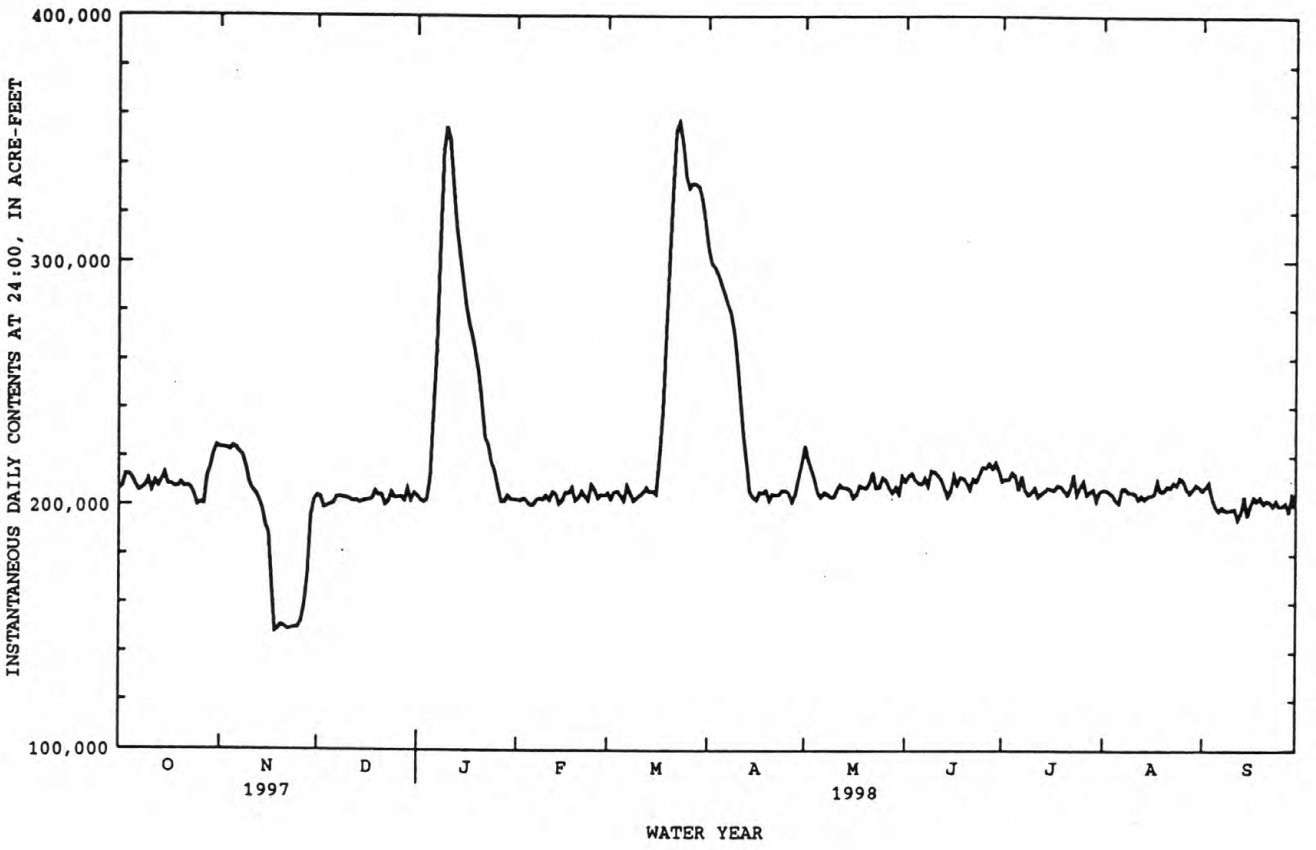
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	206400	223600	204100	204100	202600	205300	305800	224600	210200	210100	206700	206300
2	207500	223600	203500	202200	202000	202700	299500	219100	212400	211100	206400	207800
3	212500	223200	199200	201500	203100	205700	297900	214800	213500	210800	205500	209400
4	212500	222500	199800	202500	202000	206000	295100	210800	210700	213600	204500	203300
5	210900	224100	200500	210900	200300	204100	291200	205400	209500	212300	202300	199900
6	208000	223300	200900	238600	200500	202100	287300	203600	208900	206600	201300	198100
7	205700	221500	203400	265300	202500	208300	283000	205800	211600	212300	207200	199600
8	206600	220200	203700	307900	203200	205200	279400	205100	208300	206600	207200	198300
9	207700	215600	203000	345100	202600	202100	271800	203600	214500	204500	205500	198200
10	210500	209100	203000	354700	204200	203400	260100	203700	214100	205800	205700	198500
11	206000	206200	202600	349900	202400	204400	244400	206800	212700	207500	205200	199000
12	209700	204800	201700	332200	205700	205600	229400	208800	211000	203700	202600	194600
13	207600	202300	202200	314300	204900	207500	218100	207500	207400	205200	204200	197500
14	210400	198600	201100	303700	200700	205700	205800	207600	203800	206200	202800	203900
15	212900	191900	201700	293100	202000	206000	203600	206800	206200	207400	204300	196000
16	208400	188700	202300	282400	205600	204800	202500	203400	212700	206800	204200	200400
17	208400	166700	202200	274700	205200	219600	205800	204700	208900	206400	205100	203500
18	207300	148300	202800	269400	207500	239100	205300	208600	211800	208600	210000	202000
19	207500	149400	206000	262400	202100	271200	206500	207800	211500	208100	205900	203500
20	209100	151000	204300	253800	203200	301800	202400	207300	209500	206400	206000	201000
21	207300	150200	204500	241800	206000	330400	204900	209800	206800	204500	208100	202200
22	207700	149100	200300	228100	203900	353900	204500	213900	211200	207300	207400	201700
23	206800	149500	201600	224900	202200	356900	204700	207400	210100	212800	209600	200000
24	204200	150000	205400	217700	208700	349000	206500	207700	212900	204600	208400	202100
25	200000	149800	203100	214200	206500	335000	206400	211700	216000	207800	211500	199800
26	201000	152300	203300	207800	203100	330400	205200	210700	215600	210100	210500	200000
27	200500	158800	203600	201800	204600	332300	201800	207600	217500	204600	207000	201300
28	211800	171000	202000	201700	204300	332000	204700	205400	215300	205900	205300	197400
29	215600	195700	206900	204300	---	330800	211200	207900	217800	206800	207000	205100
30	221400	202100	202100	202700	---	325500	217600	205100	214300	202200	208700	200000
31	224500	---	205100	202500	---	316200	---	212300	---	205800	207700	---
TOTAL	6476400	5643100	6285900	7816200	5701600	8003000	7062400	6465300	6346700	6432400	6393800	6030400
MEAN	208900	188100	202800	252100	203600	258200	235400	208600	211600	207500	206300	201000
MAX	224500	224100	206900	354700	208700	356900	305800	224600	217800	213600	211500	209400
MIN	200000	148300	199200	201500	200300	202100	201800	203400	203800	202200	201300	194600
(‡)	621.15	619.16	619.43	619.20	619.36	628.22	620.55	620.08	620.26	619.50	619.67	618.97
(‡‡)	+15900	-22400	+3000	-2600	+1800	+111900	-98600	-5300	+2000	-8500	-1900	-7700

CAL YR 1997 TOTAL 75248800 MEAN 206200 MAX 275300 MIN 148300 (‡‡) -4000
WTR YR 1998 TOTAL 78657200 MEAN 215500 MAX 356900 MIN 148300 (‡‡) -8600

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

07191400 LAKE HUDSON NEAR LOCUST GROVE, OK--Continued



07191500 NEOSHO RIVER NEAR CHOUTEAU, OK

LOCATION.--Lat 36°13'46", long 95°10'57", in SE ¼ NW ¼ sec.9, T.20 N., R.20 E., Mayes County, Hydrologic Unit 11070209, in Robert S. Kerr Dam about 100 ft from left end of 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.--No estimated daily discharges. Records fair. 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	435	369	8880	11800	10100	1700	30600	18500	3610	10100	6820	548
2	1120	307	5830	11000	9810	5550	29600	14100	2870	7830	8100	274
3	1630	297	11500	10600	8590	2660	27800	14300	1800	8760	7660	271
4	1010	287	7060	14600	10100	3050	26700	13700	608	5630	8220	3690
5	4720	298	8530	28300	10500	5760	25400	14200	266	8580	8840	397
6	2770	432	5010	34700	6540	3670	24100	12400	258	11800	8800	273
7	1630	680	5860	36100	5370	9310	24000	10200	256	799	5210	272
8	387	1600	10600	37100	7090	25500	22400	10000	2750	5790	3720	268
9	1070	309	10600	38700	8390	16600	20700	10400	2520	6430	5710	265
10	2300	4280	9960	41500	4840	8810	19700	9690	5470	1250	8920	266
11	1660	2290	9880	42500	5290	9210	19600	9140	6960	1500	9440	264
12	739	374	8590	42300	4590	8480	19300	12100	5980	9980	8980	259
13	7050	1350	8920	39700	5070	8990	18700	13600	5230	7130	6470	271
14	355	2500	9200	34400	10700	11000	18200	9130	374	3620	7520	16200
15	291	3420	8360	29800	8910	9970	13500	8260	262	3140	4260	14900
16	6170	1380	5170	28100	5560	21600	13200	9850	256	3370	5500	3510
17	620	11200	5490	24200	4710	23500	9330	5770	4440	1580	5520	5420
18	284	10500	3470	22000	3250	23400	10100	7270	2170	514	439	8620
19	282	312	3070	21700	6890	23500	9690	8480	2910	2290	4260	7810
20	3220	1120	4500	20600	4800	23400	11700	5270	2350	5320	4470	9590
21	3850	973	7310	22800	1080	23900	7190	5760	294	460	1480	8940
22	564	239	14100	21100	4230	31500	8560	3730	2290	1180	3020	7520
23	1200	150	10000	13200	6020	43600	7790	10400	712	641	1620	9710
24	1130	684	17200	12900	4380	46700	6950	6600	815	4200	6130	9490
25	1130	806	15900	11900	4510	45000	7930	2760	1960	517	2280	10500
26	517	773	15000	12900	5030	40100	9220	7760	642	2180	4120	6340
27	5700	300	18900	12900	2810	36200	13200	7200	351	7320	4800	9090
28	295	150	19600	10200	3640	32200	16600	7510	740	2750	767	10800
29	4950	150	15800	8220	---	28700	22800	3880	2930	3420	1320	5590
30	3760	6710	18700	10100	---	28000	25900	4020	4490	10700	1540	9630
31	1030	---	11600	9830	---	29800	---	2060	---	4940	3160	---
TOTAL	61869	54240	314590	715750	172800	631360	520460	278040	66564	143721	159096	160978
MEAN	1996	1808	10150	23090	6171	20370	17350	8969	2219	4636	5132	5366
MAX	7050	11200	19600	42500	10700	46700	30600	18500	6960	11800	9440	16200
MIN	282	150	3070	8220	1080	1700	6950	2060	256	460	439	259
AC-FT	122700	107600	624000	1420000	342700	1252000	1032000	551500	132000	285100	315600	319300

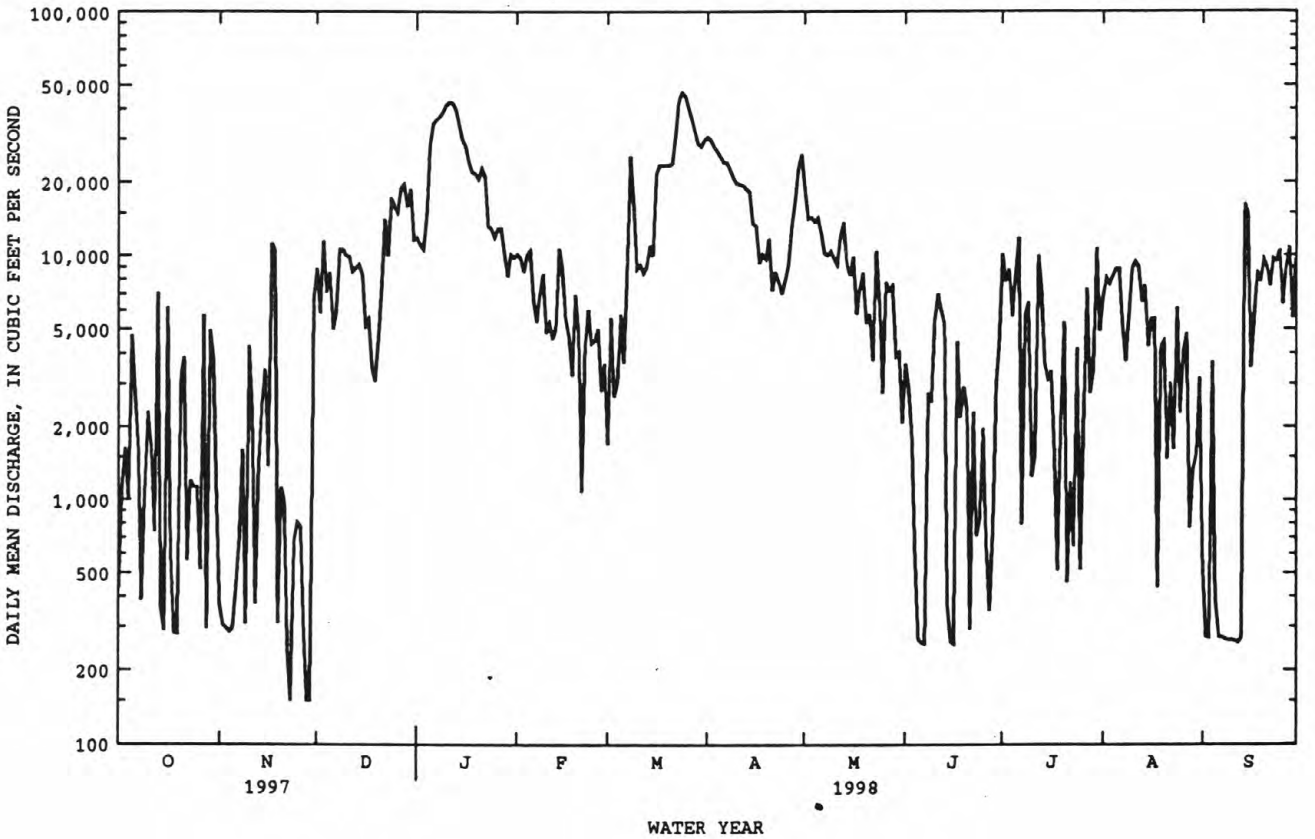
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998, BY WATER YEAR (WY)

MEAN	5673	9095	8436	7088	7538	12290	13860	11650	12950	8536	4623	4770
MAX	59840	40780	40400	23350	23640	39260	46000	40650	48020	28710	15140	28460
(WY)	1987	1986	1993	1973	1985	1973	1973	1995	1995	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

07191500 NEOSHO RIVER NEAR CHOUTEAU, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1964 - 1998	
ANNUAL TOTAL	2622865		3279468			
ANNUAL MEAN	7186		8985		[a]8871	
HIGHEST ANNUAL MEAN					22240	1993
LOWEST ANNUAL MEAN					1924	1981
HIGHEST DAILY MEAN	35500	Mar 1	46700	Mar 24	154000	Jun 11 1995
LOWEST DAILY MEAN	150	Nov 23	150	Nov 23, 28, 29	[b]12	Nov 13 1963
ANNUAL SEVEN-DAY MINIMUM	381	Nov 1	266	Sep 7	45	Feb 21 1964
INSTANTANEOUS PEAK FLOW			49200	Mar 24	[c]164000	Jun 11 1995
INSTANTANEOUS PEAK STAGE			19.87	Mar 24	[d]36.29	Jun 11 1995
ANNUAL RUNOFF (AC-FT)	5202000		6505000		6427000	
10 PERCENT EXCEEDS	13800		23400		21700	
50 PERCENT EXCEEDS	5900		6340		4820	
90 PERCENT EXCEEDS	434		382		178	

[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 ft3/s, May 20, 1943, gage height 45.00 ft, site and datum then in use, rating curve extended above 140,000 ft3/s on basis of slope-area measurement of peak flow.
[d]Affected by backwater.



07194830 ILLINOIS RIVER NEAR PEDRO, AR

LOCATION.--Lat 36°10'32", long 94°23'30", in NE ¼ SE ¼, sec. 4, T.17 N., R.32 W., Benton County, Hydrologic Unit 11110103, at county road bridge, 0.9 mi northeast of Pedro, Ar.

PERIOD OF RECORD.--July 1996 to current year.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
19...	1135	14.0	8.5	747	1028	1028	316	5.51	238	11.0	7.8
19...	1136	24.0	8.5	747	1028	1028	316	5.51	238	11.0	7.8
19...	1137	34.0	8.5	747	1028	1028	316	5.51	238	10.9	7.8
19...	1138	44.0	8.5	747	1028	1028	316	5.51	238	11.0	7.9
19...	1139	54.0	8.5	747	1028	1028	316	5.51	237	11.0	7.8
19...	1140	64.0	8.5	747	1028	1028	316	5.51	237	11.0	7.8
19...	1141	74.0	8.5	747	1028	1028	316	5.51	237	11.0	7.8
19...	1142	84.0	8.5	747	1028	1028	316	5.51	237	11.0	7.9
19...	1143	104	8.5	747	1028	1028	316	5.51	238	11.0	7.9
19...	1145	114	8.5	747	1028	1028	316	5.51	238	10.9	7.9
AUG											
19...	1051	2.00	26.5	749	1028	1028	28	4.02	308	5.4	7.2
19...	1052	4.00	26.5	749	1028	1028	28	4.02	308	5.4	7.2
19...	1053	6.00	26.5	749	1028	1028	28	4.02	308	5.3	7.2
19...	1054	8.00	26.5	749	1028	1028	28	4.02	308	5.4	7.2
19...	1055	10.0	26.5	749	1028	1028	28	4.02	307	5.6	7.2
19...	1056	12.0	26.5	749	1028	1028	28	4.02	307	5.6	7.2
19...	1057	14.0	26.5	749	1028	1028	28	4.02	307	5.6	7.2
19...	1058	16.0	26.5	749	1028	1028	28	4.02	306	5.8	7.2
19...	1059	33.0	26.5	749	1028	1028	28	4.02	308	5.2	7.2
19...	1100	36.0	26.5	749	1028	1028	28	4.02	307	5.1	7.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
20...	1725	1028	80020	61	309	7.6	17.0	16.0	--	750	10.3
NOV											
19...	1435	1028	80020	99	285	7.8	16.0	7.5	1.3	751	13.5
DEC											
02...	0915	1028	80020	82	332	7.5	8.0	10.5	--	750	9.9
JAN											
14...	1335	1028	80020	648	221	7.0	3.0	8.5	4.1	755	10.9
FEB											
19...	1130	1028	80020	316	237	7.8	12.5	8.5	--	747	11.0
MAR											
18...	1135	1028	80020	1400	166	7.3	11.5	10.0	.49	745	10.2
APR											
23...	0825	1028	80020	166	271	7.6	5.5	12.5	--	751	8.7
MAY											
13...	0905	1028	80020	124	277	7.8	25.0	20.0	2.5	740	6.0
JUN											
04...	1130	1028	80020	85	288	7.9	29.0	25.5	--	732	6.3
JUL											
15...	1120	1028	80020	54	303	7.8	32.5	26.5	1.4	738	6.9
AUG											
19...	1050	1028	80020	28	307	7.2	30.0	26.5	--	749	5.6
SEP											
24...	1030	1028	80020	88	216	7.1	26.0	22.5	6.6	747	6.6

07194830 ILLINOIS RIVER NEAR PEDRO, AR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)	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)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)	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)
OCT											
20...	106	33	320	142	0	116	--	--	--	<.010	--
NOV											
19...	114	40	160	134	0	110	<1	--	--	<.010	--
DEC											
02...	90	K26	58	167	0	137	--	--	--	<.010	--
JAN											
14...	94	37	210	95	0	78	5	--	--	<.010	--
FEB											
19...	96	K3	21	105	0	86	--	2.08	9.2	.041	.13
MAR											
18...	92	K11	360	88	0	72	28	--	--	<.010	--
APR											
23...	83	<1	K23	128	0	105	--	2.03	9.0	.010	.03
MAY											
13...	68	140	K18	134	0	110	9	1.51	6.7	.016	.05
JUN											
04...	80	140	210	137	0	112	--	1.55	6.9	.011	.04
JUL											
15...	89	130	91	138	0	113	10	--	--	<.010	--
AUG											
19...	71	150	K94	135	0	111	--	1.55	6.9	.012	.04
SEP											
24...	78	K15000	690	103	0	84	12	1.30	5.7	.010	.03

DATE	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, 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, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)
OCT										
20...	1.51	<.015	--	--	<.20	--	.041	.031	.031	.10
NOV										
19...	1.63	<.020	--	--	.15	1.8	.028	.022	.028	.09
DEC										
02...	1.45	<.020	--	--	.14	1.6	.024	.026	<.010	--
JAN										
14...	3.20	<.020	--	--	<.10	--	.073	.057	.064	.20
FEB										
19...	2.12	<.020	--	--	.22	2.3	.041	.045	.051	.16
MAR										
18...	1.49	.155	.20	.28	.44	1.9	.106	.071	.074	.23
APR										
23...	2.04	.023	.03	.18	.20	2.2	<.010	<.010	<.010	--
MAY										
13...	1.53	.030	.04	.19	.22	1.8	--	.058	.023	.07
JUN										
04...	1.56	.032	.04	.24	.28	1.8	.055	.043	.043	.13
JUL										
15...	1.44	.044	.06	.12	.16	1.6	--	.061	.058	.18
AUG										
19...	1.57	.068	.09	.10	.17	1.7	.038	.031	.034	.10
SEP										
24...	1.31	<.020	--	--	.47	1.8	.125	.078	.055	.17

07195400 ILLINOIS RIVER AT SILOAM SPRINGS, AR

LOCATION.--Lat 36°08'41", long 94°29'41", in SW ¼ SW ¼, sec. 15, T.17 N., R.33 W., Benton County, Hydrologic Unit 11110103, at bridge on State Highway 16, 8.2 mi downstream from Osage Creek, and, 4.6 mi southeast of Siloam Springs, Ar.

DRAINAGE AREA.--509 mi^2.

PERIOD OF RECORD.--October 1983 to September 1994, July 1996 to current year.

REMARKS.--Samples were collected monthly. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field. Samples collected by Arkansas Department of Pollution Control and Ecology, Little Rock, Arkansas, from 1983 to 1994, were published by the U.S. Geological Survey, Arkansas District, in Water Resources Data, Arkansas.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)
MAR											
18...	1301	64.0	11.0	744	1028	1028	2440	9.45	184	10.2	7.5
18...	1302	144	10.5	744	1028	1028	2440	9.45	183	10.2	7.4
18...	1303	204	10.5	744	1028	1028	2440	9.45	182	10.1	7.4
JUL											
15...	1234	63.0	28.0	748	1028	1028	200	5.53	338	8.8	7.8
15...	1235	56.0	27.5	748	1028	1028	200	5.53	340	8.0	7.7
15...	1236	49.0	27.5	748	1028	1028	200	5.53	339	7.9	7.7
15...	1237	42.0	27.5	748	1028	1028	200	5.53	339	7.9	7.7
15...	1238	35.0	27.5	748	1028	1028	200	5.53	340	7.8	7.7
15...	1239	28.0	27.5	748	1028	1028	200	5.53	340	7.8	7.7
15...	1240	21.0	27.5	748	1028	1028	200	5.53	340	7.8	7.7
15...	1241	14.0	27.5	748	1028	1028	200	5.53	340	7.8	7.7
15...	1242	7.00	27.5	748	1028	1028	200	5.53	339	7.8	7.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
16...	0840	1028	80020	284	301	7.3	12.5	15.5	--	757	8.5
NOV											
18...	0820	1028	80020	282	303	7.7	4.5	6.5	1.4	754	12.6
DEC											
02...	0800	1028	80020	262	325	7.6	8.0	11.5	--	750	10.0
JAN											
14...	1520	1028	80020	1090	235	7.4	3.0	9.0	5.5	755	10.9
FEB											
19...	1250	1028	80020	580	262	7.9	15.5	9.0	--	751	11.2
MAR											
18...	1300	1028	80020	2440	183	7.4	14.5	10.5	23	744	10.2
APR											
23...	0740	1028	80020	403	300	7.7	3.0	13.0	--	751	8.7
MAY											
13...	0720	1028	80020	415	294	7.8	16.5	20.0	5.0	741	6.7
JUN											
04...	0910	1028	80020	290	304	7.8	28.5	24.5	--	734	6.4
JUL											
15...	1245	1028	80020	200	340	7.7	33.0	27.5	1.4	748	7.8
AUG											
19...	1150	1028	80020	180	334	7.6	33.5	27.0	--	750	7.6
SEP											
23...	1220	1028	80020	390	269	7.2	28.5	23.0	15	750	6.8

07195400 ILLINOIS RIVER AT SILOAM SPRINGS, AR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)	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)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)	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)
OCT											
16...	86	96	580	143	0	117	--	--	--	<.010	--
NOV											
18...	104	25	140	138	0	113	<1	--	--	<.010	--
DEC											
02...	93	78	K550	145	0	119	--	--	--	<.010	--
JAN											
14...	95	21	130	99	0	81	17	--	--	<.010	--
FEB											
19...	99	K10	23	112	0	92	--	--	--	<.010	--
MAR											
18...	94	K20	300	81	0	66	29	2.14	9.5	.010	.03
APR											
23...	84	40	K51	128	0	105	--	2.72	12	.012	.04
MAY											
13...	76	92	K40	139	0	114	<1	2.32	10	.015	.05
JUN											
04...	80	92	180	140	0	115	--	2.23	9.9	.012	.04
JUL											
15...	101	<1	K100	145	0	119	11	--	--	<.010	--
AUG											
19...	97	40	K56	144	0	118	--	2.73	12	.010	.03
SEP											
23...	81	K40000	5000	128	0	105	33	1.71	7.6	.013	.04

DATE	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, 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, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)
OCT										
16...	1.94	<.015	--	--	<.20	--	.287	.239	.212	.65
NOV										
18...	2.29	<.020	--	--	.14	2.4	.148	.156	.157	.48
DEC										
02...	2.49	<.020	--	--	.16	2.6	.169	.163	.138	.42
JAN										
14...	4.17	<.020	--	--	<.10	--	.118	.099	.107	.33
FEB										
19...	2.84	<.020	--	--	.19	3.0	.088	.093	.098	.30
MAR										
18...	2.15	.135	.17	.25	.38	2.5	.116	.092	.095	.29
APR										
23...	2.73	.021	.03	.22	.24	3.0	--	.105	.096	.29
MAY										
13...	2.34	.021	.03	.28	.30	2.6	.285	.121	.128	.39
JUN										
04...	2.24	.039	.05	.21	.25	2.5	.234	.219	.224	.69
JUL										
15...	1.84	.033	.04	.23	.26	2.1	.336	.303	.303	.93
AUG										
19...	2.74	.076	.10	.12	.20	2.9	.227	.195	.048	.15
SEP										
23...	1.73	.037	.05	.43	.47	2.2	.279	.250	.238	.73

07195500 ILLINOIS RIVER NEAR WATTS, OK

LOCATION.--Lat 36°07'48", long 94°34'19", in NW ¼ NE ¼ 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 discharge. Records good. 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)
Jan 5	0500	25,700	21.62	Mar 20	0400	11,100	14.72
Jan 8	1800	8,610	12.60				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	186	218	451	611	690	1150	2260	489	453	198	118	101
2	178	205	404	553	670	974	1600	464	410	200	115	102
3	174	200	419	525	625	861	1360	438	375	197	107	101
4	169	195	528	3990	577	764	1200	412	340	186	113	99
5	162	206	467	16800	546	711	1060	421	320	173	153	97
6	154	221	417	6250	522	1250	969	527	310	162	183	94
7	154	221	383	4720	507	1160	1030	483	285	158	147	89
8	167	217	695	7320	481	4070	1070	470	277	163	137	93
9	276	211	1270	5050	466	2360	910	450	326	169	132	92
10	328	219	875	3230	464	1640	819	628	305	166	138	88
11	252	248	689	2420	1370	1340	747	512	285	156	145	89
12	227	254	578	1910	1480	1140	689	455	272	224	163	89
13	913	283	514	1610	1020	1030	643	416	251	270	158	100
14	865	575	465	1410	862	938	607	386	234	214	206	200
15	469	579	428	1280	754	914	576	370	216	183	176	487
16	368	451	402	1160	722	2290	708	348	209	168	162	297
17	316	385	374	1050	854	3870	648	326	206	157	141	241
18	282	354	348	966	790	3270	575	310	203	150	132	211
19	256	326	334	887	695	5100	537	299	205	145	130	174
20	237	301	322	828	637	7210	508	292	200	138	188	152
21	231	286	486	774	599	3220	490	286	189	132	164	140
22	227	270	1240	719	556	2320	474	279	201	128	143	796
23	223	253	901	674	521	1880	456	270	208	126	133	566
24	226	241	2300	622	509	1610	440	264	188	136	123	301
25	252	235	2560	585	501	1420	426	450	177	133	117	210
26	273	239	1540	872	1670	1270	409	1400	171	126	114	176
27	287	230	1200	1340	2320	1180	704	1710	165	118	115	155
28	253	225	998	1000	1480	1450	924	1020	162	115	116	143
29	238	611	895	867	---	1210	615	741	156	121	114	139
30	229	540	806	774	---	1080	527	716	181	120	112	130
31	225	---	699	710	---	3280	---	544	---	121	106	---
TOTAL	8797	8999	23988	71507	22888	61962	23981	16176	7480	4953	4301	5752
MEAN	284	300	774	2307	817	1999	799	522	249	160	139	192
MAX	913	611	2560	16800	2320	7210	2260	1710	453	270	206	796
MIN	154	195	322	525	464	711	409	264	156	115	106	88
AC-FT	17450	17850	47580	141800	45400	122900	47570	32090	14840	9820	8530	11410
CFSM	.45	.47	1.22	3.63	1.29	3.15	1.26	.82	.39	.25	.22	.30
IN.	.52	.53	1.41	4.19	1.34	3.63	1.40	.95	.44	.29	.25	.34

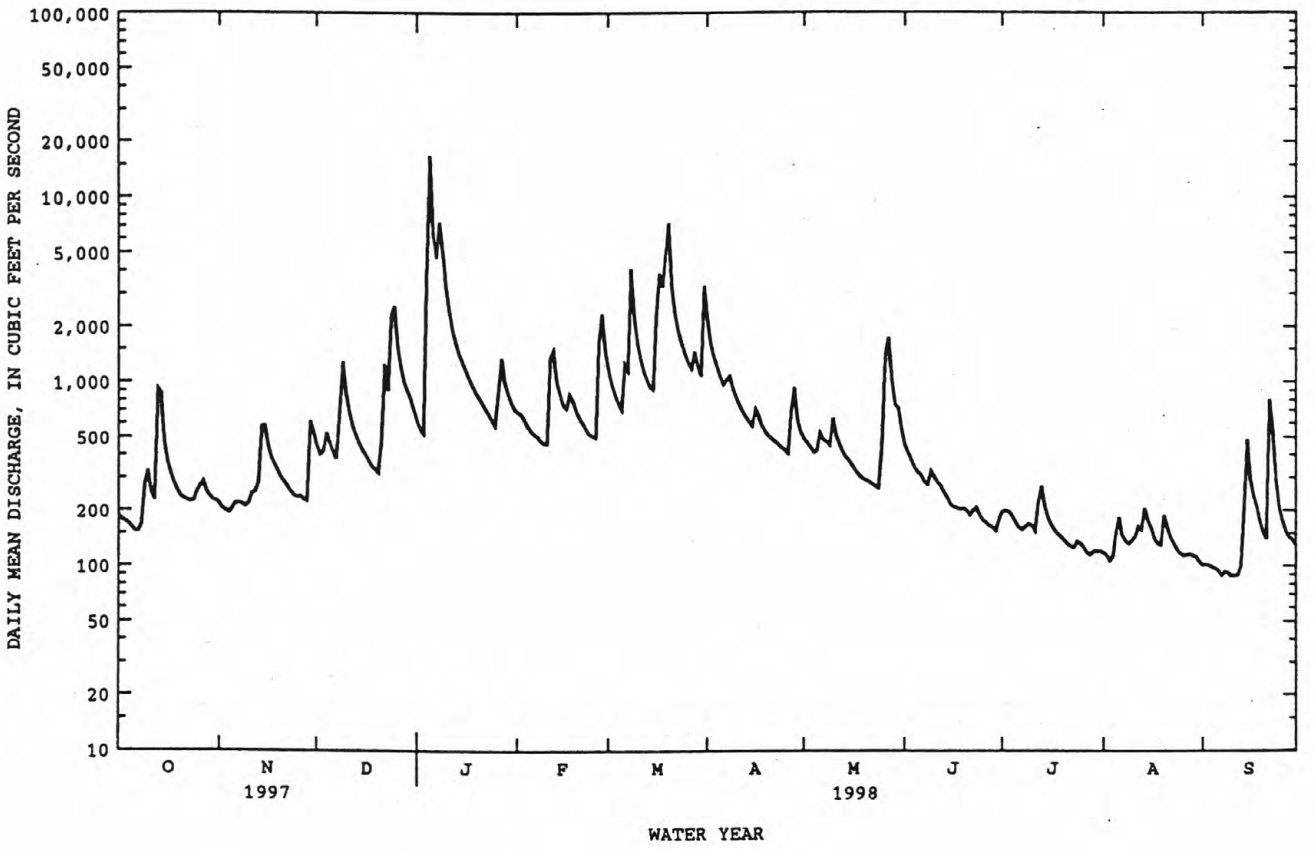
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1998, BY WATER YEAR (WY)

MEAN	369	696	689	595	689	1001	1038	1000	651	340	236	298
MAX	2734	3087	2786	2307	1818	2934	3347	4286	3225	1807	1172	1393
(WY)	1987	1974	1988	1998	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

07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1956 - 1998	
ANNUAL TOTAL	208856		260784			
ANNUAL MEAN	572		714		633	
HIGHEST ANNUAL MEAN					1247	1993
LOWEST ANNUAL MEAN					151	1964
HIGHEST DAILY MEAN	15100	Feb 21	16800	Jan 5	34500	Oct 1 1986
LOWEST DAILY MEAN	150	Sep 7	88	Sep 10	10	Sep 19 1956
ANNUAL SEVEN-DAY MINIMUM	158	Aug 4	91	Sep 6	11	Sep 22 1956
INSTANTANEOUS PEAK FLOW			25700	Jan 5	[a]68000	Jul 25 1960
INSTANTANEOUS PEAK STAGE			21.62	Jan 5	25.96	Jul 25 1960
ANNUAL RUNOFF (AC-FT)	414300		517300		458400	
ANNUAL RUNOFF (CFSM)	.90		1.13		1.00	
ANNUAL RUNOFF (INCHES)	12.24		15.28		13.54	
10 PERCENT EXCEEDS	1180		1400		1270	
50 PERCENT EXCEEDS	336		375		293	
90 PERCENT EXCEEDS	176		132		97	

[a]From rating curve extended above 51,000 ft^3/s.



07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1989 to July 1995, July 1996 to current year.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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...	1330	112	8.0	744	1028	1028	462	3.15	272	11.7	7.8
09...	1331	102	8.0	744	1028	1028	462	3.15	273	11.7	7.8
09...	1332	92.0	8.0	744	1028	1028	462	3.15	273	11.7	7.8
09...	1333	82.0	8.0	744	1028	1028	462	3.15	273	11.7	7.8
09...	1334	72.0	8.0	744	1028	1028	462	3.15	273	11.8	7.8
09...	1335	62.0	8.0	744	1028	1028	462	3.15	273	11.8	7.9
09...	1336	52.0	8.0	744	1028	1028	462	3.15	273	11.8	7.9
09...	1337	42.0	8.0	744	1028	1028	462	3.15	273	11.8	7.9
09...	1338	32.0	8.0	744	1028	1028	462	3.15	273	11.9	7.9
09...	1339	22.0	8.0	744	1028	1028	462	3.15	273	11.9	7.9
09...	1340	12.0	8.0	744	1028	1028	462	3.15	273	11.9	7.9
MAY											
13...	0851	10.0	21.0	748	1028	1028	420	3.04	278	8.4	7.6
13...	0852	20.0	21.0	748	1028	1028	420	3.04	277	8.6	7.6
13...	0853	30.0	21.0	748	1028	1028	420	3.04	277	8.5	7.6
13...	0854	40.0	21.0	748	1028	1028	420	3.04	277	8.7	7.6
13...	0855	50.0	21.0	748	1028	1028	420	3.04	278	8.7	7.6
13...	0856	60.0	21.0	748	1028	1028	420	3.04	278	8.7	7.6
13...	0857	70.0	21.0	748	1028	1028	420	3.04	278	8.7	7.6
13...	0858	80.0	21.0	748	1028	1028	420	3.04	278	8.8	7.6
13...	0859	90.0	21.0	748	1028	1028	420	3.04	278	8.8	7.7
13...	0900	100	21.0	748	1028	1028	420	3.04	277	8.8	7.7
13...	0901	110	21.0	748	1028	1028	420	3.04	278	8.8	7.7
13...	0902	120	21.0	748	1028	1028	420	3.04	277	8.8	7.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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...	1515	1028	80020	236	322	7.6	18.5	16.5	--	753	10.0	104
NOV												
18...	0950	1028	80020	355	298	7.7	12.0	7.0	2.7	755	13.5	112
DEC												
02...	1330	1028	80020	398	304	7.5	12.5	11.5	--	748	11.6	108
JAN												
23...	1210	1028	80020	673	276	7.3	4.0	7.5	2.3	752	11.7	99
FEB												
09...	1520	1028	80020	462	273	7.9	11.5	8.0	--	744	11.8	102
MAR												
24...	1200	1028	80020	1600	227	7.2	18.0	12.5	4.5	757	11.1	105
APR												
23...	1100	1028	80020	455	283	8.0	10.0	14.0	--	754	10.6	104
MAY												
13...	0850	1028	80020	420	278	7.6	20.0	21.0	7.2	748	8.7	100
JUN												
23...	1437	1028	80020	204	324	7.6	34.0	28.0	--	748	8.2	106
JUL												
15...	1500	1028	80020	180	316	7.9	33.0	28.5	6.9	748	8.4	111
AUG												
19...	1335	1028	80020	128	328	7.9	36.5	29.0	--	750	8.3	110
SEP												
23...	1455	1028	80020	492	293	7.4	27.5	24.0	8.8	751	8.6	103

07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	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											
20...	39	--	200	--	--	--	--	--	--	--	--
NOV											
18...	K11	K5	110	120	9	45	2.3	11	16	.4	3.7
DEC											
02...	42	--	160	--	--	--	--	--	--	--	--
JAN											
23...	K8	19	130	100	4	39	1.9	7.7	13	.3	2.7
FEB											
09...	K1	--	<1	--	--	--	--	--	--	--	--
MAR											
24...	K3	K2	290	99	27	36	1.9	5.4	10	.2	2.5
APR											
23...	<1	--	K44	--	--	--	--	--	--	--	--
MAY											
13...	310	<1	<1	110	8	42	1.8	9.2	15	.4	3.2
JUN											
23...	<1	--	K40	--	--	--	--	--	--	--	--
JUL											
15...	<1	K10	K31	120	5	46	1.9	13	18	.5	3.9
AUG											
19...	31	--	K44	--	--	--	--	--	--	--	--
SEP											
23...	K28000	K8000	1400	110	10	41	1.9	11	18	.5	4.2

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)	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)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)
OCT											
20...	139	0	114	--	--	--	--	--	--	--	--
NOV											
18...	138	0	113	14	13	177	166	.24	170	6	--
DEC											
02...	139	0	114	--	--	--	--	--	--	--	--
JAN											
23...	122	0	100	11	10	166	150	.23	302	<1	--
FEB											
09...	124	0	102	--	--	--	--	--	--	--	--
MAR											
24...	87	0	71	8.0	6.9	137	119	.19	592	15	--
APR											
23...	134	0	110	--	--	--	--	--	--	--	2.45
MAY											
13...	128	0	105	9.5	9.5	162	148	.22	184	22	2.02
JUN											
23...	156	0	128	--	--	--	--	--	--	--	1.88
JUL											
15...	142	0	116	9.8	14	186	165	.25	90.4	26	1.42
AUG											
19...	139	0	114	--	--	--	--	--	--	--	.854
SEP											
23...	123	0	101	13	13	180	152	.24	239	38	1.53

07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	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 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-PHORUS DIS-SOLVED (MG/L AS P) (00666)
OCT											
20...	--	<.010	--	1.87	<.015	--	--	<.20	--	.193	.164
NOV											
18...	--	<.010	--	2.02	<.020	--	--	.16	2.2	.105	.099
DEC											
02...	--	<.010	--	2.33	<.020	--	--	.37	2.7	.118	.088
JAN											
23...	--	<.010	--	4.10	<.020	--	--	<.10	--	.148	.151
FEB											
09...	--	<.010	--	3.16	<.020	--	--	.17	3.3	.059	.056
MAR											
24...	--	<.010	--	3.42	.102	.13	.04	.14	3.6	.071	.062
APR											
23...	11	.012	.04	2.46	.026	.03	.21	.23	2.7	.067	.056
MAY											
13...	9.0	.016	.05	2.04	.033	.04	.18	.21	2.3	.060	.081
JUN											
23...	8.3	.010	.03	1.88	.053	.07	.14	.19	2.1	.171	.154
JUL											
15...	6.3	.011	.04	1.43	.032	.04	.26	.29	1.7	.282	.217
AUG											
19...	3.8	.012	.04	.866	.061	.08	.14	.20	1.1	.165	.142
SEP											
23...	6.8	.012	.04	1.55	.038	.05	--	--	--	.177	.150

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	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)	CHLORO-HPYLL A PHYTO-PLANK-TON ACID M. (UG/L) (32211)	PHEO-PHYTIN PHYTO-PLANK-TON, ACID M. (UG/L) (32218)	CHLORO-PHYLL A PHYTO-PLANK-TON, UNCORR. (UG/L) (32230)	CHLORO-PHYLL B PHYTO-PLANK-TON, UNCORR. (UG/L) (32231)	CHLORO-PHYLL C PHYTO-PLANK-TON, UNCORR. (UG/L) (32232)
OCT											
20...	.153	.47	--	--	--	--	--	--	--	--	--
NOV											
18...	.122	.37	35	27	26	95	<1.00	<1.00	<1.00	<1.00	<1.00
DEC											
02...	.087	.27	--	--	--	--	--	--	--	--	--
JAN											
23...	.136	.42	18	28	51	95	<1.00	<1.00	<1.00	<1.00	<1.00
FEB											
09...	.056	.17	--	--	--	--	--	--	--	--	--
MAR											
24...	.073	.22	19	--	--	--	<1.00	2.00	1.00	<1.00	<1.00
APR											
23...	.060	.18	--	--	--	--	--	--	--	--	--
MAY											
13...	.083	.25	23	46	52	98	<1.00	11.0	7.00	<1.00	<1.00
JUN											
23...	.163	.50	--	--	--	--	--	--	--	--	--
JUL											
15...	.231	.71	30	56	27	93	3.00	2.00	4.00	<1.00	<1.00
AUG											
19...	.142	.44	--	--	--	--	--	--	--	--	--
SEP											
23...	.137	.42	32	--	--	--	<1.00	3.00	1.00	<1.00	<1.00

07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	BROM-ACIL WATER WHLREC (UG/L) (30234)	BUTA-CHLOR WATER WHLREC (UG/L) (30235)	BUTYL-ATE WATER WHLREC (UG/L) (30236)	CARBOX-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)	PCNS UNFILT RECOVER (UG/L) (39250)	HEXAZI-NONE WATER WHOLE RECOV-ERABLE (UG/L) (30264)
JUN 23...	1437	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200
AUG 19...	1335	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200

DATE	METOLA-CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	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)	AME-TRYNE TOTAL (UG/L) (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, TECH-NICAL TOTAL (UG/L) (39350)
JUN 23...	<.200	<.100	<.100	<.200	<.100	<.100	<.010	<.100	<.100	<.200	<.200	<.100
AUG 19...	<.200	<.100	<.100	<.200	<.100	<.100	<.010	<.100	<.100	<.200	<.200	<.100

DATE	CYAN-AZINE TOTAL (UG/L) (81757)	2,4-D, TOTAL (UG/L) (39730)	P,P'-DDD UNFILT RECOVER (UG/L) (39360)	P,P'-DDE, TOTAL (UG/L) (39365)	P,P'-DDT UNFILT RECOVER (UG/L) (39370)	DI-ELDRIN TOTAL (UG/L) (39380)	2,4-DP TOTAL (UG/L) (82183)	ENDO-SULFAN I TOTAL (UG/L) (39388)	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	HEPTA-CHLOR, TOTAL (UG/L) (39410)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)
JUN 23...	<.200	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010
AUG 19...	<.200	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010

DATE	METH-OXY-CHLOR, TOTAL (UG/L) (39480)	MIREX, TOTAL (UG/L) (39755)	PER-THANE TOTAL (UG/L) (39034)	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)
JUN 23...	<.010	<.010	<.100	<.200	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<.100
AUG 19...	<.010	<.010	<.100	<.200	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<.100

07195610 ILLINOIS RIVER ABOVE FLINT CREEK NEAR FLINT, OK

LOCATION.--Lat 36°10'26", long 94°43'14", in NE ¼ NW ¼, sec. 35, T.20 N., R.24 E., Delaware County, Hydrologic Unit 11110103, at Fiddlers Bend, 100 ft upstream from Flint Creek, and 1.4 mi southwest of Flint, Ok.

PERIOD OF RECORD.--July 1996 to current year.

REMARKS.--Samples were collected bi-monthly when site is wadeable. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field. No samples collected January and March 1998 due to discharge too great to wade.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
NOV										
19...	0940	20.0	7.0	757	1028	1028	315	294	12.8	7.8
19...	0941	40.0	7.0	757	1028	1028	315	294	12.7	7.8
19...	0942	60.0	7.0	757	1028	1028	315	295	12.5	7.8
MAY										
12...	1120	4.00	21.5	743	1028	1028	489	269	10.7	8.2
12...	1121	14.0	21.0	743	1028	1028	489	271	10.0	7.9
12...	1122	24.0	20.5	743	1028	1028	489	271	10.0	7.9
12...	1123	34.0	20.5	743	1028	1028	489	271	9.7	7.8
12...	1124	44.0	20.5	743	1028	1028	489	271	9.6	7.8
12...	1125	54.0	20.5	743	1028	1028	489	271	9.4	7.8
12...	1126	64.0	20.0	743	1028	1028	489	271	9.2	7.7
12...	1127	74.0	20.0	743	1028	1028	489	272	9.1	7.7
12...	1128	84.0	20.0	743	1028	1028	489	271	8.8	7.6
JUL										
15...	0910	9.00	27.0	750	1028	1028	225	309	6.3	7.3
15...	0911	16.0	27.0	750	1028	1028	225	308	6.4	7.4
15...	0912	23.0	27.5	750	1028	1028	225	308	6.5	7.5
15...	0913	30.0	27.5	750	1028	1028	225	309	6.6	7.5
15...	0914	37.0	27.5	750	1028	1028	225	309	6.7	7.5
15...	0915	42.0	27.5	750	1028	1028	225	309	6.8	7.5
15...	0916	51.0	27.5	750	1028	1028	225	308	7.0	7.5
15...	0917	58.0	27.5	750	1028	1028	225	308	7.3	7.6
15...	0918	65.0	27.5	750	1028	1028	225	308	7.9	7.6

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
19...	0935	1028	80020	315	294	7.8	4.0	7.0	1.5	757	12.7
MAY											
12...	1110	1028	80020	489	271	7.8	26.0	20.5	3.5	743	9.6
JUL											
15...	0935	1028	80020	225	309	7.5	25.5	27.5	.48	750	6.7
SEP											
02...	1415	1028	80020	104	335	7.9	34.0	29.5	.75	745	9.0

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)	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)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)	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)
NOV											
19...	105	64	85	135	0	111	<1	--	--	<.010	--
MAY											
12...	110	K1	84	131	0	107	4	1.62	7.2	.014	.05
JUL											
15...	86	K2	K48	153	0	125	3	--	--	<.010	--
SEP											
02...	120	K1	K14	154	0	126	5	.704	3.1	.014	.05

07195610 ILLINOIS RIVER ABOVE FLINT CREEK NEAR FLINT, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	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,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-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
NOV										
19...	1.82	<.020	--	--	<.10	--	.093	.097	.107	.33
MAY										
12...	1.63	.041	.05	.16	.20	1.8	.117	--	.068	.21
JUL										
15...	1.22	<.020	--	--	.15	1.4	.242	.226	.214	.66
SEP										
02...	.718	.087	.11	.10	.19	.91	.142	.148	.148	.45

07195855 FLINT CREEK NEAR WEST SILOAM SPRINGS, OK

LOCATION.--Lat 36°12'58", long 94°36'15", in NE ¼ NE ¼ sec.14, T.20 N., R.25 E., Delaware County, Oklahoma, Hydrologic Unit 11110103, on left bank 800 ft downstream from county bridge, 2.5 mi from Arkansas-Oklahoma State line, northwest of West Siloam Springs, Oklahoma.

DRAINAGE AREA.--59.8 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 958.00 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Flow is partially regulated by Lake Siloam Springs, 4.5 mi upstream, and sewage discharge into Flint Creek from city of Gentry.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	12	52	42	50	40	81	37	69	19	5.6	2.0
2	6.3	12	42	42	48	38	79	35	52	17	5.6	2.1
3	6.1	12	43	39	46	36	76	35	44	12	5.6	2.1
4	5.9	12	38	290	44	34	73	34	40	12	5.6	2.1
5	6.1	15	35	353	42	33	68	34	38	12	5.4	2.1
6	6.1	18	32	296	40	33	66	35	34	12	4.4	2.0
7	6.5	18	30	248	39	44	69	37	31	11	3.8	2.0
8	8.0	16	54	382	39	112	67	36	31	11	4.3	1.8
9	13	15	68	293	37	105	66	40	32	13	5.3	1.8
10	13	17	63	203	36	89	61	42	28	10	8.6	1.6
11	11	18	53	163	41	79	58	39	29	8.7	6.4	1.7
12	11	18	45	140	41	70	56	38	26	15	6.1	1.9
13	37	21	40	121	41	64	57	36	23	10	5.7	3.0
14	32	28	36	107	40	60	54	35	22	8.3	6.7	42
15	22	29	33	96	39	57	53	32	19	5.7	6.2	31
16	18	28	31	86	40	115	52	29	19	5.5	5.1	18
17	16	28	29	80	42	185	48	28	18	5.3	4.9	13
18	14	28	28	74	46	169	48	28	18	5.0	3.0	9.3
19	13	27	25	67	46	269	46	26	18	5.9	1.7	6.7
20	11	24	25	62	43	324	46	26	18	5.9	1.3	5.5
21	11	22	31	57	35	209	45	26	17	5.4	1.2	4.9
22	11	20	37	55	33	170	44	26	18	5.0	1.1	5.6
23	9.8	20	38	52	32	148	44	26	17	4.2	1.1	6.3
24	11	18	78	48	29	130	44	26	16	7.0	1.1	5.7
25	12	19	105	48	30	118	43	91	14	7.8	1.0	4.8
26	12	20	88	58	47	109	45	160	12	7.4	1.1	3.9
27	12	19	74	57	44	106	56	181	11	6.3	2.0	3.5
28	12	18	65	54	42	102	49	142	11	7.3	2.1	3.5
29	12	67	59	54	---	93	47	116	11	8.8	2.2	3.5
30	12	67	52	52	---	86	44	99	14	6.7	2.1	3.5
31	12	---	46	49	---	90	---	84	---	6.1	2.0	---
TOTAL	388.9	686	1475	3768	1132	3317	1685	1659	750	276.3	118.3	196.9
MEAN	12.5	22.9	47.6	122	40.4	107	56.2	53.5	25.0	8.91	3.82	6.56
MAX	37	67	105	382	50	324	81	181	69	19	8.6	42
MIN	5.9	12	25	39	29	33	43	26	11	4.2	1.0	1.6
AC-FT	771	1360	2930	7470	2250	6580	3340	3290	1490	548	235	391

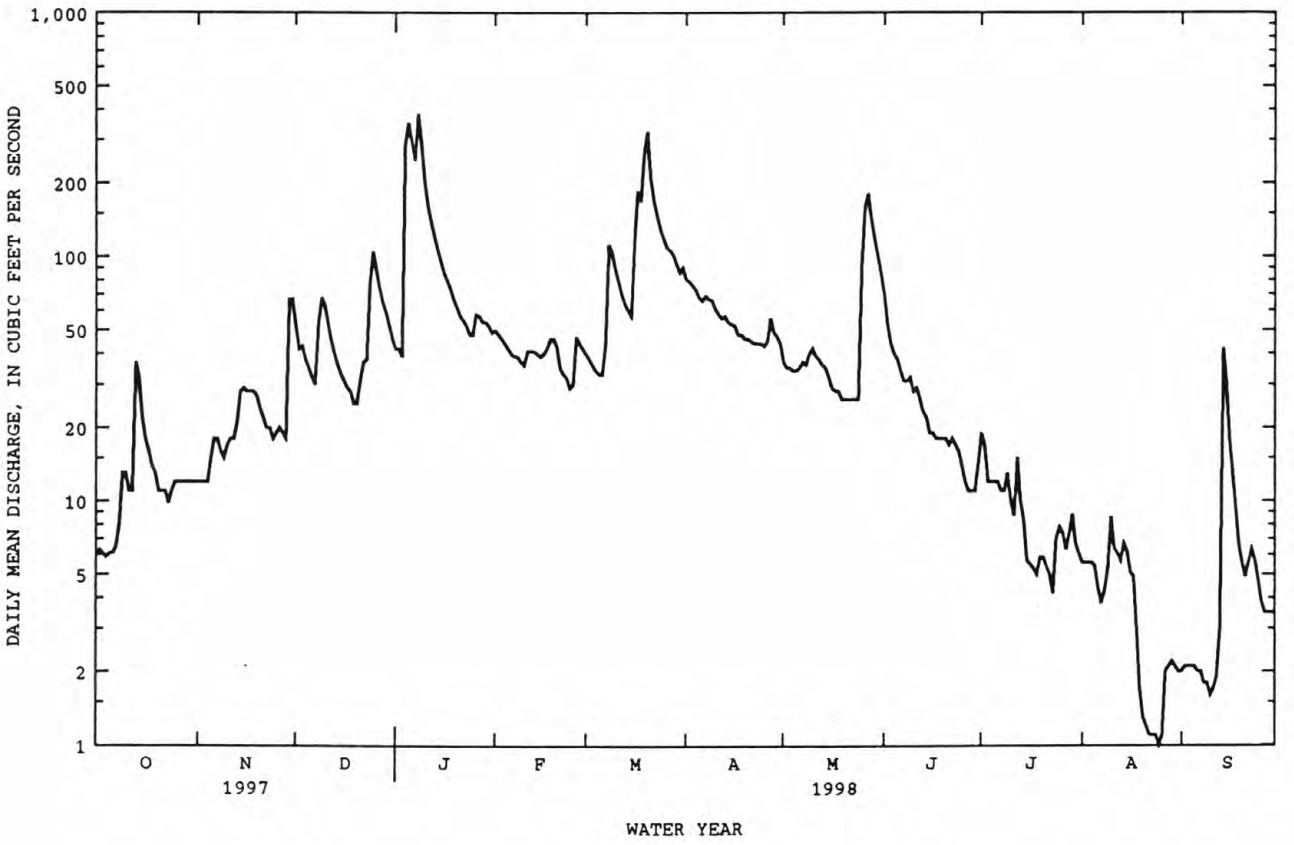
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1998, BY WATER YEAR (WY)

MEAN	31.2	56.3	70.7	53.5	54.9	76.7	69.9	66.6	50.6	20.9	16.1	21.9
MAX	199	149	219	123	120	176	143	251	169	55.0	35.6	132
(WY)	1987	1994	1993	1985	1989	1985	1985	1990	1995	1995	1986	1986
MIN	3.48	3.86	6.62	3.88	4.37	7.04	7.43	20.9	9.72	2.79	.77	1.80
(WY)	1981	1981	1980	1980	1981	1981	1981	1981	1981	1980	1980	1980

07195855 FLINT CREEK NEAR WEST SILOAM SPRINGS, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1980 - 1998	
ANNUAL TOTAL	13600.5		15452.4			
ANNUAL MEAN	37.3		42.3		49.1	
HIGHEST ANNUAL MEAN					97.9	1985
LOWEST ANNUAL MEAN					10.7	1981
HIGHEST DAILY MEAN	1280	Feb 21	382	Jan 8	2560	Sep 30 1986
LOWEST DAILY MEAN	2.9	Jul 28	1.0	Aug 25	.40	Aug 7 1980
ANNUAL SEVEN-DAY MINIMUM	4.3	Jul 22	1.1	Aug 20	.56	Aug 5 1980
INSTANTANEOUS PEAK FLOW			610	Jan 4	[a]6650	May 3 1990
INSTANTANEOUS PEAK STAGE			6.42	Jan 4	12.67	May 3 1990
ANNUAL RUNOFF (AC-FT)	26980		30650		35540	
10 PERCENT EXCEEDS	73		89		105	
50 PERCENT EXCEEDS	27		30		27	
90 PERCENT EXCEEDS	6.1		4.6		6.7	

[a]From rating curve extended above 3,3000 ft^3/s.



07195855 FLINT CREEK NEAR WEST SILOAM SPRINGS, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June to September 1979, October 1983 to current year.

REMARKS.--Samples were collected monthly. Specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field. Samples collected by Arkansas Department of Pollution Control and Ecology, Little Rock, Arkansas, from 1983 to 1994, were published by the U.S. Geological Survey, Arkansas District, in Water Resources Data, Arkansas.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
10...	0940	30.0	9.5	743	1028	1028	22	3.66	279	9.7	7.7
10...	0941	25.0	9.5	743	1028	1028	22	3.66	280	9.8	7.7
10...	0942	20.0	9.5	743	1028	1028	22	3.66	280	9.9	7.7
10...	0943	15.0	9.5	743	1028	1028	22	3.66	280	9.8	7.7
10...	0944	10.0	9.5	743	1028	1028	22	3.66	280	9.9	7.7
10...	0946	5.00	9.5	743	1028	1028	22	3.66	280	9.6	7.7
MAR											
11...	1307	4.00	7.0	764	1028	1028	65	4.08	238	12.4	7.9
11...	1308	8.00	7.0	764	1028	1028	65	4.08	239	12.3	7.9
11...	1309	12.0	7.0	764	1028	1028	65	4.08	239	12.3	7.9
11...	1310	16.0	7.0	764	1028	1028	65	4.08	239	12.3	7.9
11...	1311	20.0	7.0	764	1028	1028	65	4.08	239	12.3	7.9
11...	1312	24.0	7.0	764	1028	1028	65	4.08	238	12.3	7.9
11...	1313	28.0	7.0	764	1028	1028	65	4.08	239	12.3	7.9
11...	1314	32.0	7.0	764	1028	1028	65	4.08	238	12.2	7.8
MAY											
12...	1400	32.0	22.0	740	1028	1028	37	3.76	269	8.6	7.5
12...	1401	28.0	22.0	740	1028	1028	37	3.76	269	8.4	7.5
12...	1402	24.0	22.0	740	1028	1028	37	3.76	268	8.5	7.6
12...	1403	20.0	22.0	740	1028	1028	37	3.76	268	8.5	7.6
12...	1404	16.0	22.0	740	1028	1028	37	3.76	268	8.6	7.6
12...	1405	12.0	22.0	740	1028	1028	37	3.76	268	8.5	7.6
12...	1406	8.00	22.0	740	1028	1028	37	3.76	269	8.6	7.6
12...	1407	4.00	22.5	740	1028	1028	37	3.76	268	8.4	7.6

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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												
16...	0940	1028	80020	12	305	7.1	13.0	16.5	--	756	7.6	79
NOV												
19...	1615	1028	80020	26	291	7.7	14.0	10.0	.43	750	11.9	107
DEC												
01...	1710	1028	80020	44	273	7.3	9.5	12.0	--	750	10.7	101
JAN												
13...	1325	1028	80020	114	216	7.3	9.0	3.0	1.9	755	11.1	83
FEB												
10...	0945	1028	80020	22	280	7.7	11.5	9.5	--	743	9.8	88
MAR												
11...	1330	1028	80020	65	239	7.9	-1.0	7.0	.53	764	12.3	102
APR												
23...	1015	1028	80020	36	300	7.6	18.0	14.5	--	749	9.4	94
MAY												
12...	1355	1028	80020	37	268	7.6	26.5	22.0	2.0	740	8.6	101
JUN												
03...	1200	1028	80020	57	286	7.8	31.5	24.5	--	732	6.6	83
JUL												
14...	0950	1028	80020	19	298	7.4	30.5	24.0	1.5	738	5.5	68
AUG												
18...	1345	1028	80020	17	295	7.0	36.5	25.5	--	749	6.9	86
SEP												
22...	1015	1028	80020	28	319	7.2	27.0	22.5	.89	743	5.3	63

07195855 FLINT CREEK NEAR WEST SILOAM SPRINGS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	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)
OCT											
16...	38	--	450	--	--	--	--	--	--	--	--
NOV											
19...	52	38	170	110	11	42	2.1	12	18	.5	2.9
DEC											
01...	410	--	270	--	--	--	--	--	--	--	--
JAN											
13...	28	17	220	93	25	34	1.9	5.8	12	.3	2.9
FEB											
10...	K10	--	140	--	--	--	--	--	--	--	--
MAR											
11...	<1	<1	K31	100	18	39	1.8	8.3	14	.4	2.5
APR											
23...	83	--	K40	--	--	--	--	--	--	--	--
MAY											
12...	K20	K10	<1	100	8	38	1.9	11	18	.5	2.8
JUN											
03...	80	--	81	--	--	--	--	--	--	--	--
JUL											
14...	K390	170	250	110	11	40	2.1	14	21	.6	3.4
AUG											
18...	<1	--	K33	--	--	--	--	--	--	--	--
SEP											
22...	K940	160	760	120	44	43	2.2	15	21	.6	3.7

DATE	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)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	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)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)
OCT											
16...	130	0	106	--	--	--	--	--	--	--	--
NOV											
19...	126	0	103	21	10	168	161	.23	11.8	<1	--
DEC											
01...	124	0	102	--	--	--	--	--	--	--	--
JAN											
13...	83	0	68	12	7.3	143	126	.19	44.0	2	--
FEB											
10...	115	0	94	--	--	--	--	--	--	--	--
MAR											
11...	105	0	86	12	8.4	143	138	.19	25.1	<1	--
APR											
23...	117	0	96	--	--	--	--	--	--	--	--
MAY											
12...	115	0	94	19	9.0	164	145	.22	16.4	4	1.51
JUN											
03...	116	0	95	--	--	--	--	--	--	--	1.48
JUL											
14...	120	0	98	26	10	182	158	.25	9.34	3	--
AUG											
18...	120	0	98	--	--	--	--	--	--	--	--
SEP											
22...	88	0	72	30	12	185	152	.25	14.0	3	--

07195855 FLINT CREEK NEAR WEST SILOAM SPRINGS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	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 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-PHORUS DIS-SOLVED (MG/L AS P) (00666)
OCT											
16...	--	<.010	--	1.03	<.015	--	--	<.20	--	.038	.024
NOV											
19...	--	<.010	--	1.88	<.020	--	--	.17	2.0	.018	.029
DEC											
01...	--	<.010	--	1.88	<.020	--	--	.19	2.1	.031	<.010
JAN											
13...	--	<.010	--	4.77	<.020	--	--	<.10	--	.037	.040
FEB											
10...	--	<.010	--	3.04	<.020	--	--	<.10	--	<.010	<.010
MAR											
11...	--	<.010	--	3.31	.110	.14	.01	.13	3.4	.018	<.010
APR											
23...	--	<.010	--	1.74	.023	.03	.14	.17	1.9	.020	<.010
MAY											
12...	6.7	.011	.04	1.52	.041	.05	.11	.15	1.7	.015	--
JUN											
03...	6.5	.014	.05	1.49	.037	.05	.19	.23	1.7	.072	.038
JUL											
14...	--	<.010	--	.521	.032	.04	.16	.19	.71	.035	.024
AUG											
18...	--	<.010	--	.438	.046	.06	.08	.12	.56	.025	.013
SEP											
22...	--	<.010	--	.572	.022	.03	.13	.15	.72	.101	.098

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	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)	CHLORO-HPYLL A PHYTO-PLANK-TON ACID M. (UG/L) (32211)	PHEO-PHYTIN PHYTO-PLANK-TON, ACID M. (UG/L) (32218)	CHLORO-PHYLL A PHYTO-PLANK-TON, UNCORR. (UG/L) (32230)	CHLORO-PHYLL B PHYTO-PLANK-TON, UNCORR. (UG/L) (32231)	CHLORO-PHYLL C PHYTO-PLANK-TON, UNCORR. (UG/L) (32232)
OCT											
16...	.022	.07	--	--	--	--	--	--	--	--	--
NOV											
19...	.038	.12	1.4	35	2.5	100	<1.00	2.00	1.00	<1.00	<1.00
DEC											
01...	<.010	--	--	--	--	--	--	--	--	--	--
JAN											
13...	.047	.14	<4.0	31	9.5	96	<1.00	2.00	<1.00	<1.00	<1.00
FEB											
10...	.017	.05	--	--	--	--	--	--	--	--	--
MAR											
11...	.026	.08	<4.0	24	4.2	90	<1.00	2.00	1.00	<1.00	<1.00
APR											
23...	.019	.06	--	--	--	--	--	--	--	--	--
MAY											
12...	.040	.12	6.8	35	3.5	98	<1.00	2.00	1.00	<1.00	<1.00
JUN											
03...	.043	.13	--	--	--	--	--	--	--	--	--
JUL											
14...	.036	.11	16	84	4.3	38	<1.00	2.00	<1.00	<1.00	<1.00
AUG											
18...	.033	.10	--	--	--	--	--	--	--	--	--
SEP											
22...	.042	.13	12	21	1.6	95	<1.00	2.00	<1.00	<1.00	<1.00

07191300 Spavinaw Lake near Spavinaw, OK

07195865 SAGER CREEK NEAR WEST SILOAM SPRINGS, OK

LOCATION.--Lat 36°12'06", long 94°36'18", in NE ¼ NE ¼ sec.23, T.20 N., R.25 E., Delaware County, Hydrologic Unit 11110103, on right bank 1.4 mi upstream from Flint Creek, 2.4 mi northeast of West Siloam Springs.

DRAINAGE AREA.--18.9 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is 961.90 ft above sea level from topographic map.

REMARKS.--Records poor. Low flow sustained in part by sewage effluent from Siloam Springs, Ar. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	6.2	23	e17	19	e28	24	15	14	11	3.8	3.8
2	4.0	6.1	20	e15	19	e25	21	12	13	9.5	e3.5	3.8
3	3.8	7.6	22	e14	18	e22	21	11	12	8.5	3.8	3.8
4	2.9	7.8	19	309	17	e20	19	13	11	7.2	4.8	3.6
5	2.8	14	17	133	17	e19	19	14	11	5.7	4.8	2.6
6	3.2	11	16	130	17	e30	20	14	8.8	7.1	5.1	2.1
7	3.3	9.0	15	109	17	53	27	13	7.5	6.8	4.5	2.1
8	4.6	6.6	62	230	15	74	23	12	11	8.4	e4.2	3.2
9	8.3	6.1	33	98	16	37	20	15	12	8.1	3.8	3.4
10	6.7	11	27	65	16	29	19	14	11	7.1	6.0	3.8
11	3.8	11	24	53	21	25	17	13	12	5.9	5.9	4.2
12	5.3	9.6	22	46	19	23	16	12	11	19	6.7	5.1
13	35	20	20	39	17	24	18	12	8.5	11	5.6	20
14	15	23	19	34	15	23	18	11	7.5	8.7	6.2	83
15	12	15	e17	29	14	24	18	11	8.2	7.8	4.5	22
16	11	11	e16	26	17	122	16	9.5	8.2	7.3	e4.2	20
17	9.3	12	e15	23	17	94	15	6.9	8.0	7.4	4.8	14
18	8.3	11	e15	19	16	57	13	9.6	7.6	5.7	5.1	11
19	6.9	11	e14	19	16	204	13	9.5	8.0	4.3	5.0	8.3
20	8.4	11	e14	18	15	88	14	9.0	6.7	6.4	6.0	6.3
21	8.4	10	e13	16	13	52	14	8.2	5.9	6.6	5.1	8.3
22	8.3	7.7	e12	17	13	39	13	8.5	7.4	5.9	4.5	9.1
23	8.7	6.8	e11	19	16	34	13	7.4	7.3	6.8	e4.1	7.8
24	8.8	8.4	81	18	16	31	12	6.0	7.1	7.2	e4.2	6.9
25	7.0	8.7	50	17	31	28	10	62	7.0	5.7	e4.2	6.8
26	6.5	8.4	39	36	51	27	9.4	116	7.5	e4.2	4.2	5.1
27	7.6	6.5	e34	27	39	28	30	37	5.7	4.8	3.8	3.7
28	7.5	7.7	e29	24	e32	27	19	25	5.1	5.8	3.8	5.6
29	7.2	89	e25	22	---	23	16	20	6.5	5.8	4.0	6.1
30	7.4	30	e22	21	---	24	16	17	8.1	5.2	2.5	6.2
31	7.5	---	e19	19	---	28	---	14	---	5.3	3.4	---
TOTAL	243.7	403.2	765	1662	549	1362	523.4	557.6	264.6	226.2	142.1	291.7
MEAN	7.86	13.4	24.7	53.6	19.6	43.9	17.4	18.0	8.82	7.30	4.58	9.72
MAX	35	89	81	309	51	204	30	116	14	19	6.7	83
MIN	2.8	6.1	11	14	13	19	9.4	6.0	5.1	4.2	2.5	2.1
AC-FT	483	800	1520	3300	1090	2700	1040	1110	525	449	282	579

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

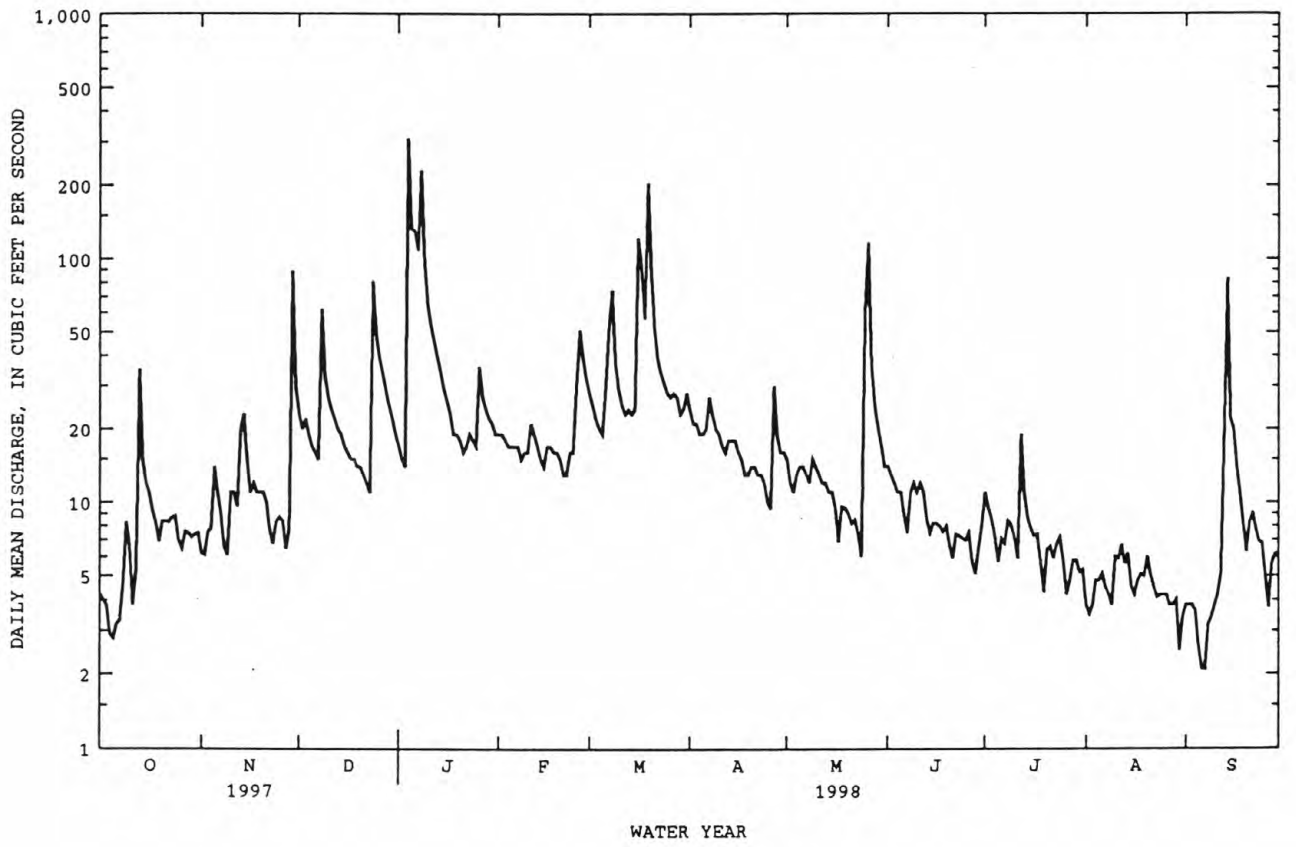
MEAN	9.10	34.0	23.6	32.7	36.4	40.7	20.4	14.9	11.4	6.50	6.69	7.43
MAX	10.3	54.7	24.7	53.6	53.2	43.9	23.3	18.0	13.9	7.30	8.79	9.72
(WY)	1997	1997	1998	1998	1997	1998	1997	1998	1997	1998	1997	1998
MIN	7.86	13.4	22.5	11.7	19.6	37.4	17.4	11.8	8.82	5.70	4.58	5.14
(WY)	1998	1998	1997	1997	1998	1997	1998	1997	1998	1997	1998	1997

e Estimated

07195865 SAGER CREEK NEAR WEST SILOAM SPRINGS, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1996 - 1998	
ANNUAL TOTAL	6506.5		6990.5			
ANNUAL MEAN	17.8		19.2		20.2	
HIGHEST ANNUAL MEAN					21.2	1997
LOWEST ANNUAL MEAN					19.2	1998
HIGHEST DAILY MEAN	537	Feb 21	309	Jan 4	537	Feb 21 1997
LOWEST DAILY MEAN	2.0	Aug 3	2.1	Sep 6	[a]2.0	Aug 3 1997
ANNUAL SEVEN-DAY MINIMUM	2.8	Jul 31	3.0	Sep 3	2.8	Jul 31 1997
INSTANTANEOUS PEAK FLOW			789	Jan 4	3400	Feb 20 1997
INSTANTANEOUS PEAK STAGE			8.13	Jan 4	12.27	Feb 20 1997
ANNUAL RUNOFF (AC-FT)	12910		13870		14630	
10 PERCENT EXCEEDS	33		33		34	
50 PERCENT EXCEEDS	11		12		12	
90 PERCENT EXCEEDS	3.8		4.3		4.2	

[a]Also occurred Aug. 10, 1997.



07195865 SAGER CREEK NEAR WEST SILOAM SPRINGS, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1991 to July 1995, July 1996 to current year.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
10...	0827	1.00	10.0	743	1028	1028	15	4.49	372	8.8	7.7
10...	0828	3.00	10.0	743	1028	1028	15	4.49	372	8.8	7.6
10...	0829	5.00	10.0	743	1028	1028	15	4.49	373	8.8	7.7
10...	0831	7.00	10.0	743	1028	1028	15	4.49	373	8.8	7.6
10...	0832	9.00	10.0	743	1028	1028	15	4.49	373	8.8	7.6
10...	0833	11.0	10.0	743	1028	1028	15	4.49	373	8.8	7.7
10...	0834	13.0	10.0	743	1028	1028	15	4.49	372	8.8	7.7
MAR											
11...	1437	2.00	8.5	764	1028	1028	26	4.67	327	12.5	7.9
11...	1438	4.00	8.5	764	1028	1028	26	4.67	326	12.5	7.9
11...	1439	6.00	8.5	764	1028	1028	26	4.67	326	12.5	7.9
11...	1440	8.00	8.5	764	1028	1028	26	4.67	326	12.4	7.8
11...	1441	10.0	8.5	764	1028	1028	26	4.67	326	12.4	7.8
11...	1442	12.0	8.5	764	1028	1028	26	4.67	326	12.4	7.8
11...	1443	14.0	8.5	764	1028	1028	26	4.67	326	12.3	7.8
11...	1444	16.0	8.5	764	1028	1028	26	4.67	325	12.0	7.8
MAY											
12...	1516	15.0	23.0	740	1028	1028	12	4.66	394	10.2	8.0
12...	1517	13.0	23.0	740	1028	1028	12	4.66	394	9.7	7.9
12...	1518	11.0	23.0	740	1028	1028	12	4.66	394	9.6	7.9
12...	1519	9.00	23.0	740	1028	1028	12	4.66	394	9.6	7.9
12...	1520	7.00	23.0	740	1028	1028	12	4.66	394	9.6	7.9
12...	1521	5.00	23.0	740	1028	1028	12	4.66	394	9.6	7.9
12...	1522	3.00	22.5	740	1028	1028	12	4.66	394	9.4	7.8
AUG											
18...	1402	2.00	28.0	739	1028	1028	5.1	4.40	515	7.8	7.9
18...	1404	4.00	28.0	739	1028	1028	5.1	4.40	515	8.0	7.9
18...	1405	6.00	28.0	739	1028	1028	5.1	4.40	515	8.0	7.9
18...	1407	8.00	27.5	739	1028	1028	5.1	4.40	515	7.9	7.9
18...	1410	10.0	27.5	739	1028	1028	5.1	4.40	514	7.8	7.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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												
16...	1130	1028	80020	11	428	7.3	19.0	17.0	--	757	7.9	82
NOV												
17...	1645	1028	80020	13	385	7.6	5.0	9.0	.33	755	12.0	105
DEC												
02...	1435	1028	80020	21	350	7.5	12.5	12.5	--	749	10.2	97
JAN												
13...	1505	1028	80020	40	282	7.3	3.0	9.5	.55	755	10.0	88
FEB												
10...	0830	1028	80020	15	373	7.6	9.0	10.0	--	743	8.8	80
MAR												
11...	1445	1028	80020	26	326	7.8	-2.0	8.5	.47	764	12.4	107
APR												
23...	0910	1028	80020	11	423	7.8	12.5	13.5	--	750	9.6	94
MAY												
12...	1515	1028	80020	12	394	7.9	32.0	23.0	1.7	740	9.6	115
JUN												
03...	1100	1028	80020	12	408	7.6	27.0	23.5	--	734	7.6	93
JUL												
14...	1115	1028	80020	7.9	423	7.8	32.0	26.0	.35	737	8.0	102
AUG												
18...	1350	1028	80020	5.1	515	7.9	33.5	28.0	--	739	8.0	105
SEP												
22...	1115	1028	80020	7.9	533	7.6	27.5	24.0	.27	743	7.4	91

07195865 SAGER CREEK NEAR WEST SILOAM SPRINGS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	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											
16...	20	--	390	--	--	--	--	--	--	--	--
NOV											
17...	K3	K2	120	120	25	43	2.7	23	27	.9	9.9
DEC											
02...	K27	--	200	--	--	--	--	--	--	--	--
JAN											
13...	31	K8	100	100	23	38	2.2	13	20	.6	5.8
FEB											
10...	K6	--	210	--	--	--	--	--	--	--	--
MAR											
11...	K3	<1	K100	120	39	44	2.5	15	21	.6	6.0
APR											
23...	30	--	K11	--	--	--	--	--	--	--	--
MAY											
12...	K16	<1	<1	120	21	45	2.3	22	27	.9	8.7
JUN											
03...	46	--	69	--	--	--	--	--	--	--	--
JUL											
14...	80	25	100	120	30	43	2.5	29	33	1	9.2
AUG											
18...	64	--	K180	--	--	--	--	--	--	--	--
SEP											
22...	190	36	310	120	61	44	2.8	47	43	2	12

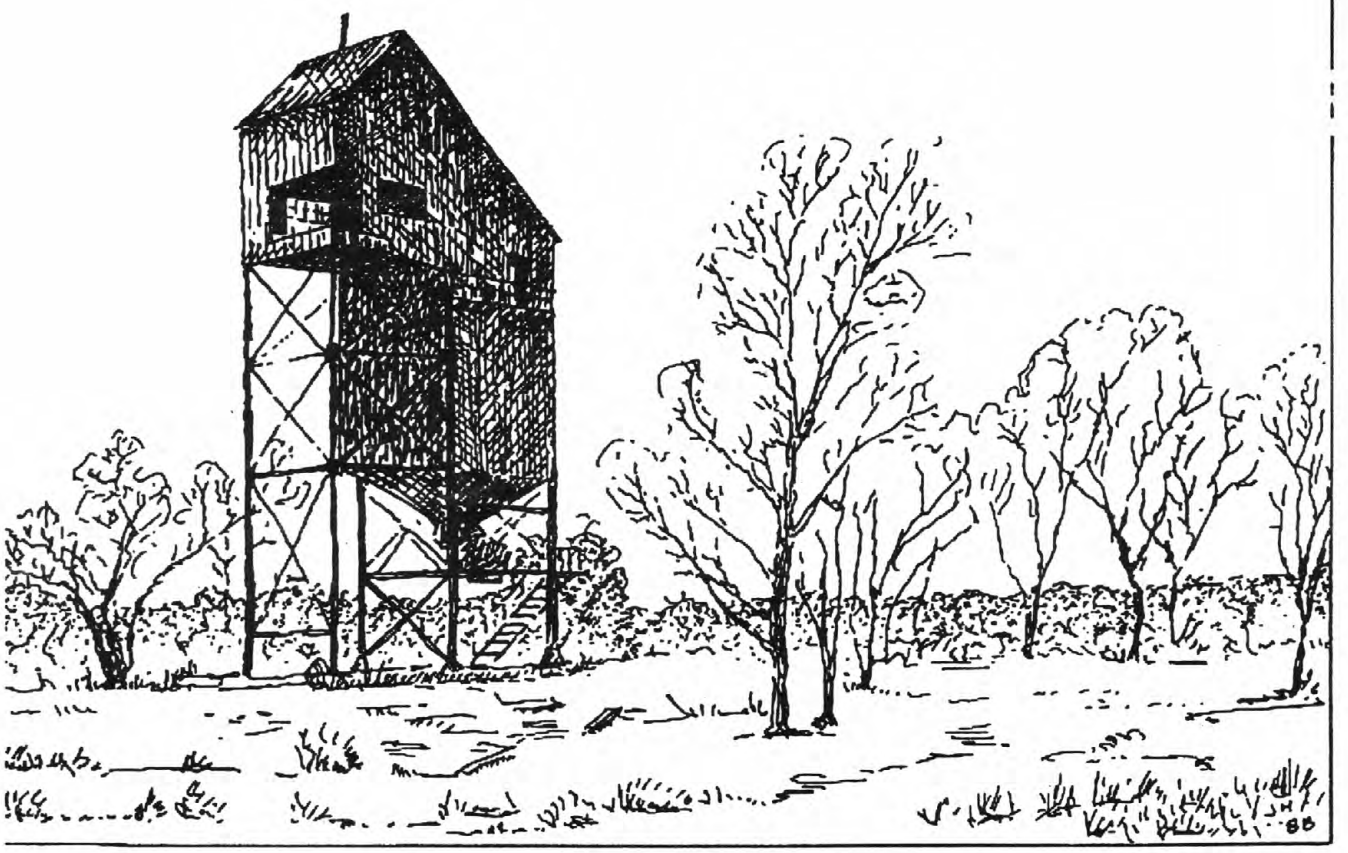
DATE	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CARBONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, 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)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)
OCT											
16...	117	0	96	--	--	--	--	--	--	--	--
NOV											
17...	115	0	94	15	33	227	215	.31	7.97	<1	--
DEC											
02...	120	0	98	--	--	--	--	--	--	--	--
JAN											
13...	98	0	81	12	19	175	161	.24	18.9	1	--
FEB											
10...	113	0	93	--	--	--	--	--	--	--	--
MAR											
11...	99	0	81	16	24	198	186	.27	13.9	<1	6.16
APR											
23...	122	0	100	--	--	--	--	--	--	--	4.48
MAY											
12...	123	0	101	14	33	243	216	.33	7.87	2	6.13
JUN											
03...	107	0	88	--	--	--	--	--	--	--	6.38
JUL											
14...	106	0	86	14	47	244	222	.33	5.20	3	--
AUG											
18...	96	0	79	--	--	--	--	--	--	--	--
SEP											
22...	74	0	61	35	16	302	235	.41	6.44	1	--

07195865 SAGER CREEK NEAR WEST SILOAM SPRINGS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	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 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-PHORUS DIS-SOLVED (MG/L AS P) (00666)
OCT											
16...	--	<.010	--	7.01	<.015	--	--	.28	7.3	1.04	1.01
NOV											
17...	--	<.010	--	6.59	<.020	--	--	.27	6.9	.872	.945
DEC											
02...	--	<.010	--	5.55	<.020	--	--	.31	5.9	.644	.644
JAN											
13...	--	<.010	--	4.93	.020	.03	.24	.26	5.2	.366	.369
FEB											
10...	--	<.010	--	7.01	<.020	--	--	.29	7.3	.734	.780
MAR											
11...	27	.010	.03	6.17	.111	.14	.28	.39	6.6	.361	.376
APR											
23...	20	.012	.04	4.49	.024	.03	.41	.44	4.9	.864	.825
MAY											
12...	27	.013	.04	6.14	.049	.06	.28	.33	6.5	.828	.981
JUN											
03...	28	.011	.04	6.39	.025	.03	.41	.44	6.8	.802	.831
JUL											
14...	--	<.010	--	5.32	.028	.04	.32	.35	5.7	1.08	.987
AUG											
18...	--	<.010	--	11.2	.052	.07	.39	.44	12	1.49	1.47
SEP											
22...	--	<.010	--	8.61	<.020	--	--	.37	9.0	1.28	1.25

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	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)	CHLORO-HPYLL A PHYTO-PLANK-TON ACID M. (UG/L) (32211)	PHEO-PHYTIN PHYTO-PLANK-TON, ACID M. (UG/L) (32218)	CHLORO-PHYLL A PHYTO-PLANK-TON, UNCORR. (UG/L) (32230)	CHLORO-PHYLL B PHYTO-PLANK-TON, UNCORR. (UG/L) (32231)	CHLORO-PHYLL C PHYTO-PLANK-TON, UNCORR. (UG/L) (32232)
OCT											
16...	.905	2.8	--	--	--	--	--	--	--	--	--
NOV											
17...	.970	3.0	<1.0	25	.88	94	<1.00	<1.00	<1.00	<1.00	<1.00
DEC											
02...	.644	2.0	--	--	--	--	--	--	--	--	--
JAN											
13...	.383	1.2	<4.0	29	3.1	95	<1.00	<1.00	<1.00	<1.00	<1.00
FEB											
10...	.721	2.2	--	--	--	--	--	--	--	--	--
MAR											
11...	.358	1.1	<4.0	39	2.7	95	<1.00	<1.00	1.00	<1.00	<1.00
APR											
23...	.783	2.4	--	--	--	--	--	--	--	--	--
MAY											
12...	.823	2.5	<4.0	25	.81	82	<1.00	10.0	6.00	<1.00	<1.00
JUN											
03...	.795	2.4	--	--	--	--	--	--	--	--	--
JUL											
14...	1.02	3.1	<4.0	27	.58	97	<1.00	1.00	<1.00	<1.00	<1.00
AUG											
18...	1.37	4.2	--	--	--	--	--	--	--	--	--
SEP											
22...	1.20	3.7	<4.0	26	.55	98	1.00	<1.00	<1.00	<1.00	<1.00



Ore loader in the Tar Creek arena

07196000 FLINT CREEK NEAR KANSAS, OK

LOCATION.--Lat 36°11'11", long 94°42'24", in SW ¼ NW ¼ 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.

WATER-DISCHARGE RECORDS

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 sea level.

REMARKS.--No estimated daily discharge. 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)
Jan 4	1730	2,550	8.30				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	23	110	98	101	92	154	72	68	32	16	11
2	31	22	95	91	97	86	145	65	58	35	15	11
3	30	20	93	86	94	83	142	61	51	30	14	14
4	29	21	87	998	89	79	132	59	47	27	16	13
5	27	23	77	998	85	77	125	59	45	25	16	11
6	26	28	70	915	83	80	120	60	42	24	16	9.1
7	27	27	66	657	81	89	129	61	40	24	15	8.6
8	29	26	140	1210	78	370	125	58	39	26	14	8.4
9	36	24	167	765	75	274	119	61	42	27	14	8.3
10	42	26	145	500	75	209	113	70	40	25	16	8.8
11	38	30	125	375	83	176	107	63	39	24	19	9.1
12	37	29	109	302	85	154	102	61	39	35	21	9.9
13	67	33	96	255	80	134	102	57	36	35	20	14
14	56	48	84	217	78	123	98	55	33	28	20	52
15	43	46	77	192	75	121	95	52	31	25	20	69
16	33	41	72	175	77	418	93	48	31	23	19	51
17	33	42	67	158	79	649	87	45	30	21	17	42
18	31	45	63	143	80	504	82	43	29	20	16	36
19	29	38	58	131	80	762	78	42	29	19	15	27
20	27	36	55	121	78	752	77	41	28	17	14	26
21	26	35	69	114	72	478	76	41	28	18	14	23
22	26	33	116	107	66	361	75	40	28	17	13	24
23	26	30	109	104	65	294	73	40	28	17	13	24
24	27	28	260	97	63	251	71	39	26	17	12	23
25	28	28	287	93	64	217	68	99	26	18	11	22
26	27	28	213	117	96	192	69	248	24	18	11	20
27	26	27	176	119	101	186	95	208	24	16	12	19
28	25	26	155	113	97	183	90	143	22	16	12	17
29	25	145	139	110	---	165	81	112	21	18	12	17
30	24	144	123	106	---	156	77	92	26	18	12	17
31	24	---	109	103	---	165	---	78	---	16	11	---
TOTAL	987	1152	3612	9570	2277	7880	3000	2273	1050	711	466	645.2
MEAN	31.8	38.4	117	309	81.3	254	100	73.3	35.0	22.9	15.0	21.5
MAX	67	145	287	1210	101	762	154	248	68	35	21	69
MIN	24	20	55	86	63	77	68	39	21	16	11	8.3
AC-FT	1960	2280	7160	18980	4520	15630	5950	4510	2080	1410	924	1280
CFSM	.29	.35	1.06	2.81	.74	2.31	.91	.67	.32	.21	.14	.20
IN.	.33	.39	1.22	3.24	.77	2.66	1.01	.77	.36	.24	.16	.22

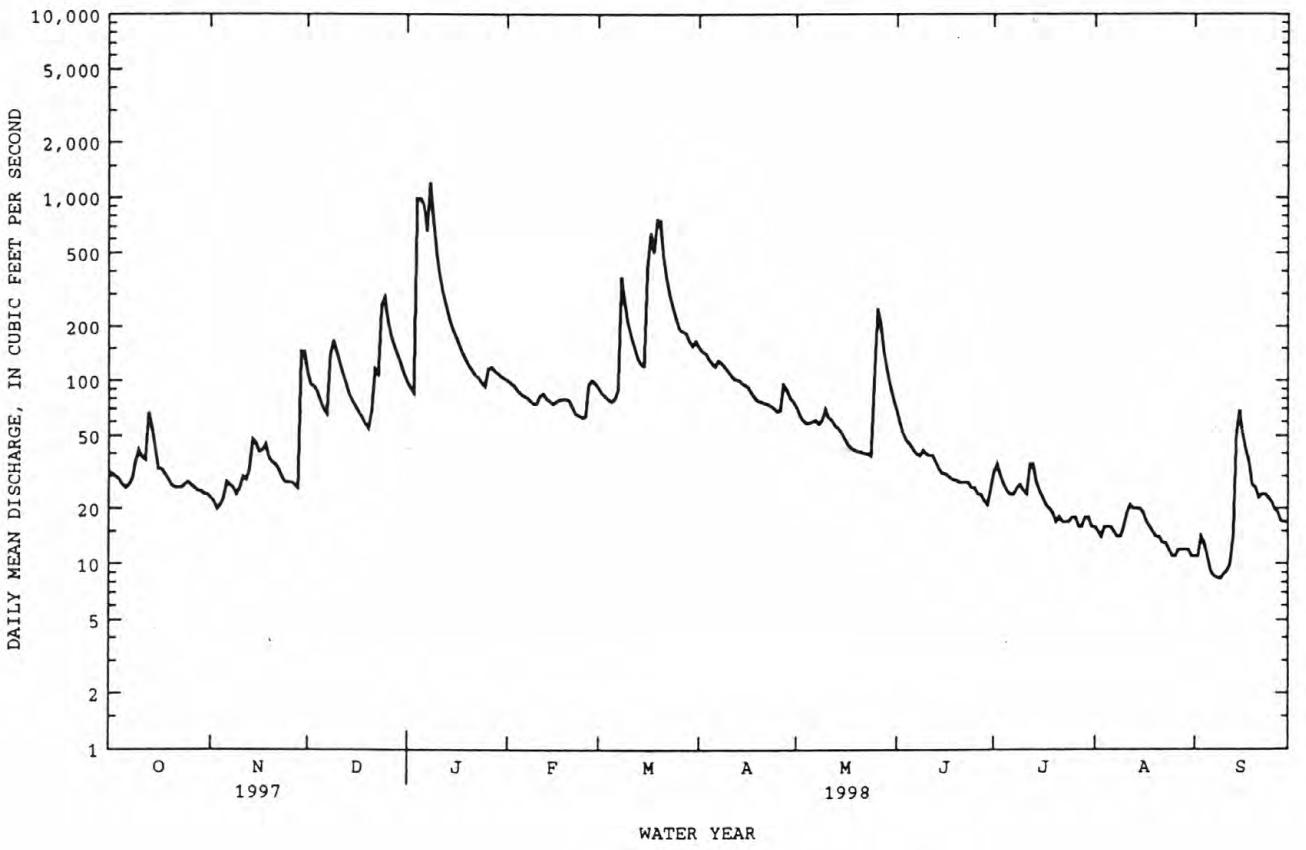
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1998, BY WATER YEAR (WY)

MEAN	75.3	139	134	112	120	181	187	186	141	59.2	45.0	61.7
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

07196000 FLINT CREEK NEAR KANSAS, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1956 - 1998	
ANNUAL TOTAL	34939		33623.2			
ANNUAL MEAN	95.7		92.1		120	
HIGHEST ANNUAL MEAN					296	1974
LOWEST ANNUAL MEAN					22.3	1956
HIGHEST DAILY MEAN	4000	Feb 21	1210	Jan 8	14500	Nov 24 1973
LOWEST DAILY MEAN	18	Jul 28	8.3	Sep 9	.60	Oct 11 1956
ANNUAL SEVEN-DAY MINIMUM	20	Aug 5	8.9	Sep 6	.66	Oct 7 1956
INSTANTANEOUS PEAK FLOW			2550	Jan 4	[a]44400	Jun 8 1974
INSTANTANEOUS PEAK STAGE			8.30	Jan 4	19.42	Jun 8 1974
ANNUAL RUNOFF (AC-FT)	69300		66690		87210	
ANNUAL RUNOFF (CFSM)	.87		.84		1.09	
ANNUAL RUNOFF (INCHES)	11.82		11.37		14.87	
10 PERCENT EXCEEDS	186		170		243	
50 PERCENT EXCEEDS	52		51		55	
90 PERCENT EXCEEDS	25		16		17	

[a]Based on indirect measurement.



07196000 FLINT CREEK NEAR KANSAS, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955-61, 1963, 1975-80, July 1991 to July 1995, July 1996 to current year.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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...	1130	8.00	8.5	747	1028	1028	74	6.40	258	11.6	7.9
09...	1131	18.0	8.5	747	1028	1028	74	6.40	258	11.8	8.0
09...	1132	28.0	8.5	747	1028	1028	74	6.40	258	11.7	8.0
09...	1133	38.0	8.5	747	1028	1028	74	6.40	257	11.7	8.0
09...	1134	48.0	9.0	747	1028	1028	74	6.40	257	11.7	8.0
MAR											
10...	1539	1.00	9.0	762	1028	1028	199	6.76	228	11.9	7.7
10...	1540	5.00	9.0	762	1028	1028	199	6.76	228	11.9	7.8
10...	1541	11.0	9.0	762	1028	1028	199	6.76	228	11.9	7.7
10...	1542	17.0	9.0	762	1028	1028	199	6.76	228	11.9	7.8
10...	1543	23.0	9.0	762	1028	1028	199	6.76	228	11.9	7.8
10...	1544	29.0	9.0	762	1028	1028	199	6.76	228	11.9	7.8
10...	1545	35.0	9.0	762	1028	1028	199	6.76	228	11.8	7.8
10...	1546	41.0	9.0	762	1028	1028	199	6.76	228	11.8	7.8
10...	1547	47.0	9.0	762	1028	1028	199	6.76	228	11.7	7.8
10...	1548	53.0	9.0	762	1028	1028	199	6.76	228	11.7	7.8
AUG											
18...	1215	3.00	26.5	752	1028	1028	16	6.02	341	8.2	7.5
18...	1216	6.00	26.5	752	1028	1028	16	6.02	342	7.9	7.5
18...	1217	9.00	26.5	752	1028	1028	16	6.02	343	7.4	7.5
18...	1218	12.0	26.5	752	1028	1028	16	6.02	343	7.3	7.4
18...	1219	15.0	26.5	752	1028	1028	16	6.02	342	7.3	7.4
18...	1220	18.0	26.5	752	1028	1028	16	6.02	342	7.3	7.4
18...	1221	21.0	26.5	752	1028	1028	16	6.02	341	7.1	7.4
18...	1222	24.0	26.5	752	1028	1028	16	6.02	338	7.2	7.4
18...	1223	27.0	26.5	752	1028	1028	16	6.02	337	7.2	7.4
18...	1224	30.0	26.5	752	1028	1028	16	6.02	339	7.3	7.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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												
15...	1810	1028	80020	41	335	7.3	18.0	19.5	--	758	9.0	99
NOV												
19...	1215	1028	80020	37	325	8.0	14.0	10.5	.27	755	12.3	111
DEC												
02...	1520	1028	80020	90	291	7.7	12.0	12.0	--	750	11.6	109
JAN												
13...	1205	1028	80020	255	198	7.2	3.0	9.0	1.0	755	11.2	98
FEB												
09...	1245	1028	80020	74	258	8.0	11.5	8.5	--	747	11.7	103
MAR												
10...	1600	1028	80020	199	228	7.8	2.5	9.0	.90	762	11.9	103
APR												
22...	1625	1028	80020	74	274	9.0	23.0	17.0	--	747	9.7	102
MAY												
12...	1110	1028	80020	62	284	7.9	27.5	20.0	1.4	735	8.3	94
JUN												
04...	0730	1028	80020	47	284	7.9	27.5	22.5	--	735	6.9	83
JUL												
14...	0825	1028	80020	29	329	7.7	26.0	25.0	.70	742	6.9	86
AUG												
18...	1205	1028	80020	16	342	7.4	33.0	26.5	--	752	7.3	91
SEP												
22...	0805	1028	80020	24	350	7.7	21.0	23.0	2.0	745	6.8	82

07196000 FLINT CREEK NEAR KANSAS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	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											
15...	21	--	490	--	--	--	--	--	--	--	--
NOV											
19...	40	14	120	120	12	44	2.2	16	22	.6	4.3
DEC											
02...	K13	--	170	--	--	--	--	--	--	--	--
JAN											
13...	73	K6	K8	82	20	30	1.6	5.8	13	.3	2.9
FEB											
09...	K1	--	K9	--	--	--	--	--	--	--	--
MAR											
10...	230	K16	K10	92	18	34	1.6	6.9	14	.3	2.8
APR											
22...	K3	--	K14	--	--	--	--	--	--	--	--
MAY											
12...	90	K5	K22	110	10	39	1.9	11	18	.5	4.1
JUN											
04...	47	--	100	--	--	--	--	--	--	--	--
JUL											
14...	67	22	100	120	13	44	2.1	14	20	.6	4.8
AUG											
18...	K3	--	K27	--	--	--	--	--	--	--	--
SEP											
22...	45	50	390	120	50	45	2.2	17	23	.7	5.2

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)	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)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)
OCT											
15...	122	0	97	--	--	--	--	--	--	--	--
NOV											
19...	131	0	107	17	21	185	185	.25	18.5	<1	--
DEC											
02...	116	0	95	--	--	--	--	--	--	--	--
JAN											
13...	76	0	62	9.7	7.8	130	114	.18	89.5	<1	--
FEB											
09...	100	0	82	--	--	--	--	--	--	--	--
MAR											
10...	90	0	74	9.6	9.9	135	123	.18	72.5	<1	--
APR											
22...	92	6	85	--	--	--	--	--	--	--	--
MAY											
12...	116	0	95	14	13	167	150	.23	28.0	<1	2.28
JUN											
04...	125	0	102	--	--	--	--	--	--	--	1.97
JUL											
14...	127	0	104	16	21	179	174	.24	14.0	<1	--
AUG											
18...	126	0	103	--	--	--	--	--	--	--	1.56
SEP											
22...	85	0	70	19	30	202	171	.27	13.1	1	2.43

07196000 FLINT CREEK NEAR KANSAS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	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 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)
OCT 15...	--	<.010	--	2.61	<.015	--	--	<.20	--	.142	.131
NOV 19...	--	<.010	--	3.55	<.020	--	--	<.10	--	.107	.105
DEC 02...	--	<.010	--	3.14	<.020	--	--	<.10	--	.124	.121
JAN 13...	--	<.010	--	4.08	<.020	--	--	<.10	--	.099	.096
FEB 09...	--	<.010	--	3.55	<.020	--	--	.20	3.8	.105	.102
MAR 10...	--	<.010	--	3.05	.113	.15	.01	.13	3.2	.099	.101
APR 22...	--	<.010	--	2.28	.084	.11	.17	.26	2.5	.134	.132
MAY 12...	10	.012	.04	2.29	.047	.06	.16	.21	2.5	--	.191
JUN 04...	8.7	.010	.03	1.98	.038	.05	.07	.11	2.1	.162	.150
JUL 14...	--	<.010	--	1.87	.037	.05	.08	.12	2.0	.136	.131
AUG 18...	6.9	.011	.04	1.57	.062	.08	--	<.10	--	.124	.122
SEP 22...	11	.013	.04	2.44	<.020	--	--	.13	2.6	.155	.148

DATE	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	CHLOROHPYLL A PHYTOPLANKTON ACID M. (UG/L) (32211)	PHEOPHYTIN PHYTOPLANKTON, ACID M. (UG/L) (32218)	CHLOROPHYLL A PHYTOPLANKTON, UNCORR. (UG/L) (32230)	CHLOROPHYLL B PHYTOPLANKTON, UNCORR. (UG/L) (32231)	CHLOROPHYLL C PHYTOPLANKTON, UNCORR. (UG/L) (32232)
OCT 15...	.133	.41	--	--	--	--	--	--	--	--	--
NOV 19...	.129	.40	2.7	20	2.0	97	<1.00	<1.00	<1.00	<1.00	<1.00
DEC 02...	.126	.39	--	--	--	--	--	--	--	--	--
JAN 13...	.114	.35	<4.0	25	17	91	<1.00	<1.00	<1.00	<1.00	<1.00
FEB 09...	.088	.27	--	--	--	--	--	--	--	--	--
MAR 10...	.104	.32	<4.0	37	20	94	<1.00	1.00	1.00	<1.00	<1.00
APR 22...	.140	.43	--	--	--	--	--	--	--	--	--
MAY 12...	.156	.48	5.3	21	3.5	94	<1.00	2.00	1.00	<1.00	<1.00
JUN 04...	.161	.49	--	--	--	--	--	--	--	--	--
JUL 14...	.144	.44	5.8	25	2.0	94	<1.00	<1.00	<1.00	<1.00	<1.00
AUG 18...	.045	.14	--	--	--	--	--	--	--	--	--
SEP 22...	.150	.46	6.5	15	.97	96	<1.00	2.00	<1.00	<1.00	<1.00

07196000 FLINT CREEK NEAR KANSAS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	BROM-ACIL WATER WHLREC (UG/L) (30234)	BUTA-CHLOR WATER WHLREC (UG/L) (30235)	BUTYL-ATE WATER WHLREC (UG/L) (30236)	CARBOX-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)	PCNS UNFILT RECOVER (UG/L) (39250)	HEXAZI-NONE WATER WHOLE RECOV-ERABLE (UG/L) (30264)
JUN												
04...	0730	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200
AUG												
18...	1205	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200

DATE	METOLA-CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	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)	AME-TRYNE TOTAL (UG/L) (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, TECH-NICAL TOTAL (UG/L) (39350)
JUN												
04...	<.200	<.100	<.100	<.200	<.100	<.100	<.010	<.100	<.100	<.200	<.200	<.100
AUG												
18...	<.200	<.100	<.100	<.200	<.100	<.100	<.010	<.100	<.100	<.200	<.200	<.100

DATE	CYAN-AZINE TOTAL (UG/L) (81757)	2,4-D, TOTAL (UG/L) (39730)	P,P'-DDD UNFILT RECOVER (UG/L) (39360)	P,P'-DDE, TOTAL (UG/L) (39365)	P,P'-DDT UNFILT RECOVER (UG/L) (39370)	DI-ELDRIN TOTAL (UG/L) (39380)	2,4-DP TOTAL (UG/L) (82183)	ENDO-SULFAN I TOTAL (UG/L) (39388)	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	HEPTA-CHLOR, TOTAL (UG/L) (39410)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)
JUN												
04...	<.200	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010
AUG												
18...	<.200	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010

DATE	METH-OXY-CHLOR, TOTAL (UG/L) (39480)	MIREX, TOTAL (UG/L) (39755)	PER-THANE TOTAL (UG/L) (39034)	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)
JUN												
04...	<.010	<.010	<.100	<.200	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<.100
AUG												
18...	<.010	<.010	<.100	<.200	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<.100

07196040 ILLINOIS RIVER BELOW FLINT CREEK NEAR FLINT, OK

LOCATION.--Lat 36°10'25", long 94°43'22", in NW ¼ NW ¼, sec. 35, T.20 N., R.24 E., Delaware County, Hydrologic Unit 11110103, 0.2 mi below Flint Creek, 1.4 mi southwest of Flint, Ok.

PERIOD OF RECORD.--July 1996 to current year.

REMARKS.--Samples were collected bi-monthly when site is wadeable. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field. No samples collected January and March 1998 due to discharge too great to wade.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
NOV										
19...	0840	25.0	7.5	757	1028	1028	370	300	12.1	7.8
19...	0841	50.0	7.5	757	1028	1028	370	298	12.1	7.8
19...	0842	75.0	7.0	757	1028	1028	370	295	12.1	7.8
19...	0843	100	7.0	757	1028	1028	370	295	12.1	7.8
MAY										
12...	1215	109	20.5	743	1028	1028	534	268	10.2	7.9
12...	1216	99.0	20.5	743	1028	1028	534	268	10.4	8.0
12...	1217	89.0	20.5	743	1028	1028	534	269	10.5	8.0
12...	1218	79.0	21.0	743	1028	1028	534	269	10.6	8.0
12...	1219	69.0	21.0	743	1028	1028	534	269	10.6	8.0
12...	1220	59.0	21.0	743	1028	1028	534	269	10.5	8.0
12...	1221	49.0	21.0	743	1028	1028	534	270	10.4	8.0
12...	1222	39.0	21.0	743	1028	1028	534	270	10.4	8.0
12...	1223	29.0	21.0	743	1028	1028	534	270	10.4	8.0
12...	1224	19.0	21.0	743	1028	1028	534	270	10.5	8.1
12...	1225	9.00	21.0	743	1028	1028	534	270	10.6	8.1
JUL										
15...	1036	102	27.5	750	1028	1028	241	307	7.6	7.5
15...	1037	90.0	27.5	750	1028	1028	241	308	7.5	7.6
15...	1038	78.0	27.5	750	1028	1028	241	308	7.7	7.6
15...	1039	66.0	27.5	750	1028	1028	241	308	7.7	7.6
15...	1040	54.0	27.5	750	1028	1028	241	309	7.6	7.6
15...	1041	42.0	27.5	750	1028	1028	241	309	7.6	7.6
15...	1042	30.0	27.5	750	1028	1028	241	309	7.6	7.6
15...	1043	18.0	27.5	750	1028	1028	241	308	7.6	7.6
15...	1044	6.00	28.0	750	1028	1028	241	307	8.0	7.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
19...	0835	1028	80020	370	297	7.8	3.5	7.0	1.1	757	12.1
MAY											
12...	1210	1028	80020	534	269	8.0	26.5	21.0	3.0	743	10.5
JUL											
15...	1045	1028	80020	241	308	7.6	27.5	27.5	.70	750	7.7
SEP											
02...	1450	1028	80020	119	336	7.7	34.0	29.0	.55	745	8.6

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)	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)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)	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)
NOV											
19...	100	42	50	143	0	117	<1	--	--	<.010	--
MAY											
12...	121	K3	K44	126	0	103	5	1.90	8.4	.015	.05
JUL											
15...	99	<1	K39	137	0	112	--	--	--	<.010	--
SEP											
02...	116	K3	K30	137	0	112	6	.301	1.3	.013	.04

07196040 ILLINOIS RIVER BELOW FLINT CREEK NEAR FLINT, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	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, 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-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
NOV										
19...	2.04	<.020	--	--	.14	2.2	.092	.084	--	--
MAY										
12...	1.92	.039	.05	.17	.20	2.1	.067	.056	.081	.25
JUL										
15...	1.22	.033	.04	.11	.14	1.4	.217	.232	.198	.61
SEP										
02...	.314	.127	.16	.04	.17	.48	.089	.092	.096	.29

07196090 ILLINOIS RIVER AT CHEWEY, OK

LOCATION.--Lat 36°06'15", long 94°46'57", in SE ¼ SE ¼, sec. 19, T.19 N., R.24 E., Adair County, Hydrologic Unit 11110103, at Hampton Bridge, 0.85 mi west of Chewey, Ok.

PERIOD OF RECORD.--July 1996 to current year.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
19...	1552	113	9.5	750	1028	1028	807	5.40	251	12.9	8.4
19...	1554	101	9.5	750	1028	1028	807	5.40	252	12.7	8.4
19...	1555	89.0	9.5	750	1028	1028	807	5.40	252	12.7	8.4
19...	1557	77.0	9.5	750	1028	1028	807	5.40	251	12.6	8.4
19...	1558	65.0	9.5	750	1028	1028	807	5.40	251	12.5	8.4
19...	1559	53.0	9.5	750	1028	1028	807	5.40	251	12.5	8.4
19...	1600	41.0	9.5	750	1028	1028	807	5.40	251	12.6	8.4
19...	1601	29.0	9.5	750	1028	1028	807	5.40	251	12.6	8.4
19...	1602	15.0	9.5	750	1028	1028	807	5.40	251	12.5	8.5
19...	1603	3.00	9.0	750	1028	1028	807	5.40	251	11.0	7.9
AUG											
18...	1120	66.0	27.5	744	1028	1028	169	3.55	318	7.2	7.9
18...	1121	61.0	27.5	744	1028	1028	169	3.55	320	7.2	7.9
18...	1122	56.0	27.5	744	1028	1028	169	3.55	320	7.2	7.9
18...	1123	51.0	27.5	744	1028	1028	169	3.55	320	7.2	7.9
18...	1124	46.0	27.5	744	1028	1028	169	3.55	320	7.2	7.9
18...	1125	41.0	27.5	744	1028	1028	169	3.55	320	7.3	7.9
18...	1126	36.0	27.5	744	1028	1028	169	3.55	320	7.3	7.9
18...	1127	31.0	27.5	744	1028	1028	169	3.55	320	7.3	7.9
18...	1128	26.0	27.5	744	1028	1028	169	3.55	320	7.3	7.9
18...	1129	21.0	27.5	744	1028	1028	169	3.55	320	7.4	7.9
18...	1130	16.0	27.5	744	1028	1028	169	3.55	320	7.3	7.9
18...	1131	11.0	27.5	744	1028	1028	169	3.55	320	7.4	7.9
18...	1132	6.00	27.5	744	1028	1028	169	3.55	320	7.5	7.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
21...	0945	1028	80020	253	304	7.6	10.5	16.0	--	758	8.3
NOV											
14...	1010	1028	80020	371	314	7.9	3.0	9.5	1.0	750	10.9
DEC											
03...	0900	1028	80020	577	268	7.7	8.5	11.0	--	749	9.7
JAN											
28...	0935	1028	80020	1180	234	7.5	11.0	7.5	8.0	750	11.4
FEB											
19...	1550	1028	80020	807	251	8.4	13.5	9.5	--	750	12.5
MAR											
18...	1600	1028	80020	4490	176	7.4	18.0	11.5	26	746	10.4
APR											
23...	1450	1028	80020	564	258	8.2	26.5	16.0	--	755	15.2
MAY											
13...	1200	1028	80020	527	272	8.3	30.0	20.5	2.2	745	8.9
JUN											
18...	0955	1028	80020	256	298	7.4	31.0	25.0	--	748	6.6
JUL											
15...	1405	1028	80020	249	303	8.2	32.0	28.5	1.1	739	9.1
AUG											
18...	1105	1028	80020	169	320	7.9	30.5	27.5	--	744	7.3
SEP											
22...	1330	1028	80020	182	321	7.9	28.5	25.0	1.5	744	7.7

07196090 ILLINOIS RIVER AT CHEWEY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	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)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	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)
OCT											
21...	85	17	440	135	0	111	--	--	--	<.010	--
NOV											
14...	97	58	350	145	0	119	<1	--	--	<.010	--
DEC											
03...	90	K32	150	124	0	102	--	--	--	<.010	--
JAN											
28...	97	48	400	95	0	78	9	--	--	<.010	--
FEB											
19...	112	<1	K5	111	*0	91	--	--	--	<.010	--
MAR											
18...	98	K10	320	74	0	61	66	--	--	<.010	--
APR											
23...	156	<1	130	122	0	100	--	--	--	<.010	--
MAY											
13...	102	K9	K8	129	0	106	2	1.72	7.6	.014	.05
JUN											
18...	82	<1	130	133	0	109	--	--	--	<.010	--
JUL											
15...	122	K21	300	140	0	115	7	--	--	<.010	--
AUG											
18...	95	59	51	134	0	110	--	.858	3.8	.016	.05
SEP											
22...	96	240	34	96	0	79	3	--	--	<.010	--

DATE	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, 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-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
OCT										
21...	1.57	<.015	--	--	<.20	--	.129	.118	.119	.36
NOV										
14...	1.80	<.020	--	--	.12	1.9	.100	.105	.123	.38
DEC										
03...	2.09	<.020	--	--	.20	2.3	.105	.085	.046	.14
JAN										
28...	2.81	<.020	--	--	.20	3.0	.094	.073	.086	.26
FEB										
19...	2.72	<.020	--	--	.24	3.0	.079	.069	.066	.20
MAR										
18...	2.00	.128	.16	.23	.35	2.4	.126	.089	.097	.30
APR										
23...	2.02	.022	.03	.19	.21	2.2	.046	.036	.042	.13
MAY										
13...	1.73	.025	.03	.20	.23	2.0	.174	.083	.088	.27
JUN										
18...	1.72	.025	.03	.12	.14	1.9	.130	.112	.112	.34
JUL										
15...	1.03	.041	.05	.10	.14	1.2	.133	.129	.117	.36
AUG										
18...	.874	.060	.08	.34	.40	1.3	.132	.120	.129	.40
SEP										
22...	1.28	<.020	--	--	.17	1.5	.232	.233	.166	.51

*pH of filtered alkalinity sample <8.3; therefore no carbonate value.

07196190 ILLINOIS RIVER NEAR SCRAPER, OK

LOCATION.--Lat 36°05'40", long 94°49'47", in SW ¼ SW ¼, sec. 26, T.19 N., R.23 E., Cherokee County, Hydrologic Unit 11110103, adjacent to State Highway 10 at Round Hollow Public Access Area, 1.2 mi northeast of Scraper, Ok.

PERIOD OF RECORD.--July 1996 to current year.

REMARKS.--Samples were collected bi-monthly when site is wadeable. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field. No samples collected January and March 1998 due to discharge being too great to wade.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
MAY										
13...	1056	220	21.5	750	1028	1028	541	262	9.6	7.8
13...	1057	200	21.5	750	1028	1028	541	264	9.3	7.8
13...	1058	180	21.0	750	1028	1028	541	263	9.1	7.7
13...	1059	160	21.0	750	1028	1028	541	263	9.1	7.7
13...	1100	140	21.0	750	1028	1028	541	263	9.0	7.7
13...	1101	120	21.0	750	1028	1028	541	263	9.1	7.7
13...	1102	100	21.0	750	1028	1028	541	262	8.9	7.7
13...	1103	80.0	21.0	750	1028	1028	541	263	8.9	7.7
13...	1104	60.0	21.0	750	1028	1028	541	263	8.8	7.7
13...	1105	40.0	21.0	750	1028	1028	541	263	8.9	7.7
13...	1106	20.0	21.0	750	1028	1028	541	263	8.7	7.7
13...	1107	5.00	21.0	750	1028	1028	541	263	8.4	7.6
JUL										
14...	0910	8.00	27.5	750	1028	1028	326	299	5.8	7.3
14...	0911	28.0	27.5	750	1028	1028	326	299	5.8	7.3
14...	0912	48.0	27.5	750	1028	1028	326	299	6.0	7.4
14...	0913	68.0	27.5	750	1028	1028	326	299	6.2	7.4
14...	0914	88.0	27.5	750	1028	1028	326	300	6.1	7.4
14...	0915	108	27.5	750	1028	1028	326	300	6.2	7.4
14...	0916	128	27.5	750	1028	1028	326	300	6.2	7.4
14...	0917	148	27.5	750	1028	1028	326	300	6.2	7.4
14...	0918	168	27.5	750	1028	1028	326	299	6.3	7.4
14...	0919	188	28.0	750	1028	1028	326	298	6.2	7.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
14...	0830	1028	80020	380	309	7.8	2.0	10.0	.70	750	10.3
MAY											
13...	1050	1028	80020	541	263	7.7	26.5	21.0	1.8	750	9.1
JUL											
14...	0905	1028	80020	326	300	7.4	28.5	27.5	.40	750	6.2
SEP											
02...	1040	1028	80020	112	316	7.4	29.0	26.5	.42	749	6.6

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)	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)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)	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)
NOV											
14...	93	62	310	140	0	115	<1	--	--	<.010	--
MAY											
13...	104	<1	500	124	0	102	<1	1.66	7.3	.016	.05
JUL											
14...	79	K5	350	138	0	113	5	--	--	<.010	--
SEP											
02...	83	K2	K47	132	0	108	3	.537	2.4	.014	.05

07196190 ILLINOIS RIVER NEAR SCRAPER, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	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, 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-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
NOV										
14...	1.65	<.020	--	--	<.10	--	.089	.100	.132	.40
MAY										
13...	1.67	.045	.06	.21	.25	1.9	.089	.037	.060	.18
JUL										
14...	1.09	.028	.04	.11	.14	1.2	.178	.160	.160	.49
SEP										
02...	.551	.085	.11	.06	.15	.70	.112	.117	.118	.36

07196400 ILLINOIS RIVER AT NO HEAD HOLLOW NEAR TAHLEQUAH, OK

LOCATION.--Lat 35°58'02", long 94°54'39", in SW ¼ NE ¼, sec. 12, T.17 N., R.22 E., Cherokee County, Hydrologic Unit 11110103, adjacent to State Highway 10 at No Head Hollow Public Use Area, 5.7 mi northeast of Tahlequah, Ok.

PERIOD OF RECORD.--July 1996 to current year.

REMARKS.--Samples were collected bi-monthly when site is wadeable. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field. No samples collected January and March 1998 due to discharges too great to wade.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
MAY										
13...	1401	10.0	23.0	750	1028	1028	566	256	12.0	8.3
13...	1402	20.0	23.0	750	1028	1028	566	256	12.0	8.3
13...	1403	30.0	23.0	750	1028	1028	566	257	11.9	8.3
13...	1404	40.0	23.0	750	1028	1028	566	257	11.8	8.3
13...	1405	50.0	23.0	750	1028	1028	566	257	11.8	8.3
13...	1406	60.0	23.0	750	1028	1028	566	257	11.8	8.3
13...	1407	70.0	23.0	750	1028	1028	566	257	11.8	8.3
13...	1408	80.0	23.0	750	1028	1028	566	256	11.9	8.3
13...	1409	90.0	24.0	750	1028	1028	566	252	13.1	8.6
JUL										
14...	1051	7.00	28.5	750	1028	1028	338	286	7.4	7.6
14...	1052	17.0	28.5	750	1028	1028	338	286	7.4	7.6
14...	1053	27.0	28.5	750	1028	1028	338	286	7.4	7.6
14...	1054	37.0	28.5	750	1028	1028	338	286	7.4	7.6
14...	1055	47.0	28.5	750	1028	1028	338	287	7.4	7.6
14...	1056	57.0	28.5	750	1028	1028	338	287	7.4	7.6
14...	1057	67.0	28.5	750	1028	1028	338	285	7.4	7.6
14...	1058	77.0	28.5	750	1028	1028	338	286	7.6	7.7
14...	1059	87.0	29.0	750	1028	1028	338	285	8.0	7.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
20...	0955	1028	80020	413	287	7.9	14.5	8.5	.65	750	12.3
MAY											
13...	1400	1028	80020	566	257	8.3	30.0	23.0	2.1	750	11.8
JUL											
14...	1050	1028	80020	338	287	7.6	30.5	28.5	.50	750	7.4
SEP											
02...	0840	1028	80020	105	298	7.4	21.5	26.5	.45	750	6.2

07196400 ILLINOIS RIVER AT NO HEAD HOLLOW NEAR TAHLEQUAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	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)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	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)
NOV											
20...	107	17	120	128	0	105	<1	--	--	<.010	--
MAY											
13...	140	<1	110	121	0	99	<1	1.46	6.4	.016	.05
JUL											
14...	98	K8	120	126	0	103	8	--	--	<.010	--
SEP											
02...	79	K1	K51	145	0	119	5	.364	1.6	.013	.04

DATE	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, 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-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
NOV										
20...	1.76	<.020	--	--	.10	1.9	.190	.191	.147	.45
MAY										
13...	1.47	.036	.05	.14	.18	1.7	.076	.098	.057	.17
JUL										
14...	.864	.030	.04	.10	.13	1.0	.120	.103	.108	.33
SEP										
02...	.377	.079	.10	.06	.14	.51	.115	.083	.087	.27

07196490 ILLINOIS RIVER NEAR BRIGGS, OK

LOCATION.--Lat 35°56'34", long 94°54'57", in NE ¼ NW ¼, sec. 24, T.17 N., R.22 E., Cherokee County, Hydrologic Unit 11110103, adjacent to State Highway 10, 0.1 mi downstream from Echota Public Use Area, 4.6 mi northwest of Briggs, Ok.

PERIOD OF RECORD.--July 1996 to current year.

REMARKS.--Samples were collected bi-monthly when site is wadeable. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field. No samples collected January and March 1998 due to discharges too great to wade.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
MAY										
13...	1550	107	24.5	750	1028	1028	588	249	12.2	8.5
13...	1551	97.0	24.5	750	1028	1028	588	250	12.3	8.4
13...	1552	87.0	24.5	750	1028	1028	588	251	12.3	8.4
13...	1553	77.0	24.5	750	1028	1028	588	251	12.3	8.4
13...	1554	67.0	24.5	750	1028	1028	588	251	12.3	8.4
13...	1555	57.0	24.5	750	1028	1028	588	251	12.3	8.4
13...	1556	47.0	24.5	750	1028	1028	588	251	12.3	8.4
13...	1557	37.0	24.5	750	1028	1028	588	251	12.3	8.4
13...	1558	27.0	24.5	750	1028	1028	588	251	12.2	8.4
13...	1559	17.0	24.5	750	1028	1028	588	251	12.2	8.4
13...	1600	7.00	24.5	750	1028	1028	588	251	12.1	8.4
JUL										
14...	1316	9.00	30.0	752	1028	1028	314	277	9.1	7.9
14...	1317	17.0	30.0	752	1028	1028	314	276	9.1	7.9
14...	1318	25.0	30.0	752	1028	1028	314	276	9.2	7.9
14...	1319	33.0	29.5	752	1028	1028	314	277	9.2	7.9
14...	1320	41.0	29.5	752	1028	1028	314	277	9.2	7.9
14...	1321	49.0	29.5	752	1028	1028	314	277	9.2	7.9
14...	1322	57.0	29.5	752	1028	1028	314	276	9.2	7.9
14...	1323	65.0	30.0	752	1028	1028	314	276	9.1	7.9
14...	1324	73.0	30.0	752	1028	1028	314	276	9.4	7.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
13...	1630	1028	80020	324	292	8.2	7.5	10.5	.38	745	13.2
MAY											
13...	1540	1028	80020	588	251	8.4	30.0	24.5	2.3	750	12.3
JUL											
14...	1315	1028	80020	314	277	7.9	33.0	29.5	.67	752	9.2
SEP											
01...	1515	1028	80020	110	289	7.9	36.0	29.0	.40	751	9.7

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)	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)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)	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)
NOV											
13...	121	18	320	133	0	109	<1	--	--	<.010	--
MAY											
13...	150	<1	330	118	*0	97	3	1.35	6.0	.013	.04
JUL											
14...	123	K9	130	122	0	100	5	--	--	<.010	--
SEP											
01...	128	K8	K20	138	0	113	--	.215	.95	.014	.05

07196490 ILLINOIS RIVER NEAR BRIGGS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	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,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-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
NOV										
13...	1.16	.042	.05	--	<.10	--	.061	.058	.078	.24
MAY										
13...	1.37	.045	.06	.17	.21	1.6	.063	.066	.057	.17
JUL										
14...	.637	.025	.03	.17	.19	.83	.103	.094	.088	.27
SEP										
01...	.229	.077	.10	.08	.16	.39	.093	.097	.083	.25

*pH of filtered sample <8.3; therefore no carbonate value.

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK

LOCATION.--Lat 35°55'22", long 94°55'24", in SE ¼ NE ¼ 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 fair. 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)
Jan 6	0700	25,700	16.22	Mar 21	0100	12,300	11.90

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	254	263	1180	1240	985	1610	3910	939	877	273	146	125
2	236	252	1030	1120	950	1310	2780	862	741	284	146	110
3	223	242	932	1030	922	1150	2210	803	651	278	146	102
4	212	231	862	2100	876	1040	1950	758	584	269	144	100
5	202	235	882	10100	830	957	1790	746	529	255	139	99
6	194	227	864	20100	791	907	1660	729	486	238	138	97
7	189	227	787	9180	751	1270	1610	783	463	224	165	94
8	185	237	882	8080	722	2060	1610	779	440	241	185	88
9	211	240	1250	10900	689	4610	1590	761	431	225	184	82
10	207	249	1800	6460	661	2840	1470	747	422	e215	181	82
11	303	250	1550	4350	640	2120	1360	860	457	e205	e190	83
12	334	254	1330	3310	1260	1740	1280	846	426	254	e195	84
13	393	306	1170	2650	1450	1490	1210	761	399	291	e205	142
14	577	351	1040	2220	1150	1340	1150	708	375	324	e211	255
15	989	497	929	1940	1010	1290	1100	664	349	325	e230	292
16	691	687	837	1740	923	2010	1050	623	327	286	e235	458
17	522	626	763	1570	871	5180	1090	586	314	254	197	499
18	432	543	702	1440	921	5840	1080	551	304	233	e188	397
19	377	495	645	1330	908	4640	1010	520	297	219	177	344
20	336	452	602	1230	842	8820	950	494	288	206	165	292
21	306	413	637	1150	791	7940	904	476	285	195	159	253
22	288	385	827	1080	747	4320	856	465	281	181	178	251
23	278	361	1530	1010	704	3340	826	452	270	172	177	435
24	277	336	1780	957	660	2790	795	442	271	168	163	636
25	273	317	3620	904	642	2430	765	475	265	168	152	488
26	278	300	3460	899	777	2150	736	886	249	168	142	356
27	283	289	2450	1090	1690	1970	783	1850	236	166	135	286
28	308	291	1990	1430	2250	1890	972	1990	226	160	132	245
29	306	574	1730	1240	---	2010	1250	1440	218	153	131	217
30	289	1000	1530	1120	---	1820	1050	1140	220	146	130	200
31	274	---	1380	1040	---	1800	---	1030	---	146	128	---
TOTAL	10227	11130	40971	104010	26413	84684	40797	25166	11681	6922	5194	7192
MEAN	330	371	1322	3355	943	2732	1360	812	389	223	168	240
MAX	989	1000	3620	20100	2250	8820	3910	1990	877	325	235	636
MIN	185	227	602	899	640	907	736	442	218	146	128	82
AC-FT	20290	22080	81270	206300	52390	168000	80920	49920	23170	13730	10300	14270
CFSM	.34	.39	1.38	3.50	.98	2.85	1.42	.85	.41	.23	.17	.25
IN.	.40	.43	1.59	4.03	1.02	3.28	1.58	.98	.45	.27	.20	.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1998, BY WATER YEAR (WY)

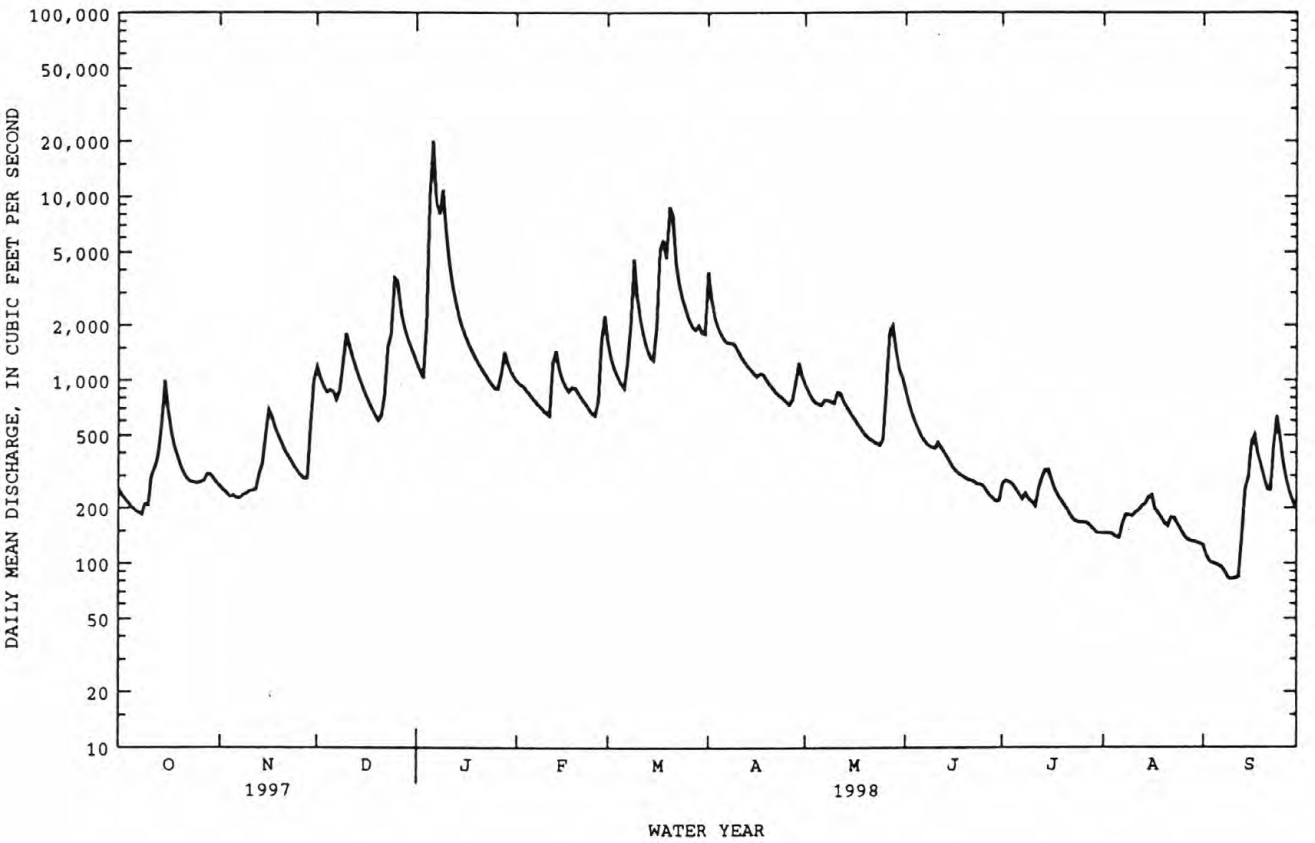
MEAN	541	940	923	869	1108	1461	1594	1659	1002	471	352	368
MAX	5222	4659	4258	3355	4661	6695	6864	8397	5993	2491	3907	1913
(WY)	1987	1974	1993	1998	1938	1945	1945	1950	1974	1958	1948	1974
MIN	7.05	75.3	77.5	74.0	113	147	151	189	80.1	22.9	10.5	3.15
(WY)	1957	1964	1956	1956	1964	1940	1954	1936	1936	1954	1936	1954

e Estimated

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1936 - 1998	
ANNUAL TOTAL	301794		374387			
ANNUAL MEAN	827		1026		939	
HIGHEST ANNUAL MEAN					1980	1974
LOWEST ANNUAL MEAN					193	1954
HIGHEST DAILY MEAN	18500	Feb 22	20100	Jan 6	90400	May 11 1950
LOWEST DAILY MEAN	171	Sep 11	82	Sep 9-10	.10	Oct 10 1956
ANNUAL SEVEN-DAY MINIMUM	175	Sep 6	87	Sep 6	.14	Oct 8 1956
INSTANTANEOUS PEAK FLOW			25700	Jan 6	[a]150000	May 10 1950
INSTANTANEOUS PEAK STAGE			16.22	Jan 6	27.94	May 10 1950
ANNUAL RUNOFF (AC-FT)	598600		742600		680300	
ANNUAL RUNOFF (CFSM)	.86		1.07		.98	
ANNUAL RUNOFF (INCHES)	11.71		14.52		13.30	
10 PERCENT EXCEEDS	1780		1980		1940	
50 PERCENT EXCEEDS	492		586		416	
90 PERCENT EXCEEDS	217		168		117	

[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 August 1995, July 1996 to current year.

REMARKS.--Samples were collected on a monthly schedule. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
10...	1334	10.0	8.5	748	1028	1028	657	4.09	239	11.7	8.1
10...	1435	20.0	8.5	748	1028	1028	657	4.09	238	11.7	8.1
10...	1436	30.0	8.5	748	1028	1028	657	4.09	239	11.7	8.1
10...	1437	40.0	8.5	748	1028	1028	657	4.09	239	11.7	8.1
10...	1438	50.0	8.5	748	1028	1028	657	4.09	239	11.7	8.1
10...	1439	60.0	8.5	748	1028	1028	657	4.09	239	11.7	8.1
10...	1440	70.0	8.5	748	1028	1028	657	4.09	239	11.7	8.1
10...	1441	80.0	8.5	748	1028	1028	657	4.09	239	11.7	8.1
10...	1442	90.0	8.5	748	1028	1028	657	4.09	239	11.7	8.1
10...	1443	100	8.5	748	1028	1028	657	4.09	239	11.7	8.1
10...	1444	110	8.5	748	1028	1028	657	4.09	239	11.7	8.1
MAY											
14...	0925	10.0	22.0	754	1028	1028	716	3.88	256	6.9	--
14...	0926	20.0	22.0	754	1028	1028	716	3.88	257	6.8	--
14...	0927	30.0	22.0	754	1028	1028	716	3.88	257	6.9	--
14...	0928	40.0	22.0	754	1028	1028	716	3.88	257	6.9	--
14...	0929	50.0	22.0	754	1028	1028	716	3.88	256	6.9	--
14...	0930	60.0	22.0	754	1028	1028	716	3.88	256	6.9	--
14...	0931	70.0	22.0	754	1028	1028	716	3.88	256	6.9	--
14...	0932	80.0	22.0	754	1028	1028	716	3.88	256	6.9	--
14...	0933	90.0	22.0	754	1028	1028	716	3.88	257	6.9	--
14...	0934	100	22.0	754	1028	1028	716	3.88	257	6.9	--
14...	0935	110	22.0	754	1028	1028	716	3.88	257	7.1	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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												
22...	0925	1028	80020	287	282	7.6	6.5	15.0	--	763	9.1	90
NOV												
13...	0840	1028	80020	302	295	7.8	7.0	10.0	.63	748	10.8	98
DEC												
03...	1120	1028	80020	929	259	7.7	5.0	11.5	--	749	9.6	90
JAN												
15...	1220	1028	80020	1930	202	7.4	5.5	8.0	6.4	755	11.3	96
FEB												
10...	1445	1028	80020	657	239	8.1	11.5	8.5	--	748	11.7	102
MAR												
17...	1430	1028	80020	5700	174	7.4	15.5	10.5	10	747	10.4	95
APR												
22...	1230	1028	80020	849	237	8.1	21.0	15.5	--	760	12.8	129
MAY												
14...	0920	1028	80020	716	256	*7.9	22.5	22.0	2.6	754	6.9	80
JUN												
16...	1537	1028	80020	321	268	8.2	29.5	27.0	--	750	11.6	148
JUL												
13...	1515	1028	80020	302	272	7.9	31.5	30.5	1.7	751	9.8	133
AUG												
17...	1610	1028	80020	198	286	8.0	35.0	30.0	--	754	10.8	144
SEP												
01...	1150	1028	80020	126	289	7.6	32.5	27.5	.68	753	8.3	106

*pH, Lab (standard units)

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	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)
OCT											
22...	18	--	430	--	--	--	--	--	--	--	--
NOV											
13...	110	120	640	120	7	43	2.2	13	19	.5	3.2
DEC											
03...	14	--	100	--	--	--	--	--	--	--	--
JAN											
15...	19	17	83	91	19	33	1.9	5.0	10	.2	2.6
FEB											
10...	K7	--	150	--	--	--	--	--	--	--	--
MAR											
17...	K16	K17000	K1200	78	--	29	1.7	4.5	11	.2	2.4
APR											
22...	<1	--	K40	--	--	--	--	--	--	--	--
MAY											
14...	K37	<1	<1	100	--	37	1.8	8.1	14	.4	3.1
JUN											
16...	<1	--	K39	--	--	--	--	--	--	--	--
JUL											
13...	K4	K51	800	110	2	40	2.0	10	16	.4	3.6
AUG											
17...	K8	--	510	--	--	--	--	--	--	--	--
SEP											
01...	K3	<1	K51	110	1	39	2.0	13	20	.5	3.9

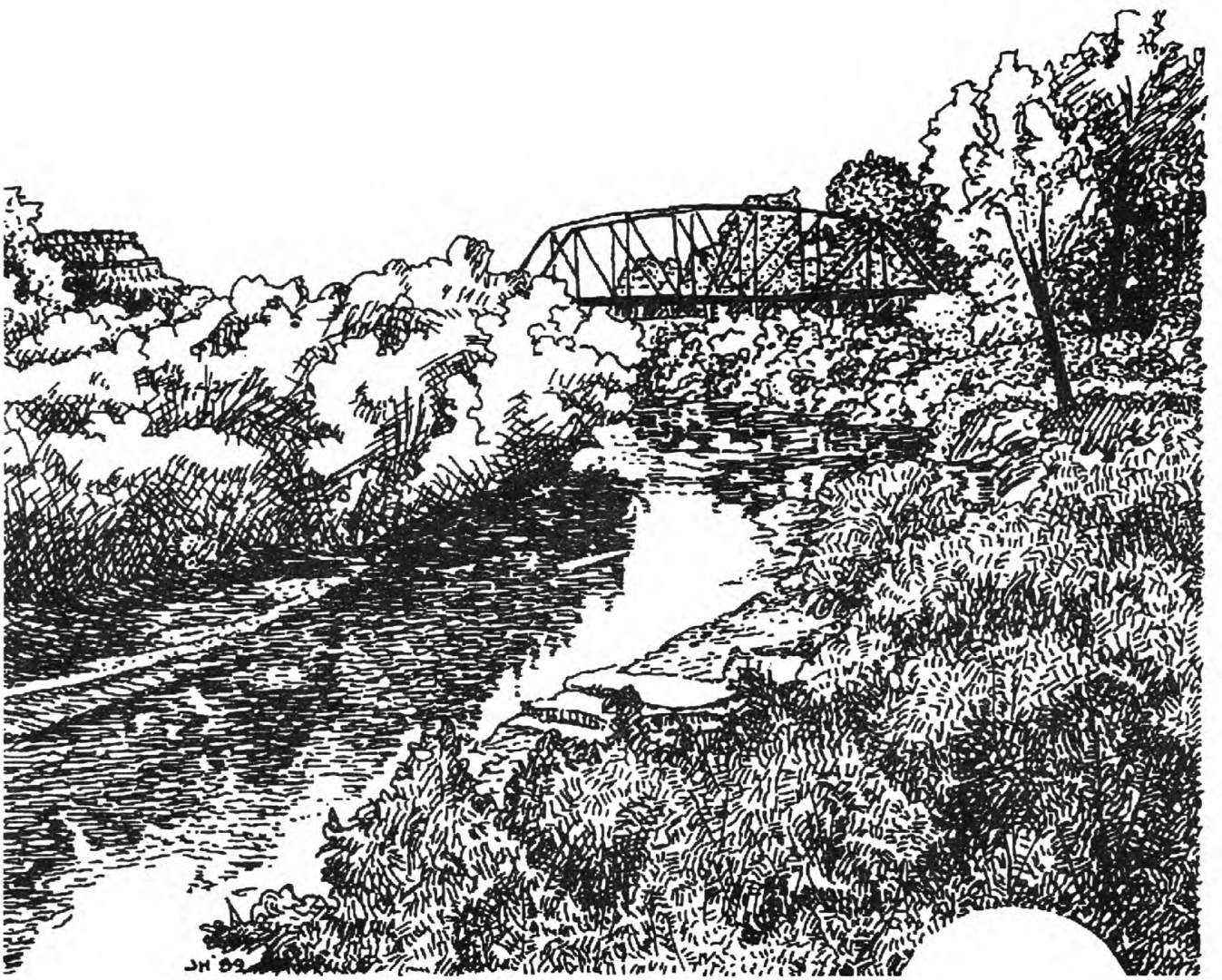
DATE	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	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)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)
OCT											
22...	127	0	104	--	--	--	--	--	--	--	--
NOV											
13...	133	0	109	13	16	163	160	.22	133	<1	--
DEC											
03...	118	0	97	--	--	--	--	--	--	--	--
JAN											
15...	87	0	71	9.8	6.9	134	117	.18	698	10	--
FEB											
10...	106	0	87	--	--	--	--	--	--	--	--
MAR											
17...	96	0	79	8.1	5.7	109	106	.15	1680	160	1.75
APR											
22...	117	0	96	--	--	--	--	--	--	--	1.52
MAY											
14...	126	0	103	10	9.4	147	138	.20	284	2	1.41
JUN											
16...	124	0	102	--	--	--	--	--	--	--	--
JUL											
13...	128	0	105	9.6	12	167	143	.23	136	5	--
AUG											
17...	126	0	103	--	--	--	--	--	--	--	.115
SEP											
01...	128	0	105	11	16	175	150	.24	59.5	7	.215

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	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 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)
OCT											
22...	--	<.010	--	1.09	<.015	--	--	<.20	--	.085	.078
NOV											
13...	--	<.010	--	1.14	<.020	--	--	<.10	--	.049	.061
DEC											
03...	--	<.010	--	1.86	<.020	--	--	.11	2.0	.085	.063
JAN											
15...	--	<.010	--	3.34	<.020	--	--	<.10	--	.067	.059
FEB											
10...	--	<.010	--	2.57	<.020	--	--	<.10	--	.048	.046
MAR											
17...	7.8	.010	.03	1.76	.129	.17	.26	.39	2.2	.148	.104
APR											
22...	6.7	.011	.04	1.53	.022	.03	.17	.19	1.7	.041	.023
MAY											
14...	6.3	.014	.05	1.43	.050	.06	.14	.19	1.6	.029	.038
JUN											
16...	--	<.010	--	1.19	.039	.05	.08	.12	1.3	.085	.080
JUL											
13...	--	<.010	--	.614	.032	.04	.14	.17	.79	.096	.085
AUG											
17...	.51	.402	1.3	.517	.176	.23	--	.13	.65	.072	.061
SEP											
01...	.95	.015	.05	.230	.093	.12	.10	.19	.42	.079	.080

DATE	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	CHLOROHPYLL A PHYTOPLANKTON ACID M. (UG/L) (32211)	PHEOPHYTIN PHYTOPLANKTON, ACID M. (UG/L) (32218)	CHLOROPHYLL A PHYTOPLANKTON, UNCORR. (UG/L) (32230)	CHLOROPHYLL B PHYTOPLANKTON, UNCORR. (UG/L) (32231)	CHLOROPHYLL C PHYTOPLANKTON, UNCORR. (UG/L) (32232)
OCT											
22...	.078	.24	--	--	--	--	--	--	--	--	--
NOV											
13...	.074	.23	2.3	17	14	93	<1.00	9.00	6.00	<1.00	<1.00
DEC											
03...	.049	.15	--	--	--	--	--	--	--	--	--
JAN											
15...	.072	.22	4.5	38	198	89	<1.00	<1.00	<1.00	<1.00	<1.00
FEB											
10...	.046	.14	--	--	--	--	--	--	--	--	--
MAR											
17...	.107	.33	<4.0	647	9950	97	<1.00	8.00	6.00	<1.00	<1.00
APR											
22...	.033	.10	--	--	--	--	--	--	--	--	--
MAY											
14...	.043	.13	5.0	37	72	92	1.00	2.00	2.00	<1.00	<1.00
JUN											
16...	.080	.25	--	--	--	--	--	--	--	--	--
JUL											
13...	.086	.26	8.6	29	24	96	<1.00	8.00	4.00	<1.00	<1.00
AUG											
17...	.107	.33	--	--	--	--	--	--	--	--	--
SEP											
01...	.075	.23	9.3	30	10	96	<1.00	3.00	1.00	<1.00	<1.00



07196513 ILLINOIS RIVER BELOW TAHLEQUAH CREEK NEAR TAHLEQUAH, OK

LOCATION.--Lat 35°53'01", long 94°56'37", in NW ¼ SW ¼, sec. 11, T.16 N., R.22 E., Cherokee County, Hydrologic Unit 11110103, 0.2 mi downstream from Tahlequah Creek, 2.1 mi upstream from Barron Fork, 2.1 mi southeast of Tahlequah, Ok. and at mile 51.4

PERIOD OF RECORD.--July 1997 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 1997 TO SEPTEMBER 1998

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)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
JUN										
17...	0900	8.00	24.5	752	1028	1028	302	270	6.6	7.6
17...	0901	18.0	25.0	752	1028	1028	302	270	6.9	7.6
17...	0902	28.0	25.0	752	1028	1028	302	270	6.9	7.6
17...	0903	38.0	25.0	752	1028	1028	302	271	6.9	7.6
17...	0904	48.0	25.0	752	1028	1028	302	271	7.0	7.6
17...	0905	58.0	25.0	752	1028	1028	302	271	7.1	7.6
17...	0906	68.0	25.0	752	1028	1028	302	272	7.2	7.6
17...	0907	78.0	25.0	752	1028	1028	302	276	7.2	7.6
17...	0908	88.0	25.0	752	1028	1028	302	281	6.9	7.5
17...	0909	98.0	25.0	752	1028	1028	302	285	6.9	7.6
AUG										
18...	0832	18.0	27.5	757	1028	1028	187	284	6.1	7.3
18...	0833	25.0	27.5	757	1028	1028	187	284	6.1	7.3
18...	0834	32.0	27.5	757	1028	1028	187	284	6.1	7.3
18...	0835	39.0	27.5	757	1028	1028	187	284	6.2	7.4
18...	0836	46.0	28.0	757	1028	1028	187	284	6.4	7.4
18...	0837	53.0	28.0	757	1028	1028	187	284	6.3	7.4
18...	0838	60.0	27.5	757	1028	1028	187	284	6.3	7.4
18...	0839	67.0	27.5	757	1028	1028	187	297	6.2	7.3
18...	0840	74.0	27.5	757	1028	1028	187	303	6.1	7.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)
JUN												
17...	0919	1028	80020	302	270	7.6	28.5	25.0	752	6.9	84	129
AUG												
18...	0830	1028	80020	187	284	7.3	32.0	27.5	757	6.1	78	--

DATE	CARBONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMACIL WATER WHLREC (UG/L) (30234)	BUTACHLOR WATER WHLREC (UG/L) (30235)	BUTYLATE WATER WHLREC (UG/L) (30236)	CARBOXIN 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)	PCNS UNFILT RECOVER (UG/L) (39250)	HEXAZINONE WATER WHOLE RECOVERABLE (UG/L) (30264)	METOLACHLOR WATER WHOLE TOT.REC (UG/L) (82612)
JUN												
17...	0	106	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200	<.200
AUG												
18...	--	--	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200	<.200

07196513 ILLINOIS RIVER BELOW TAHLEQUAH CREEK NEAR TAHLEQUAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)	AME-TRYNE TOTAL (UG/L) (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, TECH-NICAL TOTAL (UG/L) (39350)	CYAN-AZINE TOTAL (UG/L) (81757)
JUN												
17...	<.100	<.100	<.200	<.100	<.100	<.010	<.100	<.100	<.200	<.200	<.100	<.200
AUG												
18...	<.100	<.100	<.200	<.100	<.100	<.010	<.100	<.100	<.200	<.200	<.100	<.200

DATE	2,4-D, TOTAL (UG/L) (39730)	P,P'-DDD UNFILT RECOVER (UG/L) (39360)	P,P'-DDE, TOTAL (UG/L) (39365)	P,P'-DDT UNFILT RECOVER (UG/L) (39370)	DI-ELDRIN TOTAL (UG/L) (39380)	2, 4-DP TOTAL (UG/L) (82183)	ENDO-SULFAN, I TOTAL (UG/L) (39388)	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	HEPTA-CHLOR, TOTAL (UG/L) (39410)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	METH-OXY-CHLOR, TOTAL (UG/L) (39480)
JUN												
17...	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010
AUG												
18...	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010

DATE	MIREX, TOTAL (UG/L) (39755)	PER-THANE TOTAL (UG/L) (39034)	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)
JUN											
17...	<.010	<.100	<.200	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<.100
AUG											
18...	<.010	<.100	<.200	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<.100

07196520 ILLINOIS RIVER NEAR PARK HILL, OK

LOCATION.--Lat 35°51'11", long 94°54'55", in NE ¼ NE ¼, sec. 24, T.16 N., R.22 E., Cherokee County, Hydrologic Unit 11110103, adjacent to unimproved road 0.2 mi upstream from Barron Fork, 2.3 mi southeast of Park Hill, Ok.

PERIOD OF RECORD.--July 1996 to current year.

REMARKS.--Samples were collected bi-monthly when site is wadeable. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field. No samples collected January and March 1998 due to discharges too great to wade.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
MAY										
14...	1131	8.00	22.0	754	1028	1028	578	253	8.7	7.5
14...	1132	28.0	22.5	754	1028	1028	578	254	9.0	7.7
14...	1133	48.0	22.5	754	1028	1028	578	255	9.2	7.8
14...	1134	68.0	22.5	754	1028	1028	578	255	9.4	7.8
14...	1135	88.0	22.5	754	1028	1028	578	255	9.4	7.8
14...	1136	108	22.5	754	1028	1028	578	255	9.5	7.8
14...	1137	128	23.0	754	1028	1028	578	255	9.6	7.8
14...	1138	148	23.0	754	1028	1028	578	255	9.5	7.8
14...	1139	168	24.5	754	1028	1028	578	254	12.7	8.2
JUL										
13...	1201	17.0	29.0	753	1028	1028	294	271	8.2	7.5
13...	1202	34.0	29.0	753	1028	1028	294	272	8.3	7.5
13...	1203	51.0	29.0	753	1028	1028	294	272	8.3	7.6
13...	1204	68.0	29.0	753	1028	1028	294	273	8.5	7.7
13...	1205	85.0	29.5	753	1028	1028	294	273	8.7	7.7
13...	1206	102	29.5	753	1028	1028	294	273	8.8	7.7
13...	1207	119	30.0	753	1028	1028	294	273	9.0	7.8
13...	1208	136	30.5	753	1028	1028	294	272	9.4	7.8
13...	1209	153	31.5	753	1028	1028	294	267	9.8	8.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
12...	1520	1028	80020	284	297	8.2	--	11.0	.50	750	12.9
MAY											
14...	1130	1028	80020	578	255	7.8	25.5	22.5	1.9	754	9.4
JUL											
13...	1200	1028	80020	294	273	7.7	31.5	29.5	.80	753	8.7
SEP											
01...	0925	1028	80020	122	289	7.3	23.0	25.5	.70	754	6.3

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)	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)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)	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)
NOV											
12...	119	K10	200	137	0	112	<1	--	--	<.010	--
MAY											
14...	110	<1	K50	122	0	100	7	1.25	5.6	.013	.04
JUL											
13...	115	K14	>10000	124	0	102	7	--	--	<.010	--
SEP											
01...	79	K2	250	127	0	104	7	.233	1.0	.015	.05

07196520 ILLINOIS RIVER NEAR PARK HILL, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	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,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-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
NOV										
12...	.929	<.020	--	--	.11	1.0	.040	.042	.063	.19
MAY										
14...	1.27	.047	.06	.24	.29	1.6	.058	.022	.052	.16
JUL										
13...	.589	.030	.04	.15	.18	.76	.097	.072	.080	.25
SEP										
01...	.248	.094	.12	.10	.19	.44	.084	.072	.076	.23

07196973 PEACHEATER CREEK AT CHRISTIE, OK

LOCATION.--Lat 35°57'17", long 94°41'46", in SW ¼ NE ¼ 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.

PERIOD OF RECORD.--September 1992 to current year.

REVISED RECORDS.--WRD OK-96-1: 1995 (m)

GAGE.--Water-stage recorder. Datum of gage is 801.72 ft above sea level.

REMARKS.--Records good. U.S. Geological Survey satellite telemeter at station.

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)
Jan. 4	1615	2,250	11.53				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	2.7	37	33	27	19	40	18	16	2.0	.00	.00
2	.07	2.4	34	30	26	18	40	17	15	.93	.00	.00
3	.00	2.1	33	28	24	17	38	17	13	.59	.00	.00
4	.00	1.7	30	561	23	16	36	16	12	.38	.00	.00
5	.00	2.8	28	280	21	16	35	17	11	.22	.00	.00
6	.00	2.9	25	149	20	15	34	16	11	.13	.00	.00
7	.00	2.6	23	113	19	21	34	15	9.8	.04	.00	.00
8	.00	2.5	37	224	18	37	32	14	10	.17	.00	.00
9	3.7	2.3	41	159	17	34	31	14	9.4	.08	.00	.00
10	3.3	4.5	40	105	17	34	29	14	8.6	.00	.00	.00
11	3.0	4.6	e33	85	17	33	28	13	9.6	.01	.00	.00
12	4.5	5.1	e27	72	16	30	28	12	8.3	1.9	.00	.00
13	13	7.6	e25	63	16	27	28	12	7.5	.48	.00	.00
14	9.6	9.5	e24	57	15	25	26	12	6.5	.25	.00	.80
15	9.6	10	e23	52	15	27	25	11	5.7	.10	.00	.17
16	8.9	10	22	49	15	93	24	11	5.1	.01	.00	.14
17	8.3	9.8	21	45	15	126	23	10	4.2	.00	.00	.07
18	7.5	9.4	19	42	14	101	21	10	4.0	.00	.00	.00
19	6.8	9.1	17	39	14	204	20	9.6	3.3	.00	.00	.00
20	6.0	8.8	16	36	13	167	19	9.2	2.8	.00	.00	.00
21	5.6	8.5	27	34	13	105	18	8.7	2.9	.00	.00	.00
22	5.1	7.9	37	32	13	80	17	8.2	2.3	.00	.00	25
23	4.7	7.3	41	30	e12	68	16	8.0	1.8	.00	.00	7.3
24	5.5	6.8	106	29	e16	60	16	7.3	1.3	.00	.00	6.1
25	4.7	6.2	112	28	e23	55	15	11	.90	.00	.00	5.1
26	4.4	5.6	89	30	22	50	15	28	.61	.00	.00	4.7
27	4.1	5.0	70	30	21	49	22	25	.47	.00	.00	4.2
28	3.9	5.3	58	29	19	46	19	23	.38	.00	.00	3.5
29	3.5	55	48	29	---	43	19	21	.32	.00	.00	2.8
30	3.3	45	41	28	---	41	19	19	.49	.00	.00	2.1
31	3.1	---	36	27	---	43	---	18	---	.00	.00	---
TOTAL	132.54	263.0	1220	2548	501	1700	767	445.0	184.27	7.29	0.00	61.98
MEAN	4.28	8.77	39.4	82.2	17.9	54.8	25.6	14.4	6.14	.24	.000	2.07
MAX	13	55	112	561	27	204	40	28	16	2.0	.00	25
MIN	.00	1.7	16	27	12	15	15	7.3	.32	.00	.00	.00
AC-FT	263	522	2420	5050	994	3370	1520	883	365	14	.00	123

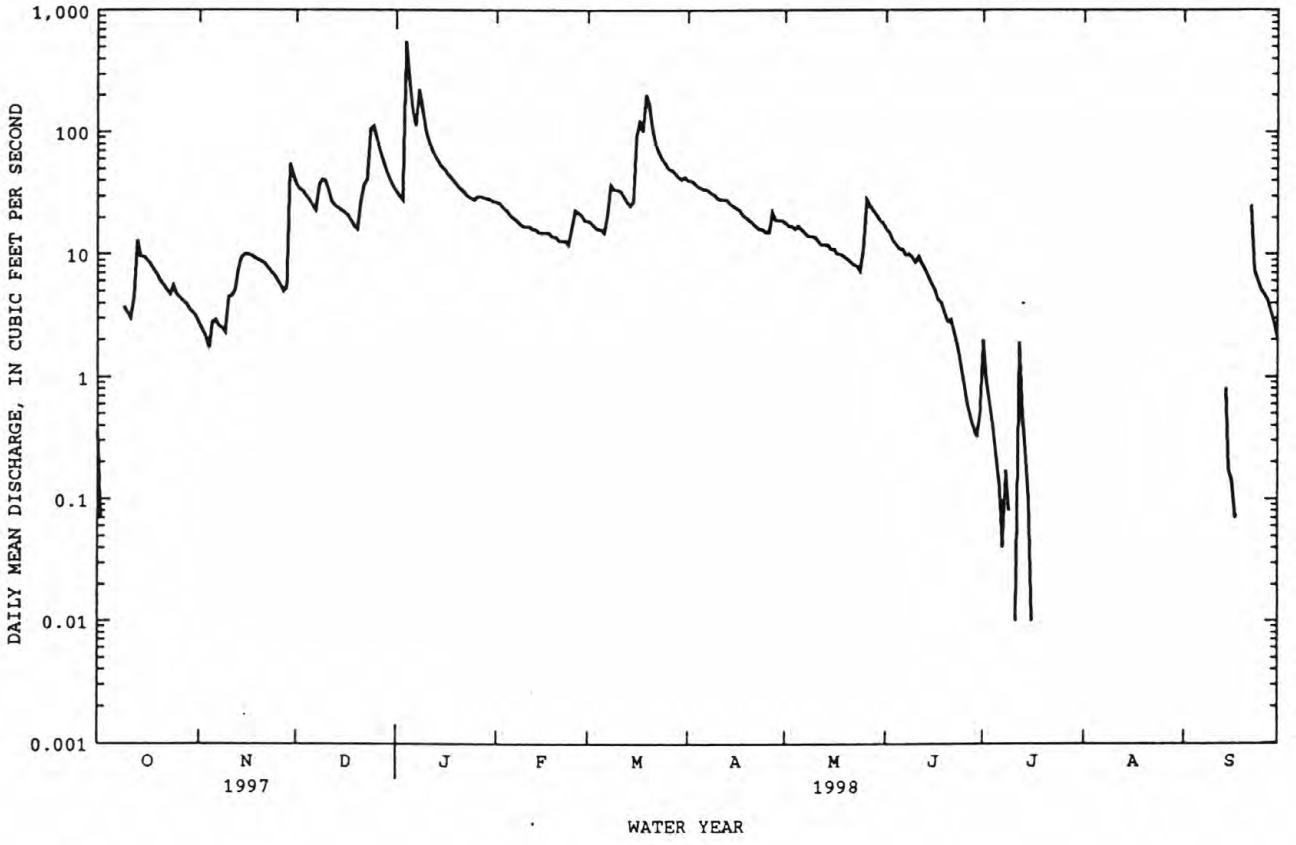
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1998, BY WATER YEAR (WY)

MEAN	10.7	42.6	40.1	37.4	30.8	42.5	40.1	43.3	29.0	9.63	3.65	13.8
MAX	35.1	90.5	103	82.2	63.1	65.4	65.5	105	74.6	19.5	7.73	45.1
(WY)	1994	1997	1993	1998	1993	1994	1993	1993	1995	1995	1995	1996
MIN	2.00	3.33	4.07	8.10	4.73	4.85	25.6	13.4	6.14	.24	.000	.94
(WY)	1995	1996	1996	1997	1996	1996	1998	1997	1998	1998	1998	1997

e Estimated

07196973 PEACHEATER CREEK AT CHRISTIE, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1993 - 1998	
ANNUAL TOTAL	7448.25		7830.08			
ANNUAL MEAN	20.4		21.5		28.6	
HIGHEST ANNUAL MEAN					48.2	1993
LOWEST ANNUAL MEAN					11.1	1996
HIGHEST DAILY MEAN	604	Feb 21	561	Jan 4	741	Sep 26 1996
LOWEST DAILY MEAN	.00	Sep 5	.00	Oct 3	.00	Aug 8 1996
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 5	.00	at times	.00	at times
INSTANTANEOUS PEAK FLOW			2250	Jan 4	2250	Jan 4 1998
INSTANTANEOUS PEAK STAGE			11.53	Jan 4	11.53	Jan 4 1998
ANNUAL RUNOFF (AC-FT)	14770		15530		20710	
10 PERCENT EXCEEDS	45		43		66	
50 PERCENT EXCEEDS	10		11		13	
90 PERCENT EXCEEDS	1.2		.00		1.4	



07197000 BARON FORK AT ELDON, OK

LOCATION.--Lat 35°55'16", long 94°50'18", in NE ¼ SE ¼ 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.--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)
Jan 4	2200	31,600	21.61	Mar 19	2100	7,670	12.66
Jan 8	1100	6,980	12.24				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	78	564	452	350	533	1200	300	177	53	23	17
2	48	75	472	413	347	459	830	275	151	48	23	17
3	47	72	442	382	325	415	707	257	134	44	22	16
4	45	69	514	7130	307	375	621	236	122	e45	22	15
5	44	73	450	10600	291	348	548	238	113	e44	22	14
6	43	69	391	4620	278	416	488	249	108	e43	22	14
7	43	68	344	3150	269	433	493	284	103	43	22	14
8	43	68	435	5480	258	2430	491	311	102	45	21	14
9	60	68	781	3580	247	1280	430	266	115	e45	21	13
10	78	74	649	2250	240	885	422	240	129	45	23	13
11	99	78	547	1500	408	723	412	217	132	41	23	13
12	94	84	470	1160	559	621	392	193	127	49	23	13
13	302	101	418	934	433	557	378	174	122	54	23	18
14	450	150	372	754	377	510	354	157	108	52	23	37
15	260	237	333	657	341	496	327	145	94	51	23	57
16	196	217	301	584	323	1490	348	136	88	48	23	54
17	161	188	274	526	321	2880	352	128	82	44	22	49
18	136	170	254	481	315	2220	322	122	79	42	22	44
19	121	152	235	443	295	3740	298	116	e76	39	21	41
20	109	141	222	414	278	3980	279	112	e70	37	21	38
21	99	131	319	386	267	2090	262	109	e65	36	20	37
22	95	123	1530	356	254	1420	245	105	e60	34	20	47
23	91	115	910	337	244	1090	229	103	e55	32	20	77
24	93	109	1910	318	236	923	216	102	e50	31	19	79
25	93	103	2050	305	228	854	203	112	e52	29	19	66
26	94	99	1290	343	558	746	192	241	e48	28	18	57
27	93	96	956	520	968	691	353	399	e45	27	18	50
28	89	96	777	446	673	786	542	318	e40	25	18	46
29	86	376	677	409	---	686	393	264	e35	25	18	42
30	84	729	585	380	---	604	331	232	93	24	18	40
31	81	---	510	356	---	1890	---	205	---	24	18	---
TOTAL	3426	4209	19982	49666	9990	36571	12658	6346	2775	1227	651	1052
MEAN	111	140	645	1602	357	1180	422	205	92.5	39.6	21.0	35.1
MAX	450	729	2050	10600	968	3980	1200	399	177	54	23	79
MIN	43	68	222	305	228	348	192	102	35	24	18	13
AC-FT	6800	8350	39630	98510	19820	72540	25110	12590	5500	2430	1290	2090
CFSM	.36	.46	2.10	5.22	1.16	3.84	1.37	.67	.30	.13	.07	.11
IN.	.42	.51	2.42	6.02	1.21	4.43	1.53	.77	.34	.15	.08	.13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1998, BY WATER YEAR (WY)

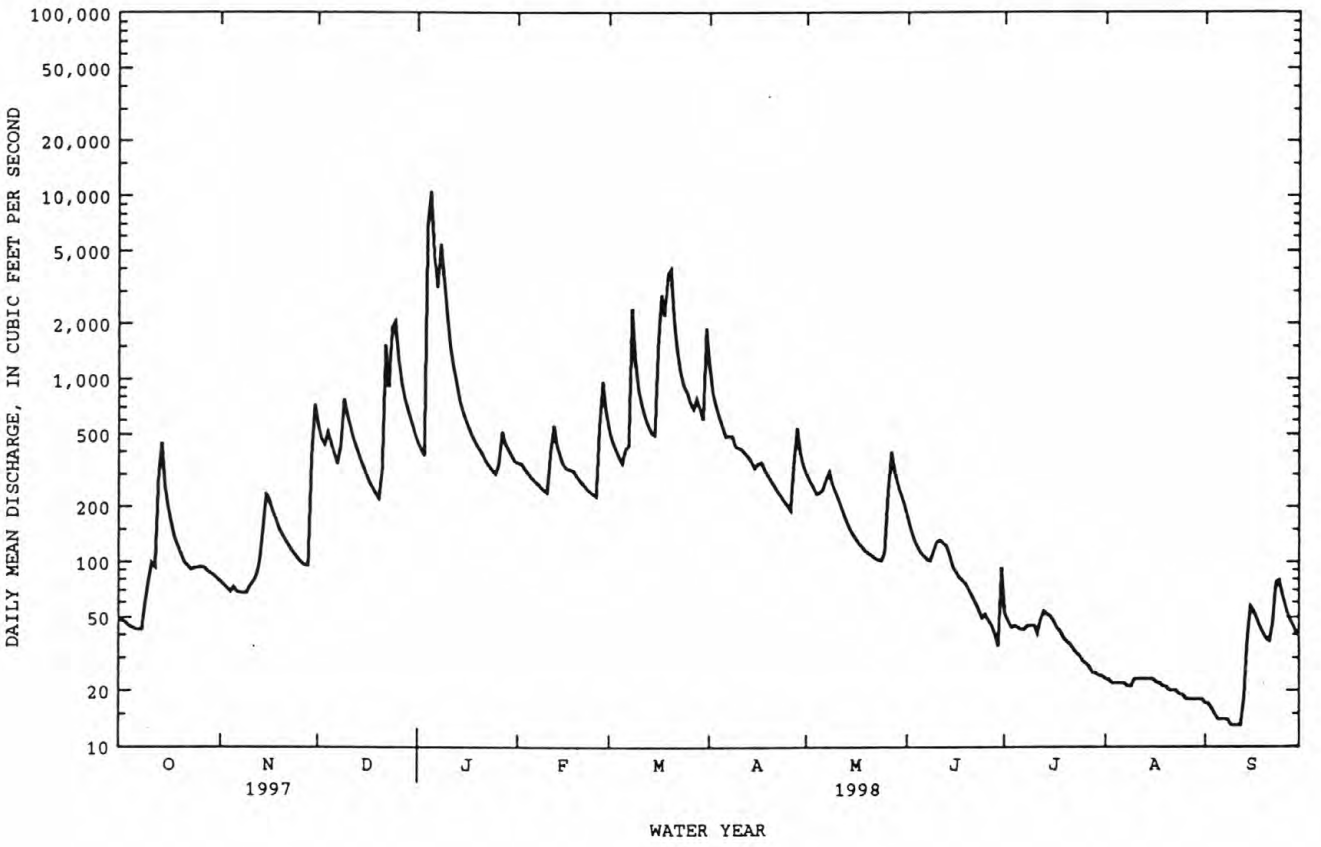
MEAN	175	338	325	316	391	544	587	642	322	146	73.9	124
MAX	2077	1641	1692	1602	1441	1702	2105	2605	1575	903	437	927
(WY)	1987	1997	1988	1998	1951	1973	1957	1957	1957	1958	1992	1970
MIN	1.96	10.4	14.0	14.6	24.6	43.3	81.0	62.5	25.0	8.75	3.80	3.10
(WY)	1957	1964	1964	1964	1964	1967	1954	1977	1977	1954	1954	1956

e Estimated

07197000 BARON FORK AT ELDON, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1949 - 1998	
ANNUAL TOTAL	122653		148553			
ANNUAL MEAN	336		407		331	
HIGHEST ANNUAL MEAN					734	1993
LOWEST ANNUAL MEAN					55.7	1963
HIGHEST DAILY MEAN	13700	Feb 21	10600	Jan 5	34300	Oct 1 1986
LOWEST DAILY MEAN	43	Sep 11	13	Sep 9,10,11,12	1.8	[a]Oct 7 1956
ANNUAL SEVEN-DAY MINIMUM	45	Oct 2	13	Sep 6	1.8	Oct 21 1956
INSTANTANEOUS PEAK FLOW			31600	Jan 4	50600	May 3 1990
INSTANTANEOUS PEAK STAGE			21.61	Jan 4	25.91	May 3 1990
ANNUAL RUNOFF (AC-FT)	243300		294700		240100	
ANNUAL RUNOFF (CFSM)	1.09		1.33		1.08	
ANNUAL RUNOFF (INCHES)	14.86		18.00		14.67	
10 PERCENT EXCEEDS	711		763		716	
50 PERCENT EXCEEDS	159		157		123	
90 PERCENT EXCEEDS	55		23		22	

[a]Also occurred Oct. 8, 21-28, 1956.



07197000 BARON FORK AT ELDON, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948, 1958-60, 1991 to July 1995, July 1996 to current year.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
10...	1205	86.0	9.5	750	1028	1028	228	5.16	176	11.3	7.7
10...	1206	76.0	9.5	750	1028	1028	228	5.16	176	11.2	7.7
10...	1207	66.0	9.5	750	1028	1028	228	5.16	176	11.1	7.7
10...	1208	56.0	9.5	750	1028	1028	228	5.16	176	11.0	7.7
10...	1209	46.0	9.5	750	1028	1028	228	5.16	176	11.0	7.7
10...	1211	36.0	9.5	750	1028	1028	228	5.16	176	11.0	7.7
10...	1212	26.0	9.5	750	1028	1028	228	5.16	176	11.0	7.7
10...	1213	16.0	9.5	750	1028	1028	228	5.16	176	11.0	7.7
10...	1214	6.00	9.5	750	1028	1028	228	5.16	175	11.0	7.7
AUG											
18...	0826	22.0	24.5	750	1028	1028	21	4.41	212	4.8	7.5
18...	0827	19.0	24.5	750	1028	1028	21	4.41	212	5.2	7.5
18...	0828	16.0	24.5	750	1028	1028	21	4.41	212	5.2	7.5
18...	0829	13.0	24.5	750	1028	1028	21	4.41	212	5.2	7.5
18...	0830	11.0	24.5	750	1028	1028	21	4.41	212	5.3	7.5
18...	0831	7.00	24.5	750	1028	1028	21	4.41	212	5.2	7.5
18...	0832	4.00	25.5	750	1028	1028	21	4.41	215	4.3	7.5
18...	0833	1.00	26.5	750	1028	1028	21	4.41	215	4.3	7.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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												
22...	0815	1028	80020	86	203	7.4	3.5	16.5	--	762	8.3	85
NOV												
13...	1330	1028	80020	100	201	7.7	7.5	13.0	.20	748	11.6	112
DEC												
03...	1700	1028	80020	431	199	7.6	4.5	12.0	--	754	9.4	88
JAN												
15...	0945	1028	80020	648	158	7.5	0.0	8.5	2.4	755	11.0	95
FEB												
10...	1210	1028	80020	228	176	7.7	13.5	9.5	--	750	11.1	99
MAR												
19...	1300	1028	80020	2630	139	7.3	7.5	10.5	23	746	10.6	97
APR												
22...	1420	1028	80020	248	178	8.2	23.0	15.5	--	758	13.0	131
MAY												
11...	1550	1028	80020	205	190	8.5	32.5	21.5	1.6	740	10.1	118
JUN												
02...	1055	1028	80020	133	198	7.8	30.0	22.0	--	738	8.0	95
JUL												
21...	0830	1028	80020	35	206	*7.7	28.0	25.5	.40	754	6.3	78
AUG												
18...	0820	1028	80020	21	212	7.5	28.5	24.5	--	750	5.2	64
SEP												
21...	1340	1028	80020	37	207	7.7	33.0	26.0	.45	741	8.3	105

*pH, Lab (standard units)

07197000 BARON FORK AT ELDON, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	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											
22...	15	--	520	--	--	--	--	--	--	--	--
NOV											
13...	50	17	250	93	5	34	1.7	3.1	7	.1	1.8
DEC											
03...	K24	--	150	--	--	--	--	--	--	--	--
JAN											
15...	19	K4	70	72	12	27	1.5	2.5	7	.1	1.7
FEB											
10...	K3	--	220	--	--	--	--	--	--	--	--
MAR											
19...	K20	K680	1100	65	19	24	1.3	2.3	7	.1	1.7
APR											
22...	<1	--	K29	--	--	--	--	--	--	--	--
MAY											
11...	K2	K2	K7	83	3	31	1.5	2.8	7	.1	1.9
JUN											
02...	22	--	23	--	--	--	--	--	--	--	--
JUL											
21...	<1	<1	K80	93	2	34	1.7	3.2	7	.1	2.2
AUG											
18...	73	--	59	--	--	--	--	--	--	--	--
SEP											
21...	77	K3	64	92	30	34	1.7	3.2	7	.1	2.3

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)	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)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)
OCT											
22...	107	0	87	--	--	--	--	--	--	--	--
NOV											
13...	107	0	88	5.4	5.4	114	108	.16	30.8	<1	--
DEC											
03...	100	0	82	--	--	--	--	--	--	--	--
JAN											
15...	74	0	61	6.1	3.7	105	90	.14	184	3	--
FEB											
10...	85	0	70	--	--	--	--	--	--	--	--
MAR											
19...	56	0	46	5.3	3.1	86	72	.12	611	118	--
APR											
22...	90	0	74	--	--	--	--	--	--	--	--
MAY											
11...	95	1	80	6.0	4.1	114	99	.16	63.1	3	.928
JUN											
02...	101	0	83	--	--	--	--	--	--	--	1.04
JUL											
21...	111	0	91	4.4	5.0	127	108	.17	12.0	<1	--
AUG											
18...	114	0	94	--	--	--	--	--	--	--	2.72
SEP											
21...	75	0	61	4.7	5.5	118	90	.16	11.8	1	--

07197000 BARON FORK AT ELDON, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	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 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-PHORUS DIS-SOLVED (MG/L AS P) (00666)
OCT											
22...	--	<.010	--	.778	<.015	--	--	<.20	--	.020	.013
NOV											
13...	--	<.010	--	.761	<.020	--	--	<.10	--	.030	.042
DEC											
03...	--	<.010	--	1.57	<.020	--	--	<.10	--	.024	.017
JAN											
15...	--	<.010	--	2.54	<.020	--	--	<.10	--	.028	.021
FEB											
10...	--	<.010	--	1.86	<.020	--	--	.13	2.0	.010	.020
MAR											
19...	--	<.010	--	1.42	.121	.16	.12	.24	1.7	.083	.039
APR											
22...	--	<.010	--	1.10	.020	.03	.08	.10	1.2	<.010	<.010
MAY											
11...	4.1	.013	.04	.941	.041	.05	.09	.13	1.1	<.010	<.010
JUN											
02...	4.6	.011	.04	1.05	.056	.07	.20	.26	1.3	.050	.019
JUL											
21...	--	<.010	--	.454	.046	.06	.05	.10	.55	.033	<.010
AUG											
18...	12	.013	.04	2.74	.059	.08	.05	.10	2.8	.014	.015
SEP											
21...	--	<.010	--	.247	.026	.03	.10	.13	.37	.027	.019

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	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)	CHLORO-HPYLL A PHYTO-PLANK-TON ACID M. (UG/L) (32211)	PHEO-PHYTIN PHYTO-PLANK-TON, ACID M. (UG/L) (32218)	CHLORO-PHYLL A PHYTO-PLANK-TON, UNCORR. (UG/L) (32230)	CHLORO-PHYLL B PHYTO-PLANK-TON, UNCORR. (UG/L) (32231)	CHLORO-PHYLL C PHYTO-PLANK-TON, UNCORR. (UG/L) (32232)
OCT											
22...	.020	.06	--	--	--	--	--	--	--	--	--
NOV											
13...	.041	.13	3.6	9	2.4	100	<1.00	1.00	<1.00	<1.00	<1.00
DEC											
03...	<.010	--	--	--	--	--	--	--	--	--	--
JAN											
15...	.028	.09	4.9	26	45	85	<1.00	<1.00	<1.00	<1.00	<1.00
FEB											
10...	.024	.07	--	--	--	--	--	--	--	--	--
MAR											
19...	.052	.16	<4.0	111	788	85	<1.00	1.00	1.00	<1.00	<1.00
APR											
22...	.017	.05	--	--	--	--	--	--	--	--	--
MAY											
11...	.026	.08	7.0	16	8.9	91	<1.00	1.00	1.00	<1.00	<1.00
JUN											
02...	.038	.12	--	--	--	--	--	--	--	--	--
JUL											
21...	.016	.05	15	24	2.3	93	<1.00	4.00	<1.00	<1.00	<1.00
AUG											
18...	.024	.07	--	--	--	--	--	--	--	--	--
SEP											
21...	.031	.10	8.2	30	3.0	96	<1.00	3.00	<1.00	<1.00	<1.00

07197080 BARON FORK AT WELLING, OK

LOCATION.--Lat 35°52'08", long 94°53'52", in NE ¼ NE ¼, sec. 18, T.16 N., R.23 E., Cherokee County, Hydrologic Unit 11110103, at county road bridge 0.3 mi south of Welling, Ok.

PERIOD OF RECORD.--July 1996 to current year.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
18...	1348	176	9.5	753	1028	1028	340	8.36	174	12.4	7.8
18...	1349	166	9.5	753	1028	1028	340	8.36	174	12.5	7.8
18...	1350	156	9.5	753	1028	1028	340	8.36	173	12.5	7.8
18...	1351	146	9.5	753	1028	1028	340	8.36	174	12.5	7.8
18...	1352	136	9.5	753	1028	1028	340	8.36	173	12.5	7.8
18...	1353	126	9.5	753	1028	1028	340	8.36	173	12.5	7.8
18...	1354	116	9.5	753	1028	1028	340	8.36	174	12.5	7.8
18...	1355	106	9.5	753	1028	1028	340	8.36	173	12.6	7.8
18...	1356	96.0	9.5	753	1028	1028	340	8.36	171	12.6	7.8
18...	1357	86.0	9.5	753	1028	1028	340	8.36	171	12.5	7.8
18...	1358	76.0	9.5	753	1028	1028	340	8.36	171	12.3	7.8
18...	1359	66.0	9.5	753	1028	1028	340	8.36	174	12.3	7.8
18...	1400	56.0	9.5	753	1028	1028	340	8.36	174	12.3	7.8
18...	1401	46.0	9.5	753	1028	1028	340	8.36	174	12.4	7.8
18...	1402	36.0	9.5	753	1028	1028	340	8.36	173	12.3	7.8
18...	1403	16.0	9.5	753	1028	1028	340	8.36	173	12.4	7.8
JUL											
13...	1235	4.00	26.5	744	1028	1028	74	7.32	198	8.9	--
13...	1236	14.0	26.5	744	1028	1028	74	7.32	199	8.9	--
13...	1237	24.0	26.5	744	1028	1028	74	7.32	199	8.9	--
13...	1238	34.0	26.5	744	1028	1028	74	7.32	199	8.8	--
13...	1239	44.0	26.5	744	1028	1028	74	7.32	199	8.9	--
13...	1240	54.0	26.5	744	1028	1028	74	7.32	199	8.5	--
13...	1241	64.0	26.5	744	1028	1028	74	7.32	199	8.6	--
13...	1242	74.0	26.5	744	1028	1028	74	7.32	198	8.4	--
13...	1243	84.0	27.0	744	1028	1028	74	7.32	198	8.6	--
13...	1244	94.0	27.0	744	1028	1028	74	7.32	198	9.0	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
21...	1510	1028	80020	92	202	7.6	9.0	17.5	--	760	10.0
NOV											
12...	1520	1028	80020	73	202	7.7	--	13.0	.40	755	11.5
DEC											
03...	1530	1028	80020	423	197	7.7	4.5	12.0	--	754	9.8
JAN											
27...	1400	1028	80020	597	179	7.3	11.5	9.5	1.9	757	11.5
FEB											
18...	1338	1028	80020	340	173	7.8	13.5	9.5	--	753	12.5
MAR											
19...	1100	1028	80020	2050	140	7.2	7.0	10.5	16	748	10.6
APR											
22...	1300	1028	80020	263	175	8.6	20.5	15.5	--	755	11.3
MAY											
13...	1645	1028	80020	187	184	8.6	31.5	23.0	2.0	740	10.2
JUN											
02...	1430	1028	80020	154	193	8.2	31.5	25.0	--	736	7.8
JUL											
13...	1220	1028	80020	74	199	*7.8	29.0	26.5	.35	744	8.5
AUG											
17...	1530	1028	80020	21	202	8.0	31.5	28.0	--	746	9.0
SEP											
01...	0825	1028	80020	12	209	--	23.0	25.0	.27	754	5.5

*pH, Lab (standard units)

07197080 BARON FORK AT WELLING, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)	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)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)	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)
OCT											
21...	105	21	320	105	0	86	--	--	--	<.010	--
NOV											
12...	110	15	250	105	0	86	<1	--	--	<.010	--
DEC											
03...	92	40	99	100	0	82	--	--	--	<.010	--
JAN											
27...	101	K5	K26	84	0	69	3	--	--	<.010	--
FEB											
18...	111	K3	K8	87	0	71	--	--	--	<.010	--
MAR											
19...	97	K10	150	60	0	49	18	--	--	<.010	--
APR											
22...	114	K7	K10	82	1	70	--	--	--	<.010	--
MAY											
13...	122	K3	K11	92	2	80	2	.756	3.3	.010	.03
JUN											
02...	98	K10	20	99	0	81	--	.961	4.3	.011	.04
JUL											
13...	109	K12	22	107	0	88	4	--	--	<.010	--
AUG											
17...	118	.79	17	115	0	95	--	.311	1.4	.014	.05
SEP											
01...	67	<1	230	115	0	94	20	.243	1.1	.014	.05

DATE	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, 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, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)
OCT										
21...	.623	<.015	--	--	<.20	--	.026	--	.016	.05
NOV										
12...	.565	<.020	--	--	<.10	--	.012	.020	.034	.10
DEC										
03...	1.39	<.020	--	--	<.10	--	.025	.029	<.010	--
JAN										
27...	2.41	<.020	--	--	<.10	--	.042	.013	.023	.07
FEB										
18...	1.66	<.020	--	--	.10	1.8	.015	.013	.031	.10
MAR										
19...	1.42	.116	.15	--	<.10	--	.033	.023	.036	.11
APR										
22...	.959	.037	.05	.10	.14	1.1	.027	.031	.035	.11
MAY										
13...	.766	.042	.05	.13	.17	.94	--	.064	.027	.08
JUN										
02...	.972	.037	.05	.24	.28	1.2	.034	.029	.036	.11
JUL										
13...	.511	.057	.07	.15	.21	.72	--	.017	.036	.11
AUG										
17...	.325	.060	.08	--	<.10	--	.022	.015	.042	.13
SEP										
01...	.257	.080	.10	--	<.10	--	.028	.012	.027	.08

07197360 CANEY CREEK NEAR BARBER, OK

LOCATION.--Lat 35°47'05", long 94°51'21", in SE ¼ SW ¼ sec.10, T.15 N., R.23 E., Cherokee County, Hydrologic Unit 11110103, on left downstream bank of county road bridge, 0.9 mi below Negro Jake Hollow, 1.9 mi northeast of Barber, and 0.5 mi upstream from Tenkiller Ferry Lake.

DRAINAGE AREA.--89.6 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1997 to September 1998.

GAGE.--Water-stage recorder. Datum of gage is 632.09 ft above sea level from topographic map.

REMARKS.--Records poor. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e16	22	143	e53	e97	e47	e185	71	37	24	8.4	5.7
2	e16	22	108	e48	e94	e44	e163	68	35	24	8.1	5.4
3	e15	21	107	e46	88	e40	e143	66	33	21	10	5.3
4	e15	22	97	e3600	84	e36	e132	63	32	20	10	5.2
5	e14	23	83	e1900	80	e32	e120	68	31	19	9.1	4.3
6	e13	21	e76	e1500	76	e50	e150	76	30	18	8.4	4.1
7	e13	20	e70	e2450	73	e580	e175	72	28	18	8.0	3.9
8	15	21	e240	e1450	69	e350	e165	68	36	19	7.6	3.9
9	28	20	176	e960	66	e275	e148	64	80	18	8.7	3.6
10	21	25	e150	e785	64	228	e128	61	58	17	10	3.5
11	19	23	e115	e510	64	188	e120	59	54	17	12	3.5
12	26	24	e88	e390	67	157	e113	57	49	22	16	3.6
13	98	30	e72	e295	63	140	e102	54	45	18	19	7.8
14	74	36	e60	e260	61	126	95	53	42	17	16	55
15	55	34	e54	e220	59	240	95	51	38	16	17	48
16	48	33	50	e200	60	829	140	49	35	16	19	42
17	42	38	52	e180	58	804	115	47	33	15	20	36
18	37	41	e48	e160	57	535	103	45	33	16	19	30
19	35	38	e43	e150	55	1160	94	43	30	16	18	27
20	32	39	e39	e140	53	e780	89	42	28	16	16	24
21	29	37	e73	e130	51	e520	82	41	28	15	15	22
22	27	32	e69	e120	50	e400	78	40	27	14	14	22
23	27	30	e94	e105	48	e340	75	39	24	14	13	20
24	30	28	e187	e100	47	e255	72	e38	23	13	12	19
25	26	28	e137	e135	46	e240	70	e125	22	13	11	17
26	25	26	e104	e150	e55	e220	68	84	21	11	9.9	16
27	24	27	e86	131	e53	e265	99	46	21	11	9.3	e15
28	25	30	e76	e120	e50	e230	92	44	20	10	8.3	14
29	24	452	e70	e125	---	e185	80	44	20	9.7	7.7	13
30	26	253	e62	e115	---	e280	74	42	20	9.1	7.0	13
31	26	---	e56	e105	---	e230	---	39	---	8.7	6.4	---
TOTAL	921	1496	2885	16633	1788	9806	3365	1759	1013	495.5	373.9	492.8
MEAN	29.7	49.9	93.1	537	63.9	316	112	56.7	33.8	16.0	12.1	16.4
MAX	98	452	240	3600	97	1160	185	125	80	24	20	55
MIN	13	20	39	46	46	32	68	38	20	8.7	6.4	3.5
AC-FT	1830	2970	5720	32990	3550	19450	6670	3490	2010	983	742	977

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1998, BY WATER YEAR (WY)

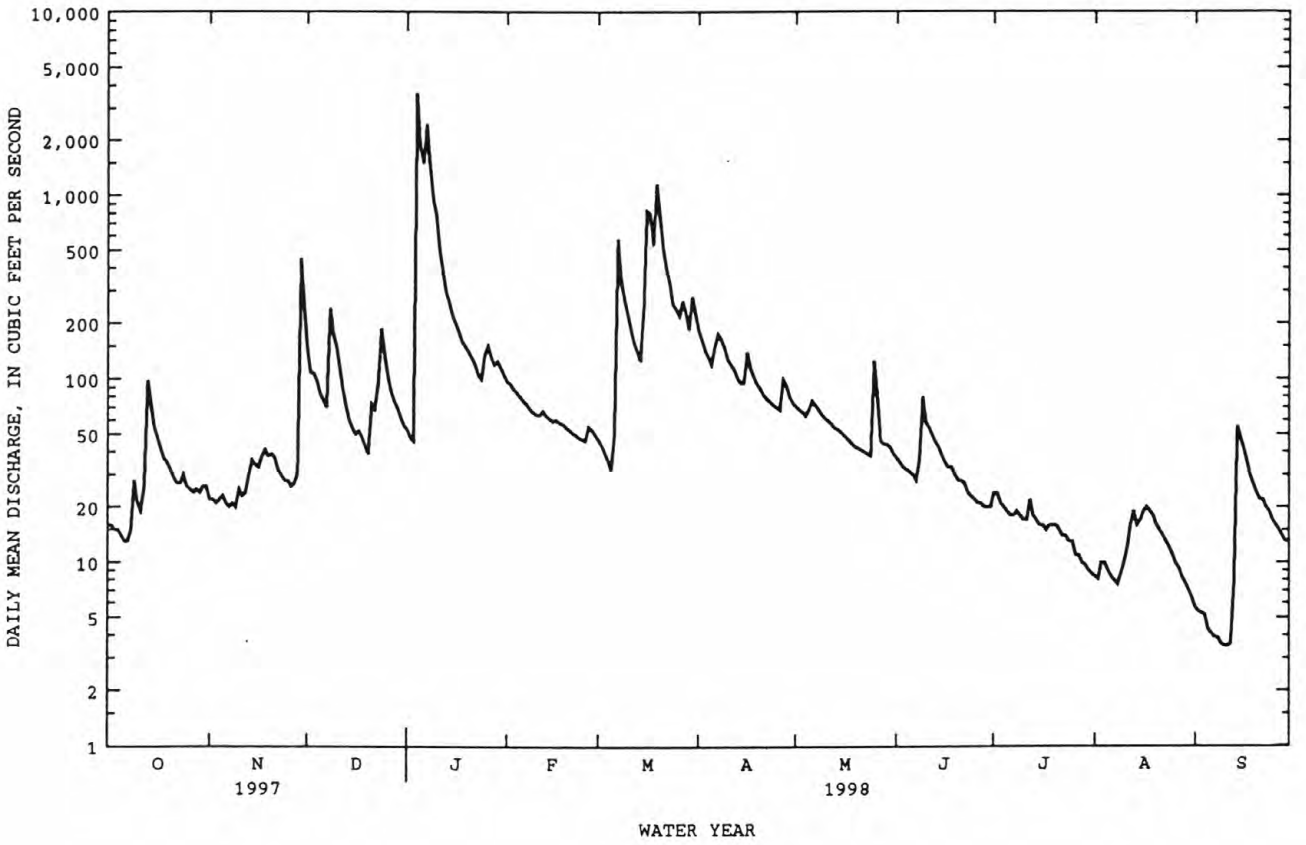
MEAN	29.7	49.9	93.1	537	63.9	316	112	56.7	33.8	16.0	12.1	16.4
MAX	29.7	49.9	93.1	537	63.9	316	112	56.7	33.8	16.0	12.1	16.4
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998
MIN	29.7	49.9	93.1	537	63.9	316	112	56.7	33.8	16.0	12.1	16.4
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998

e Estimated

07197360 CANEY CREEK NEAR BARBER, OK--Continued

SUMMARY STATISTICS	FOR 1998 WATER YEAR		WATER YEARS 1997 - 1998	
ANNUAL TOTAL	41028.2			
ANNUAL MEAN	112		112	
HIGHEST ANNUAL MEAN			112	1998
LOWEST ANNUAL MEAN			112	1998
HIGHEST DAILY MEAN	3600	Jan 4	3600	Jan 4 1998
LOWEST DAILY MEAN	3.5	Sep 10, 11	3.5	Sep 10 1998
ANNUAL SEVEN-DAY MINIMUM	3.7	Sep 6	3.7	Sep 6 1998
INSTANTANEOUS PEAK FLOW	unknown	Jan 4	unknown	Jan 4 1998
INSTANTANEOUS PEAK STAGE	17.61	Jan 4	[a]17.61	Jan 4 1998
ANNUAL RUNOFF (AC-FT)	81380		81430	
10 PERCENT EXCEEDS	193		193	
50 PERCENT EXCEEDS	43		43	
90 PERCENT EXCEEDS	12		12	

[a]From high-water mark that occurred during backwater from Tenkiller Ferry Lake.



07197360 CANEY CREEK NEAR BARBER, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1997 to current year.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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)
AUG									
25...	1430	1028	80020	25	241	7.6	31.0	27.0	758
SEP									
11...	0900	1028	80020	13	251	7.4	16.0	21.0	756

DATE	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	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, NITRITE DISSOLVED (MG/L AS N) (00613)
AUG									
25...	9.1	115	K8	<1	530	131	0	108	<.010
SEP									
11...	7.0	79	K8	K4	670	140	0	114	<.010

DATE	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, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	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)
AUG								
25...	.396	.020	.03	<.20	.018	.011	.029	.09
SEP								
11...	.333	<.015	--	<.20	.020	.019	.025	.08

07197360 CANEY CREEK NEAR BARBER, OK--Continued

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
18...	1200	71.0	10.0	753	1028	1028	56	6.38	204	12.3	7.7
18...	1201	64.0	10.0	753	1028	1028	56	6.38	203	12.3	7.7
18...	1202	57.0	10.0	753	1028	1028	56	6.38	204	12.3	7.7
18...	1203	50.0	10.0	753	1028	1028	56	6.38	203	12.3	7.7
18...	1204	43.0	10.0	753	1028	1028	56	6.38	203	12.2	7.7
18...	1206	29.0	10.0	753	1028	1028	56	6.38	204	12.1	7.7
18...	1207	22.0	10.0	753	1028	1028	56	6.38	200	12.2	7.7
18...	1208	15.0	10.0	753	1028	1028	56	6.38	204	12.2	7.7
18...	1209	8.00	10.0	753	1028	1028	56	6.38	204	12.6	7.8
MAR											
10...	1255	58.0	9.5	769	1028	1028	231	7.00	192	11.3	7.5
10...	1256	51.0	9.5	769	1028	1028	231	7.00	192	11.2	7.5
10...	1257	44.0	9.5	769	1028	1028	231	7.00	193	11.3	7.5
10...	1258	37.0	9.5	769	1028	1028	231	7.00	191	11.3	7.5
10...	1259	30.0	9.5	769	1028	1028	231	7.00	192	11.3	7.5
10...	1300	23.0	9.5	769	1028	1028	231	7.00	192	11.3	7.5
10...	1301	16.0	9.5	769	1028	1028	231	7.00	193	11.3	7.5
10...	1302	9.00	9.5	769	1028	1028	231	7.00	192	11.3	7.5
10...	1303	2.00	10.0	769	1028	1028	231	7.00	192	11.3	7.6
AUG											
17...	1325	45.0	28.5	755	1028	1028	20	6.29	241	8.8	7.2
17...	1326	40.0	28.5	755	1028	1028	20	6.29	239	8.6	7.2
17...	1327	35.0	28.5	755	1028	1028	20	6.29	241	8.9	7.2
17...	1328	30.0	28.5	755	1028	1028	20	6.29	241	8.9	7.2
17...	1329	25.0	28.5	755	1028	1028	20	6.29	242	8.9	7.2
17...	1330	20.0	28.5	755	1028	1028	20	6.29	242	8.9	7.2
17...	1331	15.0	28.5	755	1028	1028	20	6.29	241	9.1	7.2
17...	1332	10.0	28.5	755	1028	1028	20	6.29	241	9.0	7.2
17...	1333	5.00	28.5	755	1028	1028	20	6.29	241	9.1	7.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

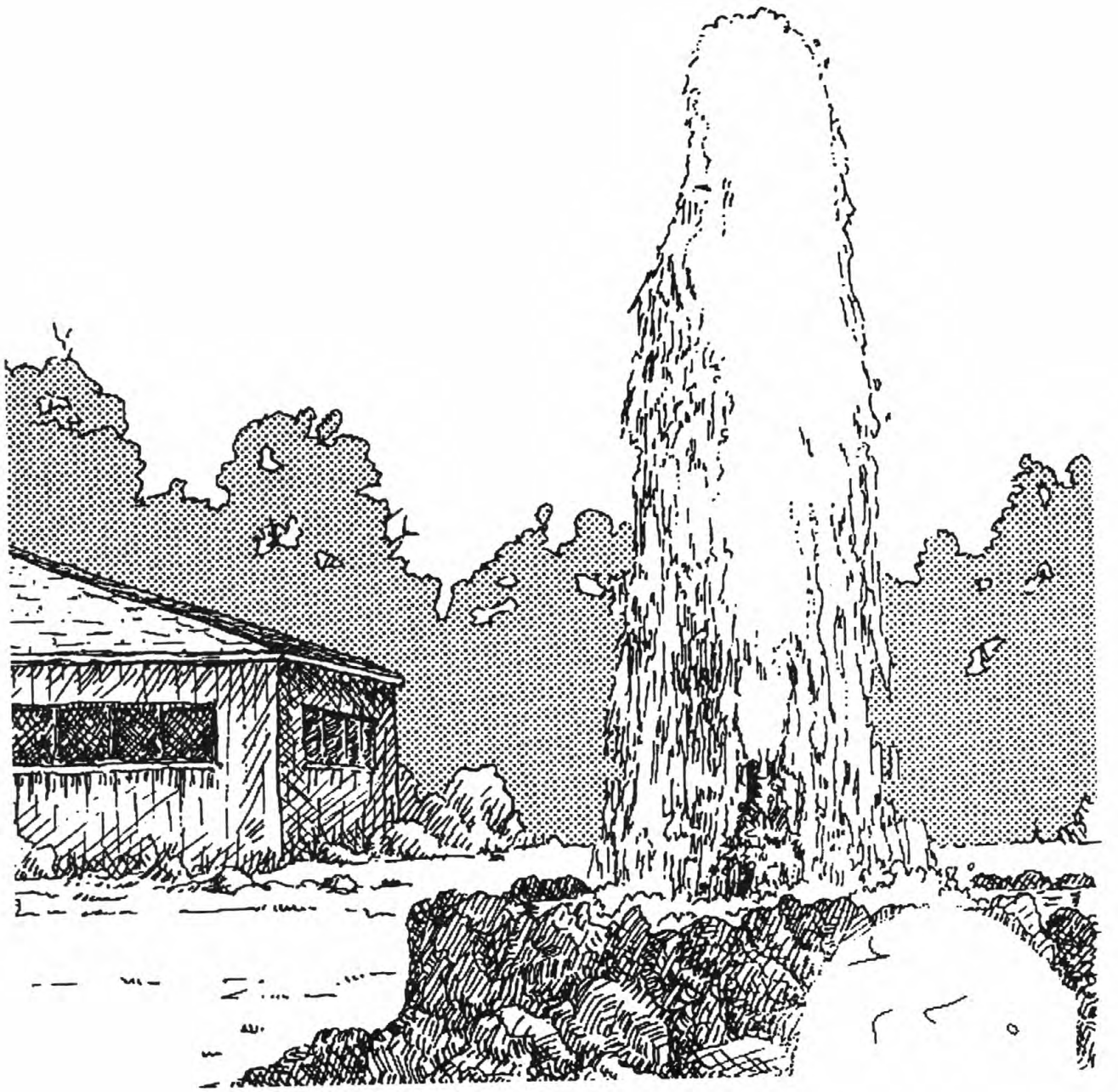
DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT											
21...	1300	1028	80020	29	257	7.5	9.5	17.5	760	9.3	98
NOV											
13...	1104	1028	80020	29	248	7.8	7.5	12.5	748	11.8	113
DEC											
15...	1445	1028	80020	E54	229	7.4	16.0	11.0	757	11.8	108
JAN											
27...	1520	1028	80020	131	190	7.5	13.0	11.0	750	11.2	103
FEB											
18...	1205	1028	80020	56	203	7.7	15.5	10.0	753	12.2	109
MAR											
10...	1315	1028	80020	231	192	7.5	2.5	9.5	769	11.3	99
APR											
22...	1120	1028	80020	78	206	8.4	18.5	14.5	757	11.5	114
MAY											
11...	1341	1028	80020	59	220	8.3	31.0	21.0	745	10.6	121
JUN											
02...	1245	1028	80020	35	233	8.0	32.0	24.5	736	8.3	103
JUL											
13...	1425	1028	80020	18	241	7.7	32.0	28.0	743	8.2	108
AUG											
17...	1340	1028	80020	20	242	7.2	34.0	28.5	755	8.9	115
SEP											
21...	1200	1028	80020	22	264	7.6	33.5	25.5	745	8.6	108

07197360 CANEY CREEK NEAR BARBER, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	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)	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)
OCT										
21...	K6	K2	350	136	0	111	--	--	<.010	--
NOV										
13...	35	30	410	134	0	110	--	--	<.010	--
DEC										
15...	K5	K1	K23	111	0	91	1.56	6.9	.010	.03
JAN										
27...	K8	K2	K7	91	0	75	--	--	<.010	--
FEB										
18...	<1	<1	K5	118	0	96	--	--	<.010	--
MAR										
10...	K320	K17	K4	93	0	76	--	--	<.010	--
APR										
22...	K6	K1	K11	108	1	90	--	--	<.010	--
MAY										
11...	K7	K2	K7	118	0	96	--	--	<.010	--
JUN										
02...	K9	K3	22	123	0	101	.774	3.4	.011	.04
JUL										
13...	56	K2	34	129	0	106	--	--	<.010	--
AUG										
17...	<1	<1	K180	131	0	107	.277	1.2	.013	.04
SEP										
21...	68	K5	K510	93	0	76	--	--	<.010	--

DATE	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,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-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
OCT										
21...	.978	<.015	--	--	<.20	--	.023	.012	.025	.08
NOV										
13...	.884	<.020	--	--	<.10	--	.019	.042	.041	.13
DEC										
15...	1.57	<.020	--	--	<.10	--	.058	.068	.065	.20
JAN										
27...	1.40	<.020	--	--	<.10	--	.031	.021	.024	.07
FEB										
18...	1.13	<.020	--	--	<.10	--	.023	.023	.034	.10
MAR										
10...	1.16	.112	.14	--	<.10	--	.027	.022	.036	.11
APR										
22...	.671	.033	.04	.13	.17	.84	.027	.016	.028	.09
MAY										
11...	.645	.051	.07	.15	.20	.85	.040	.034	<.010	--
JUN										
02...	.785	.037	.05	.20	.23	1.0	.062	.026	.030	.09
JUL										
13...	.588	.051	.07	.06	.11	.69	.018	.025	.033	.10
AUG										
17...	.290	.067	.09	--	<.10	--	.049	.021	.045	.14
SEP										
21...	.959	<.020	--	--	<.10	--	.041	.047	.044	.13



07198000 ILLINOIS RIVER NEAR GORE, OK

LOCATION.--Lat 35°34'23", long 95°04'07", in NE ¼ SW ¼ 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 fair. Except for 16 mi^2 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	222	29	3130	2920	3700	2760	2500	2150	580	683	163	734
2	482	27	909	1490	3720	2420	2570	1100	73	748	399	1130
3	153	91	1180	1140	3730	2550	3760	1230	904	592	431	1140
4	389	28	1930	2420	3720	2640	3790	2440	143	579	348	1240
5	318	27	2210	571	3600	2930	3770	1630	241	162	514	934
6	32.0	85	988	3740	3230	525	3750	1280	73	741	202	372
7	24.0	140	792	5810	2670	81	5780	1280	64	405	427	1300
8	419	26	2200	4790	2550	636	7860	715	67	1060	132	99
9	274	25	2280	3880	2580	3970	7790	656	2320	482	97	119
10	48	28	2080	5430	2580	4010	7760	707	2690	411	198	110
11	32	29	2250	7600	1420	4000	7770	255	884	297	279	279
12	38	30	2130	7490	3140	4040	7760	1010	1080	160	271	101
13	119	100	1210	8260	2540	3780	7680	1580	1050	747	276	100
14	42	56	1330	10200	1070	2540	7670	1330	65	356	202	192
15	32	269	2340	10200	1170	3890	7710	1170	61	843	419	142
16	94	792	2180	10100	2820	3620	7760	64	554	753	359	131
17	28	603	1450	9970	3150	1810	4770	48	927	669	852	1100
18	26	521	2150	9890	2370	1550	3670	2390	1290	416	175	488
19	25	799	2020	9850	1980	3070	3700	920	1220	270	e146	100
20	65	693	260	9880	2110	2070	e3450	393	76	1030	1410	101
21	198	338	194	9880	427	163	e3800	63	62	882	1240	569
22	300	369	1690	9790	666	130	3710	70	739	1210	348	159
23	264	652	2160	7670	2110	538	3720	68	776	1020	500	99
24	28	775	1520	5110	1310	1540	3190	68	1010	1030	1250	93
25	27	29	1010	5110	2260	1770	2400	459	1100	124	1420	135
26	41	138	4160	5160	1260	956	2510	77	826	103	1370	97
27	278	76	e4180	5170	2360	1860	2600	2030	67	954	1380	103
28	35	29	e4200	5170	3150	2930	2050	2370	58	610	1170	887
29	26	3600	e4210	5180	---	2850	2210	2240	965	592	842	949
30	27	4250	4230	4730	---	2370	2310	2240	904	580	1020	102
31	103	---	3360	3710	---	2530	---	2340	---	437	619	---
TOTAL	4189.0	14654	65933	192311	67393	70529	139770	34373	20869	18946	18459	13105
MEAN	135	488	2127	6204	2407	2275	4659	1109	696	611	595	437
MAX	482	4250	4230	10200	3730	4040	7860	2440	2690	1210	1420	1300
MIN	24	25	194	571	427	81	2050	48	58	103	97	93
AC-FT	8310	29070	130800	381400	133700	139900	277200	68180	41390	37580	36610	25990

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1998, BY WATER YEAR (WY)

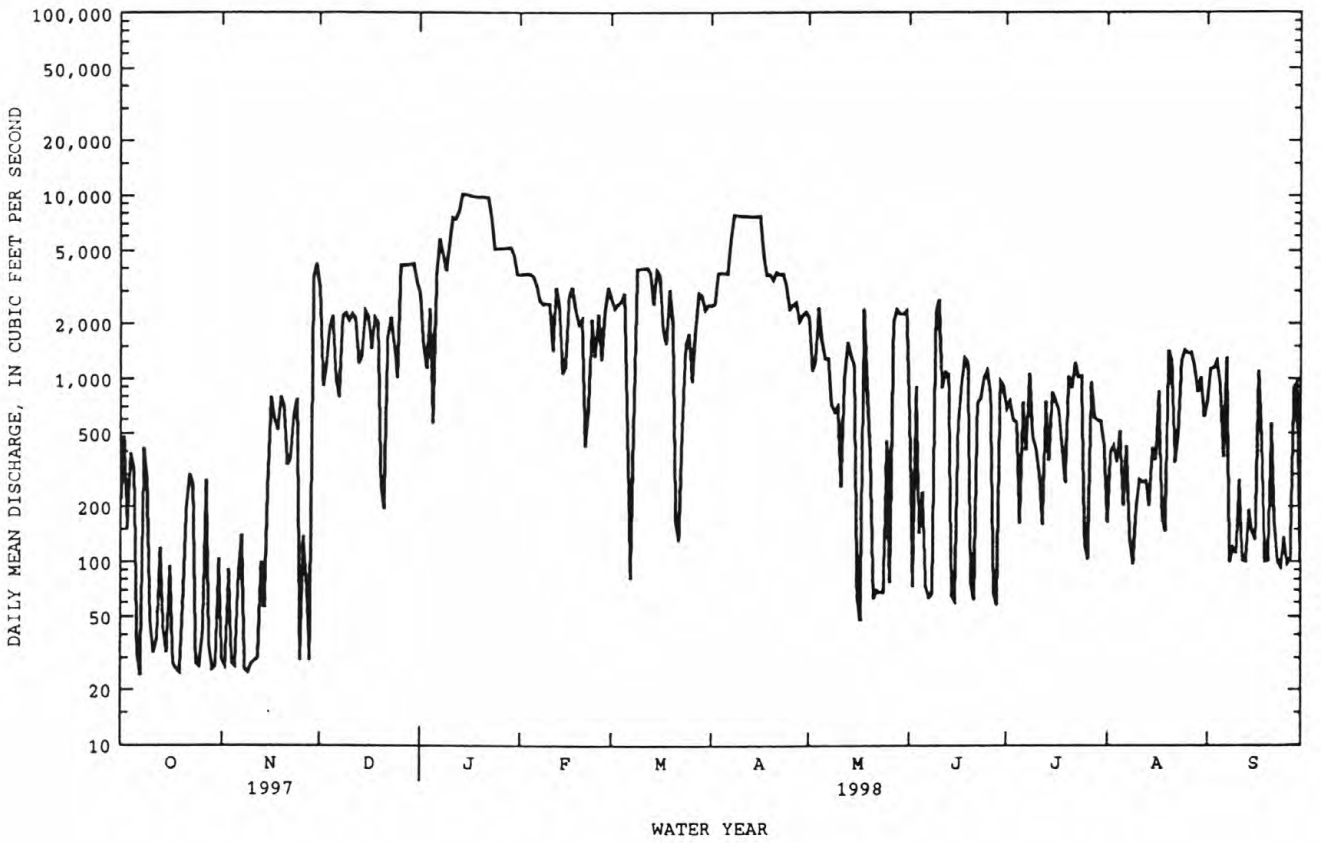
MEAN	809	1299	1743	1719	1667	2024	2717	2309	1747	1262	845	658
MAX	8165	4538	9652	6204	5740	5323	8340	10940	7177	8046	2358	2174
(WY)	1987	1992	1974	1998	1969	1994	1990	1990	1957	1957	1961	1993
MIN	74.4	56.0	55.5	27.7	57.1	60.9	70.0	105	141	84.9	81.4	80.7
(WY)	1981	1984	1981	1965	1981	1981	1980	1981	1963	1988	1963	1963

e Estimated

07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1954 - 1998	
ANNUAL TOTAL	503991.0		660531.0			
ANNUAL MEAN	1381		1810		1566	
HIGHEST ANNUAL MEAN					3199	1993
LOWEST ANNUAL MEAN					280	1964
HIGHEST DAILY MEAN	7430	Mar 15	10200	Jan 14	15800	May 6 1957
LOWEST DAILY MEAN	23	Sep 28	24	Oct 7	2.1	Sep 16 1959
ANNUAL SEVEN-DAY MINIMUM	42	Nov 8	42	Nov 8	3.5	Feb 2 1965
INSTANTANEOUS PEAK FLOW			10600	Jan 15	[a]18100	Jun 9 1957
INSTANTANEOUS PEAK STAGE			15.80	Jan 15	[b]18.70	Jun 9 1957
ANNUAL RUNOFF (AC-FT)	999700		1310000		1134000	
10 PERCENT EXCEEDS	3230		4220		3720	
50 PERCENT EXCEEDS	853		965		934	
90 PERCENT EXCEEDS	33		65		79	

[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.--October 1947 to September 1948, December 1951 to March 1952, October 1953 to current year.
CHEMICAL QUALITY DATA.--October 1947 to September 1948, December 1951 to March 1952, October 1953 to August 1995.

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 current year.

INSTRUMENTATION.--Water-temperature recorder since Oct. 1992 provides continuous recordings.

REMARKS.--Prior to October 1992 records of continuous water temperature were collected 4.2 mi upstream. Interruptions in record were due to malfunction of recording instrument.

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 24.5°C, June 28, 1998; minimum 3.0°C Jan. 17, 1994, Feb. 4, 1996.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum 24.5°C, June 28; minimum 8.0°C, Feb. 23.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	18.0	16.0	17.0	14.5	13.5	14.0	---	---	---
2	---	---	---	17.0	15.0	16.0	14.5	13.5	14.0	---	---	---
3	---	---	---	16.0	14.0	15.0	14.0	13.0	13.5	---	---	---
4	---	---	---	15.5	13.0	14.0	13.5	12.0	13.0	---	---	---
5	---	---	---	16.0	14.0	14.5	13.5	12.5	13.0	12.5	12.0	12.0
6	---	---	---	15.0	13.0	14.0	13.0	12.0	12.5	13.0	11.0	12.0
7	---	---	---	14.5	12.0	13.5	13.0	11.5	12.5	11.0	10.5	11.0
8	---	---	---	13.5	11.5	12.5	12.5	10.0	11.5	11.5	10.5	11.0
9	19.5	19.5	19.5	13.5	12.5	13.0	12.5	11.5	12.0	10.5	10.5	10.5
10	21.0	19.5	20.0	13.0	11.0	12.0	12.5	11.5	12.0	10.5	10.0	10.0
11	21.5	20.5	21.0	11.0	10.5	11.0	12.5	11.5	12.0	10.0	10.0	10.0
12	21.0	20.0	20.5	11.0	10.5	10.5	12.5	11.0	12.0	10.0	10.0	10.0
13	20.0	19.0	19.5	13.0	10.0	11.0	12.5	11.0	11.5	10.0	9.5	10.0
14	19.0	17.0	18.0	13.0	11.0	12.0	12.0	10.5	11.5	10.0	9.5	9.5
15	18.5	16.5	17.5	13.5	9.5	11.0	12.0	10.5	11.5	10.0	9.5	9.5
16	18.0	16.5	17.5	13.5	10.5	12.5	12.0	11.0	11.5	9.5	9.5	9.5
17	18.0	16.5	17.5	14.0	12.5	13.0	12.5	11.5	12.0	9.5	9.5	9.5
18	17.5	15.5	17.0	14.0	12.0	13.5	12.0	11.0	11.5	9.5	9.5	9.5
19	18.0	15.5	17.0	14.5	12.5	13.5	12.0	11.0	11.5	9.5	9.5	9.5
20	19.0	17.0	17.5	14.5	13.0	14.0	12.0	11.0	11.5	9.5	9.5	9.5
21	18.0	16.0	17.5	14.5	13.5	14.0	11.0	10.0	10.5	9.5	9.5	9.5
22	16.5	14.5	15.5	14.5	12.5	13.5	11.5	10.0	10.5	9.5	9.0	9.5
23	16.0	14.0	15.5	14.0	11.5	13.0	11.5	10.5	11.0	---	---	---
24	16.5	15.0	15.5	14.0	12.0	13.0	11.5	10.5	11.0	---	---	---
25	17.0	15.5	16.0	13.5	12.0	12.5	11.5	10.0	10.5	---	---	---
26	16.5	13.5	14.5	15.0	13.5	14.0	10.5	10.5	10.5	---	---	---
27	15.5	12.5	13.5	14.5	13.0	14.0	---	---	---	---	---	---
28	15.5	13.5	14.0	15.5	14.5	15.0	---	---	---	---	---	---
29	14.0	12.5	13.0	15.5	14.0	15.0	---	---	---	9.5	9.0	9.0
30	15.5	13.5	14.5	14.0	14.0	14.0	---	---	---	10.5	9.0	9.5
31	18.0	15.5	16.5	---	---	---	---	---	---	10.0	9.5	9.5
MONTH	---	---	---	18.0	9.5	13.4	---	---	---	---	---	---

07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9.5	9.5	9.5	10.0	8.5	9.0	11.0	10.0	10.5	12.5	11.5	12.0
2	9.5	9.0	9.5	10.0	8.5	9.0	11.0	10.0	10.5	12.5	12.0	12.0
3	9.5	9.0	9.5	10.0	8.5	9.0	10.0	10.0	10.0	12.5	11.5	12.0
4	9.5	9.0	9.5	10.0	8.5	9.0	10.0	10.0	10.0	12.5	11.5	12.0
5	10.5	9.0	9.5	9.5	8.5	9.0	10.0	10.0	10.0	12.5	12.0	12.0
6	---	---	---	10.0	9.0	9.5	10.5	10.0	10.0	12.5	12.0	12.5
7	---	---	---	10.0	9.5	9.5	10.5	10.0	10.0	13.0	12.0	12.5
8	---	---	---	10.0	8.5	9.5	10.5	10.5	10.5	13.0	12.0	12.5
9	---	---	---	9.0	8.5	8.5	11.0	10.5	10.5	14.5	13.0	13.5
10	---	---	---	8.5	8.5	8.5	11.0	10.5	11.0	15.5	13.0	13.5
11	10.5	9.0	10.0	8.5	8.5	8.5	11.0	11.0	11.0	18.0	13.0	14.5
12	10.0	9.0	9.0	8.5	8.5	8.5	11.0	11.0	11.0	17.5	14.5	15.0
13	10.5	8.5	9.5	10.0	8.5	8.5	11.0	11.0	11.0	15.0	13.5	14.0
14	10.5	9.0	10.0	10.0	9.0	9.0	11.0	10.5	11.0	15.0	13.5	14.0
15	10.0	8.5	9.5	9.5	8.5	8.5	11.0	11.0	11.0	16.0	14.0	14.5
16	10.0	8.5	9.0	9.5	8.5	9.0	---	---	---	18.0	13.5	15.5
17	10.0	8.5	9.0	10.5	8.5	10.0	---	---	---	19.0	16.0	17.5
18	10.5	8.5	9.5	11.5	10.0	10.5	---	---	---	19.0	14.5	16.5
19	10.5	9.0	9.5	11.0	9.5	10.0	---	---	---	18.0	14.5	15.5
20	10.0	8.5	9.0	11.0	9.5	10.0	---	---	---	19.0	15.0	16.0
21	11.0	9.0	10.0	12.0	10.0	11.0	---	---	---	19.5	15.5	17.0
22	10.5	9.5	10.0	11.5	10.0	11.0	---	---	---	20.0	18.5	19.5
23	10.0	8.0	9.0	12.0	10.0	11.0	11.5	11.0	11.0	20.0	18.5	19.0
24	10.0	8.5	9.5	11.5	10.5	11.0	12.5	11.0	11.5	21.0	17.5	19.0
25	10.0	9.0	9.5	12.5	10.5	11.0	12.5	11.5	12.0	20.5	16.5	19.0
26	10.0	9.0	9.5	11.5	11.0	11.0	12.5	11.5	12.0	19.5	16.5	17.5
27	10.0	9.0	9.0	11.5	10.0	11.0	12.5	11.5	12.0	19.5	15.0	17.0
28	10.0	8.5	9.0	10.5	9.5	10.0	12.5	11.5	12.0	15.5	14.0	14.5
29	---	---	---	10.5	9.5	10.0	12.5	11.5	12.0	15.0	13.5	14.0
30	---	---	---	11.0	10.0	10.5	12.5	11.5	12.0	14.5	14.0	14.0
31	---	---	---	11.0	10.0	10.5	---	---	---	14.5	14.0	14.0
MONTH	---	---	---	12.5	8.5	9.7	---	---	---	21.0	11.5	14.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	15.5	14.0	14.5	18.5	15.5	17.0	22.5	17.0	18.5	21.0	16.0	17.5
2	19.0	15.0	16.5	20.5	16.0	17.0	23.0	15.0	18.5	20.5	16.0	17.5
3	19.0	16.0	17.5	22.0	16.5	18.0	18.0	15.5	17.0	---	---	---
4	17.0	16.0	16.0	18.0	16.5	17.0	19.0	15.0	17.0	18.0	16.0	17.0
5	16.5	15.5	16.0	22.0	17.0	18.0	19.5	15.0	16.5	22.5	16.0	18.0
6	17.0	14.5	15.5	21.0	16.0	18.0	20.0	16.0	17.0	21.5	16.0	18.0
7	18.0	14.5	16.0	20.5	16.0	17.5	20.0	15.5	17.0	19.5	16.0	17.0
8	17.5	16.5	16.5	20.0	15.5	17.5	21.5	16.0	17.5	22.5	17.0	19.0
9	17.0	14.5	16.0	22.0	16.0	17.5	19.0	17.0	17.5	22.0	16.5	18.5
10	16.0	14.0	15.0	22.5	17.0	18.0	20.5	15.5	17.0	21.0	16.0	18.0
11	15.5	14.5	15.0	19.5	16.0	18.0	21.5	16.0	18.0	22.0	16.5	18.5
12	17.0	14.5	15.5	23.0	17.5	19.0	22.5	16.0	18.5	21.5	17.0	18.5
13	17.0	14.0	15.0	22.0	16.5	19.0	19.5	16.0	17.5	20.0	18.0	18.5
14	21.0	17.0	19.0	23.0	17.5	18.5	21.5	16.0	18.0	20.5	19.0	19.5
15	21.0	18.0	19.5	20.0	16.5	18.0	20.0	15.5	17.0	22.5	18.5	20.0
16	20.0	17.0	18.5	21.0	17.0	18.0	---	---	---	18.5	16.5	18.0
17	19.0	16.5	17.5	21.0	16.5	18.0	---	---	---	18.5	16.5	17.5
18	17.5	15.5	16.5	22.0	17.5	18.0	---	---	---	20.0	16.5	18.0
19	17.0	15.5	16.0	23.0	17.5	19.0	---	---	---	21.0	17.0	18.5
20	20.5	16.0	18.0	20.0	16.5	18.5	---	---	---	21.0	17.0	18.5
21	21.0	19.5	20.0	19.0	16.5	18.0	---	---	---	21.0	16.5	18.0
22	22.0	17.5	19.5	18.5	16.5	17.5	21.5	16.0	18.0	22.0	18.0	19.5
23	20.5	17.0	18.0	20.0	15.0	17.0	21.5	15.5	17.5	20.5	18.5	19.0
24	18.5	15.5	17.0	18.0	15.0	16.5	---	---	---	21.5	17.5	19.0
25	18.0	15.0	16.5	22.0	16.5	18.5	---	---	---	22.0	17.5	19.0
26	19.5	15.5	17.0	23.5	17.0	19.0	19.0	15.5	16.5	20.5	17.5	19.0
27	22.5	17.0	19.5	21.0	15.0	17.0	20.0	15.5	17.0	20.5	17.5	18.5
28	24.5	20.0	22.0	20.0	15.0	17.0	18.5	15.5	16.5	20.5	16.5	18.0
29	23.0	15.5	19.0	20.5	14.5	17.0	21.5	16.0	17.5	20.5	16.5	18.0
30	19.0	15.0	17.0	21.0	14.5	17.0	21.0	15.5	17.5	20.5	17.5	18.5
31	---	---	---	22.0	15.0	17.5	20.0	15.5	17.0	---	---	---
MONTH	24.5	14.0	17.2	23.5	14.5	17.8	---	---	---	---	---	---

07228500 CANADIAN RIVER AT BRIDGEPORT, OK

LOCATION.--Lat 35°32'37", long 98°19'03", SE ¼ NW ¼ 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^2, 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. U.S. Geological Survey satellite telemeter at station.

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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	319	309	519	e550	788	555	e650	700	205	543	e13	e9.6
2	290	288	547	e660	818	566	620	626	184	201	e12	e9.2
3	269	280	569	e800	734	570	544	575	178	130	e13	e9.0
4	250	282	564	e1400	663	561	526	580	165	90	e14	e8.8
5	238	280	538	e1100	595	586	506	562	162	72	e13	e8.5
6	227	286	579	e800	589	625	478	529	155	68	e12	e8.2
7	249	294	590	e660	569	645	567	499	152	63	e11	e8.0
8	245	304	582	e630	566	716	566	499	189	86	e10	e7.7
9	276	313	554	e600	516	715	563	551	225	74	e10	e7.5
10	285	340	537	e580	511	831	563	755	165	67	e11	e7.3
11	412	375	541	e570	487	771	556	1060	140	63	e12	e7.0
12	569	386	563	e590	451	688	519	828	124	60	e13	e7.2
13	755	399	556	e580	439	629	497	596	114	e64	e17	e8.3
14	667	433	553	e560	436	626	500	454	109	e60	e20	e8.8
15	501	441	566	e580	448	647	525	403	104	e50	e21	e9.2
16	407	466	571	e560	479	9920	500	462	97	e45	e13	e8.3
17	362	431	590	e590	495	11900	484	468	89	e50	e12	e7.7
18	343	399	587	e580	476	4780	478	412	83	e43	e15	e9.6
19	346	383	602	e560	504	5340	467	347	86	e38	e14	e10
20	340	390	602	e550	559	3660	475	306	85	e33	e13	e7.9
21	338	394	786	e530	588	2420	482	299	74	e29	e12	e8.4
22	342	399	1070	e540	615	e1700	513	275	64	e27	e11	e8.8
23	369	419	1320	e520	651	e1240	506	231	59	e25	e10	e8.6
24	385	399	4140	e510	676	e1010	523	214	57	e24	e9.6	e9.4
25	370	404	2780	e600	680	e860	512	260	52	e22	e9.2	e13
26	343	413	1700	e540	646	e760	509	559	48	e20	e12	e14
27	326	411	e1200	e520	611	e710	651	530	46	e19	e13	e16
28	323	398	e800	e500	586	e900	707	378	45	e17	e12	e15
29	305	419	e700	480	---	e850	782	315	44	16	e11	e15
30	309	486	594	484	---	e790	780	265	42	e15	e10	e13
31	327	---	e560	545	---	e700	---	227	---	e14	e9.8	---
TOTAL	11087	11221	26960	19269	16176	57271	16549	14765	3342	2128	388.6	289.0
MEAN	358	374	870	622	578	1847	552	476	111	68.6	12.5	9.63
MAX	755	486	4140	1400	818	11900	782	1060	225	543	21	16
MIN	227	280	519	480	436	555	467	214	42	14	9.2	7.0
AC-FT	21990	22260	53480	38220	32090	113600	32820	29290	6630	4220	771	573

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1998, BY WATER YEAR (WY)

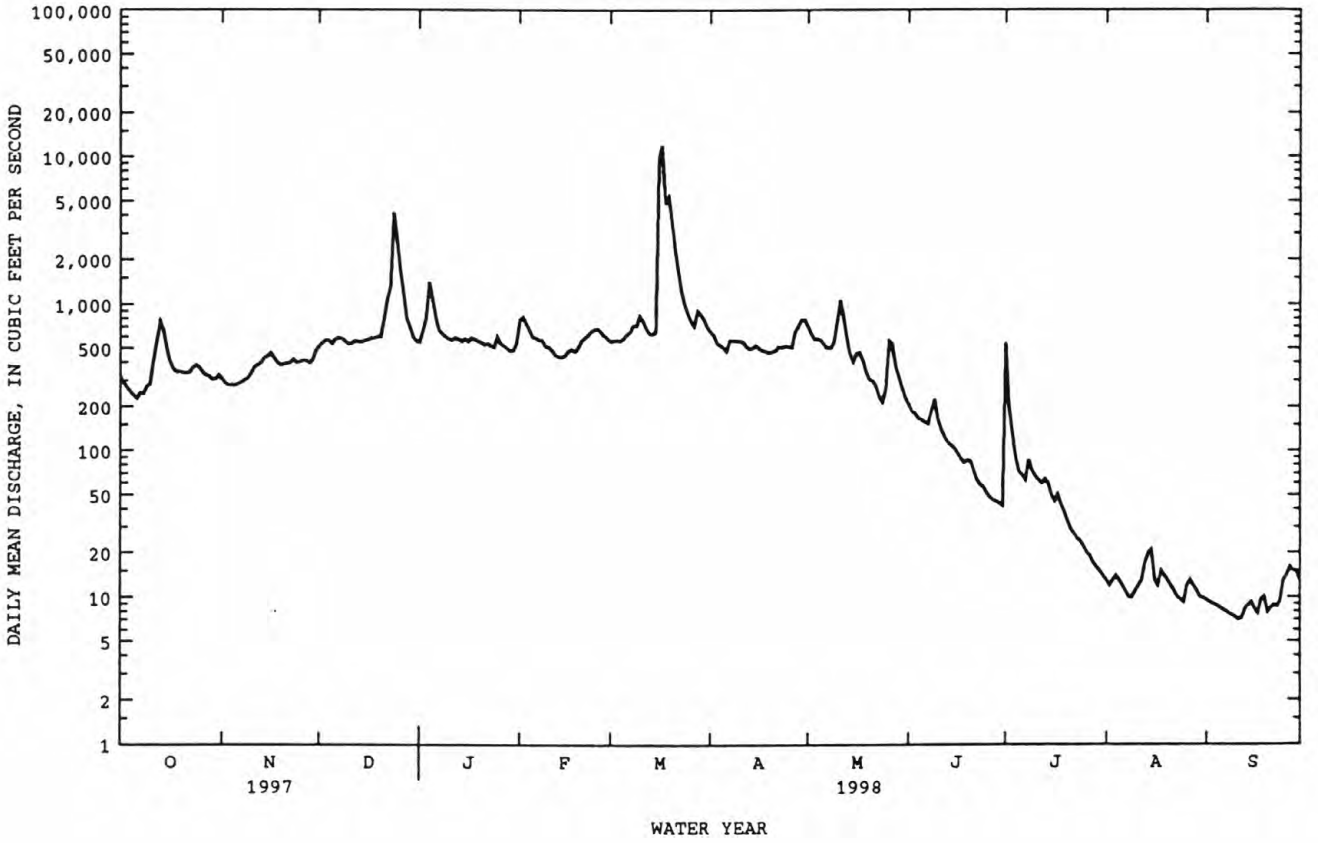
MEAN	212	229	193	229	247	460	385	783	550	120	152	207
MAX	2412	1525	870	1162	578	1907	1795	4188	2342	500	1036	1386
(WY)	1987	1975	1998	1988	1998	1973	1997	1987	1995	1979	1974	1996
MIN	7.01	17.5	16.2	22.5	36.8	60.8	20.5	13.4	12.9	3.18	.14	1.14
(WY)	1979	1971	1979	1979	1981	1977	1971	1971	1970	1970	1970	1984

e Estimated

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1970 - 1998	
ANNUAL TOTAL	226032		179445.6			
ANNUAL MEAN	619		492		[a]314	
HIGHEST ANNUAL MEAN					1018	1987
LOWEST ANNUAL MEAN					70.2	1981
HIGHEST DAILY MEAN	16600	Apr 11	11900	Mar 17	42100	May 29 1987
LOWEST DAILY MEAN	74	Aug 3	7.0	Sep 11	.00	at times
ANNUAL SEVEN-DAY MINIMUM	78	Jul 31	7.6	Sep 6	.00	Aug 3 1970
INSTANTANEOUS PEAK FLOW			16500	Mar 17	[b]86100	May 17 1982
INSTANTANEOUS PEAK STAGE			14.53	Mar 17	[c]17.55	May 17 1982
ANNUAL RUNOFF (AC-FT)	448300		355900		227500	
10 PERCENT EXCEEDS	1190		742		530	
50 PERCENT EXCEEDS	350		412		115	
90 PERCENT EXCEEDS	140		12		11	

[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 ft (present datum) June 23, 1948, from flood mark.



07229050 CANADIAN RIVER AT NORMAN, OK

LOCATION.--Lat 35°11'40", long 97°29'05", in NW ¼ sec.2, T.8 N., R.3 W., Cleveland County, Hydrologic Unit 11090202, near left bank on downstream side of pier of Interstate 35, 0.5 mi downstream from Merkle Creek, 0.2 mi south of Norman, and at mile 202.6.

DRAINAGE AREA.--25,853 mi^2, of which 4,801 mi^2 probably is noncontributing.

PERIOD OF RECORD.--February 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,000.00 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e400	e400	e420	e850	5980	e660	e960	e800	e300	40	4.1	2.3
2	e330	e370	450	e1000	1560	627	e860	e700	e270	91	4.3	2.3
3	e300	e360	617	e1200	855	636	e720	e550	e260	434	4.5	2.4
4	e280	e340	583	e5190	805	538	e680	e500	e200	323	5.6	2.0
5	e270	e330	528	e4020	e780	531	e700	e580	e190	188	5.9	2.1
6	e260	e320	566	e2360	e760	667	e680	e590	e180	131	5.3	1.5
7	e270	e310	629	e1970	e790	962	643	e600	e170	104	5.3	1.7
8	e300	e330	695	e2070	e780	1100	787	e580	e180	109	7.1	2.0
9	e320	e1400	644	e1450	770	1090	e700	e600	e300	84	7.2	1.4
10	e370	e840	589	e1270	e750	1020	e720	e800	240	76	6.9	1.3
11	e400	e630	478	e1290	e700	970	e700	e900	e1000	64	7.8	1.6
12	e840	557	439	e1180	e680	844	e740	e1800	e500	67	6.2	2.1
13	e1740	573	458	e1050	e660	807	e680	e1200	e300	58	6.3	248
14	e966	525	464	e1080	e640	1040	e640	e800	e200	47	6.6	90
15	e653	434	419	e1020	e660	e1500	e680	e650	123	41	5.0	36
16	e600	e500	397	e1060	e670	12800	e640	e600	121	44	4.0	22
17	e520	e480	451	e1110	e680	19100	e690	e570	112	50	4.3	19
18	e480	e460	454	e1070	e720	8620	e700	e800	109	41	5.5	30
19	e460	449	547	e966	e760	e6400	e680	e770	112	35	5.2	19
20	e450	e440	555	e1010	e740	e5600	e660	e650	106	21	4.2	13
21	e440	e430	e1000	913	e720	e3400	e720	e600	92	14	3.3	38
22	e430	e420	e1200	849	e760	e2400	e700	e570	104	11	3.1	347
23	e480	e410	e2000	812	e740	e1700	e660	e560	88	9.9	3.1	274
24	e520	444	e4500	833	e760	e1400	e680	e555	72	9.6	2.9	89
25	e600	536	e3500	787	e800	e1200	e740	e600	59	8.2	3.1	44
26	e520	476	e2500	915	e760	e1100	e900	e800	53	6.7	3.0	29
27	e480	432	e2000	884	e700	e1000	3630	e900	53	6.2	2.6	24
28	e450	454	e1700	830	e740	e960	e1260	e1100	49	5.5	2.5	20
29	e440	e440	e1300	822	---	e1000	e1000	e600	44	4.3	2.4	17
30	e430	e430	e1000	822	---	e1100	e900	e350	42	3.7	2.3	13
31	e420	---	e900	936	---	e1200	---	e325	---	4.0	2.3	---
TOTAL	15419	14520	31983	41619	26720	81972	25450	22000	5629	2131.1	141.9	1394.7
MEAN	497	484	1032	1343	954	2644	848	710	188	68.7	4.58	46.5
MAX	1740	1400	4500	5190	5980	19100	3630	1800	1000	434	7.8	347
MIN	260	310	397	787	640	531	640	325	42	3.7	2.3	1.3
AC-FT	30580	28800	63440	82550	53000	162600	50480	43640	11170	4230	281	2770

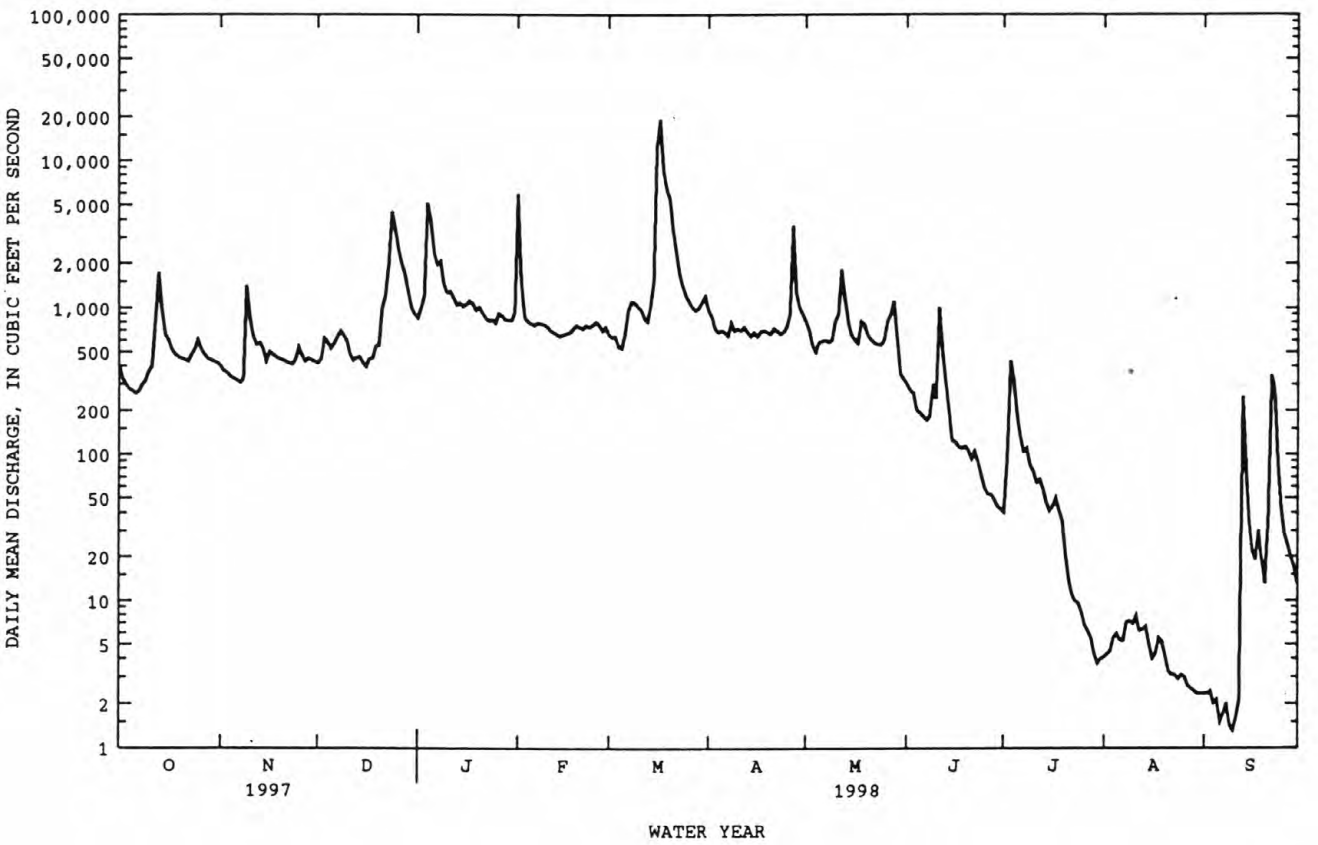
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

MEAN	493	519	772	892	684	1106	1027	753	629	192	375	586
MAX	497	554	1032	1343	954	2644	1954	1407	1338	277	841	1214
(WY)	1998	1997	1998	1998	1998	1998	1997	1997	1997	1997	1996	1996
MIN	488	484	511	442	418	330	280	142	188	68.7	4.58	46.5
(WY)	1997	1998	1997	1997	1996	1996	1996	1996	1998	1998	1998	1998

e Estimated

07229050 CANADIAN RIVER AT NORMAN, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1996 - 1998	
ANNUAL TOTAL	280073		268979.7			
ANNUAL MEAN	767		737		733	
HIGHEST ANNUAL MEAN					737	1998
LOWEST ANNUAL MEAN					728	1997
HIGHEST DAILY MEAN	12600	Apr 12	19100	Mar 17	19100	Mar 17 1998
LOWEST DAILY MEAN	108	Aug 5	1.3	Sep 10	1.3	Sep 10 1998
ANNUAL SEVEN-DAY MINIMUM	116	Jul 31	1.7	Sep 5	1.7	Sep 5 1998
INSTANTANEOUS PEAK FLOW			21800	Mar 17	21800	Mar 17 1998
INSTANTANEOUS PEAK STAGE			96.74	Mar 17	96.74	Mar 17 1998
ANNUAL RUNOFF (AC-FT)	555500		533500		530700	
10 PERCENT EXCEEDS	1630		1200		1100	
50 PERCENT EXCEEDS	421		525		390	
90 PERCENT EXCEEDS	203		5.4		66	



07229200 CANADIAN RIVER AT PURCELL, OK

LOCATION.--Lat 35°00'50", long 97°20'50", in NW ¼ 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 fair. 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.

REVISIONS.--Instantaneous peak stage for the water year 1994 has been revised to 7.37 ft, Apr. 11

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	436	e450	e570	1090	9100	1070	1130	1080	429	e58	5.5	4.8
2	388	e430	e600	1220	3470	965	1030	770	368	54	6.6	6.2
3	340	e400	e780	1380	2270	974	871	611	317	612	9.6	7.5
4	312	e380	e750	7540	1540	1070	741	595	265	877	11	7.2
5	304	e370	e730	5880	1190	1000	775	638	259	568	17	6.5
6	295	e360	e720	3490	1020	965	730	643	253	e300	16	4.2
7	313	e350	e800	2940	1000	1680	783	657	232	e150	15	4.3
8	359	e340	e900	3080	938	1950	768	616	250	e180	20	4.4
9	369	e2000	e800	2170	900	1700	795	688	389	e160	23	5.5
10	441	e1200	e750	e1700	854	1390	797	983	317	e130	31	5.2
11	448	e900	e630	e1500	825	1480	794	1140	1720	e100	36	4.8
12	1200	e836	e600	e1400	820	1390	853	2090	1600	e110	28	4.7
13	2490	e860	e580	e1350	791	1340	787	1490	861	e98	23	514
14	1380	e788	e560	e1300	742	1330	748	1080	e700	e88	20	432
15	910	e651	548	e1200	791	2060	758	861	e600	e80	20	136
16	e700	e700	681	e1300	836	15800	754	729	485	e86	14	61
17	e650	e670	746	e1400	910	20500	797	709	e350	e90	11	38
18	e600	e650	718	e1300	922	13500	796	1030	e250	e74	13	37
19	e560	e630	701	e1200	1070	9160	775	952	e170	e60	18	53
20	e540	e610	715	e1300	1050	8010	753	809	e150	e50	13	33
21	e520	e590	1100	e1200	1050	4890	818	748	e130	e40	10	28
22	e500	e580	1430	e1300	1130	3410	802	739	e150	e35	7.6	1010
23	e520	e560	2310	e1200	1060	2530	735	713	e130	e30	7.4	886
24	e600	e590	7240	e1100	1080	1950	778	706	e110	25	7.0	487
25	e700	e690	6740	e1000	1140	1610	863	730	e90	18	6.9	185
26	e600	e730	3720	e1200	1120	1360	1000	993	e80	13	7.2	118
27	e560	e680	2440	e1300	1080	1240	4680	1190	e72	11	6.6	101
28	e530	e600	1910	e1200	1190	1200	1780	1270	e66	9.2	4.5	87
29	e500	e590	1520	e1150	---	1260	1240	756	e62	8.5	6.0	75
30	e480	e580	1210	e1100	---	1300	1260	576	e60	7.1	6.4	63
31	e460	---	1110	e1200	---	1450	---	488	---	6.9	5.2	---
TOTAL	19005	19765	44609	56690	39889	109534	30191	27080	10915	4128.7	425.5	4409.3
MEAN	613	659	1439	1829	1425	3533	1006	874	364	133	13.7	147
MAX	2490	2000	7240	7540	9100	20500	4680	2090	1720	877	36	1010
MIN	295	340	548	1000	742	965	730	488	60	6.9	4.5	4.2
AC-FT	37700	39200	88480	112400	79120	217300	59880	53710	21650	8190	844	8750

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1998, BY WATER YEAR (WY)

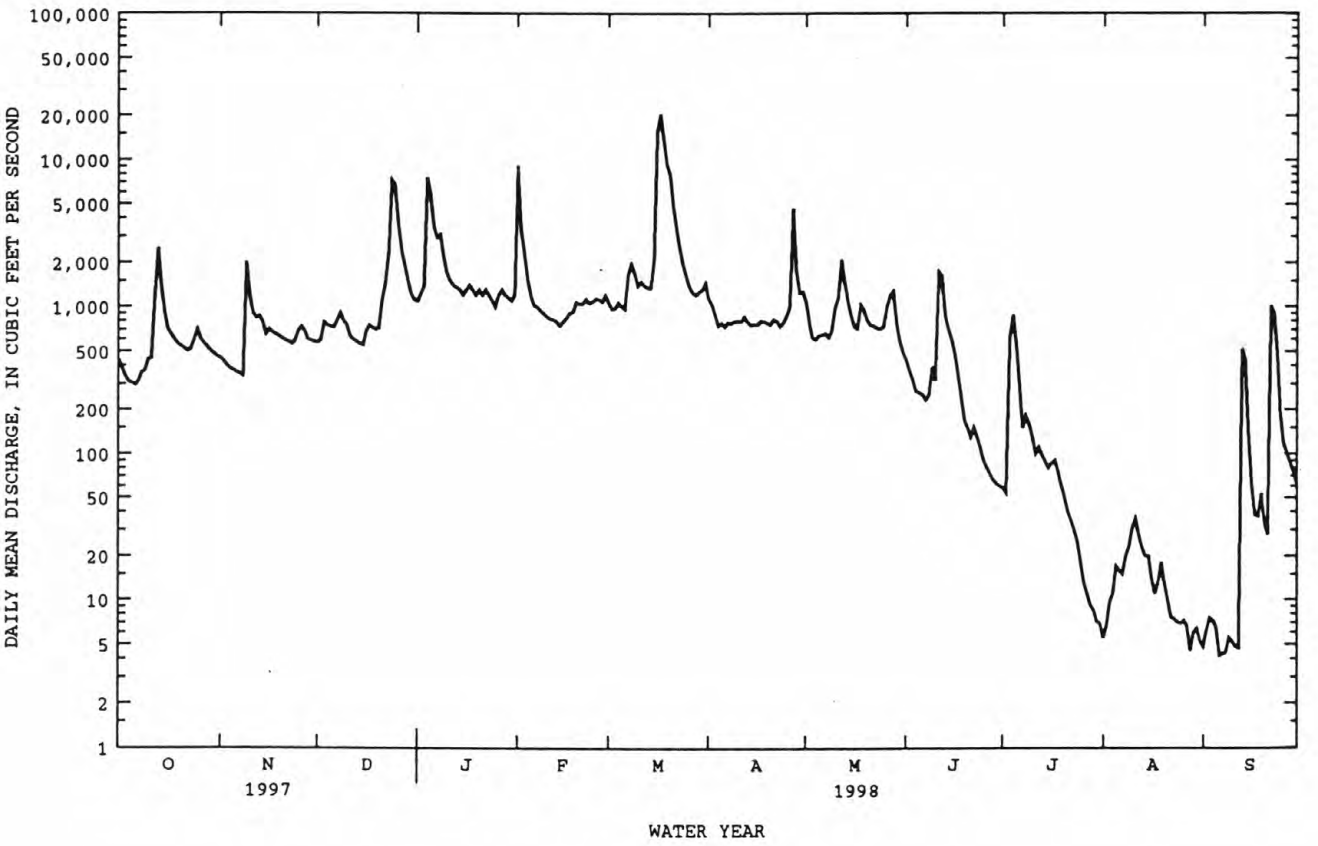
MEAN	676	579	712	667	673	1036	849	2052	1371	345	305	471
MAX	7083	2649	2602	2055	1865	3533	2877	7717	5863	1216	1183	1563
(WY)	1987	1987	1992	1987	1987	1998	1997	1993	1989	1987	1996	1996
MIN	2.84	11.9	106	23.7	21.3	113	38.1	73.1	309	41.4	2.00	2.54
(WY)	1981	1981	1983	1981	1981	1981	1981	1981	1988	1980	1980	1980

e Estimated

07229200 CANADIAN RIVER AT PURCELL, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1980 - 1998	
ANNUAL TOTAL	428049		366641.5			
ANNUAL MEAN	1173		1004		812	
HIGHEST ANNUAL MEAN					2287	1987
LOWEST ANNUAL MEAN					117	1981
HIGHEST DAILY MEAN	15800	Apr 12	20500	Mar 17	71000	May 29 1987
LOWEST DAILY MEAN	101	Aug 6	4.2	Sep 6	[a].00	Aug 2 1980
ANNUAL SEVEN-DAY MINIMUM	121	Jul 31	4.7	Sep 6	.00	Aug 6 1980
INSTANTANEOUS PEAK FLOW			22200	Mar 17	102000	May 29 1987
INSTANTANEOUS PEAK STAGE			10.97	Mar 17	[b]14.75	May 29 1987
ANNUAL RUNOFF (AC-FT)	849000		727200		588500	
10 PERCENT EXCEEDS	2300		1600		1450	
50 PERCENT EXCEEDS	652		700		335	
90 PERCENT EXCEEDS	307		14		40	

[a]No flow at times in 1980.
[b]From high-water mark.



07229900 LAKE THUNDERBIRD NEAR NORMAN, OK

LOCATION.--Lat 35°13'24", long 97°13'02", in NW ¼ SE ¼ 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, 13,600 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.

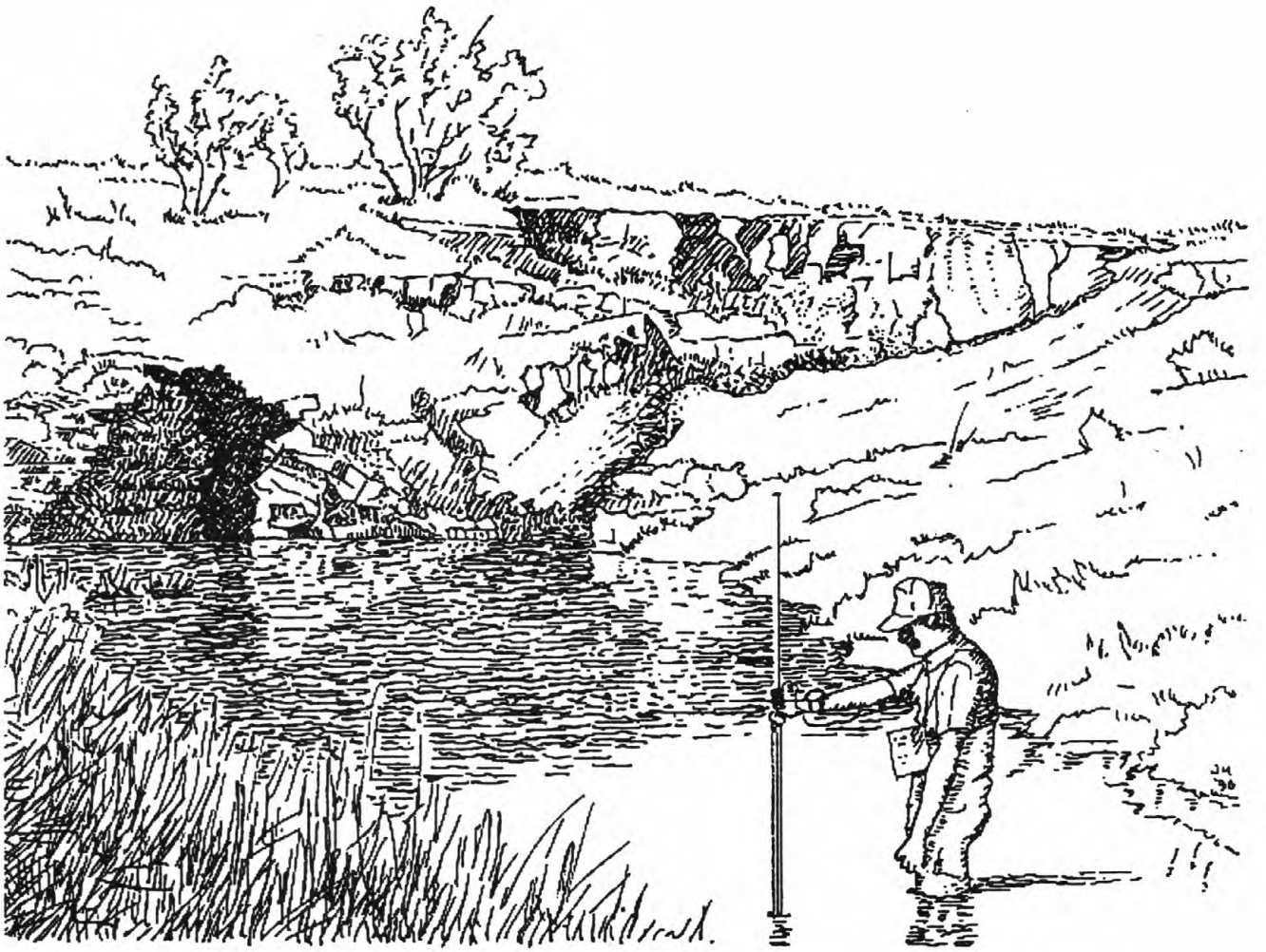
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 187,400 acre-ft, May 5, 1990, elevation, 1,048.38 ft; minimum since conservation pool first reached, 15,370 acre-ft, Nov. 30, 1965, elevation, 1,011.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 150,600 acre-ft, Mar. 20, elevation, 1,043.68 ft; minimum, 103,300 acre- ft, Sept. 21, elevation, 1,036.19 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	*Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Diversions (acrefeet)
Sept. 30	1038.28	115,300	-	-
Oct. 31	1038.46	116,300	+1,000	1,248
Nov. 30	1038.59	121,100	+800	993
Dec. 31	1039.86	124,900	+7,800	956
CAL YR 97	-	-	+4,400	
Jan. 31	1039.17	120,600	-4,300	961
Feb. 28	1039.14	120,400	-200	820
Mar. 31	1041.47	135,200	+14,800	990
Apr. 30	1039.86	124,900	-10,300	1,197
May 31	1039.27	121,200	-3,700	1,522
June 30	1038.80	118,400	-2,800	1,851
July 31	1037.66	111,600	-6,800	2,354
Aug. 31	1036.64	105,800	-5,800	2,227
Sept. 30	1036.41	104,500	-1,300	1,942
WTR YR 98	-	-	-10,800	

*Elevation at 0800



Measuring runoff into a sinkhole in the Blaine aquifer

07230000 LITTLE RIVER BELOW LAKE THUNDERBIRD NEAR NORMAN, OK

LOCATION.--Lat 35°13'18", long 97°12'49", in NE ¼ SE ¼ 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 fair. 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	.59	.69	502	1.2	.85	696	495	.97	.97	.84	.87
2	.69	.57	.83	347	141	.86	695	494	.95	.94	.83	.87
3	.69	.58	.72	250	407	.87	692	493	.97	.94	.85	.94
4	.69	.61	.69	99	499	.87	691	395	.97	.95	.87	.87
5	.69	.64	.69	1.0	498	.87	689	198	.97	.92	.87	.87
6	.69	.69	.69	144	414	.88	570	49	.97	.85	.87	.87
7	.69	.69	.78	412	247	1.3	495	.97	.97	.85	.91	.87
8	.69	.69	.79	507	247	.86	495	.97	1.2	.87	.88	.89
9	.69	.79	.74	507	247	125	494	1.0	1.0	.85	.87	.97
10	.69	.72	.69	506	247	406	231	.97	.98	.87	.96	.95
11	.72	.69	.69	505	247	505	1.1	.97	1.1	.87	.89	.87
12	1.2	.69	.69	505	199	406	1.1	.97	.96	.87	.84	.88
13	.65	.78	.76	630	53	130	83	.97	.95	.87	.82	1.3
14	.61	.74	.78	704	.78	1.1	135	.97	.94	.87	.83	.99
15	.61	.69	.76	609	.79	1.6	208	.93	.96	.86	.78	.97
16	.61	.69	.74	350	.79	2.5	250	.93	.94	.87	.80	.97
17	.61	.69	.72	258	.80	1.3	117	.94	.91	.87	.78	.97
18	.61	.69	.72	258	.78	63	1.2	.92	.93	.87	.81	.97
19	.61	.69	.70	258	.80	62	1.2	.93	.93	.87	.83	.97
20	.61	.69	.77	258	.78	321	1.2	.93	.91	.87	.78	.97
21	.68	.69	.98	258	.78	584	1.2	.92	.93	.87	.78	1.1
22	.61	.69	.73	258	.86	724	1.2	.92	.92	.87	.80	1.4
23	.68	.69	1.4	129	89	806	1.3	.90	.91	.87	.82	.99
24	.61	.69	61	.83	144	978	.81	.87	.92	.87	.82	.97
25	.68	.69	141	.82	144	968	.78	1.1	.93	.87	.80	.97
26	.56	.74	141	.84	144	813	1.3	1.1	.93	.86	.82	.97
27	.61	.69	141	85	95	699	1.1	.97	.93	.87	.85	.97
28	.61	.80	141	138	.85	697	129	.94	.92	.87	.87	.97
29	.61	.69	318	138	---	696	406	.94	.93	.87	.87	.97
30	.61	.69	504	54	---	623	495	.94	.95	.83	.87	.97
31	.61	---	502	.97	---	612	---	.97	---	.82	.87	---
TOTAL	20.62	20.67	1966.75	8673.46	4071.21	10231.86	7584.49	2147.94	28.75	27.17	26.08	29.11
MEAN	.67	.69	63.4	280	145	330	253	69.3	.96	.88	.84	.97
MAX	1.2	.80	504	704	499	978	696	495	1.2	.97	.96	1.4
MIN	.56	.57	.69	.82	.78	.85	.78	.87	.91	.82	.78	.87
AC-FT	41	41	3900	17200	8080	20290	15040	4260	57	54	52	58

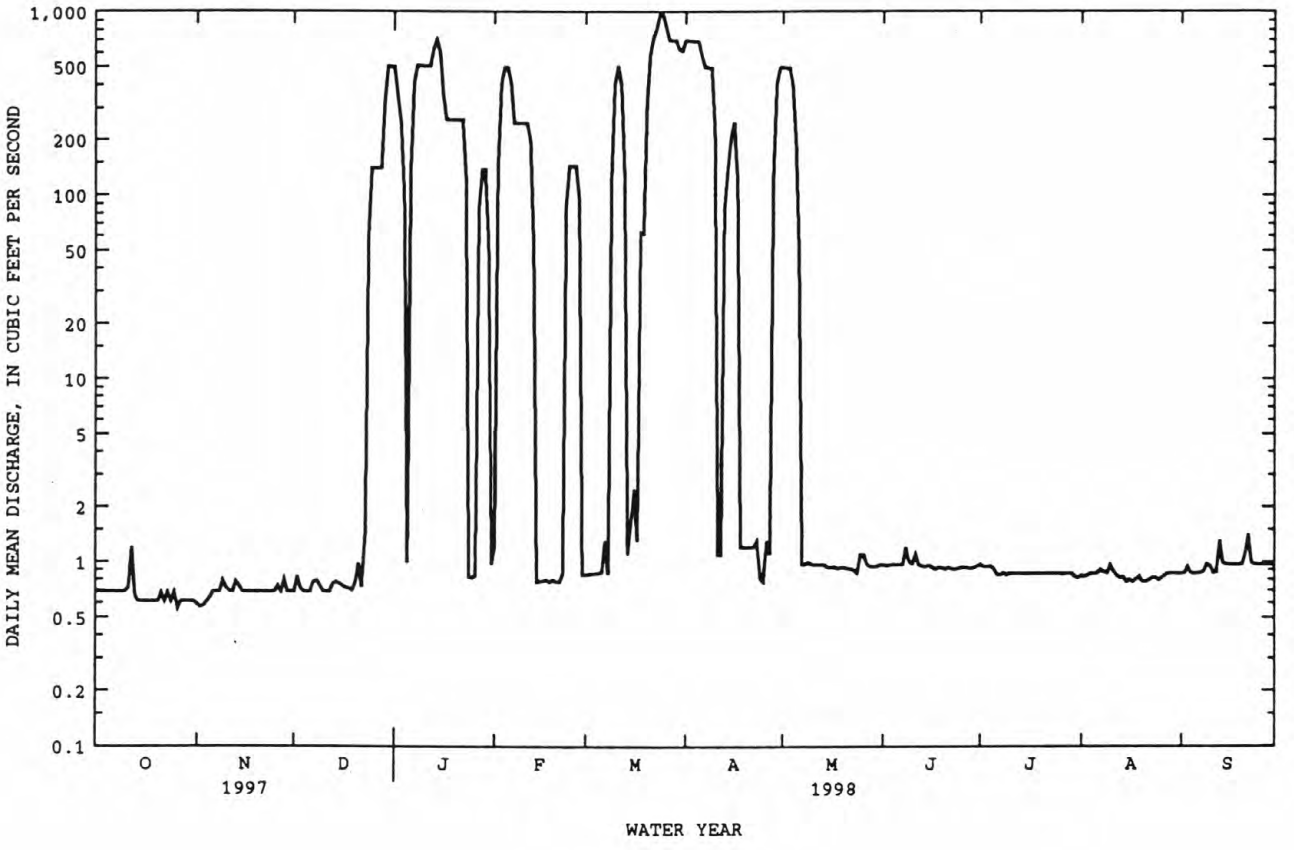
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1998, BY WATER YEAR (WY)

MEAN	31.9	48.8	38.7	45.6	44.8	95.1	93.6	120	136	29.2	17.7	8.01
MAX	489	626	431	438	324	548	625	936	688	323	266	96.5
(WY)	1987	1984	1993	1985	1993	1985	1985	1990	1995	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

07230000 LITTLE RIVER BELOW LAKE THUNDERBIRD NEAR NORMAN, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1966 - 1998	
ANNUAL TOTAL	23467.53		34828.11			
ANNUAL MEAN	64.3		95.4		[a]59.1	
HIGHEST ANNUAL MEAN					251	1985
LOWEST ANNUAL MEAN					.22	1966
HIGHEST DAILY MEAN	515	Apr 15	978	Mar 24	1280	May 14 1990
LOWEST DAILY MEAN	.56	Oct 26	.56	Oct 26	[b].10	Oct 1 1965
ANNUAL SEVEN-DAY MINIMUM	.60	Oct 28	.60	Oct 28	.10	Oct 19 1965
INSTANTANEOUS PEAK FLOW			989	Mar 23	[c]1450	May 10 1990
INSTANTANEOUS PEAK STAGE			6.88	Mar 23	[d]8.62	Oct 26 1983
ANNUAL RUNOFF (AC-FT)	46550		69080		42840	
10 PERCENT EXCEEDS	327		494		256	
50 PERCENT EXCEEDS	1.1		.93		.64	
90 PERCENT EXCEEDS	.69		.69		.35	

[a]Prior to regulation, water years 1953-64, 58.9 ft^3/s.
[b]No flow at times in 1954-56, 1964.
[c]Maximum discharge for period of record 34,600 ft^3/s May 25, 1957, from rating curve extended above 15,000 ft^3/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 ¼ NE ¼ 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	11	21	e142	1030	e32	891	950	e31	9.3	2.3	.28
2	6.3	10	23	e132	257	e30	902	981	e29	9.4	2.3	.12
3	5.8	8.9	81	e126	464	e29	920	946	e28	8.9	1.9	.06
4	5.2	8.4	e35	2280	465	e28	900	894	e26	8.3	2.4	.00
5	5.1	8.7	26	542	401	e27	868	468	e24	8.4	2.8	.00
6	5.2	8.5	24	489	373	e25	807	275	e23	8.9	3.0	.00
7	6.1	8.3	21	739	270	314	837	e152	e22	8.0	2.8	.00
8	9.7	8.7	57	994	305	275	823	e133	130	8.0	3.3	.00
9	8.7	10	42	567	302	e188	814	e96	250	7.9	3.9	.00
10	7.7	23	28	452	304	410	747	e75	85	6.9	3.5	.00
11	7.4	27	25	425	297	628	e320	e63	103	6.5	7.7	.00
12	109	20	e21	415	286	504	e205	e56	104	6.5	5.7	.02
13	136	21	e19	446	e198	291	e190	e49	70	6.4	4.1	8.6
14	38	38	e17	517	e150	e226	e180	e45	49	6.2	3.3	15
15	22	39	e15	470	e96	615	e255	e42	e39	6.0	2.7	10
16	15	24	e14	e153	e78	3820	e320	e40	e33	5.8	2.2	6.6
17	12	19	e13	e123	e67	2470	e350	e37	e27	5.5	1.9	5.3
18	10	16	e12	e108	e118	735	e320	e35	e25	5.3	1.5	4.5
19	9.0	15	e11	e96	e94	1070	e155	34	e23	5.0	1.4	3.9
20	8.2	15	e11	e87	e79	652	e125	33	e21	4.8	1.4	3.4
21	13	16	284	e79	e71	788	e133	32	e18	4.4	1.5	3.6
22	16	17	e120	e74	e66	975	e128	33	e16	4.2	1.2	251
23	22	15	804	e69	e61	1010	e115	31	e14	4.0	1.0	63
24	40	14	855	e64	e56	1140	e109	30	e12	3.9	.84	22
25	57	12	e315	e59	e51	1080	e101	105	11	3.8	.69	16
26	44	e11	e265	e57	e43	986	723	393	11	3.4	.66	13
27	26	e10	e200	55	e39	879	3680	135	10	3.1	.68	12
28	18	15	e175	152	e35	851	986	80	10	2.9	.56	12
29	15	42	e155	156	---	877	860	57	10	2.7	.65	11
30	13	29	e250	144	---	970	919	42	9.4	2.4	.60	11
31	12	---	e170	54	---	895	---	34	---	2.2	.50	---
TOTAL	709.2	520.5	4109	10266	6056	22820	18683	6376	1263.4	179.0	68.98	472.38
MEAN	22.9	17.4	133	331	216	736	623	206	42.1	5.77	2.23	15.7
MAX	136	42	855	2280	1030	3820	3680	981	250	9.4	7.7	251
MIN	5.1	8.3	11	54	35	25	101	30	9.4	2.2	.50	.00
AC-FT	1410	1030	8150	20360	12010	45260	37060	12650	2510	355	137	937

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1998, BY WATER YEAR (WY)

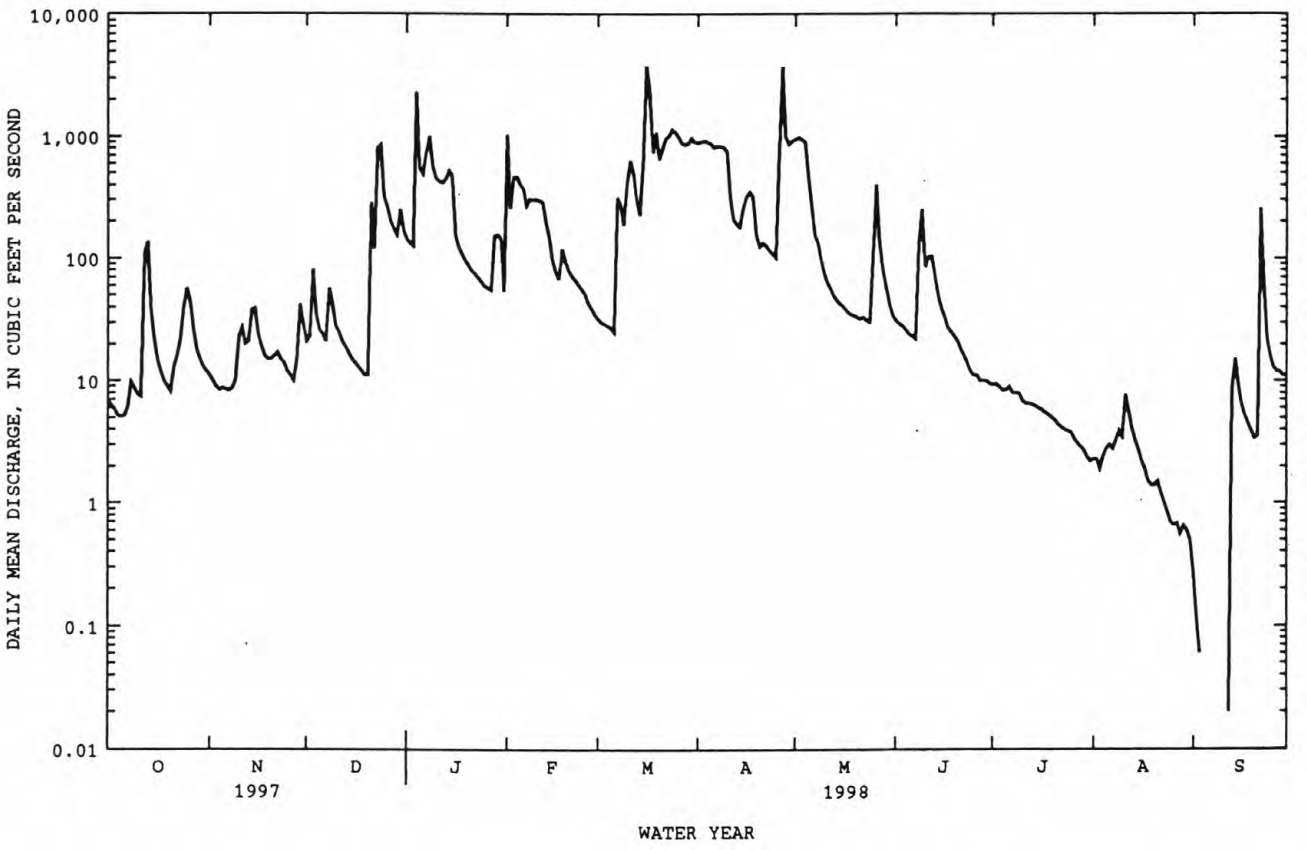
MEAN	110	113	104	97.4	125	220	254	343	277	67.0	50.3	57.7
MAX	898	628	851	844	783	1086	1265	1687	1401	505	510	477
(WY)	1984	1984	1993	1985	1985	1990	1990	1990	1995	1989	1996	1970
MIN	.009	2.27	2.12	2.74	2.45	4.49	5.55	9.25	5.53	1.38	.000	.22
(WY)	1979	1981	1979	1981	1967	1966	1981	1981	1972	1967	1972	1980

e Estimated

07230500 LITTLE RIVER NEAR TECUMSEH, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1966 - 1998	
ANNUAL TOTAL	50157.7		71523.46			
ANNUAL MEAN	137		196		[a]151	
HIGHEST ANNUAL MEAN					511	1985
LOWEST ANNUAL MEAN					9.34	1981
HIGHEST DAILY MEAN	2300	Feb 20	3820	Mar 16	9740	May 3 1990
LOWEST DAILY MEAN	5.1	Oct 5	.00	Sep 4-11	.00	at times
ANNUAL SEVEN-DAY MINIMUM	5.8	Oct 1	.00	Sep 4	.00	Jun 23 1966
INSTANTANEOUS PEAK FLOW			5330	Apr 27	[b]14000	May 3 1990
INSTANTANEOUS PEAK STAGE			16.12	Apr 27	[c]19.24	Oct 20 1984
ANNUAL RUNOFF (AC-FT)	99490		141900		109700	
10 PERCENT EXCEEDS	380		763		500	
50 PERCENT EXCEEDS	38		30		19	
90 PERCENT EXCEEDS	10		2.8		1.6	

[a]Prior to regulation, water years 1944-64, 149 ft^3/s.
[b]Maximum discharge for period of record 32,400 ft^3/s, May 25, 1957.
[c]Maximum gage height for period of record 19.68, May 18, 1949.



07231000 LITTLE RIVER NEAR SASAKWA, OK

LOCATION.--Lat 34°57'55", long 96°30'44", NE ¼ sec.25, T.6 N., R.7 E., Seminole County, Hydrologic Unit 11090203, near right abutment on downstream side of State Highway 56 bridge, 1.6 mi north of Sasakwa, 15.1 mi downstream from Salt Creek, and at mile 17.1.

DRAINAGE AREA.--884 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 731.76 ft above sea level. Prior to Apr. 11, 1946, nonrecording gage at site 6.4 miles upstream at datum 12.58 ft higher. Prior to Oct. 1, 1979, gage at site 6.4 miles upstream at datum 17.58 ft higher. Prior to Jan. 26, 1996 gage at site 6.4 miles upstream at datum 12.58 ft higher.

REMARKS.--Records fair. Flow regulated by Lake Thunderbird (station 07229900) 78.7 mi upstream since March 1965.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	27	89	e630	1090	e175	e1470	e1850	79	13	.47	.29
2	10	24	74	e590	2020	e98	e1220	e1500	67	15	.46	.27
3	9.0	21	120	e570	1040	e87	e1180	e12900	59	15	.47	.24
4	8.0	19	165	e4100	899	e81	e1170	e1170	55	13	.51	.22
5	7.7	17	129	e5100	955	e100	e1150	e1030	49	12	.56	.19
6	7.8	16	88	e4900	852	e96	e1180	e780	46	11	.56	.18
7	7.7	17	73	e3100	e740	e330	e1370	e540	45	9.4	.53	.18
8	11	17	96	e2900	e500	e1750	e1100	e430	52	12	.57	.17
9	15	18	109	e3250	e480	e950	e960	e370	64	13	.63	.13
10	15	24	127	e2200	e460	e530	e910	e350	319	12	.63	.14
11	18	27	e105	e1500	e445	e637	e780	e360	171	11	.75	.15
12	29	51	e86	e1250	e435	e817	e350	e250	121	11	.97	.25
13	128	58	e78	e1150	e330	e712	e295	e200	132	9.2	13	2.0
14	247	55	e71	e1200	e260	e466	e280	e180	75	7.9	15	12
15	99	67	e69	e1050	e200	1130	e330	e162	51	6.9	14	5.8
16	57	77	e55	e800	e170	6960	e390	e137	40	6.1	9.2	12
17	39	59	47	e660	e180	9130	e530	e118	34	5.3	5.1	31
18	29	44	44	e560	e198	8100	e510	e112	31	e4.3	2.8	17
19	24	38	42	e510	e180	5540	e285	106	29	e3.9	1.7	8.8
20	21	36	46	e450	e167	3340	e190	e100	27	e3.3	1.2	5.1
21	27	35	617	e380	e153	e1900	e205	e92	24	e3.0	.81	3.4
22	31	35	1070	e330	e143	e1730	e195	e87	22	e2.6	.59	36
23	42	40	e800	e295	e135	e1600	e185	e90	20	e2.3	.52	153
24	63	40	e3200	e270	e128	e1560	e180	e87	18	e2.0	.49	189
25	62	34	e2380	e248	e148	e1670	e175	e84	17	e1.8	.45	71
26	64	32	e1180	e233	e248	e1450	e850	242	16	e1.5	.38	31
27	78	31	e753	e212	e252	e1340	11900	583	14	e1.3	.36	18
28	60	48	e615	e200	e235	e1280	9150	358	14	e1.0	.35	12
29	40	207	e507	e232	---	e1240	6840	185	13	e.80	.34	8.8
30	33	116	e480	e275	---	e1280	3090	128	12	e.64	.32	6.6
31	30	---	e560	e250	---	e1770	---	98	---	.48	.31	---
TOTAL	1325.2	1330	13875	39395	13043	57849	48420	24679	1716	211.72	74.03	624.91
MEAN	42.7	44.3	448	1271	466	1866	1614	796	57.2	6.83	2.39	20.8
MAX	247	207	3200	5100	2020	9130	11900	12900	319	15	15	189
MIN	7.7	16	42	200	128	81	175	84	12	.48	.31	.13
AC-FT	2630	2640	27520	78140	25870	114700	96040	48950	3400	420	147	1240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1998, BY WATER YEAR (WY)

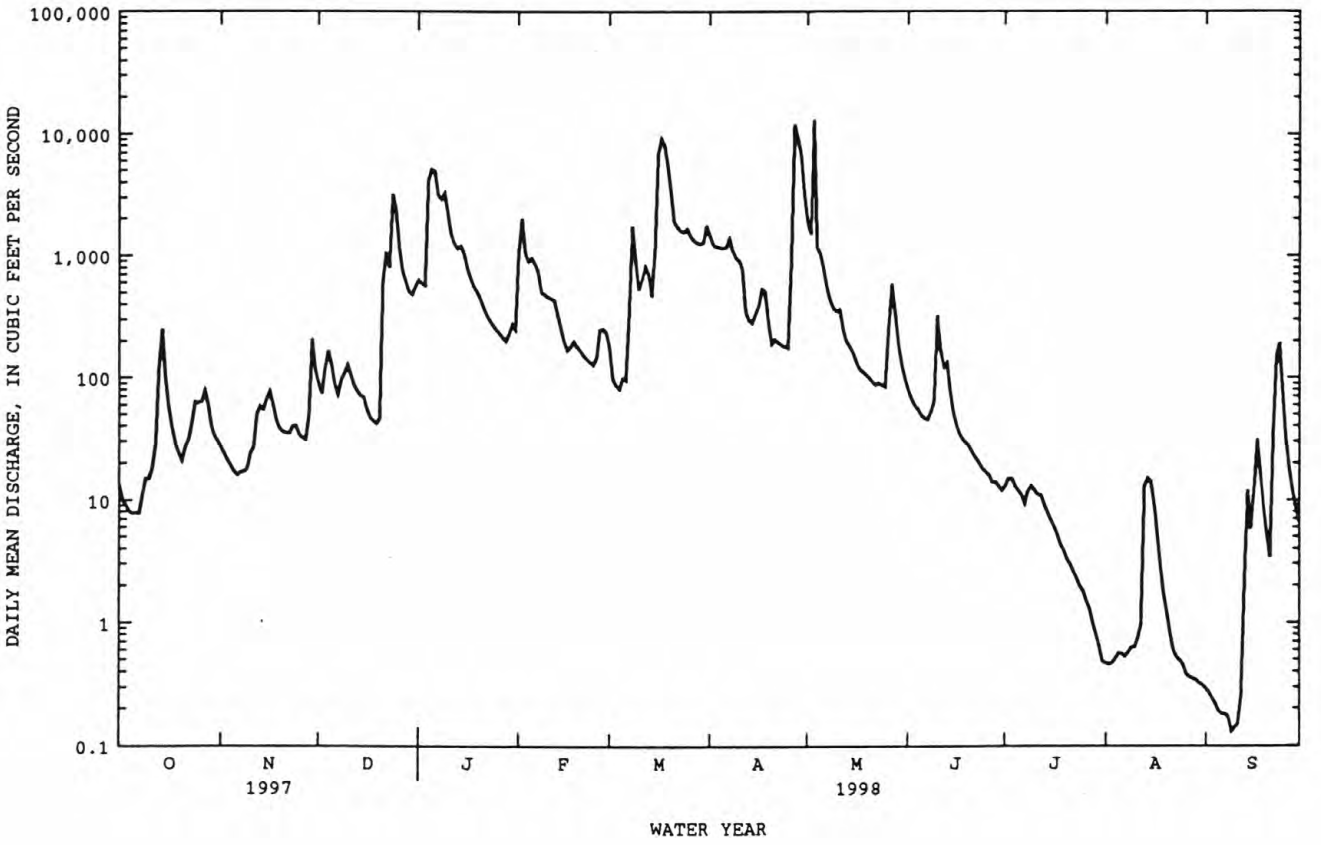
MEAN	253	320	284	239	354	551	634	857	626	131	92.0	134
MAX	2523	1705	2095	1307	1852	2618	3591	2762	2135	684	904	753
(WY)	1971	1993	1993	1985	1993	1990	1990	1990	1995	1989	1992	1970
MIN	.000	.009	.30	1.69	1.80	7.39	17.2	30.7	11.2	2.00	.004	.005
(WY)	1979	1981	1979	1967	1967	1967	1981	1981	1966	1967	1980	1980

e Estimated

07231000 LITTLE RIVER NEAR SASAKWA, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1966 - 1998	
ANNUAL TOTAL	112130.2		202542.86			
ANNUAL MEAN	307		555		[a]372	
HIGHEST ANNUAL MEAN					996	1993
LOWEST ANNUAL MEAN					19.0	1981
HIGHEST DAILY MEAN	6950	Feb 21	12900	May 3	15600	May 1 1985
LOWEST DAILY MEAN	7.7	Oct 5	.13	Sep 9	.00	Nov 23 1965
ANNUAL SEVEN-DAY MINIMUM	8.7	Oct 2	.16	Sep 5	.00	Nov 23 1965
INSTANTANEOUS PEAK FLOW			12700	Apr 27	[b]18500	May 1 1985
INSTANTANEOUS PEAK STAGE			24.56	Apr 27	[c]31.73	May 1 1985
ANNUAL RUNOFF (AC-FT)	222400		401700		269800	
10 PERCENT EXCEEDS	771		1260		1000	
50 PERCENT EXCEEDS	98		81		55	
90 PERCENT EXCEEDS	17		.81		1.2	

[a]Prior to regulation, water years 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 ¼ SW ¼ 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.

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 Ser- vice.

REVISED RECORDS.--WSP 1341: Drainage area. WSP 1391: 1941. WRD-OK-97-1: 1996.

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 poor. 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)
Jan 4	1400	82,100	12.61	Mar 17	0200	95,200	13.45
Feb 2	0300	25,600	8.35	Apr 27	0800	86,000	12.85

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e830	e565	e1280	e1480	4070	e2270	5260	4530	1020	81	6.7	10
2	e620	e545	e930	e1400	16100	e2090	4370	4000	880	67	7.7	12
3	e500	e495	832	e1350	6180	e1920	3940	3530	779	105	8.1	12
4	e430	e473	e1120	31100	3780	e1830	3730	3700	697	78	e13	12
5	e390	e450	e1290	29200	3470	1710	3370	3350	632	e50	e22	13
6	e360	e412	e1180	18200	3030	1690	3340	2780	586	e45	e20	13
7	e370	e407	e1230	13600	2680	2540	4820	2240	538	142	e23	15
8	e390	e395	e1320	24900	2430	8930	4130	1870	598	171	e27	16
9	402	e760	e1510	15600	2280	7050	3240	1630	641	110	e33	17
10	e870	e1380	e1540	9110	2220	4890	3560	1510	766	70	e37	16
11	e890	e1220	e1480	5690	2110	3970	3380	1600	1040	e55	e44	16
12	e720	e940	e1130	4710	e2080	4020	e2340	2090	1040	e45	e48	15
13	e2150	e990	e1240	3770	e2030	3750	2110	2880	2610	e39	e40	e470
14	e4100	e925	e1470	3250	2000	3190	1880	3030	1290	e35	e33	e750
15	e2100	e875	e1810	3460	1920	5540	1950	2080	823	e33	e25	e680
16	e990	e840	e1090	3340	e2080	45600	2170	1600	629	e29	e23	e340
17	e830	e955	e890	2930	e2360	65800	2480	1420	515	e28	e20	e120
18	e740	e915	e855	2620	e2630	37300	2370	1310	461	e27	e18	e74
19	e695	e875	e810	2470	e2510	26400	1970	1220	390	e31	e19	e66
20	e690	e835	e770	2480	e2420	19900	1540	1220	340	e30	e23	e62
21	e680	e825	e1700	2350	e2320	12600	1670	1490	295	e24	e21	e85
22	e685	e825	e3900	2330	e2280	8000	1840	1130	264	e16	e18	e180
23	e685	e880	e3300	2240	e2250	6660	1780	1050	235	e12	e15	e1150
24	e660	e890	e9600	2190	e2220	5370	1650	999	211	e9.2	e11	e920
25	e640	e835	e8400	1910	2190	5290	1510	1000	169	e8.6	9.4	e710
26	e1060	e805	e6500	3120	3220	4850	1520	1570	153	e7.8	9.5	e400
27	e1010	e760	e2200	2710	2480	4550	48700	2450	144	e7.4	9.7	e170
28	e920	e770	e2050	2350	2490	4450	23800	2610	122	e7.2	8.2	e91
29	e800	e760	e1700	2210	---	4460	13000	1890	111	e6.6	8.9	e68
30	e720	e1550	e1620	2170	---	4390	6750	1960	103	6.0	9.8	49
31	e640	---	e1500	2080	---	6170	---	1280	---	6.8	11	---
TOTAL	27567	24152	66247	206320	87830	317180	164170	65019	18082	1382.6	622.0	6552
MEAN	889	805	2137	6655	3137	10230	5472	2097	603	44.6	20.1	218
MAX	4100	1550	9600	31100	16100	65800	48700	4530	2610	171	48	1150
MIN	360	395	770	1350	1920	1690	1510	999	103	6.0	6.7	10
AC-FT	54680	47910	131400	409200	174200	629100	325600	129000	35870	2740	1230	13000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 1998, BY WATER YEAR (WY)

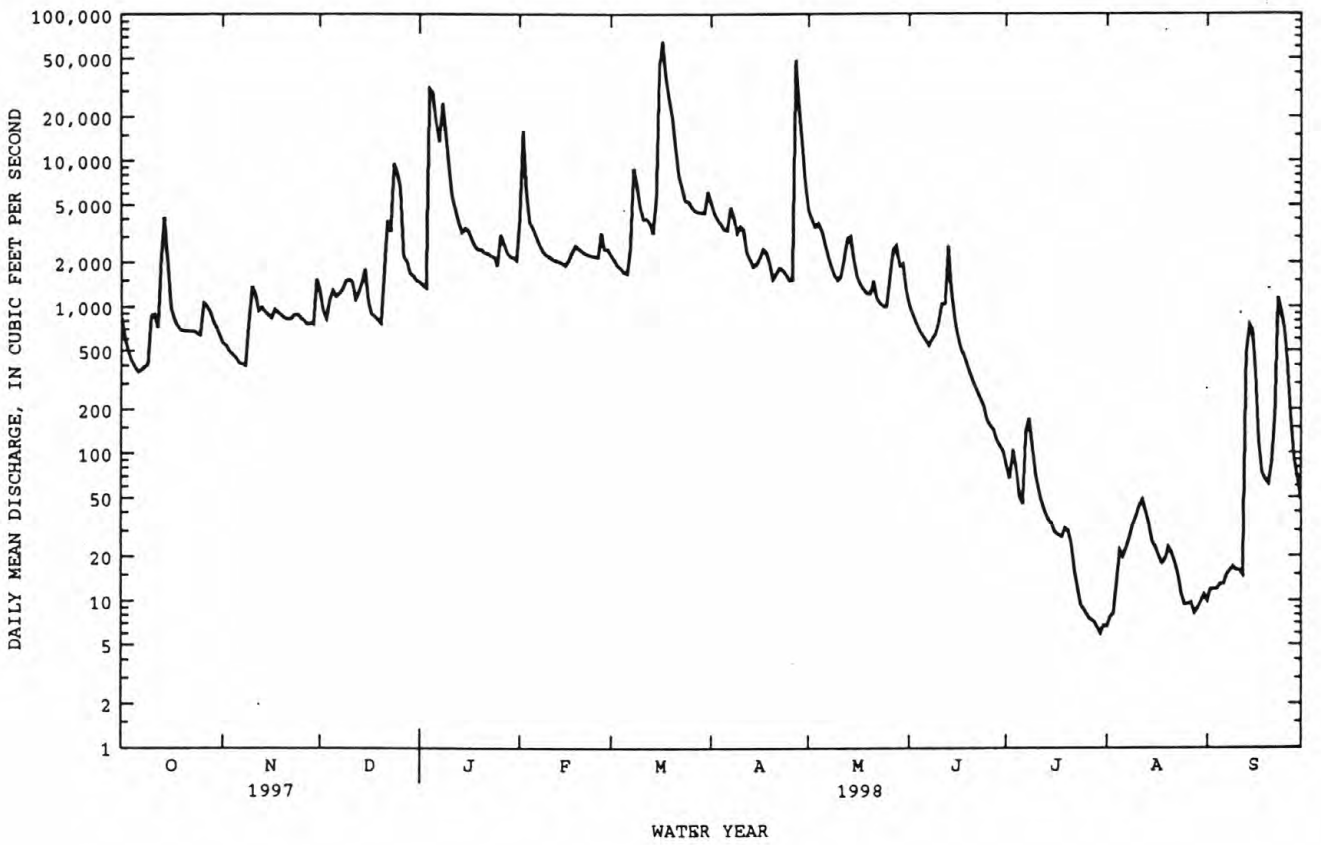
MEAN	1638	1179	1052	936	1309	1935	2574	4471	3333	1350	844	1225
MAX	21530	6529	9355	6655	7059	10230	15110	20640	15350	9669	8398	6467
(WY)	1942	1993	1993	1998	1985	1998	1990	1990	1941	1950	1906	1941
MIN	.10	3.82	7.76	16.4	23.4	20.9	45.7	195	33.7	10.8	.068	.000
(WY)	1957	1967	1967	1940	1967	1967	1956	1966	1966	1966	1980	1956

e Estimated

07231500 CANADIAN RIVER AT CALVIN, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1906 - 1998	
ANNUAL TOTAL	949506		985123.6			
ANNUAL MEAN	2601		2699		1824	
HIGHEST ANNUAL MEAN					5513	1942
LOWEST ANNUAL MEAN					184	1981
HIGHEST DAILY MEAN	29600	May 26	65800	Mar 17	140000	May 29 1987
LOWEST DAILY MEAN	130	Aug 7	6.0	Jul 30	.00	Sep 10 1939
ANNUAL SEVEN-DAY MINIMUM	197	Aug 1	6.9	Jul 27	.00	Sep 10 1939
INSTANTANEOUS PEAK FLOW			95200	Mar 17	174000	May 11 1950
INSTANTANEOUS PEAK STAGE			13.45	Mar 17	[a]21.00	Aug 7 1906
ANNUAL RUNOFF (AC-FT)	1883000		1954000		1322000	
10 PERCENT EXCEEDS	6070		4610		4130	
50 PERCENT EXCEEDS	1300		1060		400	
90 PERCENT EXCEEDS	514		18		25	

[a]From floodmark, site and datum then in use.



07232250 BEAVER RIVER NEAR FELT, OK

LOCATION.--Lat 36°37'47", long 102°24'52", NE ¼ NE ¼ 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.--Records fair.

AVERAGE DISCHARGE.--18 years, .96 ft^3/s, 696 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 1997 TO SEPTEMBER 1998
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	e.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

e Estimated

Canadian River at Calvin May 5, 1941

07232900 COLDWATER CREEK NEAR GUYMON, OK

LOCATION.--Lat 36°34'19", long 10°122'52", NW ¼ NW ¼ 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 discharge. Records good. Natural flow affected by flood retarding structures and irrigation development. Satellite telemeter at station.

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

Date	Time	Discharge	Gage Height	Date	Time	Discharge	Gage Height

No flow entire year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1998, BY WATER YEAR (WY)

MEAN	1.17	.000	.000	.000	.000	.000	2.93	8.76	5.00	.028	1.19	1.76
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

07232900 COLDWATER CREEK NEAR GUYMON, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1981 - 1998	
ANNUAL TOTAL	83.55		0.00			
ANNUAL MEAN	.23				1.74	
HIGHEST ANNUAL MEAN					8.37	1982
LOWEST ANNUAL MEAN					.000	1983
HIGHEST DAILY MEAN	59	Aug 13			1500	May 18 1989
LOWEST DAILY MEAN	.00	Jan 1	.00	all year	.00	each year
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1980
INSTANTANEOUS PEAK FLOW					5800	Jun 20 1982
INSTANTANEOUS PEAK STAGE			7.27	Oct 1	14.34	Jun 20 1982
ANNUAL RUNOFF (AC-FT)	166				1260	
10 PERCENT EXCEEDS	.00		.00		.00	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

07233650 PALO DURO CREEK AT RANGE, OK

LOCATION.--Lat 36°32'38", long 101°04'50", SE ¼ SE ¼ 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.--No estimated daily discharge. Records poor. Flow regulated since April 1991 by Palo Duro Reservoir, 18 mi upstream. Natural flow also affected by local irrigation withdrawals. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

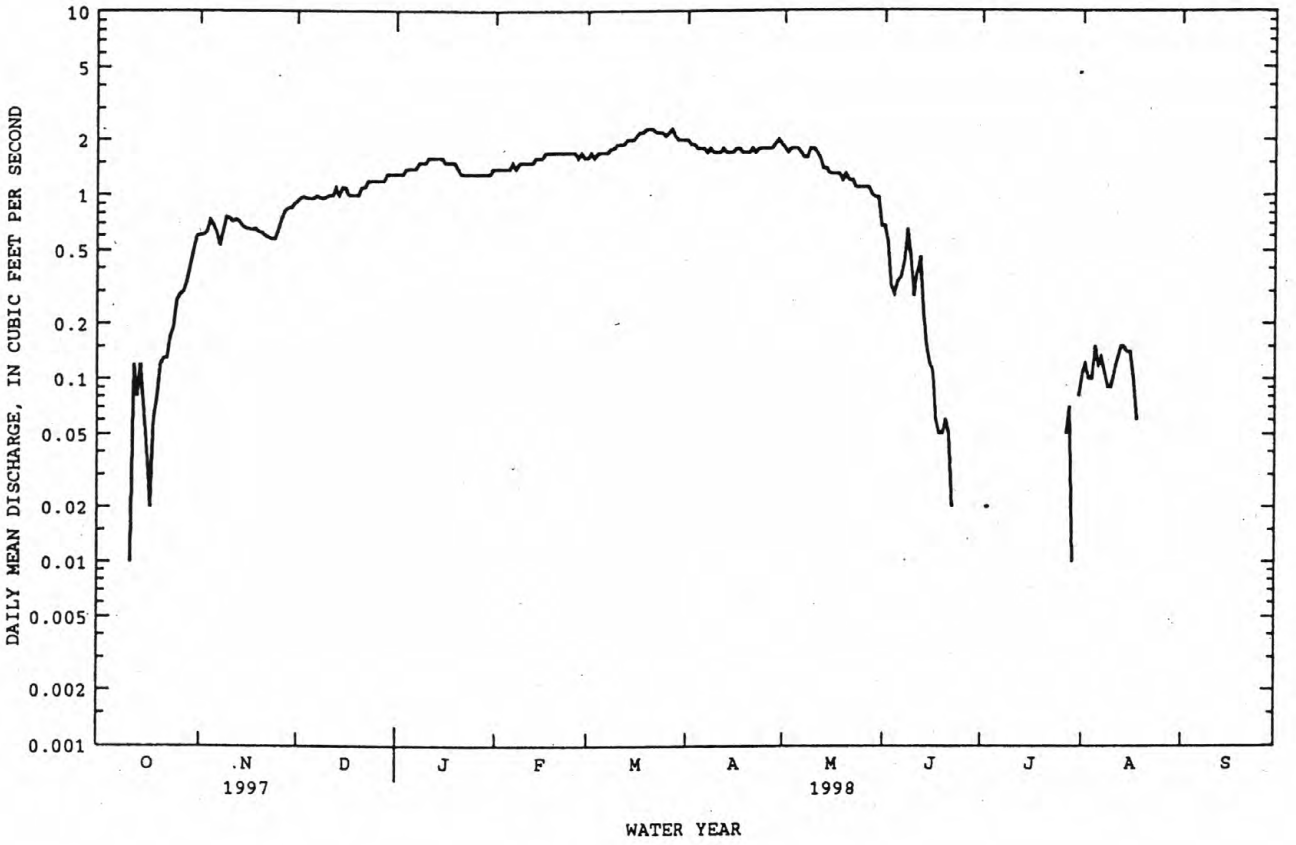
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.39	.61	.93	1.3	1.4	1.6	2.0	1.8	.68	.00	.11	.00
2	.00	.61	.97	1.3	1.4	1.7	1.9	1.7	.55	.02	.12	.00
3	.00	.63	.98	1.3	1.4	1.6	1.9	1.8	.32	.02	.10	.00
4	.00	.73	.96	1.4	1.4	1.7	1.8	1.8	.29	.00	.10	.00
5	.00	.69	.96	1.4	1.4	1.7	1.8	1.8	.34	.00	.15	.00
6	.00	.63	.96	1.4	1.5	1.7	1.8	1.7	.36	.00	.12	.00
7	.00	.53	.99	1.4	1.4	1.7	1.7	1.6	.43	.00	.13	.00
8	.00	.63	.97	1.5	1.5	1.8	1.8	1.6	.65	.00	.11	.00
9	.00	.76	.96	1.5	1.5	1.8	1.7	1.8	.47	.00	.09	.00
10	.00	.75	.98	1.5	1.5	1.9	1.7	1.8	.28	.00	.09	.00
11	.01	.72	1.0	1.6	1.5	1.9	1.7	1.7	.38	.01	.11	.00
12	.12	.74	1.0	1.6	1.5	1.9	1.8	1.6	.46	.00	.13	.00
13	.08	.72	1.1	1.6	1.6	2.0	1.7	1.4	.23	.00	.15	.00
14	.12	.68	1.0	1.6	1.6	2.0	1.7	1.4	.15	.00	.15	.00
15	.07	.66	1.1	1.6	1.6	2.0	1.7	1.3	.12	.00	.14	.00
16	.04	.66	1.1	1.5	1.7	2.1	1.8	1.3	.11	.00	.14	.00
17	.02	.65	1.0	1.5	1.7	2.2	1.8	1.3	.06	.00	.10	.00
18	.06	.66	1.0	1.5	1.7	2.2	1.7	1.3	.05	.00	.06	.00
19	.08	.63	1.0	1.5	1.7	2.3	1.7	1.2	.05	.00	.00	.00
20	.12	.63	1.0	1.4	1.7	2.3	1.7	1.3	.06	.00	.00	.00
21	.13	.60	1.1	1.3	1.7	2.3	1.8	1.2	.05	.00	.00	.00
22	.13	.59	1.1	1.3	1.7	2.2	1.7	1.2	.02	.00	.00	.00
23	.17	.58	1.2	1.3	1.7	2.2	1.8	1.1	.00	.00	.00	.00
24	.19	.58	1.2	1.3	1.7	2.2	1.8	1.1	.00	.00	.00	.00
25	.27	.65	1.2	1.3	1.7	2.1	1.8	1.1	.00	.00	.00	.00
26	.29	.74	1.2	1.3	1.6	2.2	1.8	1.1	.00	.00	.00	.00
27	.30	.82	1.2	1.3	1.7	2.3	1.8	1.1	.00	.05	.00	.00
28	.34	.85	1.2	1.3	1.6	2.1	1.9	1.0	.00	.07	.00	.00
29	.41	.85	1.3	1.3	---	2.0	2.0	.97	.00	.01	.00	.00
30	.50	.90	1.3	1.3	---	2.0	1.9	.97	.00	.00	.00	.00
31	.60	---	1.3	1.4	---	2.0	---	.68	---	.08	.00	---
TOTAL	4.44	20.48	33.26	43.8	44.1	61.7	53.7	42.72	6.11	0.26	2.10	0.00
MEAN	.14	.68	1.07	1.41	1.58	1.99	1.79	1.38	.20	.008	.068	.000
MAX	.60	.90	1.3	1.6	1.7	2.3	2.0	1.8	.68	.08	.15	.00
MIN	.00	.53	.93	1.3	1.4	1.6	1.7	.68	.00	.00	.00	.00
AC-FT	8.8	41	66	87	87	122	107	85	12	.5	4.2	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1998, BY WATER YEAR (WY)

MEAN	.41	.88	1.21	1.26	1.41	1.58	1.51	1.40	.87	.25	.26	.36
MAX	.97	1.58	2.68	1.73	2.17	1.99	1.82	2.14	1.72	.84	.55	1.47
(WY)	1997	1997	1997	1997	1997	1998	1997	1995	1995	1992	1996	1996
MIN	.12	.28	.43	.50	.67	1.14	.94	.51	.065	.000	.032	.000
(WY)	1995	1995	1995	1995	1995	1996	1996	1996	1996	1994	1995	1998

07233650 PALO DURO CREEK AT RANGE, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1992 - 1998	
ANNUAL TOTAL	388.80		312.67			
ANNUAL MEAN	1.07		.86		.95	
HIGHEST ANNUAL MEAN					1.35	1997
LOWEST ANNUAL MEAN					.67	1996
HIGHEST DAILY MEAN	3.3	May 7	2.3	Mar 19,20,21,27	7.3	May 8 1995
LOWEST DAILY MEAN	.00	Jul 9	.00	several days	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 2	.00	Oct 2	.00	Jun 23 1994
INSTANTANEOUS PEAK FLOW			2.4	Mar 19,20,21	71	Aug 12 1993
INSTANTANEOUS PEAK STAGE			8.93	Mar 19	10.00	Aug 12 1993
ANNUAL RUNOFF (AC-FT)	771		620		687	
10 PERCENT EXCEEDS	2.1		1.8		1.8	
50 PERCENT EXCEEDS	1.1		.85		.96	
90 PERCENT EXCEEDS	.02		.00		.01	



07234000 BEAVER RIVER AT BEAVER, OK

(Headwater of the North Canadian River)

LOCATION.--Lat 36°49'20", long 100°31'08", SW ¼ 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.

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 fair except for estimated winter periods which are poor. 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.26	.14	6.7	8.3	8.2	25	17	6.6	.30	.30	.05
2	.09	.26	.17	7.3	8.2	8.1	24	16	6.5	.25	.17	.05
3	.09	.29	.21	7.9	8.0	8.1	22	15	5.8	.17	.16	.04
4	.09	.35	.24	8.6	8.0	8.3	21	15	5.8	.12	.24	.04
5	.10	.37	.27	9.3	8.2	8.1	20	14	5.6	.09	.18	.04
6	.10	.42	.30	9.8	8.2	8.1	20	14	5.5	.10	.21	.03
7	.10	.42	.31	10	8.2	e8.2	23	14	5.0	.12	.15	.03
8	.11	.37	.30	e9.9	8.5	e8.0	25	15	4.9	.31	.15	.03
9	.11	.30	.33	e9.0	8.6	e7.9	25	28	3.7	1.1	.14	.03
10	.12	.31	.44	e6.0	8.2	e7.9	23	34	3.1	.80	.13	.02
11	.12	.35	.59	e7.5	8.3	e8.0	22	35	2.7	.94	.12	.02
12	.12	.36	.58	e7.2	8.2	e8.3	21	28	2.1	.79	.13	.02
13	.14	.34	.76	e6.8	8.3	9.2	20	24	1.6	.66	.17	.02
14	.17	.38	1.0	e8.5	8.3	8.9	19	22	1.2	.49	.15	.02
15	.17	.39	1.3	e8.8	8.3	9.0	18	22	1.2	.44	.13	.01
16	.35	.32	1.6	9.4	8.9	11	18	19	.86	.48	.12	.02
17	.42	.29	1.6	9.0	9.0	13	17	18	.58	.34	.12	.01
18	.37	.23	1.7	8.9	9.2	15	17	17	.43	.28	.12	.01
19	.16	.23	1.9	8.8	9.4	17	17	16	.39	.22	.10	.01
20	.17	.24	2.0	8.8	9.4	17	17	15	.37	.17	.09	.00
21	.18	.23	2.7	8.5	9.5	19	16	14	.32	.15	.09	.00
22	.18	.23	2.9	8.3	9.3	23	16	13	.30	.12	.08	.01
23	.16	.19	e2.1	8.3	9.4	25	16	12	.27	.11	.07	.02
24	.19	.14	e1.1	8.2	9.3	25	16	12	.23	.11	.06	.01
25	.38	.14	e2.0	8.3	9.2	25	16	11	.22	.10	.06	.00
26	.34	.14	e2.2	8.2	8.8	25	15	10	.17	.10	.06	.00
27	.29	.13	e2.5	8.2	8.6	25	15	9.8	.14	.22	.06	.00
28	.24	.14	e3.0	8.2	8.4	24	17	9.2	.14	.29	.05	.00
29	.15	.15	e3.2	8.1	---	22	17	8.5	.11	.18	.05	.00
30	.18	.13	e4.4	8.2	---	23	17	7.6	.09	.13	.05	.00
31	.22	---	e5.8	8.3	---	25	---	6.8	---	.49	.05	---
TOTAL	5.69	8.10	47.64	259.0	242.2	458.3	575	511.9	65.92	10.17	3.76	0.54
MEAN	.18	.27	1.54	8.35	8.65	14.8	19.2	16.5	2.20	.33	.12	.018
MAX	.42	.42	5.8	10	9.5	25	25	35	6.6	1.1	.30	.05
MIN	.08	.13	.14	6.0	8.0	7.9	15	6.8	.09	.09	.05	.00
AC-FT	11	16	94	514	480	909	1140	1020	131	20	7.5	1.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1998, BY WATER YEAR (WY)

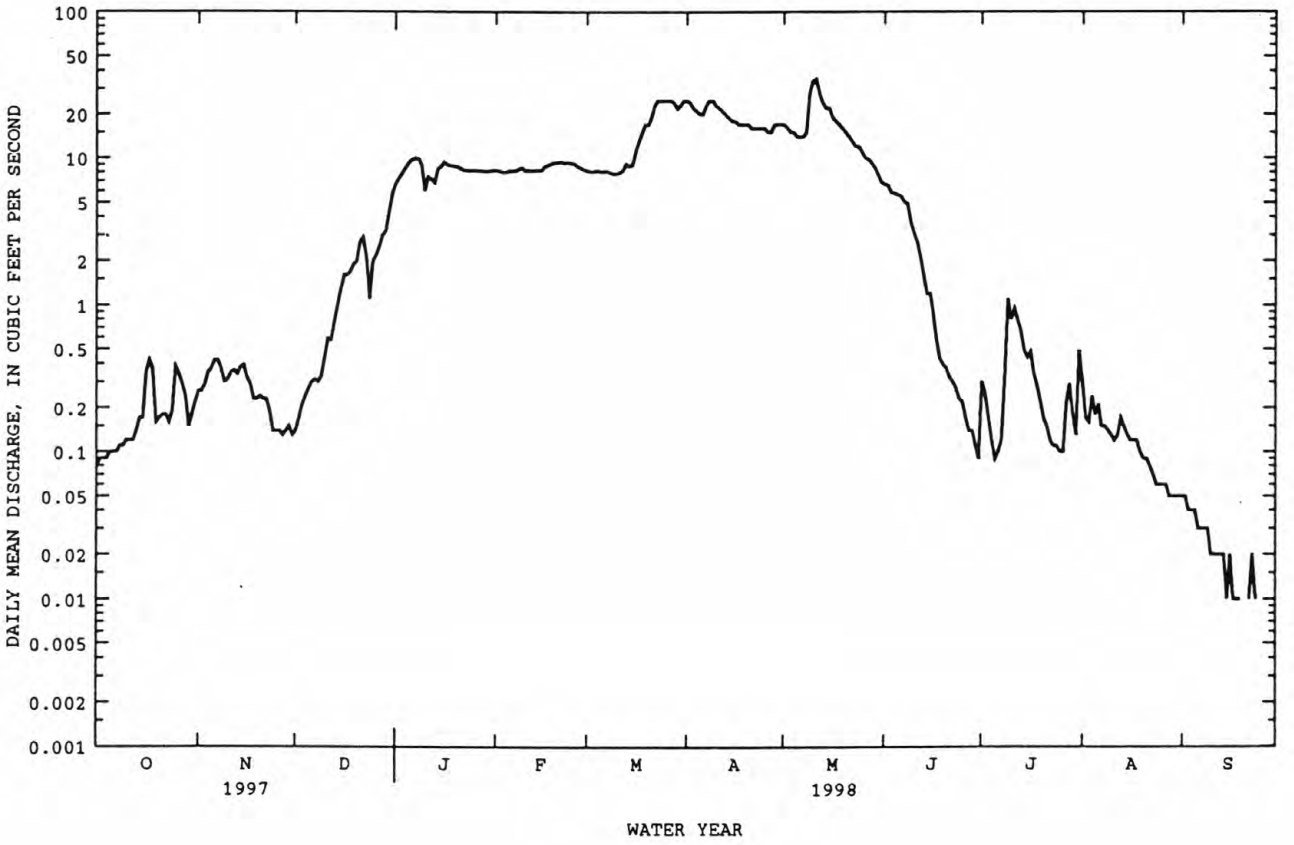
MEAN	8.10	2.24	2.72	4.01	6.21	10.2	16.1	52.2	61.1	16.2	4.50	11.6
MAX	130	11.9	13.7	17.2	21.4	27.6	83.8	295	362	79.4	25.9	78.5
(WY)	1986	1997	1988	1988	1993	1993	1990	1989	1989	1979	1982	1981
MIN	.000	.000	.000	.040	.11	.11	.029	.093	.000	.000	.000	.000
(WY)	1980	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981	1980

e Estimated

07234000 BEAVER RIVER AT BEAVER, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1979 - 1998	
ANNUAL TOTAL	2968.48		2188.22			
ANNUAL MEAN	8.13		6.00		[a]16.3	
HIGHEST ANNUAL MEAN					64.0	1989
LOWEST ANNUAL MEAN					2.25	1984
HIGHEST DAILY MEAN	38	Apr 5	35	May 11	3880	May 31 1980
LOWEST DAILY MEAN	.06	Sep 30	.00	several days	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.08	Sep 24	.00	Sep 24	.00	Oct 1 1978
INSTANTANEOUS PEAK FLOW			39	May 10	[b]5510	Jun 10 1983
INSTANTANEOUS PEAK STAGE			3.48	May 10	[c]10.50	Jun 10 1983
ANNUAL RUNOFF (AC-FT)	5890		4340		11780	
10 PERCENT EXCEEDS	19		17		25	
50 PERCENT EXCEEDS	4.4		1.1		.93	
90 PERCENT EXCEEDS	.14		.06		.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.



07237500 NORTH CANADIAN RIVER AT WOODWARD, OK

LOCATION.--Lat 36°26'12", long 99°16'41", SW ¼ SW ¼ 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 down- stream from Wolf Creek, and at mile 460.2.

DRAINAGE AREA.--11,589 mi^2, of which 4,812 mi^2 is probably noncontributing.

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 Wood- ward 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	110	90	203	216	172	369	441	183	39	19	9.7
2	65	110	93	193	207	171	313	354	180	37	19	9.6
3	58	109	98	195	203	170	279	279	175	35	18	9.5
4	54	95	94	245	199	172	273	264	173	33	19	9.3
5	51	77	94	223	195	172	321	253	171	32	25	9.0
6	50	72	92	225	191	171	326	247	167	30	26	9.0
7	48	69	93	221	188	175	378	241	166	29	26	8.8
8	57	68	95	216	190	187	416	238	164	46	25	8.4
9	50	67	95	212	191	182	371	356	145	39	24	8.1
10	48	66	94	204	190	180	394	359	120	35	23	7.7
11	51	64	96	198	185	186	414	335	109	32	23	7.5
12	72	66	e90	e190	185	188	405	397	99	30	37	7.3
13	61	77	e87	e185	185	189	394	501	93	28	55	7.3
14	60	88	90	e182	185	194	388	501	86	27	34	7.3
15	55	88	91	180	187	198	381	518	82	25	31	7.1
16	52	89	85	155	188	368	383	411	78	24	27	7.3
17	50	90	99	168	189	443	376	307	74	24	24	7.3
18	50	91	140	168	188	412	338	285	71	23	20	7.2
19	49	91	144	166	188	390	275	270	69	22	18	7.1
20	49	92	147	165	187	478	269	261	66	20	17	6.7
21	51	92	169	187	185	601	344	252	63	19	15	6.8
22	51	92	163	221	184	414	407	244	61	18	15	9.0
23	49	91	181	227	184	402	258	237	57	18	13	9.2
24	50	91	153	228	185	389	237	234	52	17	12	8.9
25	57	92	115	229	186	380	239	228	50	17	12	8.4
26	94	91	104	233	181	540	281	222	47	17	12	7.4
27	100	91	98	231	178	826	283	215	44	16	11	6.6
28	105	97	97	231	175	701	297	210	43	29	15	6.3
29	108	95	94	230	---	687	362	203	40	21	12	6.1
30	110	92	198	231	---	695	440	196	38	19	11	6.0
31	111	---	360	225	---	568	---	187	---	18	10	---
TOTAL	1991	2603	3739	6367	5295	11001	10211	9246	2966	819	648	235.9
MEAN	64.2	86.8	121	205	189	355	340	298	98.9	26.4	20.9	7.86
MAX	111	110	360	245	216	826	440	518	183	46	55	9.7
MIN	48	64	85	155	175	170	237	187	38	16	10	6.0
AC-FT	3950	5160	7420	12630	10500	21820	20250	18340	5880	1620	1290	468

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1998, BY WATER YEAR (WY)

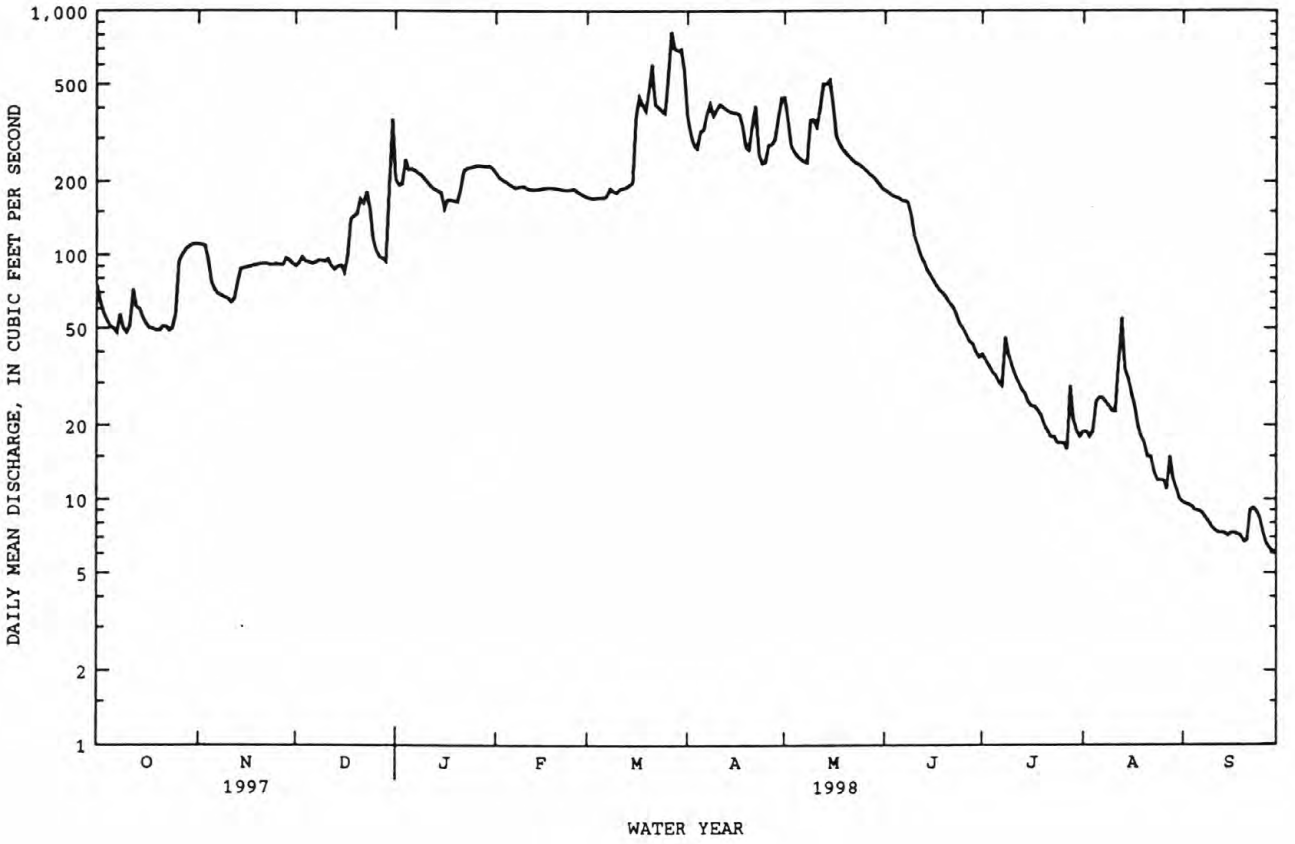
MEAN	63.5	56.9	57.5	75.2	86.8	135	148	231	198	81.3	48.2	44.3
MAX	377	281	242	205	191	404	382	900	814	328	254	368
(WY)	1986	1997	1997	1998	1997	1987	1988	1979	1989	1989	1996	1996
MIN	2.33	5.75	8.33	11.0	12.6	30.6	32.6	13.3	9.57	4.24	1.73	.95
(WY)	1992	1985	1995	1981	1981	1996	1996	1996	1996	1981	1991	1984

e Estimated

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1979 - 1998	
ANNUAL TOTAL	61365		55121.9			
ANNUAL MEAN	168		151		[a]102	
HIGHEST ANNUAL MEAN					228	1989
LOWEST ANNUAL MEAN					16.9	1981
HIGHEST DAILY MEAN	762	Jun 14	826	Mar 27	2950	May 23 1989
LOWEST DAILY MEAN	33	Sep 19	6.0	Sep 30	.00	at times
ANNUAL SEVEN-DAY MINIMUM	36	Sep 15	7.1	Sep 15	.13	Sep 9 1984
INSTANTANEOUS PEAK FLOW			865	Mar 27	[b]3090	May 23 1989
INSTANTANEOUS PEAK STAGE			7.59	Mar 27	[c]10.72	May 23 1989
ANNUAL RUNOFF (AC-FT)	121700		109300		74010	
10 PERCENT EXCEEDS	354		364		238	
50 PERCENT EXCEEDS	147		99		55	
90 PERCENT EXCEEDS	55		12		5.8	

[a]Prior to regulation 1939-78, 194 ft^3/s.
[b]Maximum discharge for period of record 42,000 ft^3/s, Oct. 10, 1946.
[c]Maximum gage height for period of record 9.80 ft, Oct. 10, 1946, site and datum then in use.



07238000 NORTH CANADIAN RIVER NEAR SEILING, OK

LOCATION.--Lat 36°11'00", long 98°55'15", in NW ¼ 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.--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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	218	177	176	511	414	267	780	607	227	68	39	17
2	173	175	180	358	404	262	558	608	223	71	37	16
3	147	175	187	333	350	259	468	483	218	65	36	16
4	125	175	188	656	326	262	407	392	212	59	36	15
5	111	168	177	649	313	268	389	363	210	57	40	14
6	100	153	173	489	303	266	452	341	206	57	45	13
7	93	148	173	428	296	272	643	326	201	60	44	12
8	114	147	175	390	294	297	640	316	200	89	41	11
9	166	144	178	367	301	306	621	1160	195	154	38	11
10	119	144	174	346	302	285	535	1310	186	101	34	10
11	132	144	174	329	299	282	551	827	170	87	37	9.9
12	260	145	175	322	294	284	566	610	161	78	52	9.9
13	298	152	173	322	292	284	545	614	153	72	61	10
14	218	167	176	315	291	292	527	688	145	66	76	11
15	173	172	178	311	290	303	510	791	137	61	60	11
16	154	167	177	306	291	1190	505	845	131	59	48	11
17	143	166	170	289	291	1840	506	610	123	57	41	11
18	136	166	177	295	290	1510	497	455	117	54	35	11
19	132	166	208	289	291	1090	450	399	e111	48	30	11
20	128	164	213	285	290	1020	388	363	e105	44	28	9.9
21	125	164	246	280	290	937	393	341	e100	41	26	10
22	123	164	316	290	286	975	491	323	e95	39	24	14
23	124	167	401	316	286	742	541	308	e90	37	22	14
24	125	167	849	322	285	678	371	296	e86	36	20	16
25	127	166	582	329	284	633	335	293	81	36	19	16
26	123	168	397	336	276	605	433	294	77	34	19	13
27	152	169	312	343	272	756	442	278	73	33	17	12
28	159	179	286	341	270	1030	506	266	69	34	21	11
29	164	189	272	337	---	966	499	257	67	41	20	10
30	172	183	263	335	---	923	541	245	65	41	20	9.1
31	176	---	347	347	---	922	---	234	---	38	18	---
TOTAL	4710	4931	7873	11166	8471	20006	15090	15243	4234	1817	1084	365.8
MEAN	152	164	254	360	303	645	503	492	141	58.6	35.0	12.2
MAX	298	189	849	656	414	1840	780	1310	227	154	76	17
MIN	93	144	170	280	270	259	335	234	65	33	17	9.1
AC-FT	9340	9780	15620	22150	16800	39680	29930	30230	8400	3600	2150	726

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1998, BY WATER YEAR (WY)

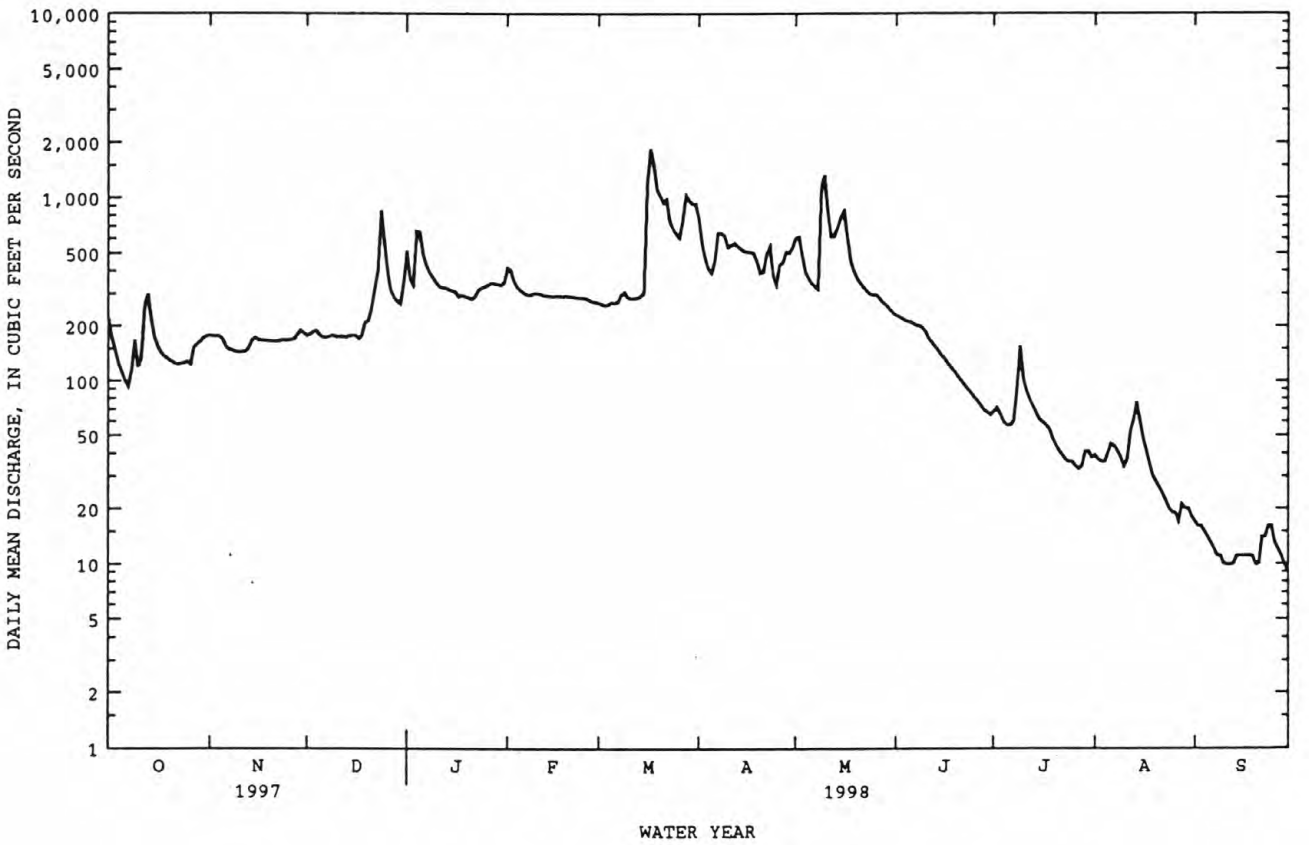
MEAN	95.9	99.8	97.9	117	135	205	212	359	295	121	72.4	87.8
MAX	471	400	333	360	303	645	523	984	982	380	409	698
(WY)	1997	1997	1997	1998	1998	1998	1997	1979	1989	1989	1996	1996
MIN	2.73	10.6	24.5	30.5	36.7	61.8	57.3	32.3	18.8	8.13	1.23	.074
(WY)	1992	1985	1979	1981	1981	1996	1981	1996	1981	1991	1984	1984

e Estimated

07238000 NORTH CANADIAN RIVER NEAR SEILING, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1979 - 1998	
ANNUAL TOTAL	109598		94990.8			
ANNUAL MEAN	300		260		[a]158	
HIGHEST ANNUAL MEAN					353	1997
LOWEST ANNUAL MEAN					29.4	1981
HIGHEST DAILY MEAN	5430	Sep 23	1840	Mar 17	5430	Sep 23 1997
LOWEST DAILY MEAN	38	Sep 19	9.1	Sep 30	.00	at times
ANNUAL SEVEN-DAY MINIMUM	43	Sep 15	10	Sep 8	.00	Sep 16 1980
INSTANTANEOUS PEAK FLOW			1960	May 9	[b]7200	Sep 23 1997
INSTANTANEOUS PEAK STAGE			11.10	May 9	[c]14.86	Sep 23 1997
ANNUAL RUNOFF (AC-FT)	217400		188400		114600	
10 PERCENT EXCEEDS	586		561		361	
50 PERCENT EXCEEDS	230		180		82	
90 PERCENT EXCEEDS	68		20		11	

[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.



07239300 NORTH CANADIAN RIVER BELOW WEAVERS CREEK NEAR WATONGA, OK

LOCATION.--Lat 35°48'43", long 98°25'14", NE ¼, NE ¼, 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.

REVISED RECORDS.--WRD OK-95-1; 1987 (M)

GAGE.--Water-stage recorder. Datum of gage is 1,453.60 ft above sea level (Oklahoma State Highway Department benchmark).

REMARKS.--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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1050	111	327	741	162	246	784	797	163	62	7.7	15
2	1040	77	327	893	142	244	976	782	157	39	9.0	16
3	1010	69	274	889	120	245	1110	779	153	32	9.0	15
4	976	152	237	998	205	247	1110	767	150	28	122	14
5	882	220	233	915	264	244	1100	763	150	26	580	13
6	729	225	233	872	266	245	1110	758	149	27	830	12
7	715	229	238	784	402	258	1050	841	148	25	951	12
8	536	227	240	677	455	271	1020	751	147	24	1000	11
9	389	225	238	823	463	255	1040	593	145	24	1010	10
10	280	231	232	727	459	253	862	562	144	21	1030	9.6
11	202	227	231	645	457	253	1020	538	144	21	1050	9.5
12	158	224	232	654	454	250	1000	740	138	21	1040	9.8
13	135	180	177	635	453	253	974	817	136	19	855	10
14	104	165	136	620	451	254	974	810	164	17	354	10
15	136	156	129	613	452	293	956	833	135	16	122	9.1
16	250	154	123	608	451	1760	951	735	133	16	77	9.4
17	273	151	119	601	450	1330	940	335	129	18	59	8.4
18	286	150	119	594	446	560	931	297	96	16	47	9.4
19	269	150	117	588	440	645	917	635	56	16	39	10
20	263	149	200	575	441	367	902	855	e49	15	33	9.1
21	258	148	371	572	382	644	900	901	e43	13	33	9.5
22	252	147	375	560	345	915	881	885	38	11	30	12
23	252	147	537	555	343	1010	870	709	34	12	27	11
24	265	147	857	550	278	1040	857	649	30	13	24	11
25	255	144	521	544	260	1080	435	818	28	12	22	9.9
26	245	267	374	541	255	1100	226	810	28	10	22	8.8
27	244	318	328	429	251	909	260	531	26	10	21	8.5
28	240	325	323	392	248	838	361	332	25	10	20	8.6
29	141	328	312	311	---	825	604	212	23	9.6	18	8.5
30	114	331	293	171	---	820	765	186	91	8.4	17	8.2
31	139	---	416	138	---	709	---	171	---	7.2	16	---
TOTAL	12088	5774	8869	19215	9795	18363	25886	20192	3052	599.2	9474.7	318.3
MEAN	390	192	286	620	350	592	863	651	102	19.3	306	10.6
MAX	1050	331	857	998	463	1760	1110	901	164	62	1050	16
MIN	104	69	117	138	120	244	226	171	23	7.2	7.7	8.2
AC-FT	23980	11450	17590	38110	19430	36420	51340	40050	6050	1190	18790	631

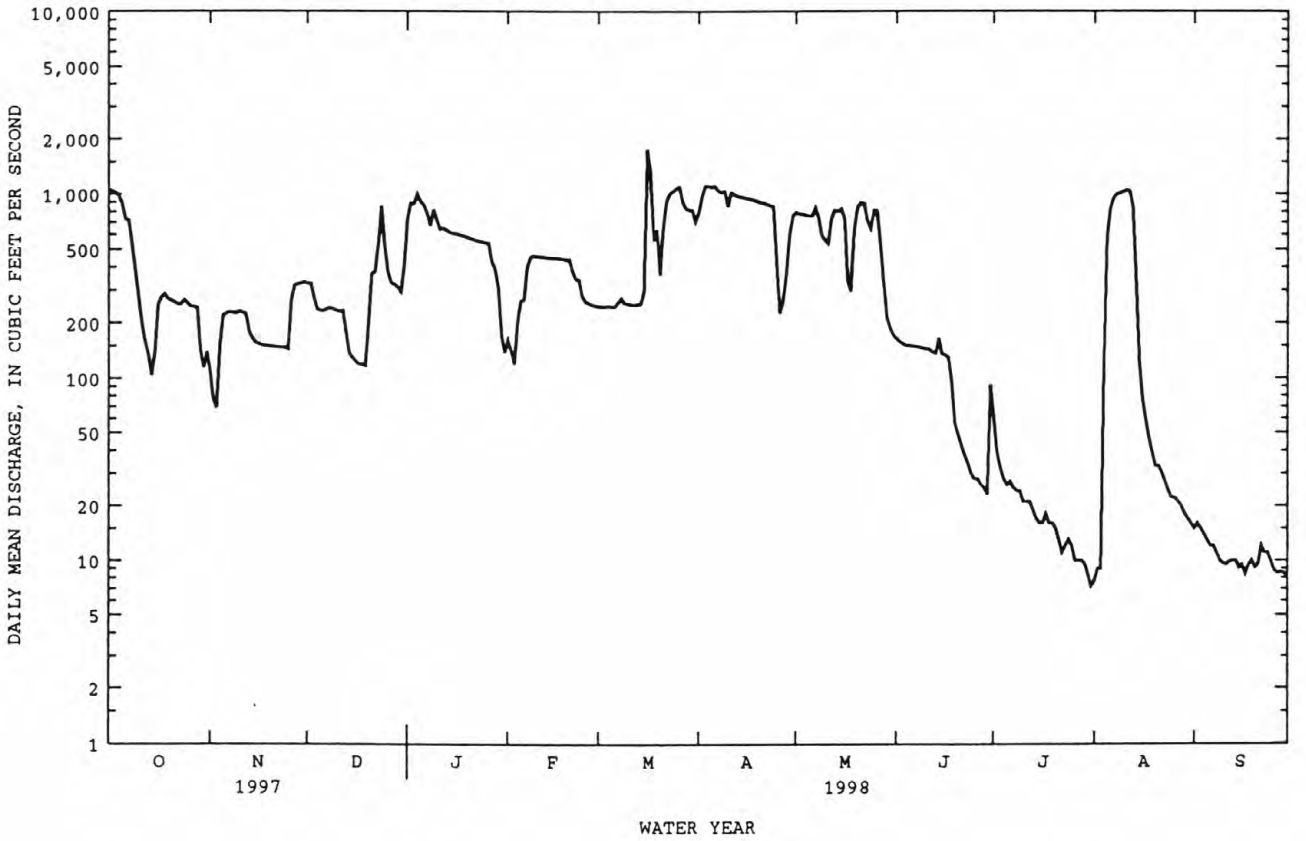
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1998, BY WATER YEAR (WY)

MEAN	148	126	120	154	190	213	295	286	339	172	196	164
MAX	708	532	380	620	532	597	863	874	944	895	610	666
(WY)	1997	1997	1997	1998	1994	1988	1998	1997	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

e Estimated

07239300 NORTH CANADIAN RIVER BELOW WEAVERS CREEK NEAR WATONGA, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1984 - 1998	
ANNUAL TOTAL	150774		133626.2			
ANNUAL MEAN	413		366		200	
HIGHEST ANNUAL MEAN					476	1997
LOWEST ANNUAL MEAN					32.1	1985
HIGHEST DAILY MEAN	2590	Apr 11	1760	Mar 16	5170	Oct 3 1986
LOWEST DAILY MEAN	38	Sep 11, 12	7.2	Jul 31	5.0	Sep 26 1985
ANNUAL SEVEN-DAY MINIMUM	41	Sep 6	8.7	Jul 28	5.5	Sep 14 1985
INSTANTANEOUS PEAK FLOW			2370	Mar 16	6180	Oct 3 1986
INSTANTANEOUS PEAK STAGE			14.86	Mar 16	19.24	Oct 3 1986
ANNUAL RUNOFF (AC-FT)	299100		265000		144900	
10 PERCENT EXCEEDS	862		911		649	
50 PERCENT EXCEEDS	318		250		53	
90 PERCENT EXCEEDS	85		12		16	



07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK

LOCATION.--Lat 35°37'01", long 98°03'54", in NW ¼ SW ¼ 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.--No estimated daily discharges. Records fair. 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

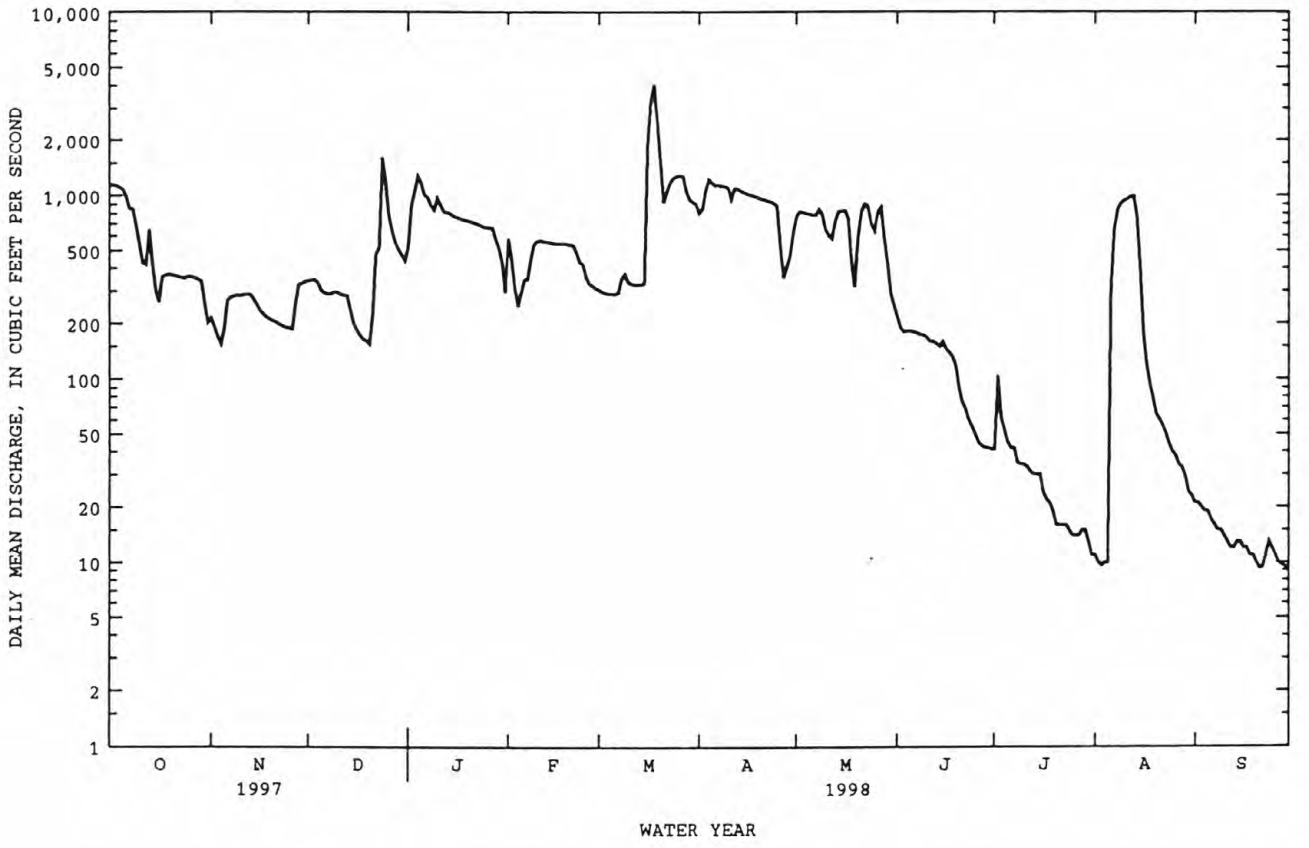
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1150	214	345	525	586	306	806	778	216	41	11	21
2	1140	194	346	889	463	299	850	821	189	104	10	21
3	1140	170	348	1050	312	294	1070	808	180	61	9.6	20
4	1110	155	332	1280	250	292	1230	802	182	52	10	19
5	1080	187	302	1180	294	292	1180	795	182	45	10	19
6	985	268	294	1010	349	291	1140	786	180	42	313	17
7	852	279	291	982	351	298	1150	786	178	42	650	16
8	848	284	292	887	453	355	1130	845	174	35	837	15
9	691	285	299	840	545	373	1130	792	173	34	908	15
10	550	284	297	971	569	337	1100	650	168	34	937	14
11	429	289	288	898	571	330	959	603	160	33	958	13
12	420	289	287	821	565	327	1100	579	160	31	986	12
13	649	289	284	817	559	326	1090	727	155	30	992	12
14	427	273	239	800	558	327	1060	826	150	30	779	13
15	301	255	200	779	550	332	1040	828	159	30	396	13
16	262	237	186	767	548	1890	1020	833	145	24	175	12
17	360	225	173	754	549	3310	1010	750	139	22	119	12
18	368	217	165	742	548	4040	997	429	132	21	94	11
19	371	212	161	736	548	2570	982	317	118	19	78	11
20	367	207	155	729	538	1570	964	586	90	16	64	10
21	365	204	226	715	538	928	957	829	75	16	60	9.3
22	360	198	478	709	492	1050	943	905	69	16	55	9.4
23	356	195	522	695	436	1180	930	880	60	16	50	11
24	355	191	1610	682	424	1250	914	697	55	15	44	13
25	363	190	1220	674	360	1280	884	641	50	14	40	12
26	360	187	780	671	330	1290	536	825	45	14	38	11
27	355	258	645	668	323	1280	356	869	43	14	34	10
28	348	327	557	579	313	1060	405	582	42	15	33	9.7
29	341	332	511	520	---	958	467	419	42	15	29	9.5
30	258	340	473	433	---	925	633	288	41	13	24	9.1
31	203	---	442	297	---	910	---	249	---	11	23	---
TOTAL	17164	7235	12748	24100	12922	30270	28033	21525	3752	905	8766.6	400.0
MEAN	554	241	411	777	462	976	934	694	125	29.2	283	13.3
MAX	1150	340	1610	1280	586	4040	1230	905	216	104	992	21
MIN	203	155	155	297	250	291	356	249	41	11	9.6	9.1
AC-FT	34040	14350	25290	47800	25630	60040	55600	42690	7440	1800	17390	793

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1998, BY WATER YEAR (WY)

MEAN	196	169	164	194	245	295	369	539	558	192	243	212
MAX	745	603	425	777	600	976	1110	1878	1086	860	556	535
(WY)	1997	1997	1997	1998	1994	1998	1997	1993	1997	1989	1995	1989
MIN	18.4	27.9	28.5	35.0	28.8	28.8	32.6	24.7	86.5	29.2	35.1	13.3
(WY)	1993	1991	1991	1989	1991	1991	1991	1996	1994	1998	1994	1998

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1989 - 1998	
ANNUAL TOTAL	214589		167820.6			
ANNUAL MEAN	588		460		281	
HIGHEST ANNUAL MEAN					635	1997
LOWEST ANNUAL MEAN					85.3	1992
HIGHEST DAILY MEAN	3550	Apr 13	4040	Mar 18	8430	May 10 1993
LOWEST DAILY MEAN	74	Sep 14	9.1	Sep 30	9.1	Sep 30 1998
ANNUAL SEVEN-DAY MINIMUM	80	Sep 8	11	Sep 17	11	Sep 17 1998
INSTANTANEOUS PEAK FLOW			4120	Mar 18	9310	May 10 1993
INSTANTANEOUS PEAK STAGE			14.32	Mar 18	19.60	May 10 1993
ANNUAL RUNOFF (AC-FT)	425600		332900		203700	
10 PERCENT EXCEEDS	1150		1010		815	
50 PERCENT EXCEEDS	394		330		96	
90 PERCENT EXCEEDS	154		16		29	



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, 2,040 microsiemens, Oct. 2,1994; minimum, 85 microsiemens, Aug. 17, 1996.
pH: Maximum, 9.4 units, Sept. 25, 1989; minimum, 6.9 units, Sept. 16, 1995.
WATER TEMPERATURE: Maximum, 39.0°C, July 2, 1990; minimum, 0.0°C, many days during winter period.
DISSOLVED OXYGEN: Maximum, 15.2 mg/L, April 12, 1997; minimum, 3.1 mg/L, July 15, 1989.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded (more than 20% missing record), 1,790 microsiemens, Aug. 6; minimum recorded, 304 microsiemens, Mar. 16.
pH: Maximum, 9.0 units, July 20, Sept. 25; minimum, 7.8 units, July 3.
WATER TEMPERATURE: Maximum 37.5°C, July 4; minimum, 1.5°C, Jan. 15.
DISSOLVED OXYGEN: Maximum, 13.9 mg/L, Mar. 12, May 31; minimum, 4.5 mg/L, Aug. 6.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
29...	0905	2.00	26.5	731	1028	1028	42	5.43	1550	7.6	8.3
29...	0910	7.00	26.0	731	1028	1028	42	5.43	1590	7.5	8.3
29...	0912	12.0	26.5	731	1028	1028	42	5.43	1570	7.5	8.3
29...	0916	17.0	26.5	731	1028	1028	42	5.43	1570	7.6	8.3
29...	0920	22.0	26.5	731	1028	1028	42	5.43	1570	7.6	8.4
29...	0923	27.0	26.5	731	1028	1028	42	5.43	1570	7.6	8.4
29...	0927	32.0	26.5	731	1028	1028	42	5.43	1570	7.6	8.4
29...	0934	37.0	26.5	731	1028	1028	42	5.43	1570	7.6	8.4
29...	0937	42.0	26.0	731	1028	1028	42	5.43	1570	7.6	8.3
29...	0942	47.0	26.5	731	1028	1028	42	5.43	1570	7.5	8.4
29...	0950	52.0	26.0	731	1028	1028	42	5.43	1570	7.6	8.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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												
15...	0945	1028	80020	310	1160	8.4	13.5	15.5	39	742	8.6	89
NOV												
19...	1100	1028	80020	212	1420	8.6	14.5	7.0	9.7	737	12.0	103
DEC												
09...	1015	1028	80020	307	1400	8.3	12.5	5.5	13	720	12.2	103
JAN												
14...	1000	1028	80020	829	1430	8.5	.0	1.5	26	736	13.6	102
FEB												
11...	0915	1028	80020	579	1430	8.5	6.0	6.0	22	733	12.4	104
MAR												
18...	1000	1028	80020	4300	375	7.8	6.5	7.0	190	732	10.5	90
APR												
14...	1005	1028	80020	1220	1440	8.4	22.0	17.0	32	726	8.8	96
MAY												
19...	0845	1028	80020	287	1440	8.4	24.0	23.5	14	733	7.8	96
JUN												
16...	1110	1028	80020	145	1300	8.4	29.0	23.0	56	727	8.8	108
JUL												
08...	1032	1028	80020	36	1490	8.4	29.5	26.5	3.2	741	8.3	107
22...	1054	1028	80020	16	1410	8.4	31.5	26.0	3.6	731	9.1	118
AUG												
12...	1130	1028	80020	1100	1610	8.3	31.0	26.5	41	733	7.2	93
SEP												
01...	0838	1028	80020	20	1690	8.4	24.0	23.5	2.0	728	7.4	92

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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												
15...	1.3	3.9	1000	1700	--	--	--	--	--	--	--	--
NOV												
19...	.70	--	100	100	450	200	110	45	123	37	3	5.6
DEC												
09...	.51	2.0	--	270	--	--	--	--	--	--	--	--
JAN												
14...	.64	3.3	120	110	--	--	--	--	--	--	--	--
FEB												
11...	.59	2.3	330	230	450	220	110	43	115	35	2	5.5
MAR												
18...	2.6	6.4	6400	13000	--	--	--	--	--	--	--	--
APR												
14...	--	2.7	K32	120	--	--	--	--	--	--	--	--
MAY												
19...	--	--	K20	K73	470	220	110	46	128	37	3	5.2
JUN												
16...	--	--	K13	K4	--	--	--	--	--	--	--	--
JUL												
08...	.50	20	110	200	--	--	--	--	--	--	--	--
22...	--	--	84	110	--	--	--	--	--	--	--	--
AUG												
12...	.65	5.0	87	460	470	310	100	51	157	42	3	4.9
SEP												
01...	--	6.3	93	140	--	--	--	--	--	--	--	--

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)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2) (00405)	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)
OCT												
15...	278	1	230	--	--	--	--	--	--	--	--	--
NOV												
19...	299	6	256	1.3	260	140	.66	17	872	858	1.19	499
DEC												
09...	277	3	232	2.3	--	--	--	--	--	--	--	--
JAN												
14...	266	7	230	1.4	--	--	--	--	--	--	--	--
FEB												
11...	278	5	236	1.5	270	130	.59	12	852	827	1.16	1330
MAR												
18...	95	0	78	2.9	--	--	--	--	--	--	--	--
APR												
14...	--	--	212	1.7	--	--	--	--	--	--	--	--
MAY												
19...	--	--	245	2.0	280	160	.68	9.3	918	894	1.25	711
JUN												
16...	246	8	215	1.7	--	--	--	--	--	--	--	--
JUL												
08...	272	11	241	1.8	--	--	--	--	--	--	--	--
22...	267	8	232	2.1	--	--	--	--	--	--	--	--
AUG												
12...	185	0	151	1.5	330	210	.69	14	1040	963	1.41	3090
SEP												
01...	226	6	195	1.7	--	--	--	--	--	--	--	--

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	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											
15...	94	.584	2.6	.014	.05	.598	.141	.18	.59	.73	.338
NOV											
19...	26	--	--	<.010	--	.370	<.020	--	--	.34	.056
DEC											
09...	28	--	--	<.010	--	.182	<.020	--	--	.33	.044
JAN											
14...	140	--	--	<.010	--	.280	<.020	--	--	.36	.034
FEB											
11...	55	--	--	<.010	--	.235	<.020	--	--	.35	.061
MAR											
18...	1	.427	1.9	.033	.11	.460	.715	.92	1.4	2.1	.141
APR											
14...	71	--	--	<.010	--	<.050	.021	.03	.29	.31	.028
MAY											
19...	68	--	--	<.010	--	<.050	.038	.05	.30	.34	<.010
JUN											
16...	146	--	--	<.010	--	<.050	.055	.07	.47	.53	.014
JUL											
08...	18	--	--	<.010	--	.058	.043	.06	.40	.44	.014
22...	7	--	--	<.010	--	<.050	.029	.04	.47	.50	.033
AUG											
12...	158	--	--	<.010	--	.177	.046	.06	.43	.47	.036
SEP											
01...	6	--	--	<.010	--	<.050	.058	.07	.89	.95	.042

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											
15...	.299	.92	--	--	--	--	--	--	--	--	--
NOV											
19...	.080	.25	4	139	<.50	<1.0	<5.0	<3.0	<10	<3.0	<10
DEC											
09...	.041	.13	--	--	--	--	--	--	--	--	--
JAN											
14...	.041	.13	--	--	--	--	--	--	--	--	--
FEB											
11...	.070	.21	3	129	<1.0	<8.0	<14	<12	<10	<10	<100
MAR											
18...	.100	.31	--	--	--	--	--	--	--	--	--
APR											
14...	.025	.08	--	--	--	--	--	--	--	--	--
MAY											
19...	<.010	--	4	130	<1.0	<8.0	<14	<12	<10	<10	<100
JUN											
16...	.027	.08	--	--	--	--	--	--	--	--	--
JUL											
08...	.021	.06	--	--	--	--	--	--	--	--	--
22...	.021	.06	--	--	--	--	--	--	--	--	--
AUG											
12...	.033	.10	5	151	<1.0	<8.0	<14	<12	<10	<10	<100
SEP											
01...	.028	.09	--	--	--	--	--	--	--	--	--

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
15...	--	--	--	--	--	--	--	--	--	--	--
NOV											
19...	38	6.5	<.1	<10	11	<1	<1.0	1030	7	9.6	6.0
DEC											
09...	--	--	--	--	--	--	--	--	--	--	--
JAN											
14...	--	--	--	--	--	--	--	--	--	--	--
FEB											
11...	34	13	<.1	<60	<40	<1	<4.0	1030	<10	<20	7.5
MAR											
18...	--	--	--	--	--	--	--	--	--	--	--
APR											
14...	--	--	--	--	--	--	--	--	--	--	--
MAY											
19...	41	<4.0	<.1	<60	<40	<1	<4.0	1140	<10	<20	6.6
JUN											
16...	--	--	--	--	--	--	--	--	--	--	--
JUL											
08...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
AUG											
12...	46	<4.0	< .1	<60	<40	<1	<4.0	1230	13	<20	10
SEP											
01...	--	--	--	--	--	--	--	--	--	--	--

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	BROM-ACIL WATER WHLREC (UG/L) (30234)	BUTA-CHLOR WATER WHLREC (UG/L) (30235)	BUTYL-ATE WATER WHLREC (UG/L) (30236)	CARBOX-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)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39519)
NOV											
19...	1100	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<5.00
FEB											
11...	0915	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<5.00
MAY											
19...	0845	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<5.00
AUG											
12...	1130	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<5.00

DATE	PCNS UNFILT RECOVER (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)	FONOFOS (DY-FONATE) WATER WHOLE TOT.REC (UG/L) (82614)	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)
NOV											
19...	<.100	<.200	<.200	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.200
FEB											
11...	<.100	<.200	<.200	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.200
MAY											
19...	<.100	<.200	<.200	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.200
AUG											
12...	<.100	<.200	<.200	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.200

DATE	AME-TRYNE TOTAL (UG/L) (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, TECH-NICAL TOTAL (UG/L) (39350)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39351)	CHLOR-PYRIFOS TOTAL RECOVER (UG/L) (38932)	CYAN-AZINE TOTAL (UG/L) (81757)	2,4-D, TOTAL (UG/L) (39730)	P,P'-DDD UNFILT RECOVER (UG/L) (39360)	P,P'-DDD, RECOVER IN BOT-TOM MA-TERIAL (UG/KG) (39363)
NOV											
19...	<.100	<.100	<.200	<.200	<.100	<3.00	<.010	<.200	.021	<.001	<.500
FEB											
11...	<.100	<.100	<.200	<.200	<.100	<3.00	<.010	<.200	.018	<.001	<.500
MAY											
19...	<.100	<.100	<.200	<.200	<.100	<3.00	<.010	<.200	.034	<.001	<.500
AUG											
12...	<.100	<.100	<.200	<.200	<.100	<3.00	<.010	<.200	.037	<.001	<.500

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	P,P'-DDE, TOTAL (UG/L) (39365)	P,P'-DDE, RECOVER IN BOTTOM MATERIAL (UG/KG) (39368)	P,P'-DDT UNFILT RECOVER (UG/L) (39370)	P,P'-DDT, RECOVER IN BOTTOM MATERIAL (UG/KG) (39373)	DEF TOTAL (UG/L) (39040)	DIAZINON, TOTAL (UG/L) (39570)	DIELDRIN TOTAL (UG/L) (39380)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) (39383)	DISULFOTON UNFILT RECOVER (UG/L) (39011)	2,4-DP TOTAL (UG/L) (82183)	ENDOSULFAN I TOTAL (UG/L) (39388)
NOV											
19...	<.001	<.200	<.001	<.500	<.010	<.010	<.001	<.200	<.020	<.010	<.001
FEB											
11...	<.001	<.200	<.001	<.500	<.010	<.010	<.001	<.200	<.010	<.010	<.001
MAY											
19...	<.001	<.200	<.001	<.500	<.040	<.020	<.001	<.200	<.020	<.010	<.001
AUG											
12...	<.001	<.200	<.001	<.500	<.010	<.010	<.001	<.200	<.010	<.010	<.001

DATE	ENDOSULFAN I 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)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)	LINDANE TOTAL (UG/L) (39340)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG) (39343)
NOV										
19...	<.200	<.001	<.200	<.010	<.001	<.200	<.001	<.200	<.001	<.200
FEB										
11...	<.200	<.001	<.200	<.010	<.001	<.200	<.001	<.200	<.001	<.200
MAY										
19...	<.200	<.001	<.200	<.010	<.001	<.200	<.001	<.200	<.001	<.200
AUG										
12...	<.200	<.001	<.200	<.010	<.001	<.200	<.001	<.200	<.001	<.200

DATE	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)	PHORATE TOTAL (UG/L) (39023)	PROMETONE TOTAL (UG/L) (39056)
NOV										
19...	<.020	<.010	<2.50	<.010	<.010	<.200	<.010	<.100	<.010	<.200
FEB										
11...	<.010	<.010	<2.50	<.010	<.010	<.200	<.010	<.100	<.010	<.200
MAY										
19...	<.030	<.010	<2.50	<.010	<.010	<.200	<.010	<.100	<.010	<.200
AUG										
12...	<.010	<.010	<2.50	<.010	<.010	<.200	<.010	<.100	<.010	<.200

DATE	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										
19...	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<50.0	<.100	<.010
FEB										
11...	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<50.0	<.100	<.010
MAY										
19...	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<50.0	<.100	<.010
AUG										
12...	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<50.0	<.100	<.010

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SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	1460	1430	1440	1390	1380	1380	1400	1350	1380
2	---	---	---	1440	1410	1420	---	---	---	1440	1390	1410
3	---	---	---	1460	1410	1430	---	---	---	1440	1420	1430
4	---	---	---	1460	1440	1450	---	---	---	1430	1030	1300
5	---	---	---	1510	1460	1480	---	---	---	1170	986	1070
6	---	---	---	1510	1390	1420	1380	1380	1380	1310	1170	1260
7	---	---	---	1390	1380	1390	1380	1370	1380	1350	1310	1340
8	---	---	---	1390	1370	1380	1370	1350	1360	1370	1350	1360
9	---	---	---	1370	1350	1360	1360	1350	1350	1390	1370	1380
10	1370	1360	1360	1350	1350	1350	1350	1340	1350	1420	1390	1410
11	1370	1330	1350	1350	1330	1340	1340	1340	1340	1420	1410	1410
12	1330	1230	1280	1340	1330	1330	1340	1340	1340	1420	1410	1420
13	1230	832	982	1340	1320	1330	1350	1340	1340	1430	1420	1420
14	1090	829	950	1320	1300	1320	1350	1340	1340	1440	1420	1430
15	---	---	---	---	---	---	1350	1340	1340	1440	1370	1440
16	---	---	---	---	---	---	---	---	---	1440	1430	1440
17	---	---	---	---	---	---	---	---	---	1450	1430	1440
18	---	---	---	---	---	---	1440	1420	1420	1450	1430	1440
19	---	---	---	---	---	---	1430	1410	1420	1450	1420	1440
20	---	---	---	---	---	---	1430	1250	1400	1440	1410	1430
21	---	---	---	---	---	---	1250	1190	1210	1440	1430	1440
22	1380	1350	1360	---	---	---	1240	1060	1170	1440	1430	1430
23	1360	1300	1340	1360	1330	1350	1060	1040	1050	1450	1430	1440
24	1350	1310	1350	1390	1360	1370	---	---	---	1450	1430	1440
25	1350	1330	1340	---	---	---	---	---	---	1460	1450	1450
26	1370	1330	1350	---	---	---	---	---	---	1460	1430	1440
27	1370	1360	1370	---	---	---	---	---	---	1430	1420	1430
28	1380	1370	1380	1400	1370	1400	---	---	---	1440	1430	1430
29	1390	1380	1390	---	---	---	---	---	---	1440	1430	1440
30	1390	1390	1390	1390	1370	1380	---	---	---	1440	1430	1430
31	1430	1390	1400	---	---	---	1350	1280	1320	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	---	---	---	1470	1440	1460
2	---	---	---	---	---	---	1420	1400	1420	1490	1440	1480
3	---	---	---	---	---	---	1420	1400	1410	1500	1490	1490
4	---	---	---	---	---	---	1420	1410	1410	1500	1490	1490
5	1420	1340	1380	1470	1450	1460	1410	1410	1410	1520	1500	1500
6	1410	1390	1400	1450	1450	1450	1410	1410	1410	1530	1490	1510
7	1430	1410	1420	1450	1410	1420	1410	1390	1400	1500	1270	1430
8	1450	1430	1440	1410	1350	1380	1390	1370	1380	---	---	---
9	1440	1410	1420	1370	1350	1360	1410	1390	1400	---	---	---
10	---	---	---	1450	1370	1410	1420	1410	1410	---	---	---
11	---	---	---	1460	1410	1430	1430	1410	1420	---	---	---
12	---	---	---	1430	1410	1420	1440	1430	1440	---	---	---
13	---	---	---	1450	1420	1440	1440	1430	1440	---	---	---
14	---	---	---	1440	1430	1440	1450	1440	1450	---	---	---
15	---	---	---	1430	1310	1400	1470	1450	1460	---	---	---
16	---	---	---	1310	304	680	1480	1470	1470	---	---	---
17	---	---	---	353	325	337	1470	1470	1470	---	---	---
18	---	---	---	364	325	340	1490	1470	1470	---	---	---
19	---	---	---	428	362	407	1490	1480	1490	---	---	---
20	---	---	---	504	380	438	1480	1470	1470	---	---	---
21	---	---	---	661	504	586	1470	1470	1470	---	---	---
22	---	---	---	---	---	---	1480	1470	1470	---	---	---
23	---	---	---	---	---	---	1490	1470	1480	---	---	---
24	---	---	---	---	---	---	1490	1480	1480	---	---	---
25	---	---	---	---	---	---	1490	1460	1480	1460	1310	1390
26	---	---	---	---	---	---	1470	1420	1450	1460	1090	1350
27	---	---	---	---	---	---	1440	1410	1430	1280	1090	1210
28	---	---	---	---	---	---	1410	1330	1380	1360	1280	1320
29	---	---	---	---	---	---	1330	1270	1300	1430	1360	1380
30	---	---	---	---	---	---	1440	1320	1410	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	1620	1590	1600	1600	1530	1560	1640	1610	1620
2	---	---	---	1660	694	1090	1580	1510	1540	1650	1610	1620
3	---	---	---	827	701	756	1540	1470	1510	1640	1580	1610
4	---	---	---	1250	827	1040	1500	1480	1490	1640	1580	1610
5	---	---	---	1410	1250	1350	1510	1470	1490	1650	1600	1620
6	---	---	---	1470	1400	1440	1790	1340	1530	1660	1610	1630
7	---	---	---	1530	1460	1490	1350	1330	1340	1660	1610	1630
8	---	---	---	1560	1490	1520	1350	1350	1350	1650	1610	1620
9	---	---	---	1570	1500	1530	1480	1340	1380	1640	1600	1620
10	---	---	---	1580	1520	1550	1510	1480	1500	1640	1590	1610
11	---	---	---	1570	1530	1550	---	---	---	1620	1560	1600
12	---	---	---	1580	1510	1540	---	---	---	1610	1570	1600
13	1460	1350	1430	1540	1490	1530	---	---	---	1600	1550	1560
14	1440	1370	1410	---	---	---	---	---	---	1580	1550	1560
15	1420	1300	1400	---	---	---	---	---	---	1590	1550	1570
16	1430	1100	1280	1540	1490	1510	---	---	---	1570	1550	1560
17	1490	1430	1460	1570	1510	1530	---	---	---	1560	1530	1540
18	1520	1470	1500	1570	1520	1540	1630	1600	1620	1540	1510	1530
19	1540	1480	1510	1580	1530	1550	1640	1610	1620	1550	1490	1520
20	1520	1450	1480	1560	1510	1540	1670	1620	1640	---	---	---
21	1540	1480	1510	1560	1530	1540	1680	1640	1650	---	---	---
22	1520	1500	1510	1590	1530	1560	1700	1640	1670	---	---	---
23	1550	1510	1520	1610	1560	1570	1700	1640	1660	---	---	---
24	1560	1510	1530	1590	1540	1570	---	---	---	---	---	---
25	1590	1520	1550	1590	1540	1560	---	---	---	---	---	---
26	1580	1540	1560	1600	1540	1570	1700	1670	1680	---	---	---
27	1600	1550	1570	1610	1540	1570	1710	1660	1680	---	---	---
28	1610	1550	1580	1610	1540	1580	1690	1660	1670	---	---	---
29	1620	1550	1580	1590	1530	1550	1670	1630	1650	---	---	---
30	1640	1590	1610	1610	1530	1560	1670	1620	1640	---	---	---
31	---	---	---	1600	1540	1560	1660	1630	1640	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.4	8.3	8.3	8.6	8.5	8.5	8.5	8.5	8.5	8.6	8.6	8.6
2	8.4	8.4	8.4	8.5	8.5	8.5	8.5	8.5	8.5	8.6	8.5	8.5
3	8.4	8.4	8.4	8.5	8.5	8.5	8.5	8.5	8.5	8.6	8.5	8.5
4	8.5	8.4	8.4	8.5	8.4	8.5	8.5	8.4	8.5	8.5	8.4	8.5
5	8.5	8.4	8.4	8.6	8.4	8.5	8.6	8.5	8.6	8.5	8.4	8.4
6	8.5	8.4	8.4	8.6	8.5	8.6	8.6	8.6	8.6	8.5	8.5	8.5
7	8.5	8.5	8.5	8.6	8.5	8.6	8.6	8.6	8.6	8.6	8.5	8.6
8	8.5	8.5	8.5	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
9	8.5	8.4	8.4	8.6	8.5	8.6	8.6	8.6	8.6	8.6	8.5	8.6
10	8.5	8.4	8.5	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
11	8.5	8.4	8.4	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
12	8.5	8.4	8.4	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
13	8.4	8.1	8.2	8.6	8.6	8.6	8.6	8.6	8.6	8.7	8.6	8.6
14	8.3	8.2	8.2	8.6	8.6	8.6	8.6	8.6	8.6	8.7	8.6	8.6
15	8.3	8.3	8.3	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
16	8.4	8.3	8.4	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
17	8.6	8.4	8.5	8.6	8.6	8.6	8.6	8.5	8.6	8.6	8.5	8.6
18	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.5	8.6	8.6	8.6	8.6
19	8.6	8.5	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
20	8.7	8.5	8.6	8.6	8.5	8.6	8.6	8.6	8.6	8.6	8.6	8.6
21	8.7	8.6	8.6	8.5	8.5	8.5	8.6	8.5	8.6	8.6	8.6	8.6
22	8.6	8.5	8.6	8.6	8.5	8.5	8.5	8.5	8.5	8.6	8.6	8.6
23	8.6	8.6	8.6	8.6	8.4	8.5	8.6	8.5	8.5	8.6	8.6	8.6
24	8.7	8.6	8.6	8.5	8.4	8.4	---	---	---	8.6	8.6	8.6
25	8.7	8.6	8.6	8.4	8.4	8.4	---	---	---	8.6	8.6	8.6
26	8.7	8.7	8.7	8.4	8.4	8.4	8.4	8.3	8.4	8.7	8.6	8.6
27	8.7	8.6	8.7	8.4	8.4	8.4	8.5	8.4	8.5	8.7	8.6	8.6
28	8.7	8.6	8.6	8.4	8.3	8.4	8.6	8.5	8.5	8.6	8.6	8.6
29	8.6	8.5	8.6	8.5	8.4	8.4	8.6	8.6	8.6	8.6	8.5	8.6
30	8.5	8.4	8.5	8.5	8.4	8.5	8.6	8.5	8.6	8.6	8.5	8.6
31	8.5	8.4	8.5	---	---	---	8.6	8.5	8.6	8.5	8.4	8.4
MAX	8.7	8.7	8.7	8.6	8.6	8.6	---	---	---	8.7	8.6	8.6
MIN	8.3	8.1	8.2	8.4	8.3	8.4	---	---	---	8.5	8.4	8.4

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.4	8.2	8.3	8.4	8.4	8.4	8.5	8.4	8.5	8.3	8.3	8.3
2	8.4	8.2	8.3	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.3	8.3
3	8.4	8.4	8.4	8.4	8.4	8.4	8.5	8.4	8.4	8.5	8.4	8.4
4	8.4	8.4	8.4	8.6	8.4	8.4	8.5	8.4	8.5	8.5	8.4	8.4
5	8.5	8.4	8.4	8.6	8.5	8.6	8.5	8.5	8.5	8.7	8.4	8.5
6	8.5	8.5	8.5	8.6	8.6	8.6	8.5	8.4	8.5	8.7	8.6	8.6
7	8.5	8.5	8.5	8.6	8.5	8.6	8.5	8.4	8.4	8.7	8.5	8.6
8	8.5	8.4	8.5	8.6	8.6	8.6	8.5	8.4	8.4	8.7	8.5	8.6
9	8.6	8.5	8.5	8.6	8.6	8.6	8.5	8.4	8.5	8.7	8.5	8.6
10	8.6	8.5	8.5	8.6	8.6	8.6	8.5	8.4	8.5	8.6	8.6	8.6
11	8.6	8.6	8.6	8.6	8.6	8.6	8.5	8.4	8.4	8.6	8.5	8.5
12	8.6	8.6	8.6	8.6	8.6	8.6	8.5	8.4	8.4	8.6	8.5	8.5
13	8.6	8.5	8.6	8.6	8.6	8.6	8.4	8.4	8.4	8.5	8.5	8.5
14	8.6	8.5	8.6	8.6	8.6	8.6	8.4	8.4	8.4	8.5	8.4	8.5
15	8.6	8.5	8.6	8.7	8.6	8.6	8.4	8.4	8.4	8.5	8.4	8.5
16	8.6	8.6	8.6	8.6	8.0	8.2	8.4	8.4	8.4	8.6	8.5	8.5
17	8.6	8.5	8.6	---	---	---	8.4	8.4	8.4	8.7	8.5	8.6
18	8.6	8.5	8.5	---	---	---	8.4	8.4	8.4	8.7	8.4	8.6
19	8.5	8.4	8.5	---	---	---	8.4	8.4	8.4	8.5	8.3	8.4
20	8.5	8.4	8.5	---	---	---	8.4	8.4	8.4	8.6	8.3	8.5
21	8.5	8.5	8.5	---	---	---	8.4	8.4	8.4	8.5	8.5	8.5
22	8.5	8.5	8.5	---	---	---	8.4	8.4	8.4	8.5	8.3	8.4
23	8.5	8.4	8.4	---	---	---	8.5	8.4	8.5	8.4	8.4	8.4
24	8.5	8.4	8.4	---	---	---	8.5	8.5	8.5	8.4	8.4	8.4
25	8.5	8.4	8.4	---	---	---	8.5	8.5	8.5	8.4	8.4	8.4
26	8.5	8.4	8.4	---	---	---	8.5	8.4	8.4	8.4	8.1	8.4
27	8.5	8.4	8.4	---	---	---	8.4	8.3	8.3	8.4	8.1	8.2
28	8.4	8.4	8.4	---	---	---	8.3	8.2	8.3	8.7	8.4	8.5
29	---	---	---	---	---	---	8.2	8.1	8.2	8.7	8.5	8.6
30	---	---	---	---	---	---	8.3	8.1	8.2	8.7	8.3	8.5
31	---	---	---	8.5	8.4	8.5	---	---	---	8.6	8.3	8.4
MAX	8.6	8.6	8.6	---	---	---	8.5	8.5	8.5	8.7	8.6	8.6
MIN	8.4	8.2	8.3	---	---	---	8.2	8.1	8.2	8.3	8.1	8.2

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.5	8.2	8.3	8.5	8.2	8.3	8.7	8.0	8.3	8.7	8.4	8.6
2	8.5	8.3	8.3	8.3	7.9	8.1	8.8	8.0	8.3	8.7	8.3	8.6
3	8.5	8.2	8.3	8.9	7.8	7.9	8.7	7.9	8.2	8.8	8.4	8.6
4	8.6	8.3	8.4	8.7	8.2	8.5	8.8	8.0	8.3	8.8	8.3	8.6
5	8.6	8.3	8.4	8.6	8.3	8.5	8.8	8.0	8.4	8.8	8.3	8.6
6	8.5	8.3	8.4	8.6	8.2	8.4	8.4	8.0	8.2	8.8	8.3	8.6
7	8.5	8.2	8.3	8.5	8.2	8.4	8.3	8.1	8.2	8.8	8.3	8.5
8	8.5	8.3	8.3	8.4	8.1	8.3	8.3	8.1	8.2	8.8	8.3	8.5
9	8.5	8.2	8.3	8.4	8.1	8.3	8.3	8.1	8.2	8.7	8.3	8.5
10	8.5	8.2	8.3	8.8	8.0	8.2	8.4	8.1	8.3	8.6	8.3	8.5
11	8.5	8.2	8.3	8.6	8.3	8.5	8.4	8.3	8.4	8.6	8.2	8.4
12	8.4	8.1	8.2	8.5	8.2	8.4	8.4	8.3	8.4	8.7	8.2	8.4
13	8.5	8.1	8.3	8.4	8.1	8.2	8.5	8.4	8.4	8.6	8.2	8.4
14	8.5	8.2	8.3	---	---	---	8.6	8.4	8.5	8.7	8.2	8.4
15	8.5	8.1	8.3	---	---	---	8.8	8.5	8.6	8.8	8.1	8.4
16	8.6	8.2	8.3	8.8	8.3	8.6	8.8	8.6	8.7	8.7	8.1	8.4
17	8.5	8.2	8.3	8.8	8.3	8.5	8.7	8.5	8.6	8.7	8.2	8.5
18	8.5	8.2	8.3	8.8	8.3	8.5	8.7	8.5	8.6	8.7	8.2	8.4
19	8.5	8.2	8.3	8.8	8.2	8.5	8.7	8.5	8.6	8.7	8.2	8.5
20	8.5	8.2	8.3	9.0	8.3	8.7	8.7	8.5	8.6	8.7	8.2	8.5
21	8.5	8.2	8.3	8.9	8.4	8.7	8.7	8.5	8.6	8.7	8.2	8.4
22	8.5	8.3	8.4	8.9	8.3	8.6	8.6	8.3	8.5	8.5	8.1	8.3
23	8.5	8.3	8.4	8.8	8.3	8.5	8.6	8.3	8.5	8.7	8.2	8.5
24	8.5	8.3	8.4	8.8	8.2	8.5	8.6	8.3	8.5	8.9	8.2	8.5
25	8.5	8.3	8.4	8.8	8.3	8.5	8.7	8.3	8.5	9.0	8.2	8.5
26	8.5	8.2	8.4	8.8	8.3	8.5	8.7	8.4	8.5	8.7	8.1	8.4
27	8.5	8.2	8.3	8.8	8.2	8.4	8.7	8.4	8.6	8.7	8.0	8.3
28	8.4	8.1	8.3	8.8	8.2	8.4	8.7	8.4	8.6	8.6	8.0	8.3
29	8.4	8.1	8.2	8.8	8.0	8.4	8.7	8.4	8.6	8.7	8.1	8.4
30	8.4	8.0	8.2	8.8	8.0	8.3	8.7	8.4	8.6	8.8	8.1	8.4
31	---	---	---	8.8	8.0	8.3	8.7	8.4	8.6	---	---	---
MAX	8.6	8.3	8.4	---	---	---	8.8	8.6	8.7	9.0	8.4	8.6
MIN	8.4	8.0	8.2	---	---	---	8.3	7.9	8.2	8.5	8.0	8.3

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.0	21.5	22.5	15.5	13.5	14.5	8.5	8.0	8.0	6.0	4.0	5.0
2	23.5	22.0	23.0	14.0	11.5	12.5	8.0	7.5	8.0	8.0	6.0	7.0
3	23.5	22.5	23.0	13.0	10.0	11.5	7.5	6.0	7.0	9.0	8.0	8.5
4	23.0	21.5	22.5	14.0	10.0	12.0	6.0	4.5	5.5	8.5	5.5	7.0
5	23.0	21.5	22.5	14.0	11.5	13.0	5.0	3.5	4.0	5.5	5.0	5.0
6	23.0	22.0	22.5	12.5	10.5	11.0	3.5	2.5	3.0	6.0	5.5	5.5
7	23.0	22.0	22.5	11.5	9.0	10.5	3.5	3.5	3.5	5.5	4.0	4.5
8	22.5	21.5	22.0	12.0	9.5	10.5	5.0	3.5	4.5	4.0	3.5	3.5
9	22.5	21.0	22.0	11.0	9.0	10.0	7.0	5.0	5.5	4.0	3.0	3.5
10	23.5	22.0	22.5	9.5	8.0	8.5	6.0	4.0	5.0	3.5	3.0	3.0
11	23.0	21.5	22.5	8.0	6.5	7.5	4.0	3.5	4.0	3.0	2.5	3.0
12	21.5	19.5	21.0	8.0	7.0	7.5	3.5	2.0	3.0	3.0	3.0	3.0
13	19.5	17.5	18.0	8.5	7.5	8.0	3.5	1.5	2.5	3.0	2.0	2.5
14	18.0	15.5	16.5	8.0	6.5	7.0	5.0	2.0	3.5	2.0	2.0	2.0
15	19.0	15.5	17.5	6.5	5.0	6.0	6.0	3.0	4.5	3.0	1.5	2.5
16	19.0	16.0	17.5	6.5	4.0	5.5	7.0	4.5	5.5	3.5	2.5	3.0
17	18.0	16.0	17.0	7.0	4.5	5.5	7.0	4.0	5.5	4.5	3.0	3.5
18	18.0	15.5	17.0	8.0	5.0	6.5	7.5	4.5	6.0	4.5	4.0	4.0
19	17.5	16.0	16.5	9.0	6.5	8.0	8.0	5.5	6.5	4.5	3.0	4.0
20	17.0	15.5	16.5	10.0	8.0	9.0	6.5	5.0	5.5	5.5	4.0	4.5
21	16.0	14.5	15.0	10.5	8.0	9.5	5.0	4.0	4.5	5.0	4.0	4.5
22	14.5	13.0	14.0	11.0	9.0	10.0	4.5	4.0	4.5	4.5	3.5	4.0
23	14.0	13.0	13.5	11.0	8.5	9.5	4.5	4.0	4.5	3.5	3.0	3.5
24	15.0	14.0	14.5	11.5	9.0	10.0	---	---	---	4.5	2.5	3.5
25	15.0	12.0	14.0	12.5	9.5	11.0	---	---	---	5.0	4.0	4.5
26	12.0	9.5	10.5	12.0	10.5	11.0	4.0	3.0	3.5	6.0	4.5	5.5
27	11.0	8.5	9.5	12.0	10.0	11.0	4.0	3.0	3.5	6.5	5.0	6.0
28	12.0	9.5	10.5	13.0	12.0	12.5	4.0	3.0	3.5	7.0	5.5	6.5
29	12.5	10.5	11.5	12.0	10.0	11.0	4.0	2.5	3.5	7.5	6.0	6.5
30	15.5	12.5	14.0	10.0	8.5	9.0	5.0	3.5	4.5	7.5	5.5	7.0
31	16.0	12.5	14.5	---	---	---	5.5	4.0	4.5	7.5	7.0	7.5
MONTH	23.5	8.5	17.6	15.5	4.0	9.6	---	---	---	9.0	1.5	4.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.5	7.5	8.0	9.5	7.0	8.0	15.0	12.0	13.5	18.5	15.5	17.0
2	9.0	7.0	8.0	9.0	6.5	8.0	15.0	13.0	14.0	20.0	18.0	19.0
3	8.5	6.0	7.0	9.5	6.0	8.0	14.5	13.5	14.0	20.5	18.5	19.5
4	6.0	5.5	5.5	10.5	7.5	9.0	13.5	12.0	13.0	20.5	18.0	19.0
5	5.5	4.0	5.0	10.0	7.5	8.5	14.0	11.5	12.5	21.0	19.0	20.0
6	5.0	3.0	4.0	7.5	6.5	7.0	15.5	13.5	14.5	22.0	20.5	21.0
7	6.0	3.5	4.5	7.0	6.5	7.0	16.0	14.5	15.0	22.0	19.5	21.0
8	7.0	5.5	6.0	6.5	4.0	5.5	15.0	14.5	15.0	22.0	20.5	21.0
9	8.0	6.0	7.0	5.5	2.5	4.0	15.0	13.0	14.0	20.5	19.5	19.5
10	8.0	7.0	7.5	6.0	2.5	4.0	16.0	13.5	14.5	21.5	18.5	20.0
11	8.0	6.0	7.0	5.5	4.0	4.5	17.0	14.5	15.5	23.0	20.0	21.5
12	7.5	6.5	7.0	5.5	3.0	4.5	17.5	15.5	16.5	24.5	21.5	23.0
13	8.0	6.0	7.0	9.0	4.5	6.5	18.0	16.0	17.0	24.5	22.5	23.5
14	8.5	6.5	7.5	10.0	8.5	9.0	18.5	16.5	17.5	24.5	22.5	23.5
15	9.0	8.0	8.5	9.5	8.0	8.5	19.0	17.0	18.0	25.0	23.5	24.0
16	8.5	7.5	7.5	8.0	7.5	8.0	18.0	16.5	17.0	24.0	22.0	23.0
17	8.5	7.0	7.5	8.0	7.5	8.0	16.5	15.0	16.0	24.5	22.0	23.5
18	8.5	6.5	7.5	8.5	7.5	8.0	17.0	15.0	16.0	26.5	23.5	25.0
19	9.0	8.0	8.5	8.5	6.0	7.5	17.5	15.5	16.5	26.5	23.5	25.0
20	9.5	7.5	9.0	7.0	5.5	6.0	17.5	16.0	16.5	26.0	24.0	25.0
21	9.5	8.5	9.0	9.5	6.5	8.0	17.0	15.0	16.0	24.5	23.5	24.0
22	9.5	9.0	9.0	11.0	9.0	10.0	18.0	15.5	17.0	24.5	23.5	24.0
23	11.0	8.0	9.5	11.5	10.0	10.5	18.5	16.0	17.5	24.5	23.0	23.5
24	11.5	9.0	10.5	11.5	10.0	11.0	19.0	17.0	18.0	26.0	23.0	24.5
25	13.5	11.0	12.0	13.5	11.0	12.0	20.0	18.0	19.0	25.5	23.5	24.0
26	12.5	10.5	11.5	14.0	13.0	13.5	19.5	17.0	18.5	25.0	22.5	23.5
27	11.0	9.0	10.0	14.0	13.5	14.0	17.0	15.5	16.0	25.5	23.5	24.5
28	10.0	7.5	9.0	15.5	13.0	14.0	15.5	13.5	14.0	27.5	24.5	26.0
29	---	---	---	16.5	14.5	15.5	13.5	12.5	13.0	29.0	26.0	27.5
30	---	---	---	17.0	15.5	16.0	16.5	12.5	14.5	28.5	25.5	27.0
31	---	---	---	15.5	13.5	14.5	---	---	---	28.0	24.5	26.0
MONTH	13.5	3.0	7.9	17.0	2.5	9.0	20.0	11.5	15.7	29.0	15.5	22.9

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	29.0	24.5	26.5	33.0	25.5	28.5	35.0	24.5	29.0	31.0	24.0	27.5
2	30.0	25.0	27.5	32.5	26.5	29.0	32.0	24.0	28.0	32.0	24.0	27.5
3	29.5	25.5	27.5	34.0	25.5	29.5	30.0	23.5	26.5	31.5	25.0	28.0
4	27.0	21.5	23.5	37.5	26.0	31.5	28.5	23.5	26.0	32.5	23.5	28.0
5	21.5	19.0	20.5	32.5	28.5	30.0	29.0	23.0	25.5	32.5	24.0	28.5
6	23.5	18.0	21.0	36.0	27.0	31.0	27.5	24.0	26.0	32.5	24.5	28.0
7	23.5	20.0	22.0	37.0	27.5	31.5	28.0	26.0	27.0	32.5	24.5	28.5
8	24.0	20.5	22.0	36.0	27.0	31.0	28.0	26.0	27.0	32.0	24.5	28.0
9	28.0	22.5	25.0	36.0	27.5	31.5	28.5	26.0	27.0	30.0	23.0	26.0
10	28.5	24.0	26.0	36.0	26.5	30.5	27.5	26.5	27.0	29.0	21.0	24.5
11	28.0	24.0	26.0	34.5	26.5	30.0	27.0	26.0	26.5	28.5	21.0	24.5
12	28.5	23.5	26.0	35.5	26.5	30.5	26.5	25.5	26.0	28.0	22.5	25.0
13	30.5	25.0	27.5	35.5	26.5	30.5	27.5	25.5	26.5	26.0	22.5	24.0
14	29.0	25.0	27.0	---	---	---	28.0	26.0	27.0	30.5	23.0	26.0
15	27.0	24.0	25.5	---	---	---	29.5	26.0	27.5	29.5	23.5	26.5
16	27.5	22.5	25.0	34.5	25.5	29.5	30.0	26.0	28.0	28.5	23.5	26.0
17	28.0	23.5	25.5	36.0	24.5	30.0	30.5	25.5	28.0	29.0	23.0	25.5
18	30.0	24.5	27.0	35.0	25.0	29.5	30.5	26.0	28.0	29.0	22.5	25.5
19	31.0	25.0	28.0	35.5	25.0	29.5	31.0	25.5	28.0	30.0	23.0	26.0
20	32.0	25.5	28.0	35.0	25.5	29.5	32.0	25.5	28.5	29.5	22.5	25.5
21	31.0	25.5	28.0	35.0	25.5	29.5	31.5	26.0	28.5	30.0	23.0	26.0
22	30.5	24.5	27.5	35.5	24.5	29.5	31.0	25.0	28.0	25.5	19.0	21.5
23	31.5	24.5	27.5	35.5	25.0	29.5	32.0	25.5	28.0	24.5	19.0	21.0
24	30.5	23.5	26.5	37.0	26.0	30.5	32.0	25.5	28.5	29.5	21.5	24.5
25	31.0	23.5	26.5	36.5	26.5	31.0	31.5	25.5	28.5	29.0	22.0	25.0
26	32.0	23.0	27.0	35.0	25.0	29.5	32.5	26.5	29.0	29.0	22.0	25.0
27	34.0	24.5	28.5	37.0	25.0	30.5	32.5	26.0	29.0	30.5	23.0	26.0
28	35.0	25.5	29.5	35.0	26.0	30.0	32.5	26.0	28.5	31.0	23.5	26.5
29	35.0	26.0	30.0	34.5	25.5	29.0	31.0	23.0	27.0	30.5	23.0	26.5
30	34.0	26.0	29.0	34.5	23.5	28.0	31.0	23.0	27.0	29.5	23.0	26.0
31	---	---	---	35.0	24.5	28.5	31.5	24.0	27.5	---	---	---
MONTH	35.0	18.0	26.2	---	---	---	35.0	23.0	27.5	32.5	19.0	25.9

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

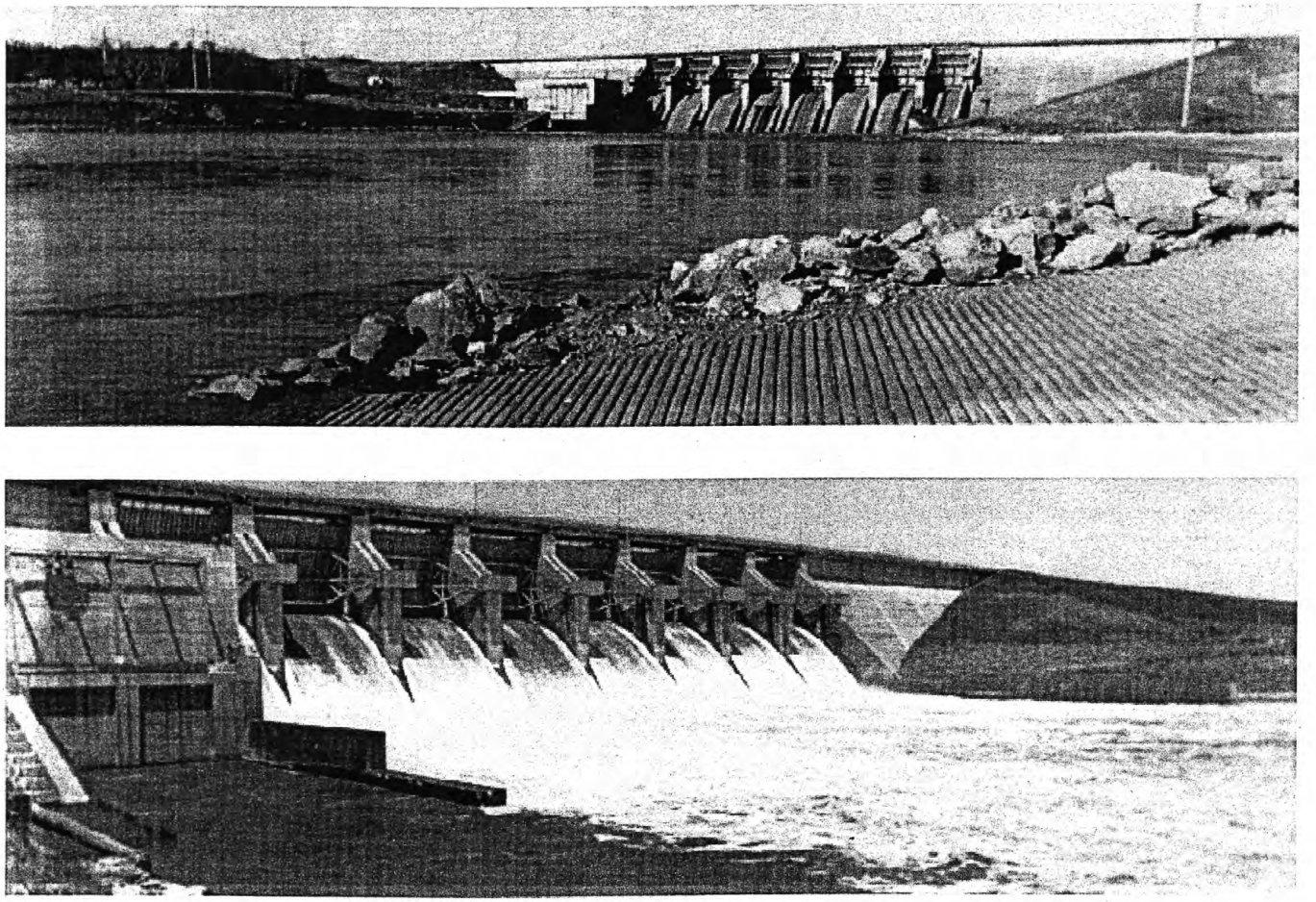
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	9.5	8.7	9.1	11.3	10.9	11.1	12.8	12.3	12.5
2	---	---	---	10.1	9.1	9.6	11.2	11.0	11.1	12.3	11.5	11.9
3	---	---	---	10.3	9.4	9.9	11.7	11.0	11.4	11.5	11.1	11.2
4	---	---	---	10.1	9.3	9.7	12.2	11.6	11.9	11.4	11.1	11.2
5	---	---	---	9.9	9.2	9.6	12.6	11.9	12.3	11.7	11.3	11.6
6	---	---	---	11.5	9.7	10.8	13.0	12.4	12.7	11.7	11.6	11.6
7	---	---	---	11.6	10.7	11.1	12.6	12.4	12.5	12.3	11.7	11.9
8	---	---	---	11.3	10.4	10.9	12.4	11.9	12.2	12.7	12.3	12.5
9	---	---	---	11.0	10.4	10.7	12.6	11.4	11.8	12.7	12.6	12.6
10	8.9	7.4	7.9	11.8	10.9	11.4	12.3	11.5	12.0	13.4	12.7	13.0
11	8.2	7.1	7.5	12.2	11.4	11.8	12.9	12.3	12.6	13.2	12.9	13.0
12	8.2	7.3	7.6	12.0	11.5	11.7	13.3	12.6	13.1	13.0	12.8	12.9
13	7.8	7.1	7.5	11.9	11.4	11.7	13.6	13.0	13.4	13.3	12.9	13.1
14	8.5	7.8	8.3	12.1	11.3	11.7	13.3	12.4	12.9	13.4	13.2	13.4
15	8.6	8.0	8.3	12.8	12.0	12.4	12.7	11.9	12.4	13.7	13.1	13.3
16	8.8	8.0	8.4	13.1	12.3	12.7	12.4	11.8	12.1	13.2	12.9	13.0
17	9.8	8.2	8.8	12.9	12.0	12.5	12.4	11.3	11.9	13.1	12.6	12.9
18	10.0	8.4	9.0	12.5	11.5	12.1	11.9	11.2	11.5	12.8	12.4	12.6
19	9.8	8.4	8.9	12.0	11.0	11.6	11.7	11.1	11.4	13.2	12.7	12.9
20	10.6	8.6	9.3	11.6	10.9	11.2	12.0	11.1	11.6	12.9	12.4	12.7
21	9.9	8.8	9.3	11.6	10.8	11.2	12.2	11.9	12.1	13.0	12.3	12.6
22	10.0	9.2	9.5	11.6	10.7	11.1	12.2	11.9	12.1	13.4	12.6	13.0
23	9.8	9.1	9.4	11.8	10.7	11.2	12.1	11.7	12.0	13.6	13.1	13.3
24	9.8	9.1	9.4	11.9	10.8	11.2	---	---	---	13.8	13.1	13.5
25	9.6	8.9	9.2	11.4	10.0	10.8	---	---	---	13.5	12.9	13.1
26	10.6	9.4	10.1	11.1	10.0	10.5	12.2	12.1	12.2	13.5	12.6	12.9
27	11.1	10.5	10.7	10.5	9.9	10.3	12.7	12.2	12.4	13.4	12.5	12.8
28	10.7	10.1	10.5	10.5	9.8	10.1	12.5	12.3	12.4	13.0	12.2	12.5
29	10.4	9.7	10.1	10.5	9.8	10.2	12.9	12.3	12.6	12.9	12.0	12.4
30	9.8	8.8	9.5	11.3	10.3	10.8	12.8	12.5	12.6	13.0	11.7	12.3
31	9.6	8.7	9.1	---	---	---	12.9	12.4	12.6	11.7	11.3	11.5
MONTH	---	---	---	13.1	8.7	11.0	---	---	---	13.8	11.1	12.6

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.3	10.5	10.7	12.4	11.5	11.9	11.8	10.6	11.0	9.1	8.5	9.0
2	11.0	10.5	10.8	12.5	11.6	12.0	11.3	10.5	10.8	8.7	8.2	8.5
3	11.7	10.9	11.3	12.7	11.5	12.1	10.9	10.3	10.6	8.8	8.2	8.4
4	12.1	11.7	11.9	12.4	11.1	11.7	11.3	10.5	10.9	8.9	8.2	8.5
5	12.7	11.9	12.3	12.3	11.0	11.6	11.4	10.7	11.1	8.6	7.9	8.2
6	13.4	12.7	13.1	12.5	11.7	12.1	10.8	10.1	10.5	8.5	7.6	8.0
7	13.2	12.5	12.9	12.2	11.8	12.0	10.4	9.8	10.1	8.9	7.6	8.2
8	12.8	12.3	12.5	12.9	11.8	12.4	10.5	9.7	10.2	8.2	7.2	7.6
9	12.4	11.8	12.2	13.5	12.7	13.2	10.9	10.1	10.4	8.2	7.4	7.8
10	12.3	11.8	12.0	13.8	12.8	13.3	10.8	10.1	10.5	8.6	7.8	8.1
11	12.7	12.1	12.4	13.5	12.8	13.1	10.5	9.7	10.1	8.2	7.4	7.8
12	12.7	12.1	12.4	13.9	12.8	13.3	10.1	9.4	9.7	8.5	7.2	7.7
13	12.9	12.2	12.5	13.1	11.6	12.6	9.8	9.2	9.5	8.0	7.0	7.4
14	12.5	11.8	12.2	12.0	11.1	11.6	9.7	9.0	9.3	7.7	7.0	7.3
15	12.1	11.6	11.8	11.9	11.0	11.4	9.6	8.9	9.2	7.9	6.9	7.3
16	12.0	11.6	11.8	11.4	10.0	10.4	9.8	8.9	9.3	8.2	7.2	7.6
17	12.5	11.8	12.1	10.0	9.6	9.8	10.1	9.4	9.7	8.8	7.3	7.9
18	12.5	11.9	12.1	9.6	9.3	9.5	10.2	9.5	9.8	10.1	7.1	8.3
19	12.2	11.6	11.9	10.8	9.3	10.1	9.7	9.1	9.4	10.4	6.8	8.4
20	12.3	11.5	11.8	11.5	10.8	11.2	9.4	9.0	9.2	8.4	6.9	7.7
21	12.1	11.3	11.6	11.1	10.1	10.7	9.8	9.2	9.5	7.6	7.1	7.3
22	12.0	11.3	11.6	10.6	10.1	10.3	9.7	9.1	9.4	7.4	7.0	7.2
23	12.0	11.2	11.6	10.4	10.0	10.2	9.8	9.1	9.4	7.6	7.3	7.4
24	11.9	10.8	11.4	11.2	10.0	10.6	9.3	8.8	9.1	7.9	7.3	7.6
25	11.2	10.1	10.7	10.9	10.3	10.7	9.0	8.6	8.9	7.5	7.2	7.3
26	11.3	10.1	10.7	10.3	10.0	10.1	8.7	8.5	8.6	7.5	6.4	7.2
27	11.8	10.5	11.2	10.3	9.8	10.0	9.2	8.6	9.0	7.5	6.4	7.0
28	12.2	11.2	11.7	10.5	9.7	10.1	9.6	9.0	9.3	9.8	7.1	8.2
29	---	---	---	10.4	9.5	9.8	9.7	9.5	9.6	10.1	7.0	8.3
30	---	---	---	10.2	9.2	9.6	9.7	9.1	9.5	12.5	6.8	9.2
31	---	---	---	11.2	9.9	10.5	---	---	---	13.9	7.2	10.0
MONTH	13.4	10.1	11.8	13.9	9.2	11.2	11.8	8.5	9.8	13.9	6.4	7.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	13.2	7.3	9.7	---	---	---	8.2	5.7	7.2	9.2	5.8	7.1
2	11.0	6.9	8.7	---	---	---	8.4	7.5	8.0	9.3	5.4	7.1
3	12.0	6.8	9.1	---	---	---	11.8	6.2	8.5	8.8	5.2	6.7
4	10.1	7.1	8.5	---	---	---	12.8	5.5	7.9	8.8	4.8	6.5
5	11.8	8.4	9.9	---	---	---	9.4	5.7	8.0	8.4	4.8	6.2
6	12.2	8.6	10.3	---	---	---	6.7	4.5	5.9	8.1	4.9	6.2
7	11.8	8.1	9.7	---	---	---	7.0	5.8	6.4	7.0	6.0	6.4
8	12.0	8.1	9.6	---	---	---	7.4	6.2	6.7	7.2	6.2	6.7
9	12.1	7.6	9.6	---	---	---	7.4	6.0	6.6	7.8	6.5	7.1
10	10.9	7.1	8.8	---	---	---	7.6	6.4	6.9	8.1	6.7	7.5
11	11.2	7.0	8.9	---	---	---	7.5	6.8	7.2	8.1	6.8	7.4
12	10.4	7.2	8.6	---	---	---	8.0	7.0	7.4	7.8	6.9	7.3
13	9.8	6.6	8.0	---	---	---	8.3	7.1	7.7	7.6	7.0	7.3
14	10.0	6.4	8.1	---	---	---	8.6	7.1	7.7	7.5	6.5	7.1
15	9.9	6.9	8.4	---	---	---	9.2	7.3	8.0	7.5	6.7	7.1
16	10.9	7.1	8.7	---	---	---	8.9	7.1	7.9	7.6	6.8	7.3
17	10.2	7.2	8.5	---	---	---	9.0	7.1	7.9	7.7	6.8	7.3
18	9.7	6.9	8.1	---	---	---	9.1	7.0	7.9	7.9	6.7	7.3
19	9.7	6.8	8.0	---	---	---	9.0	7.0	7.8	7.8	6.7	7.2
20	10.4	6.7	8.3	---	---	---	9.5	7.0	8.1	7.8	6.7	7.3
21	10.8	6.7	8.5	---	---	---	9.1	6.9	7.9	7.6	6.5	7.2
22	11.3	7.0	8.8	---	---	---	9.0	6.7	7.7	8.5	7.4	8.2
23	11.1	7.1	8.8	---	---	---	8.7	6.3	7.4	8.6	7.4	8.1
24	10.9	7.2	8.8	---	---	---	8.4	5.9	7.0	8.0	6.8	7.5
25	11.0	7.2	8.8	---	---	---	8.4	5.9	6.9	8.0	6.9	7.4
26	---	---	---	---	---	---	8.8	6.1	7.1	7.9	6.8	7.4
27	---	---	---	---	---	---	8.6	6.0	7.1	7.8	6.7	7.3
28	---	---	---	---	---	---	8.7	5.9	7.0	7.8	6.4	7.2
29	---	---	---	12.2	4.9	7.7	8.8	6.1	7.3	8.0	6.1	7.2
30	---	---	---	12.1	5.3	7.6	9.0	6.0	7.3	7.7	6.2	7.1
31	---	---	---	9.0	5.5	7.6	9.1	5.8	7.1	---	---	---
MONTH	---	---	---	---	---	---	12.8	4.5	7.4	9.3	4.8	7.2



Kaw Dam near Ponca City, OK October, 1995. Before and after gate openings.

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK

LOCATION.--Lat 35°33'47", long 97°57'26", SW ¼ NW ¼ 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.

WATER-DISCHARGE RECORDS

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 good. 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	203	410	513	972	313	910	867	289	61	15	26
2	1110	194	412	838	640	307	907	910	266	118	14	25
3	1090	167	420	1070	395	302	1070	888	251	92	15	24
4	1080	147	405	1420	298	302	1140	876	241	74	16	21
5	1050	151	343	1360	306	300	1150	872	233	68	15	21
6	985	255	318	1180	388	296	1150	860	229	63	185	20
7	846	270	314	1110	379	306	1160	867	227	59	597	19
8	839	279	318	998	445	365	1140	903	234	54	774	18
9	723	281	322	881	556	407	1120	878	255	50	851	17
10	572	284	315	989	574	343	1110	775	230	41	867	16
11	429	293	302	917	573	327	994	705	228	e39	879	15
12	585	299	293	820	566	319	1120	665	216	e38	900	14
13	883	300	291	807	563	316	1110	756	212	e37	907	15
14	536	290	269	791	558	318	1080	885	199	e36	794	16
15	309	266	231	774	557	333	1080	877	206	e35	488	15
16	243	248	218	766	552	2700	1070	884	197	e34	229	15
17	330	239	203	757	557	3090	1050	843	186	e33	154	14
18	354	234	196	748	555	2870	1030	592	178	e32	121	14
19	360	230	193	736	553	2770	1010	352	172	e31	100	14
20	349	230	198	735	546	1840	999	602	134	e30	80	13
21	342	230	290	733	543	1130	995	837	110	29	75	12
22	339	227	594	776	517	1060	1000	936	98	23	65	13
23	341	225	762	771	455	1150	980	916	90	22	60	14
24	343	221	1820	753	443	1200	964	803	83	21	55	14
25	353	218	1370	741	404	1210	952	736	77	19	51	14
26	342	216	949	729	346	1190	741	877	72	19	46	12
27	329	265	767	723	336	1160	513	947	68	18	41	12
28	324	393	636	642	323	1020	527	717	66	17	38	11
29	317	399	556	562	---	963	565	549	62	15	34	10
30	269	409	514	501	---	953	716	380	61	15	32	9.8
31	198	---	473	451	---	943	---	321	---	15	30	---
TOTAL	17280	7663	14702	25592	13900	30103	29353	23876	5170	1238	8528	473.8
MEAN	557	255	474	826	496	971	978	770	172	39.9	275	15.8
MAX	1110	409	1820	1420	972	3090	1160	947	289	118	907	26
MIN	198	147	193	451	298	296	513	321	61	15	14	9.8
AC-FT	34270	15200	29160	50760	27570	59710	58220	47360	10250	2460	16920	940

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1998, BY WATER YEAR (WY)

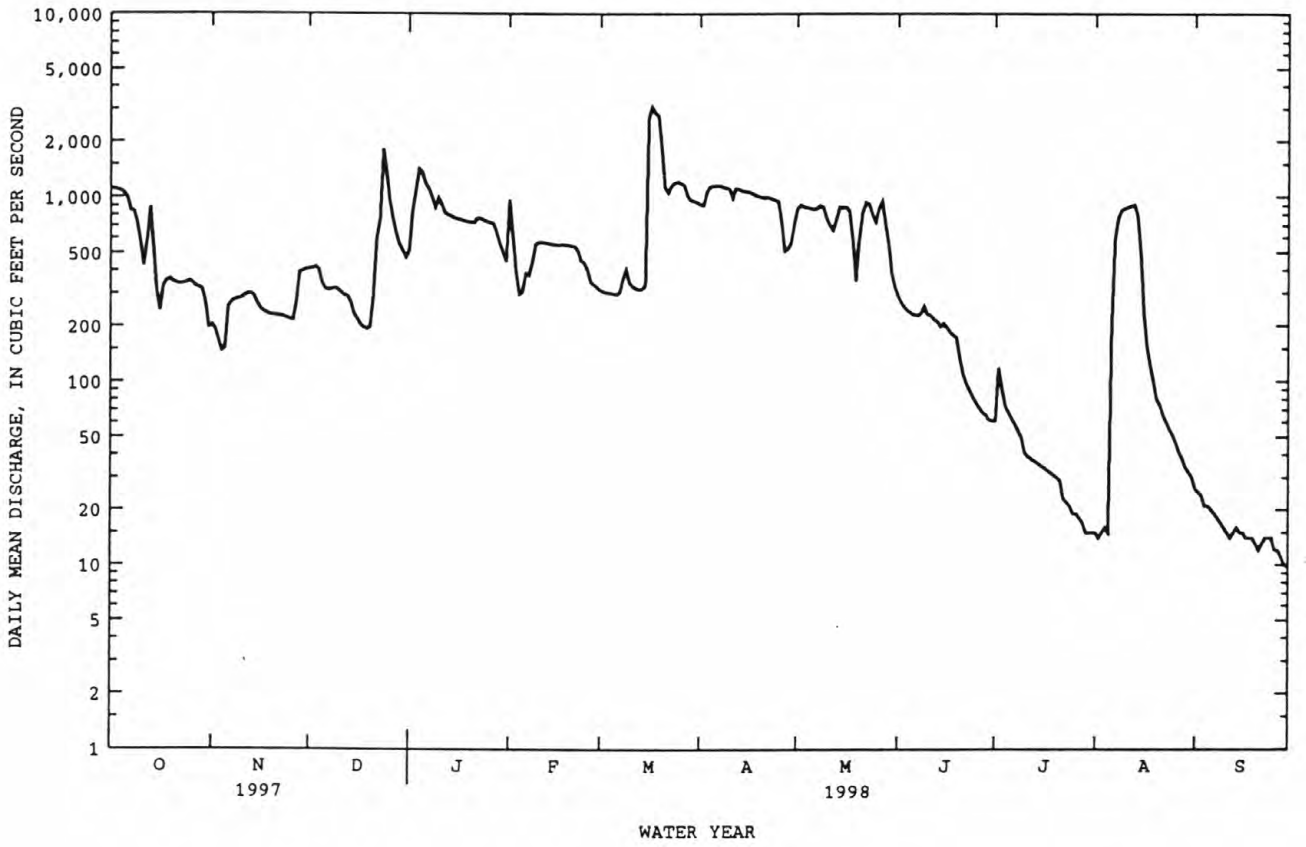
MEAN	195	129	98.9	106	140	206	256	414	513	270	183	214
MAX	1904	884	489	826	673	971	1129	2354	3121	2597	2460	2786
(WY)	1987	1975	1978	1998	1994	1998	1997	1993	1949	1951	1950	1950
MIN	.000	.000	.000	.000	.000	.000	.000	8.00	.17	.73	.000	.000
(WY)	1953	1955	1955	1955	1955	1955	1955	1953	1953	1952	1954	1952

e Estimated

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1949 - 1998	
ANNUAL TOTAL	221796		177878.8			
ANNUAL MEAN	608		487		[a]227	
HIGHEST ANNUAL MEAN					807	1951
LOWEST ANNUAL MEAN					31.8	1953
HIGHEST DAILY MEAN	3120	Apr 11	3090	Mar 17	13300	May 10 1993
LOWEST DAILY MEAN	69	Sep 13	9.8	Sep 30	.00	at times
ANNUAL SEVEN-DAY MINIMUM	79	Sep 8	12	Sep 24	.00	Jul 3 1952
INSTANTANEOUS PEAK FLOW			3570	Mar 16	15000	Oct 28 1941
INSTANTANEOUS PEAK STAGE			13.87	Mar 16	[b]22.22	Sep 21 1965
ANNUAL RUNOFF (AC-FT)	439900		352800		164600	
10 PERCENT EXCEEDS	1190		1050		668	
50 PERCENT EXCEEDS	405		341		54	
90 PERCENT EXCEEDS	183		20		2.1	

[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, 103 microsiemens, Mar. 17, 1998.
WATER TEMPERATURE: Maximum, 35.0°C, July 1, 23, 1994, July 7, 1998; minimum, 0.0°C, many days in winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded (greater than 20 percent missing record), 1,690 microsiemens, Aug. 26; minimum recorded, 103 microsiemens, Mar. 17.
WATER TEMPERATURE: Maximum, 35.°C, July 7; minimum, 1.0°C, Dec. 13.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1420	1320	1360	---	---	---	1430	1410	1420	1360	1310	1330
2	1410	1370	1400	---	---	---	1420	1390	1410	1380	1360	1370
3	1420	1390	1410	---	---	---	1410	1400	1400	1390	1380	1380
4	1420	1410	1410	---	---	---	1420	1400	1410	---	---	---
5	1430	1420	1420	---	---	---	1410	1390	1390	---	---	---
6	1430	1390	1420	1560	1430	1500	1440	1410	1430	---	---	---
7	1400	1380	1390	---	---	---	1440	1430	1440	---	---	---
8	1390	1280	1370	---	---	---	1430	1410	1420	---	---	---
9	1380	1360	1370	---	---	---	1410	1400	1400	---	---	---
10	1390	1380	1390	---	---	---	1410	1400	1410	---	---	---
11	1390	1330	1360	---	---	---	1420	1410	1410	---	---	---
12	1330	710	1160	---	---	---	1430	1420	1420	---	---	---
13	959	710	866	---	---	---	1430	1420	1430	---	---	---
14	961	651	817	---	---	---	1440	1430	1430	---	---	---
15	1130	961	1060	---	---	---	1460	1440	1450	---	---	---
16	1180	1120	1150	---	---	---	1470	1460	1460	---	---	---
17	1330	1160	1250	---	---	---	1470	1430	1450	---	---	---
18	---	---	---	---	---	---	1460	1440	1450	---	---	---
19	---	---	---	---	---	---	1440	1420	1420	---	---	---
20	---	---	---	---	---	---	1430	1370	1400	---	---	---
21	---	---	---	---	---	---	1500	1320	1360	---	---	---
22	---	---	---	---	---	---	1450	1290	1400	1450	1430	1440
23	1380	1350	1370	---	---	---	1290	654	1160	1460	1440	1450
24	1380	1340	1370	---	---	---	763	408	568	1460	1450	1450
25	1380	1370	1380	---	---	---	531	461	492	1460	1450	1460
26	1370	1350	1360	1420	1420	1420	676	543	632	1460	1450	1460
27	1390	1370	1390	1420	1410	1420	995	674	848	1450	1430	1440
28	1400	1380	1390	1440	1420	1430	1150	995	1080	---	---	---
29	1410	1400	1400	1430	1410	1420	1240	1150	1200	---	---	---
30	1430	1410	1420	1420	1410	1410	1270	1240	1250	---	---	---
31	1440	1400	1420	---	---	---	1310	1270	1290	---	---	---
MONTH	---	---	---	---	---	---	1500	408	1280	---	---	---

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	1470	1440	1450	---	---	---	1490	1450	1470
2	---	---	---	1460	1450	1460	1430	1410	1400	1500	1470	1500
3	---	---	---	1480	1450	1460	1440	1360	1420	1520	1500	1510
4	---	---	---	1510	1450	1490	---	---	---	1520	1500	1510
5	1410	1320	1370	1500	1500	1500	---	---	---	1520	1500	1520
6	1440	1410	1420	1500	1490	1490	---	---	---	1550	1490	1530
7	1450	1420	1440	1490	1450	1470	---	---	---	1540	1510	1520
8	1480	1450	1460	1460	1400	1440	---	---	---	1540	1240	1500
9	1480	1440	1460	1450	1410	1420	---	---	---	1480	1230	1390
10	1450	1430	1440	1510	1420	1460	1430	1360	1400	1510	1460	1500
11	1440	1400	1420	1520	1480	1500	1380	1360	1400	1500	1440	1480
12	1450	1380	1420	1510	1490	1500	1380	1350	1370	1520	1440	1490
13	1450	1380	1440	1510	1490	1500	1380	1340	1360	1570	1510	1540
14	1450	1440	1450	1570	1480	1500	1380	1330	1370	1570	1550	1560
15	1450	1450	1450	1540	1350	1470	1390	1330	1380	1570	1510	1560
16	1460	1450	1450	1360	111	538	1390	1330	1360	1570	1510	1560
17	1460	1450	1450	226	103	163	1390	1380	1360	1560	1510	1530
18	1450	1450	1450	226	118	171	1420	1340	1390	1560	1540	1550
19	1450	1440	1440	193	137	168	---	---	---	1530	1500	1520
20	1460	1440	1450	248	173	200	---	---	---	1560	1510	1530
21	1450	1450	1450	364	248	305	---	---	---	1540	1490	1520
22	1450	1450	1450	---	---	---	---	---	---	---	---	---
23	1450	1440	1450	---	---	---	---	---	---	---	---	---
24	1450	1450	1450	---	---	---	1500	1480	1490	---	---	---
25	1460	1450	1450	---	---	---	1510	1450	1490	---	---	---
26	1470	1440	1460	---	---	---	1500	1450	1480	---	---	---
27	1470	1380	1440	---	---	---	1460	1440	1450	1290	1070	1180
28	1460	1390	1450	---	---	---	1460	1400	1440	1350	1250	1310
29	---	---	---	---	---	---	1400	1290	1330	1410	1340	1380
30	---	---	---	---	---	---	1460	1300	1370	1380	1260	1320
31	---	---	---	---	---	---	---	---	---	1280	1250	1260
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	1570	1530	1550	---	---	---	1610	1570	1600
2	---	---	---	1630	991	1470	---	---	---	1580	1550	1570
3	---	---	---	991	680	735	---	---	---	1570	1540	1550
4	---	---	---	901	704	803	---	---	---	1560	1500	1540
5	---	---	---	1240	917	1070	---	---	---	1540	1480	1520
6	---	---	---	---	---	---	---	---	---	1560	1510	1530
7	---	---	---	---	---	---	---	---	---	1560	1510	1530
8	---	---	---	---	---	---	---	---	---	1560	1510	1530
9	---	---	---	---	---	---	---	---	---	1560	1500	1530
10	---	---	---	---	---	---	---	---	---	1570	1460	1540
11	---	---	---	---	---	---	---	---	---	1550	1460	1510
12	---	---	---	---	---	---	---	---	---	1590	1460	1500
13	---	---	---	1490	1460	1480	---	---	---	---	---	---
14	---	---	---	1490	1460	1480	---	---	---	1480	1420	1450
15	---	---	---	1520	1470	1490	---	---	---	1460	1420	1450
16	---	---	---	1510	1470	1500	---	---	---	1460	1430	1450
17	---	---	---	1530	1470	1490	---	---	---	1470	1440	1460
18	---	---	---	1510	1480	1500	---	---	---	1470	1380	1440
19	---	---	---	1530	1480	1510	---	---	---	1450	1370	1410
20	---	---	---	1540	1500	1520	---	---	---	---	---	---
21	---	---	---	1530	1490	1510	---	---	---	---	---	---
22	---	---	---	1560	1500	1520	---	---	---	---	---	---
23	---	---	---	1570	1510	1530	---	---	---	---	---	---
24	---	---	---	1560	1520	1550	---	---	---	1340	1290	1310
25	---	---	---	1560	1480	1540	---	---	---	1380	1330	1360
26	---	---	---	1590	1520	1550	1690	1660	1670	1380	1320	1360
27	1600	1560	1570	1620	1560	1580	1680	1660	1670	---	---	---
28	1600	1560	1580	1580	1470	1540	1680	1640	1660	---	---	---
29	1580	1550	1560	1560	1470	1530	1660	1630	1640	---	---	---
30	1570	1530	1550	---	---	---	1640	1620	1630	---	---	---
31	---	---	---	1600	1490	1530	1630	1600	1620	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.0	21.5	22.0	15.0	13.0	14.5	9.0	8.0	8.0	5.5	4.0	5.0
2	23.5	22.0	22.5	14.0	12.0	13.0	8.0	7.5	7.5	8.0	5.5	7.0
3	23.5	22.5	23.0	12.5	10.0	11.5	7.5	6.0	7.0	9.0	8.0	8.5
4	23.0	21.5	22.5	13.0	10.0	12.0	6.0	5.0	5.5	8.5	5.5	6.5
5	23.0	21.5	22.5	14.0	11.5	13.0	5.0	3.5	4.0	5.5	5.0	5.5
6	23.0	22.0	22.5	12.5	10.5	11.0	3.5	2.5	3.0	5.5	5.5	5.5
7	23.0	22.0	22.5	11.0	9.0	10.0	4.0	3.5	3.5	5.5	4.0	4.5
8	23.0	22.0	22.5	11.5	9.5	10.5	5.0	4.0	4.5	4.0	3.5	3.5
9	22.5	21.5	22.0	11.0	9.5	10.0	6.5	5.0	5.5	3.5	3.0	3.5
10	23.0	21.5	22.0	9.5	8.0	8.5	6.0	4.5	5.0	3.5	3.0	3.0
11	23.0	21.5	22.0	8.0	6.5	7.5	4.5	3.5	4.0	3.0	2.5	2.5
12	21.5	19.0	20.5	8.0	7.0	7.5	3.5	2.0	3.0	3.0	3.0	3.0
13	19.0	17.0	17.5	8.0	7.0	7.5	3.0	1.0	2.0	3.0	2.0	2.5
14	17.5	15.5	16.5	8.0	6.0	7.0	4.0	2.0	3.0	2.0	2.0	2.0
15	18.5	15.5	17.0	6.0	4.5	5.5	5.5	3.0	4.5	3.0	1.5	2.0
16	18.0	16.0	17.0	6.0	4.0	5.0	6.0	4.0	5.5	3.0	2.5	3.0
17	18.0	16.0	17.0	6.5	4.5	5.5	6.0	4.0	5.5	4.5	3.0	3.5
18	17.5	15.5	16.5	7.5	5.0	6.0	6.5	4.5	6.0	4.5	4.0	4.0
19	17.5	15.5	16.5	8.5	6.0	7.5	7.5	5.0	6.5	4.5	3.5	4.0
20	16.5	15.5	16.0	9.0	7.5	8.5	7.0	5.0	5.5	5.5	4.0	4.5
21	16.0	14.0	15.0	9.5	8.0	8.5	5.0	4.0	4.0	5.0	4.0	4.5
22	14.5	12.5	13.5	10.5	8.5	9.5	4.5	3.5	4.0	4.0	3.5	4.0
23	14.0	13.0	13.5	10.5	8.0	9.5	4.5	3.5	4.0	3.5	3.0	3.5
24	15.0	13.5	14.0	10.5	8.5	9.5	3.5	3.0	3.0	4.5	3.0	3.5
25	15.0	12.5	14.0	11.5	9.0	10.0	3.5	3.0	3.0	5.0	4.0	4.5
26	12.5	9.5	10.5	11.5	10.0	10.5	3.5	3.0	3.5	6.0	5.0	5.5
27	10.5	8.5	9.5	11.5	9.5	10.5	3.5	2.5	3.0	6.5	5.0	6.0
28	11.5	9.5	10.5	12.5	11.5	12.0	3.5	3.0	3.5	7.5	6.0	6.5
29	12.5	10.5	11.5	11.5	10.0	11.0	4.0	2.5	3.0	7.5	6.0	7.0
30	15.0	12.0	13.5	10.0	9.0	9.0	4.5	3.0	4.0	8.0	6.0	7.0
31	15.5	12.5	14.5	---	---	---	5.0	3.5	4.0	8.0	7.5	7.5
MONTH	23.5	8.5	17.4	15.0	4.0	9.4	9.0	1.0	4.5	9.0	1.5	4.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9.0	7.5	8.0	9.5	7.0	8.5	15.0	13.0	14.0	18.5	15.5	16.5
2	9.0	7.5	8.0	9.5	7.0	8.0	15.5	13.5	14.5	20.5	18.0	19.0
3	8.5	6.5	7.5	9.5	6.5	8.0	15.0	13.5	14.0	20.5	18.5	19.5
4	6.5	6.0	6.0	10.5	8.0	9.0	14.0	12.5	13.5	20.5	18.5	19.5
5	6.0	4.5	5.5	10.0	8.0	9.0	14.0	12.0	13.0	21.0	19.5	20.0
6	5.5	3.5	4.5	8.0	7.0	7.0	15.5	13.5	14.5	22.5	20.5	21.0
7	6.0	4.0	5.0	7.5	7.0	7.0	16.5	14.5	15.5	22.5	20.0	21.5
8	7.0	5.5	6.5	7.0	4.5	5.5	15.5	14.5	15.0	22.0	21.0	21.5
9	8.5	6.5	7.5	5.5	3.0	4.0	15.5	13.5	14.5	21.0	19.5	20.0
10	8.0	7.0	7.5	6.0	2.5	4.5	16.0	13.5	14.5	22.0	19.0	20.0
11	8.0	6.5	7.5	6.0	4.0	5.0	17.0	14.5	15.5	23.0	20.5	21.5
12	7.5	7.0	7.0	5.5	3.0	4.5	17.5	15.5	16.5	24.5	21.5	23.0
13	8.0	6.0	7.0	9.0	4.0	6.5	18.0	16.0	17.0	25.0	23.0	24.0
14	8.5	7.0	8.0	10.0	8.5	9.0	18.5	16.5	17.5	24.5	23.0	24.0
15	9.0	8.5	8.5	9.5	8.5	9.0	19.0	17.0	18.0	25.0	23.5	24.0
16	8.5	8.0	8.0	8.5	8.5	8.5	18.0	16.5	17.0	24.5	22.5	23.5
17	8.5	7.5	8.0	8.5	8.0	8.0	16.5	15.0	16.0	25.0	22.5	23.5
18	8.5	7.0	8.0	9.0	7.5	8.0	17.0	15.0	16.0	26.0	23.5	24.5
19	9.5	8.5	9.0	8.5	6.5	7.5	17.5	15.5	16.5	26.5	23.0	25.0
20	10.0	8.0	9.0	7.0	5.5	6.5	17.0	15.5	16.5	25.5	24.0	25.0
21	10.0	9.0	9.5	9.0	6.5	8.0	16.5	14.5	15.5	24.5	23.5	24.0
22	10.0	9.5	9.5	11.5	9.0	10.0	17.5	15.5	16.5	24.0	23.0	23.5
23	11.0	8.5	9.5	11.5	10.0	11.0	18.0	16.0	17.0	24.0	23.0	23.5
24	12.0	9.5	11.0	12.5	10.5	11.5	19.0	17.0	17.5	25.5	22.5	24.0
25	13.5	11.5	12.5	13.5	11.0	12.5	20.0	17.5	18.5	25.0	22.5	24.0
26	12.5	11.0	12.0	14.5	13.0	14.0	19.5	17.0	18.5	24.5	22.5	23.0
27	11.0	9.5	10.5	15.0	14.0	14.0	17.0	15.0	16.0	25.5	23.0	24.0
28	10.5	8.0	9.0	15.5	13.0	14.5	15.0	13.5	14.0	27.5	24.5	25.5
29	---	---	---	16.5	14.5	15.5	13.5	13.0	13.5	29.0	26.0	27.0
30	---	---	---	17.0	16.0	16.5	16.0	12.5	14.0	28.5	26.0	27.0
31	---	---	---	16.0	14.0	15.0	---	---	---	28.0	24.5	26.5
MONTH	13.5	3.5	8.2	17.0	2.5	9.2	20.0	12.0	15.7	29.0	15.5	22.9

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	29.0	24.5	26.5	31.5	25.0	28.5	34.5	26.0	30.0	31.0	24.0	27.0
2	29.5	25.0	27.5	31.0	25.0	28.0	32.0	25.0	28.5	31.0	23.5	27.0
3	29.5	25.5	27.5	30.5	25.5	28.0	29.0	25.0	27.0	31.0	24.5	27.5
4	27.0	21.5	24.0	32.5	25.5	27.5	27.5	24.5	26.0	31.5	23.5	27.5
5	22.0	19.5	20.5	29.5	25.5	27.0	28.5	24.0	26.0	32.0	23.5	27.5
6	23.5	18.5	21.0	33.0	25.0	28.5	27.5	22.5	25.0	31.5	24.0	27.5
7	23.5	20.0	22.0	35.0	26.5	30.5	28.0	25.5	26.5	32.0	24.5	28.0
8	24.0	20.5	22.0	32.5	26.0	29.5	28.0	26.0	27.0	31.5	24.5	27.5
9	27.5	22.0	24.5	34.0	27.0	30.5	---	---	---	30.0	23.0	26.0
10	28.0	24.0	26.0	33.0	26.5	29.5	---	---	---	29.0	20.5	24.0
11	28.0	24.0	25.5	32.5	26.5	29.5	---	---	---	28.5	20.5	24.0
12	29.0	23.5	26.0	33.5	26.0	30.0	26.5	25.5	26.0	27.0	22.0	24.0
13	30.0	25.0	27.0	32.5	26.0	29.5	27.0	25.0	26.0	25.0	22.5	23.5
14	29.0	25.0	27.0	34.5	26.0	30.0	---	---	---	30.5	22.5	26.0
15	27.0	24.0	25.5	29.5	25.5	27.5	---	---	---	29.5	23.5	25.5
16	28.0	22.5	25.0	32.5	25.0	28.5	---	---	---	27.5	23.5	25.0
17	27.5	23.5	24.5	33.0	24.5	29.0	---	---	---	29.0	23.0	25.0
18	29.5	24.5	26.5	32.5	24.5	28.5	---	---	---	29.5	22.0	25.0
19	31.0	25.5	28.0	32.5	24.5	28.5	---	---	---	30.5	22.5	25.5
20	30.5	26.0	28.0	33.0	25.0	28.5	---	---	---	31.0	22.5	26.0
21	31.0	26.0	28.0	32.0	25.0	28.5	---	---	---	32.0	23.0	26.5
22	31.0	25.0	27.5	32.5	24.5	28.5	---	---	---	25.0	19.5	21.5
23	31.0	25.0	27.5	34.0	24.5	29.0	---	---	---	24.5	19.0	21.0
24	29.5	22.5	26.0	34.0	26.0	29.5	---	---	---	29.5	21.0	24.5
25	31.0	24.5	27.5	33.5	26.0	30.0	---	---	---	30.0	22.5	25.5
26	31.5	24.0	27.5	32.5	24.0	28.5	31.5	25.5	28.0	30.0	22.0	25.0
27	33.0	24.5	28.0	34.0	25.5	30.0	32.0	25.5	28.5	31.5	23.0	26.5
28	33.5	25.5	29.0	34.0	26.0	30.0	31.5	25.5	28.0	32.0	23.5	27.0
29	33.5	26.0	29.0	33.5	26.0	29.5	30.0	23.0	26.5	32.0	23.0	26.5
30	31.5	26.0	28.5	33.5	25.5	29.5	30.0	22.5	26.5	31.0	23.0	25.5
31	---	---	---	33.5	26.0	29.0	30.5	23.5	27.0	---	---	---
MONTH	33.5	18.5	26.1	35.0	24.0	29.0	---	---	---	32.0	19.0	25.6

07240000 LAKE HEFNER CANAL NEAR OKLAHOMA CITY, OK

LOCATION.--Lat 35°33'11", long 97°37'11", in SW ¼ SW ¼ 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. U.S. Geological Survey satellite telemeter at station.

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.

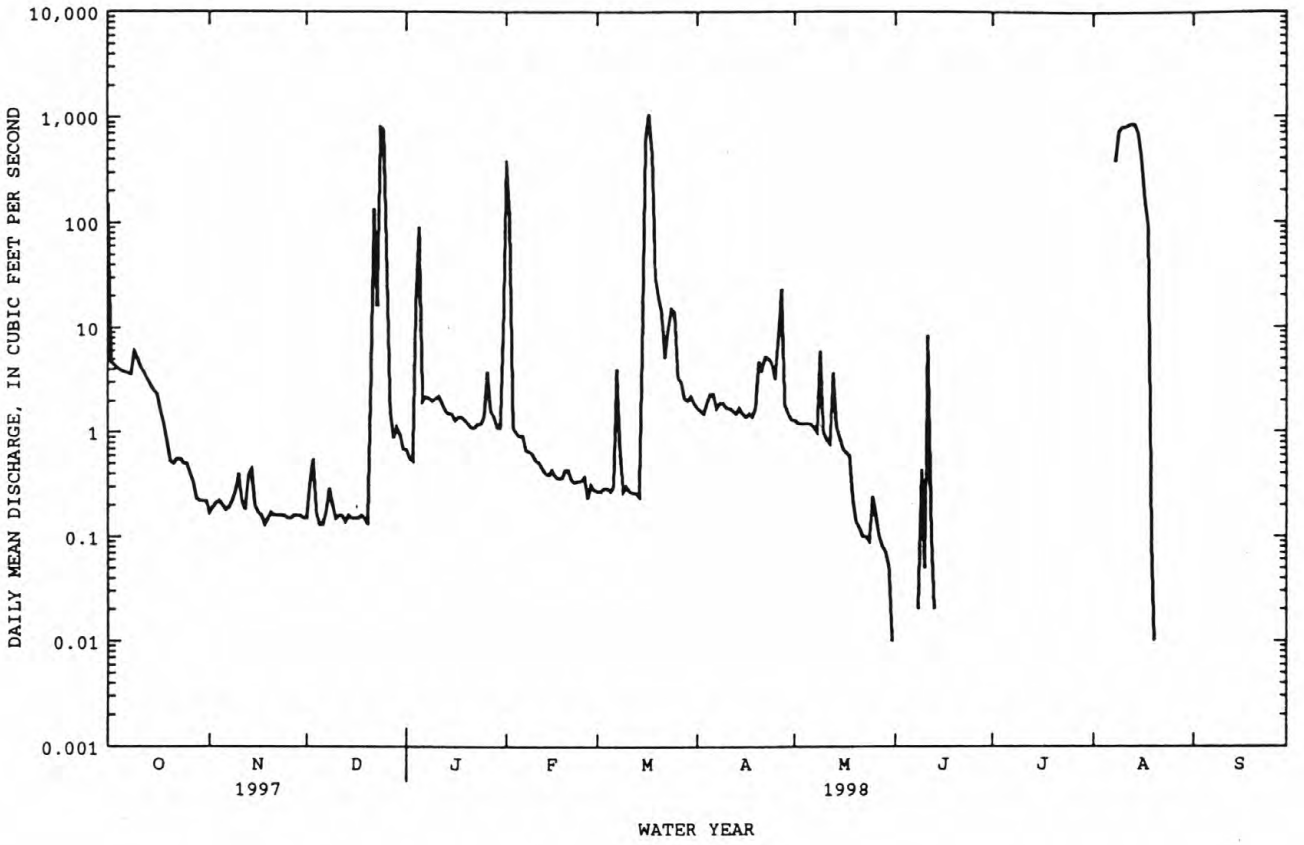
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	149	.17	.15	.68	386	.27	1.7	1.3	.00	.00	.00	.00
2	e4.7	.19	.33	.56	121	.27	1.6	1.2	.00	.00	.00	.00
3	e4.4	.21	.55	.53	1.1	.29	1.5	1.2	.00	.00	.00	.00
4	e4.1	.22	.17	19	.98	.29	1.9	1.2	.00	.00	.00	.00
5	e3.9	.20	.13	91	.91	.27	2.3	1.2	.00	.00	.00	.00
6	e3.8	.18	.13	2.0	.92	.30	2.3	1.2	.00	.00	.00	.00
7	e3.7	.19	.17	2.2	.67	4.0	1.7	1.1	.00	.00	.00	.00
8	e3.6	.22	.29	2.1	.65	.72	1.9	.99	.02	.00	376	.00
9	e5.9	.27	.20	2.0	.62	.27	1.9	5.9	.43	.00	724	.00
10	e5.1	.40	.15	2.1	.53	.30	1.7	.98	.05	.00	800	.00
11	e4.2	.21	.16	2.2	.51	.27	1.7	.83	8.3	.00	802	.00
12	e3.7	.18	.16	1.9	.45	.26	1.6	.77	.10	.00	835	.00
13	e3.2	.39	.14	1.6	.40	.26	1.5	3.7	.02	.00	863	.00
14	e2.8	.44	.16	1.5	.39	.24	1.7	1.1	.00	.00	858	.00
15	2.5	.20	.15	1.5	.43	7.8	1.5	.87	.00	.00	708	.00
16	e2.3	.17	.15	1.3	.38	640	1.4	.69	.00	.00	404	.00
17	e1.6	.16	.15	1.4	.36	1080	1.5	.63	.00	.00	159	.00
18	e1.2	.13	.16	1.4	.36	446	1.4	.59	.00	.00	91	.00
19	e.80	.15	.15	1.3	.43	30	1.7	.23	.00	.00	.09	.00
20	e.52	.17	.13	1.2	.43	20	4.7	.14	.00	.00	.01	.00
21	e.50	.16	2.9	1.1	.35	14	4.0	.12	.00	.00	.00	.00
22	e.56	.16	135	1.1	.33	5.1	5.2	.10	.00	.00	.00	.00
23	e.56	.16	16	1.2	.34	9.5	5.0	.10	.00	.00	.00	.00
24	e.50	.16	800	1.2	.34	15	4.5	.09	.00	.00	.00	.00
25	e.50	.15	756	1.4	.37	14	3.2	.24	.00	.00	.00	.00
26	e.40	.15	33	3.8	.23	3.3	8.1	.16	.00	.00	.00	.00
27	e.33	.16	1.6	1.6	.31	3.0	23	.10	.00	.00	.00	.00
28	.23	.16	.88	1.4	.28	2.1	1.8	.08	.00	.00	.00	.00
29	.22	.16	1.1	1.1	---	2.0	1.5	.07	.00	.00	.00	.00
30	.22	.15	.94	1.1	---	2.2	1.3	.05	.00	.00	.00	.00
31	.22	---	.69	9.5	---	1.9	---	.01	---	.00	.00	---
TOTAL	215.26	6.02	1751.89	161.97	520.07	2303.91	94.8	26.94	8.92	0.00	6620.10	0.00
MEAN	6.94	.20	56.5	5.22	18.6	74.3	3.16	.87	.30	.000	214	.000
MAX	149	.44	800	91	386	1080	23	5.9	8.3	.00	863	.00
MIN	.22	.13	.13	.53	.23	.24	1.3	.01	.00	.00	.00	.00
AC-FT	427	12	3470	321	1030	4570	188	53	18	.00	13130	.00

CAL YR 1997 TOTAL 9169.98 MEAN 25.1 MAX 800 MIN .00 AC-FT 18190
WTR YR 1998 TOTAL 11709.88 MEAN 32.1 MAX 1080 MIN .00 AC-FT 23230

e Estimated

07240000 LAKE HEFNER CANAL NEAR OKLAHOMA CITY, OK--Continued



07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK

LOCATION.--Lat 35°28'43", long 97°39'47", in NE ¼ of NW ¼ 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, Octo- ber 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 poor. 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e400	211	282	591	1780	471	1010	e720	e250	57	31	31
2	e520	220	400	645	1440	471	834	e700	300	e128	32	30
3	e516	219	547	897	603	368	1020	e690	e280	e93	31	30
4	726	214	400	1920	585	338	1020	e700	e260	151	31	29
5	691	212	303	2720	368	361	1170	e729	e210	180	30	29
6	712	e190	329	2060	473	354	1470	e710	e230	102	30	30
7	539	e180	316	1530	521	499	1210	e705	e230	70	211	30
8	523	e190	316	1510	515	930	1240	e725	e350	74	154	29
9	908	205	340	1060	532	415	1280	e938	309	53	20	29
10	488	234	352	884	694	388	1060	e828	226	35	20	31
11	463	251	345	986	675	485	991	e694	356	35	20	28
12	622	251	326	932	626	444	975	e600	461	34	20	26
13	1240	290	326	843	553	391	998	e590	e410	39	20	27
14	516	326	326	835	508	394	1010	e580	e250	43	20	25
15	564	330	270	825	507	461	950	e755	e250	43	19	72
16	e370	328	233	765	538	2250	951	e809	263	43	19	87
17	175	e220	230	668	610	5330	941	e809	e238	42	19	52
18	245	e170	230	737	582	4560	931	e705	e195	42	36	37
19	327	197	230	748	580	4020	926	e436	e260	42	83	16
20	329	207	230	741	579	3410	918	e270	e210	37	99	16
21	329	209	237	734	579	2080	907	331	e170	32	104	19
22	329	209	376	603	578	1530	e909	694	e98	32	96	21
23	373	209	820	579	575	1500	e838	748	e95	31	81	19
24	e369	209	1860	607	397	1510	e795	e740	e91	30	40	25
25	e365	226	2230	605	376	1460	e888	e673	e91	30	31	29
26	e354	221	1410	757	474	1660	e980	e800	e88	29	31	28
27	e345	220	1150	533	448	1510	e1620	e810	e64	35	30	28
28	338	222	820	612	463	1360	e900	836	e69	48	31	26
29	338	222	500	609	---	1150	e880	603	e59	47	31	21
30	336	230	705	480	---	1070	e770	449	e54	69	31	19
31	253	---	500	569	---	1090	---	420	---	31	31	---
TOTAL	14603	6822	16939	28585	17159	42260	30392	20797	6417	1757	1482	919
MEAN	471	227	546	922	613	1363	1013	671	214	56.7	47.8	30.6
MAX	1240	330	2230	2720	1780	5330	1620	938	461	180	211	87
MIN	175	170	230	480	368	338	770	270	54	29	19	16
AC-FT	28970	13530	33600	56700	34030	83820	60280	41250	12730	3490	2940	1820

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1998, BY WATER YEAR (WY)

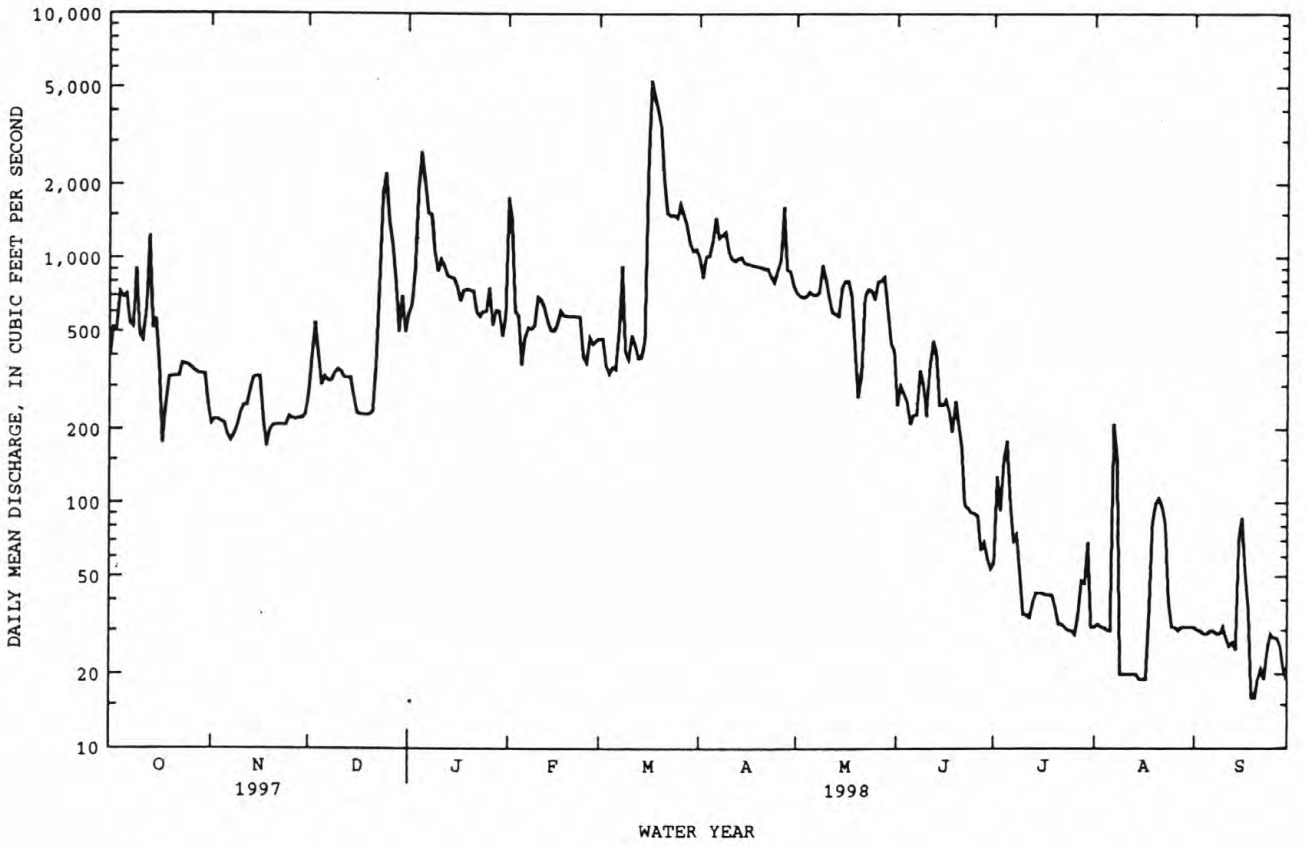
MEAN	190	127	102	99.3	130	179	158	338	436	157	103	109
MAX	2426	1489	563	922	708	1487	1149	2922	2774	1749	884	826
(WY)	1987	1975	1993	1998	1997	1990	1997	1993	1995	1957	1957	1989
MIN	.000	.000	.016	.045	.061	.000	.027	.45	.013	.039	.000	.000
(WY)	1953	1955	1957	1955	1955	1954	1954	1956	1953	1954	1953	1954

e Estimated

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1953 - 1998	
ANNUAL TOTAL	211067		188132			
ANNUAL MEAN	578		515		177	
HIGHEST ANNUAL MEAN					749	1987
LOWEST ANNUAL MEAN					.42	1954
HIGHEST DAILY MEAN	4370	Apr 12	5330	Mar 17	13300	May 10 1993
LOWEST DAILY MEAN	14	Sep 30	16	Sep 19, 20	[a].00	Oct 1 1952
ANNUAL SEVEN-DAY MINIMUM	76	Sep 7	20	Aug 11	.00	Oct 1 1952
INSTANTANEOUS PEAK FLOW			6580	Mar 17	19500	Jun 11 1995
INSTANTANEOUS PEAK STAGE			17.26	Mar 17	[b]29.85	May 28 1987
ANNUAL RUNOFF (AC-FT)	418700		373200		128500	
10 PERCENT EXCEEDS	1130		1040		482	
50 PERCENT EXCEEDS	389		354		15	
90 PERCENT EXCEEDS	129		30		.68	

[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, 100 microsiemens, Nov. 20, 1994.
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, 34.5°C, July 12, 1998; minimum, 0.0°C, several days during winter periods.
DISSOLVED OXYGEN: Maximum, 17.5 mg/l, Oct. 12, 1992; minimum, 2.3 mg/l, Apr. 20, 1990.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded (more than 20 percent missing record), 1,880 microsiemens, Aug. 27; minimum recorded, 495 microsiemens, Apr. 27.
WATER TEMPERATURE: Maximum recorded (more than 20 percent missing record), 34.5°C, July 12; minimum recorded, 1.5°C, Jan. 15.
DISSOLVED OXYGEN: Maximum recorded (more than 20 percent missing record), 15.3 mg/l, Jan. 13; minimum recorded, 4.1 mg/l, Sept. 9.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
30...	1452	2.00	32.5	732	1028	1028	52	4.82	1370	8.6	8.4
30...	1500	7.00	33.0	732	1028	1028	52	4.82	1370	8.4	8.4
30...	1510	12.0	32.0	732	1028	1028	52	4.82	1370	8.4	8.4
30...	1515	17.0	32.0	732	1028	1028	52	4.82	1370	8.4	8.4
30...	1517	22.0	32.0	732	1028	1028	52	4.82	1370	8.4	8.4
30...	1520	27.0	32.0	732	1028	1028	52	4.82	1370	8.6	8.4
30...	1523	32.0	32.0	732	1028	1028	52	4.82	1370	8.6	8.4
30...	1525	37.0	32.5	732	1028	1028	52	4.82	1370	8.6	8.4
30...	1527	42.0	32.5	732	1028	1028	52	4.82	1370	8.6	8.4
30...	1535	62.0	33.5	732	1028	1028	52	4.82	1370	8.5	8.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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												
15...	1145	1028	80020	564	823	8.2	20.0	16.5	62	744	9.8	103
NOV												
19...	0930	1028	80020	192	1390	8.5	11.5	5.5	9.0	741	12.5	103
DEC												
09...	1215	1028	80020	320	1400	8.3	15.5	6.0	12	722	12.7	109
JAN												
14...	1115	1028	80020	835	1380	8.5	1.0	2.5	29	738	14.1	108
FEB												
11...	1045	1028	80020	680	1360	8.5	8.5	7.0	19	736	12.8	110
MAR												
18...	1300	1028	80020	4500	602	8.4	12.0	8.0	130	732	8.4	74
APR												
14...	1300	1028	80020	1010	1430	8.4	28.0	19.0	40	726	8.8	101
MAY												
19...	1135	1028	80020	435	1440	8.5	27.0	24.5	33	736	7.9	99
JUN												
16...	1340	1028	80020	243	1370	8.4	34.0	26.0	29	729	8.8	114
JUL												
08...	1215	1028	80020	58	1040	8.3	47.5	30.5	15	741	8.2	112
AUG												
12...	1320	1028	80020	19	1450	8.5	37.0	30.5	4.5	736	9.7	135
SEP												
01...	1037	1028	80020	29	1610	8.3	27.5	26.5	9.5	736	7.7	99

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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 15...	1.9	3.1	1900	2700	--	--	--	--	--	--	--	--
NOV 19...	.96	--	110	78	450	180	110	44	118	36	2	5.9
DEC 09...	.52	2.0	--	150	--	--	--	--	--	--	--	--
JAN 14...	.81	3.2	100	92	--	--	--	--	--	--	--	--
FEB 11...	.47	2.5	K140	280	470	240	110	45	121	35	2	5.2
MAR 18...	1.2	6.3	3900	K460000	--	--	--	--	--	--	--	--
APR 14...	.48	.8	190	120	--	--	--	--	--	--	--	--
MAY 19...	--	--	250	120	460	230	110	45	127	--	3	--
JUN 16...	--	--	430	90	--	--	--	--	--	--	--	--
JUL 08...	--	15	360	200	--	--	--	--	--	--	--	--
AUG 12...	.96	4.0	580	66	410	240	88	46	143	43	3	6.5
SEP 01...	1.2	5.3	190	K46	--	--	--	--	--	--	--	--

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)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2) (00405)	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)
OCT 15...	183	0	150	--	--	--	--	--	--	--	--	--
NOV 19...	328	3	272	1.7	250	130	.65	18	850	839	1.16	441
DEC 09...	288	0	236	2.6	--	--	--	--	--	--	--	--
JAN 14...	266	4	224	1.6	--	--	--	--	--	--	--	--
FEB 11...	280	3	234	1.4	290	150	.70	13	902	874	1.23	1660
MAR 18...	136	*0	111	1.0	--	--	--	--	--	--	--	--
APR 14...	267	4	225	1.6	--	--	--	--	--	--	--	--
MAY 19...	--	--	229	1.5	--	--	--	8.3	--	--	--	--
JUN 16...	--	--	212	2.0	--	--	--	--	--	--	--	--
JUL 08...	250	5	214	2.4	--	--	--	--	--	--	--	--
AUG 12...	189	8	169	1.0	300	180	.81	9.7	931	877	1.27	47.8
SEP 01...	247	4	209	1.8	--	--	--	--	--	--	--	--

*pH of filtered sample <8.3; therefore no carbonate value.

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	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											
15...	92	1.31	5.8	.034	.11	1.35	.066	.08	.50	.56	.305
NOV											
19...	18	--	--	<.010	--	.620	<.020	--	--	.34	.119
DEC											
09...	22	--	--	<.010	--	.232	<.020	--	--	.29	.061
JAN											
14...	54	--	--	<.010	--	.429	<.020	--	--	.38	.075
FEB											
11...	88	--	--	<.010	--	.141	<.020	--	--	.33	.019
MAR											
18...	194	.367	1.6	.026	.09	.393	.230	.30	.57	.80	.137
APR											
14...	86	--	--	<.010	--	.076	.022	.03	.38	.41	.052
MAY											
19...	114	--	--	<.010	--	<.050	.048	.06	.35	.40	.041
JUN											
16...	64	--	--	<.010	--	<.050	.059	.08	.26	.32	.016
JUL											
08...	24	--	--	<.010	--	<.050	.137	.18	1.1	1.3	.084
AUG											
12...	19	.176	.78	.031	.10	.207	.128	.16	.63	.75	.082
SEP											
01...	35	.039	.17	.012	.04	.051	.163	.21	1.0	1.2	.189

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											
15...	.268	.82	--	--	--	--	--	--	--	--	--
NOV											
19...	.144	.44	4	135	<.50	<1.0	<5.0	<3.0	<10	3.1	<10
DEC											
09...	.068	.21	--	--	--	--	--	--	--	--	--
JAN											
14...	.071	.22	--	--	--	--	--	--	--	--	--
FEB											
11...	.029	.09	3	124	<1.0	<8.0	<14	<12	<10	<10	<100
MAR											
18...	.129	.40	--	--	--	--	--	--	--	--	--
APR											
14...	.039	.12	--	--	--	--	--	--	--	--	--
MAY											
19...	.042	.13	--	135	<1.0	<8.0	<14	<12	<10	<10	<100
JUN											
16...	.018	.06	--	--	--	--	--	--	--	--	--
JUL											
08...	.067	.21	--	--	--	--	--	--	--	--	--
AUG											
12...	.074	.23	4	155	<1.0	<8.0	<14	<12	<10	<10	<100
SEP											
01...	.134	.41	--	--	--	--	--	--	--	--	--

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
15...	--	--	--	--	--	--	--	--	--	--	--
NOV											
19...	37	11	<.1	<10	<10	<1	<1.0	1020	10	7.1	6.1
DEC											
09...	--	--	--	--	--	--	--	--	--	--	--
JAN											
14...	--	--	--	--	--	--	--	--	--	--	--
FEB											
11...	37	<4.0	<.1	<60	<40	<1	<4.0	1070	<10	<20	6.6
MAR											
18...	--	--	--	--	--	--	--	--	--	--	--
APR											
14...	--	--	--	--	--	--	--	--	--	--	--
MAY											
19...	39	57	--	<60	<40	--	<4.0	1110	11	<20	5.7
JUN											
16...	--	--	--	--	--	--	--	--	--	--	--
JUL											
08...	--	--	--	--	--	--	--	--	--	--	--
AUG											
12...	43	23	<.1	<60	<40	<1	<4.0	1110	<10	<20	9.2
SEP											
01...	--	--	--	--	--	--	--	--	--	--	--

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	1380	1280	1350	1410	1410	1410	---	---	---
2	---	---	---	1400	1310	1370	1410	1370	1400	---	---	---
3	---	---	---	1440	1380	1420	1380	1320	1350	1390	1360	1370
4	---	---	---	1440	1410	1430	1400	1360	1380	1360	792	1010
5	---	---	---	1420	1390	1410	1410	1400	1410	1050	805	972
6	---	---	---	1440	1420	1430	1410	1380	1400	1150	1020	1080
7	---	---	---	1480	1430	1450	1410	1380	1400	1220	1150	1190
8	---	---	---	1500	1410	1470	1410	1390	1400	1240	1210	1220
9	---	---	---	1410	1390	1410	1400	1360	1390	1300	1240	1270
10	---	---	---	1400	1390	1390	1410	1380	1400	1350	1300	1330
11	---	---	---	1400	1370	1380	1410	1400	1400	1370	1350	1360
12	---	---	---	1400	1390	1380	1420	1410	1410	1380	1360	1370
13	---	---	---	1390	1360	1380	1440	1410	1420	1380	1370	1380
14	---	---	---	1360	1340	1350	1430	1420	1430	1390	1380	1380
15	---	---	---	1390	1350	1370	1430	1420	1430	1390	1380	1380
16	---	---	---	1400	1300	1370	1440	1410	1430	1400	1360	1390
17	---	---	---	1320	1350	1360	1450	1430	1440	1410	1380	1400
18	1270	1130	1180	1370	1350	1360	1450	1440	1450	1410	1240	1380
19	1290	1260	1270	1400	1370	1390	1440	1420	1430	1420	1400	1410
20	1290	1270	1280	1400	1390	1390	1440	1440	1440	1410	1390	1410
21	1290	1270	1280	1400	1320	1380	1440	1230	1340	1410	1400	1400
22	1310	1290	1300	1400	1390	1400	1400	1160	1260	1420	1390	1410
23	1310	1170	1270	1400	1390	1400	1400	850	1230	1420	1410	1420
24	---	---	---	1400	1390	1400	885	714	776	---	---	---
25	---	---	---	1410	1390	1400	762	694	721	1390	1340	1380
26	---	---	---	1410	1400	1400	894	746	787	1370	1290	1340
27	---	---	---	1410	1400	1400	927	832	862	---	---	---
28	---	---	---	1410	1400	1400	1120	927	1050	1380	1360	1360
29	1350	1340	1340	1420	1400	1410	1190	1080	1120	1370	1360	1360
30	1360	1350	1350	1420	1380	1400	1260	1190	1230	1370	1350	1360
31	1370	1350	1360	---	---	---	1300	1230	1280	1360	827	1240
MONTH	---	---	---	1500	1280	1400	1450	694	1290	---	---	---

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	953	648	788	1440	1330	1410	---	---	---	1430	1280	1360
2	938	782	875	1440	1270	1390	---	---	---	1470	1430	1450
3	1020	917	966	1450	1420	1440	1410	1150	1340	1480	1460	1470
4	1140	1030	1070	1450	1430	1440	1430	1410	1420	1480	1470	1480
5	1180	1120	1160	1440	1300	1410	1430	1400	1420	1480	1460	1470
6	---	---	---	1450	1440	1440	1450	1400	1420	1480	1460	1470
7	1350	1300	1320	1440	1110	1330	1450	1430	1440	1500	1460	1480
8	1360	1330	1340	1290	1100	1170	1440	1390	1420	---	---	---
9	1400	1360	1380	---	---	---	1410	1370	1400	---	---	---
10	1400	1260	1330	---	---	---	1430	1400	1420	---	---	---
11	---	---	---	---	---	---	1440	1420	1430	---	---	---
12	1380	1320	1360	---	---	---	1440	1410	1430	---	---	---
13	1390	1330	1380	---	---	---	1450	1430	1440	1450	1410	1430
14	1410	1390	1400	---	---	---	1460	1430	1450	1490	1450	1470
15	1400	1390	1390	---	---	---	1470	1430	1440	1490	1410	1470
16	---	---	---	---	---	---	1450	1360	1420	1490	1460	1470
17	---	---	---	---	---	---	1450	1390	1430	1480	1430	1460
18	1420	1410	1410	---	---	---	1460	1440	1450	1450	1430	1440
19	1430	1400	1420	---	---	---	1490	1390	1450	1450	1410	1440
20	1420	1400	1400	---	---	---	1500	1370	1440	1430	1380	1410
21	1430	1410	1420	---	---	---	1460	1420	1440	1470	1380	1420
22	1430	1420	1420	---	---	---	1490	1450	1470	1470	1400	1450
23	1440	1420	1430	---	---	---	1490	1470	1480	1460	1400	1420
24	1430	1410	1430	---	---	---	1490	1480	1490	1470	1450	1460
25	1440	1430	1440	---	---	---	1500	1480	1490	1460	1350	1400
26	1440	1320	1390	---	---	---	1500	645	1380	1410	1340	1370
27	1440	1390	1420	---	---	---	778	495	677	1390	1170	1330
28	1430	1280	1390	---	---	---	1130	778	964	1290	1130	1190
29	---	---	---	---	---	---	1290	1130	1220	1320	1210	1280
30	---	---	---	---	---	---	1280	1260	1270	1330	1270	1300
31	---	---	---	---	---	---	---	---	---	1340	1250	1310
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1330	1260	1310	1390	1350	1370	1510	1470	1490	1640	1570	1610
2	1350	1240	1310	1380	1330	1350	1500	1440	1470	1570	1510	1540
3	1340	1010	1250	1420	1350	1380	1480	1450	1460	1590	1330	1470
4	1370	1280	1350	1430	1330	1400	1460	1440	1450	1340	1260	1300
5	1340	1220	1300	1440	1150	1300	1520	1430	1470	1310	1270	1280
6	1340	1290	1320	1260	1030	1110	1550	1500	1520	1460	1280	1350
7	1320	1260	1290	1150	1020	1070	1530	1110	1410	1490	1270	1350
8	1350	1120	1180	1180	995	1070	---	---	---	1350	1240	1260
9	1250	1020	1130	1190	1040	1090	---	---	---	1250	1230	1240
10	---	---	---	1210	1130	1170	---	---	---	1240	1210	1220
11	1260	632	999	1330	1210	1270	---	---	---	1220	1200	1210
12	1040	603	802	1260	1210	1230	---	---	---	1200	1170	1190
13	---	---	---	1270	1250	1260	---	---	---	1280	1190	1250
14	---	---	---	1280	1250	1260	---	---	---	1290	1250	1270
15	---	---	---	1280	1240	1260	---	---	---	---	---	---
16	1350	1270	1310	1280	1250	1260	---	---	---	---	---	---
17	1360	1310	1340	1280	1260	1270	---	---	---	---	---	---
18	1320	1100	1200	1310	1280	1290	---	---	---	---	---	---
19	1380	1240	1310	1310	1290	1300	---	---	---	---	---	---
20	---	---	---	1480	1310	1370	---	---	---	---	---	---
21	---	---	---	---	---	---	1610	1560	1600	---	---	---
22	---	---	---	---	---	---	1630	1550	1600	---	---	---
23	---	---	---	1560	1480	1530	1630	1570	1600	---	---	---
24	---	---	---	1730	1560	1650	1620	1540	1570	---	---	---
25	---	---	---	1820	1730	1780	1560	1410	1470	---	---	---
26	---	---	---	1780	1570	1660	---	---	---	---	---	---
27	1360	1320	1340	1880	1460	1600	---	---	---	---	---	---
28	1370	1330	1350	1460	1360	1380	1590	1540	1560	---	---	---
29	1370	1340	1360	1400	1380	1390	1550	1470	1510	---	---	---
30	1360	1310	1350	1460	1390	1410	1500	1390	1440	---	---	---
31	---	---	---	1530	1460	1500	1650	1420	1520	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.0	21.0	22.0	15.0	14.0	14.5	10.5	10.0	10.0	6.0	4.0	5.0
2	23.5	22.5	23.0	14.0	12.5	13.5	10.0	9.0	9.5	8.5	6.0	7.0
3	24.0	23.0	23.5	12.5	11.5	12.0	9.5	7.5	8.5	9.0	8.5	8.5
4	23.5	22.0	23.0	12.0	11.0	11.5	7.5	5.5	7.0	9.0	5.0	6.5
5	23.5	22.0	22.5	12.5	11.5	12.0	6.5	4.5	6.0	6.5	5.0	6.0
6	23.5	22.5	23.0	12.0	10.5	11.0	5.5	4.5	5.0	6.5	4.5	5.5
7	23.0	22.5	23.0	10.5	9.5	10.0	5.0	4.0	4.5	5.5	3.0	4.5
8	23.5	22.5	23.0	10.5	9.5	10.0	5.5	4.5	5.0	4.5	3.0	4.0
9	---	---	---	10.5	10.0	10.0	7.0	5.0	6.0	4.0	2.5	3.5
10	---	---	---	10.0	8.0	9.0	7.0	5.0	6.5	4.0	3.0	3.5
11	---	---	---	8.5	7.5	8.0	5.5	4.0	5.0	3.5	2.5	3.0
12	---	---	---	8.0	7.0	7.5	4.5	3.5	4.0	3.5	2.5	3.5
13	---	---	---	7.5	7.0	7.5	4.0	2.5	3.5	3.5	2.5	3.0
14	---	---	---	7.0	6.0	7.0	4.5	3.0	3.5	2.5	2.5	2.5
15	---	---	---	---	---	---	5.0	2.5	3.5	3.0	1.5	2.5
16	---	---	---	---	---	---	6.5	3.0	4.5	3.5	2.5	3.0
17	---	---	---	---	---	---	6.5	4.5	5.0	4.5	3.0	3.5
18	17.5	16.0	16.5	---	---	---	5.5	4.0	4.5	4.5	4.0	4.5
19	17.0	16.5	16.5	---	---	---	6.5	4.5	5.5	4.5	3.5	4.5
20	17.0	16.0	16.5	8.0	7.0	7.5	6.0	5.0	5.5	6.0	4.5	5.0
21	16.0	15.0	16.0	9.0	7.5	8.0	5.0	3.0	4.0	5.5	5.0	5.0
22	15.0	14.0	14.5	10.0	8.5	9.0	4.5	2.5	3.5	5.0	4.0	4.0
23	14.0	13.5	14.0	10.5	9.0	10.0	5.0	4.0	5.0	4.0	3.0	4.0
24	---	---	---	10.5	9.5	10.0	4.5	2.5	4.0	4.0	3.0	3.5
25	---	---	---	11.5	10.0	11.0	4.0	2.5	3.5	5.0	3.5	4.5
26	---	---	---	12.0	11.0	11.5	4.0	3.0	3.5	6.0	5.0	5.5
27	---	---	---	12.5	11.0	12.0	3.0	2.0	2.5	6.5	5.0	6.0
28	---	---	---	13.5	12.5	13.0	3.0	2.0	2.5	7.5	6.0	7.0
29	11.5	11.0	11.0	13.5	12.0	13.0	2.5	2.0	2.5	7.5	6.5	7.5
30	14.0	11.5	13.0	12.0	10.5	11.0	4.5	2.5	3.5	7.5	7.0	7.5
31	15.0	14.0	14.5	---	---	---	5.0	3.5	4.5	---	---	---
MONTH	---	---	---	---	---	---	10.5	2.0	4.9	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	10.0	9.0	9.5	16.5	14.5	15.5	18.0	15.5	16.5
2	---	---	---	9.0	8.0	8.5	16.5	14.5	15.5	20.0	18.0	19.0
3	---	---	---	9.0	7.5	8.5	16.5	14.0	15.0	20.5	19.0	19.5
4	---	---	---	10.5	8.5	9.5	14.5	13.5	14.0	21.5	19.5	20.5
5	---	---	---	10.5	9.0	10.0	14.5	13.0	13.5	21.5	20.5	21.0
6	5.0	4.0	4.5	9.0	8.0	8.5	16.5	14.0	15.0	22.5	20.0	21.0
7	5.0	4.0	4.5	8.0	7.5	8.0	17.0	15.5	16.5	23.0	21.5	22.5
8	6.5	5.0	6.0	7.5	4.0	6.0	17.0	15.5	16.0	---	---	---
9	8.5	6.5	7.5	4.0	2.5	3.0	16.0	14.5	15.0	---	---	---
10	8.5	7.0	8.0	4.0	2.5	3.5	15.5	13.5	14.5	---	---	---
11	8.0	7.0	7.5	4.5	4.0	4.5	16.5	13.5	15.5	---	---	---
12	8.0	7.0	7.5	4.5	3.5	3.5	17.5	15.5	16.5	---	---	---
13	8.0	6.5	7.0	7.0	4.0	5.0	18.5	16.5	17.5	25.0	23.0	24.0
14	8.5	7.5	8.0	9.5	7.0	8.5	19.5	16.5	18.0	---	---	---
15	9.0	8.5	9.0	9.5	9.5	9.5	19.5	18.5	19.0	---	---	---
16	9.0	8.5	9.0	10.0	8.5	9.0	---	---	---	---	---	---
17	8.5	7.5	8.0	8.5	7.5	8.0	---	---	---	---	---	---
18	9.0	8.0	8.5	8.0	7.5	8.0	---	---	---	---	---	---
19	9.5	9.0	9.0	8.0	5.5	7.0	---	---	---	---	---	---
20	10.0	9.0	9.5	7.0	5.5	6.0	---	---	---	---	---	---
21	10.0	9.5	10.0	8.0	5.5	6.5	---	---	---	---	---	---
22	10.5	10.0	10.0	11.0	8.0	9.0	17.5	15.0	16.5	---	---	---
23	11.0	9.5	10.0	12.5	11.0	11.5	17.0	16.0	16.5	---	---	---
24	12.0	10.5	11.5	13.5	12.0	12.5	19.5	15.5	17.5	---	---	---
25	14.5	12.0	13.5	15.0	13.5	14.0	20.5	18.5	19.5	---	---	---
26	14.5	12.5	13.5	16.0	14.5	15.0	20.5	16.0	19.0	---	---	---
27	12.5	11.0	12.0	15.5	15.0	15.5	16.0	14.5	15.0	---	---	---
28	11.0	10.0	10.5	16.0	14.5	15.5	14.5	13.0	13.5	27.5	25.0	26.0
29	---	---	---	17.5	16.0	16.5	13.0	12.5	12.5	28.5	26.5	27.5
30	---	---	---	17.5	16.5	17.0	16.0	12.5	14.0	27.0	26.0	26.5
31	---	---	---	16.5	15.5	16.0	---	---	---	26.0	24.5	25.5
MONTH	---	---	---	17.5	2.5	9.5	---	---	---	---	---	---

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.5	25.5	26.0	32.0	27.5	29.0	34.0	28.0	30.0	31.5	26.0	28.0
2	27.0	25.5	26.5	32.5	27.5	29.5	32.5	26.5	29.0	32.0	26.0	28.0
3	27.5	26.0	26.5	32.0	27.0	29.0	31.0	28.0	29.0	31.0	26.0	28.0
4	---	---	---	30.5	27.5	29.0	29.0	27.0	28.0	31.5	26.0	28.0
5	---	---	---	30.5	29.5	30.0	29.5	26.0	27.5	32.5	26.5	28.5
6	---	---	---	32.5	28.5	30.0	31.5	25.5	27.5	31.0	26.0	28.0
7	---	---	---	31.5	28.0	29.5	31.0	26.0	28.0	30.5	26.0	27.5
8	---	---	---	31.5	29.0	30.0	---	---	---	30.5	25.5	28.0
9	---	---	---	32.0	29.0	30.5	---	---	---	29.5	25.0	27.0
10	---	---	---	33.0	28.0	30.0	---	---	---	28.0	23.0	25.0
11	---	---	---	33.0	28.5	30.0	---	---	---	27.5	23.0	24.5
12	28.0	24.5	25.5	34.5	28.5	31.0	---	---	---	26.0	21.5	23.5
13	29.5	26.5	28.0	34.0	29.5	31.5	---	---	---	24.0	22.5	23.5
14	28.5	27.0	28.0	34.0	30.0	32.0	---	---	---	29.5	22.0	24.5
15	27.5	26.0	26.5	33.5	30.0	31.5	---	---	---	28.5	22.0	25.0
16	27.0	24.5	26.0	34.0	30.5	31.5	---	---	---	27.0	24.5	25.5
17	27.0	25.0	26.0	33.5	29.5	31.0	---	---	---	27.0	24.5	25.5
18	29.0	25.5	27.0	32.5	29.0	30.5	---	---	---	---	---	---
19	30.0	27.0	28.5	32.5	29.0	30.0	30.0	28.0	29.0	---	---	---
20	30.5	28.0	29.0	33.0	28.5	30.0	31.0	29.0	29.5	---	---	---
21	30.5	28.0	29.5	---	---	---	31.0	29.0	30.0	---	---	---
22	---	---	---	---	---	---	30.5	29.0	29.5	---	---	---
23	---	---	---	33.5	27.5	29.5	30.5	28.5	29.5	---	---	---
24	---	---	---	32.0	28.0	29.5	32.0	27.5	29.5	27.5	21.0	23.5
25	---	---	---	33.5	27.5	30.0	32.0	27.5	29.0	27.5	22.0	24.0
26	31.5	26.5	28.0	32.5	27.0	29.0	31.5	27.5	29.0	27.5	21.5	23.5
27	30.0	26.5	28.0	32.5	27.5	29.5	32.0	27.0	28.5	29.0	22.0	24.5
28	30.0	27.5	29.0	32.5	29.0	30.0	31.5	27.0	28.5	30.0	22.5	25.0
29	31.0	28.5	30.0	32.0	28.5	30.0	32.0	26.5	28.5	---	---	---
30	32.5	28.5	30.0	33.0	28.0	29.5	32.0	26.5	28.5	---	---	---
31	---	---	---	33.5	27.5	29.5	31.0	26.5	28.0	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	9.4	8.8	9.1	11.1	10.7	10.9	13.9	13.3	13.7
2	---	---	---	9.5	9.0	9.3	11.7	11.0	11.4	13.3	12.4	12.7
3	---	---	---	9.8	9.3	9.6	12.1	11.7	11.9	12.4	12.1	12.2
4	---	---	---	10.0	9.4	9.8	---	---	---	13.4	12.1	12.9
5	---	---	---	9.9	9.3	9.6	---	---	---	13.7	13.2	13.3
6	---	---	---	10.1	9.6	9.8	---	---	---	13.6	13.2	13.3
7	---	---	---	10.4	9.8	10.1	13.2	12.7	12.9	14.0	13.6	13.8
8	---	---	---	11.3	9.9	10.2	12.8	12.4	12.6	14.2	13.8	14.1
9	---	---	---	10.4	10.0	10.2	12.4	12.0	12.2	14.3	14.1	14.2
10	---	---	---	11.1	10.2	10.7	12.5	12.1	12.2	14.4	13.9	14.2
11	---	---	---	11.2	10.7	10.9	13.1	12.5	12.9	14.8	14.1	14.6
12	---	---	---	11.5	11.0	11.2	13.5	13.1	13.3	14.6	14.2	14.4
13	---	---	---	11.3	11.1	11.2	13.8	13.3	13.5	15.3	14.2	14.9
14	---	---	---	11.9	11.2	11.5	13.9	13.3	13.5	14.7	13.9	14.1
15	---	---	---	12.6	11.9	12.3	13.4	12.8	13.1	15.1	14.0	14.8
16	---	---	---	12.8	12.3	12.6	13.2	12.5	12.8	14.6	14.2	14.4
17	---	---	---	12.8	12.2	12.5	12.9	11.9	12.4	14.4	13.6	14.1
18	---	---	---	12.8	12.1	12.4	12.6	11.9	12.1	14.0	13.6	13.8
19	---	---	---	12.5	11.6	12.1	12.5	11.7	12.0	14.3	13.7	13.9
20	---	---	---	11.9	11.3	11.6	12.3	11.8	12.0	13.8	13.4	13.6
21	---	---	---	11.8	11.0	11.3	12.4	12.1	12.3	13.9	13.4	13.7
22	---	---	---	11.4	10.8	11.1	13.1	12.4	12.8	14.2	13.8	14.0
23	---	---	---	11.3	10.5	10.9	13.3	12.9	13.0	14.4	14.0	14.2
24	---	---	---	11.3	10.5	10.8	13.5	13.2	13.3	14.5	13.9	14.2
25	---	---	---	11.4	10.6	10.9	13.9	13.5	13.8	14.0	13.5	13.8
26	---	---	---	11.5	10.5	10.8	13.8	13.3	13.7	13.5	13.2	13.3
27	---	---	---	10.8	10.2	10.5	14.2	13.7	13.9	13.4	12.9	13.2
28	---	---	---	11.0	10.0	10.3	13.9	13.6	13.7	13.1	12.7	12.9
29	9.8	9.6	9.7	10.5	10.0	10.2	14.1	13.8	13.9	13.2	12.4	12.7
30	9.5	9.1	9.2	10.9	10.3	10.6	14.0	13.6	13.8	12.7	12.2	12.5
31	9.1	8.5	8.8	---	---	---	14.2	13.7	13.9	12.4	11.9	12.2
MONTH	---	---	---	12.8	8.8	10.8	---	---	---	15.3	11.9	13.7

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.1	11.3	11.8	---	---	---	---	---	---	10.3	9.3	9.9
2	12.1	11.5	11.7	---	---	---	---	---	---	10.2	9.0	9.4
3	12.4	11.4	12.0	---	---	---	---	---	---	9.7	8.9	9.2
4	13.0	12.3	12.6	---	---	---	---	---	---	9.3	8.0	8.6
5	13.1	12.8	12.9	---	---	---	---	---	---	8.7	7.9	8.2
6	13.6	13.1	13.4	---	---	---	---	---	---	---	---	---
7	13.6	13.0	13.3	---	---	---	---	---	---	---	---	---
8	13.0	12.4	12.8	---	---	---	---	---	---	---	---	---
9	12.6	12.0	12.4	---	---	---	---	---	---	---	---	---
10	12.8	12.0	12.4	---	---	---	10.9	10.4	10.7	---	---	---
11	13.0	12.1	12.6	---	---	---	10.9	10.1	10.4	---	---	---
12	12.5	12.1	12.3	---	---	---	10.4	9.9	10.2	---	---	---
13	12.5	11.8	12.1	---	---	---	10.4	9.9	10.0	8.3	6.8	7.2
14	12.1	11.2	11.8	10.9	10.2	10.6	9.9	9.5	9.7	7.7	6.6	7.0
15	11.7	10.8	11.3	10.3	10.0	10.1	10.2	9.5	9.9	7.1	6.4	6.7
16	11.5	10.7	11.2	10.8	9.9	10.3	10.0	9.5	9.8	8.0	6.2	6.8
17	11.8	11.3	11.5	11.1	9.8	10.8	10.3	9.9	10.1	6.6	6.2	6.4
18	11.8	11.0	11.5	11.0	10.8	10.9	10.6	10.0	10.2	---	---	---
19	11.3	10.7	11.0	11.5	10.8	11.0	10.2	9.8	10.0	---	---	---
20	11.4	10.7	11.0	11.9	11.2	11.5	10.2	9.7	10.0	---	---	---
21	10.8	9.8	10.5	---	---	---	10.5	9.9	10.2	---	---	---
22	10.1	9.4	9.7	---	---	---	10.4	9.8	10.0	---	---	---
23	10.2	9.0	9.6	---	---	---	10.3	9.7	9.9	---	---	---
24	---	---	---	---	---	---	10.0	9.3	8.7	---	---	---
25	---	---	---	---	---	---	9.8	9.2	9.4	---	---	---
26	---	---	---	---	---	---	9.7	9.2	9.4	---	---	---
27	---	---	---	---	---	---	10.2	9.7	10.0	---	---	---
28	---	---	---	---	---	---	10.6	10.1	10.4	---	---	---
29	---	---	---	---	---	---	10.7	10.5	10.6	7.6	7.1	7.2
30	---	---	---	---	---	---	10.7	9.8	10.4	7.9	6.9	7.3
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.2	6.9	7.3	---	---	---	10.6	5.1	7.0	9.9	5.7	7.4
2	7.8	6.9	7.2	---	---	---	10.2	5.1	7.4	10.3	5.4	7.0
3	8.1	7.0	7.5	---	---	---	9.6	5.0	6.3	9.5	5.4	7.1
4	7.7	7.1	7.3	---	---	---	9.4	5.1	6.6	9.1	5.0	6.6
5	9.2	7.6	8.5	---	---	---	10.8	5.2	7.4	9.6	4.8	6.5
6	9.5	8.5	8.9	---	---	---	11.2	5.2	7.4	8.9	5.2	6.6
7	9.4	8.1	8.6	---	---	---	---	---	---	9.6	4.7	6.6
8	8.9	8.0	8.2	---	---	---	---	---	---	8.7	4.4	6.1
9	8.8	7.7	8.3	---	---	---	---	---	---	8.4	4.1	5.9
10	---	---	---	---	---	---	---	---	---	8.9	5.3	6.5
11	8.4	6.7	7.6	---	---	---	---	---	---	---	---	---
12	7.2	6.6	6.8	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	7.6	6.2	6.8	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	7.3	5.6	6.4	---	---	---	---	---	---	---	---	---
19	7.1	5.3	6.2	---	---	---	---	---	---	---	---	---
20	6.6	4.9	5.7	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	7.9	6.6	7.2	---	---	---
22	---	---	---	---	---	---	8.9	6.5	7.3	---	---	---
23	---	---	---	---	---	---	8.0	6.3	7.1	---	---	---
24	---	---	---	---	---	---	9.6	6.3	7.5	---	---	---
25	---	---	---	---	---	---	9.4	6.0	7.7	---	---	---
26	7.4	4.8	5.8	---	---	---	---	---	---	---	---	---
27	8.1	4.7	6.1	---	---	---	---	---	---	---	---	---
28	6.6	4.7	5.5	---	---	---	10.9	5.5	7.4	---	---	---
29	7.0	4.4	5.4	---	---	---	11.5	5.3	8.0	---	---	---
30	6.5	4.5	5.4	---	---	---	11.6	6.0	7.8	---	---	---
31	---	---	---	10.5	5.2	7.2	10.2	5.8	7.5	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK

LOCATION.--Lat 35°33'56", long 97°22'01", in SW ¼ SW ¼ 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,940 ft^3/s, Mar 17, gage height, 17.80 ft; minimum discharge, 36 ft^3/s, Sep 23, gage height, 8.61 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	123	274	274	723	e2800	530	1200	908	e480	103	53	46
2	755	258	377	775	1870	530	1110	976	e400	76	52	51
3	423	262	737	881	1340	515	1030	960	371	71	53	46
4	862	250	632	3800	824	411	1280	938	368	70	56	46
5	758	241	404	3440	630	414	1180	932	355	154	59	46
6	727	237	393	2780	572	422	1300	939	280	165	60	46
7	755	211	389	e2300	639	757	e1420	925	258	102	59	48
8	643	187	494	2050	644	1070	e1300	910	302	213	323	49
9	998	220	417	1260	624	776	e1280	1510	524	161	135	51
10	842	315	402	e1010	677	391	e1250	e1300	398	e140	58	46
11	531	294	411	e1100	841	459	e1190	e900	e1250	e95	58	46
12	2060	281	390	995	731	474	e1100	e720	879	e90	50	50
13	1520	334	378	973	695	412	e1100	e640	e700	e88	50	250
14	917	502	372	947	583	383	1130	e600	e500	e86	55	222
15	723	415	367	917	576	802	1110	e680	e350	e85	46	55
16	e625	385	286	890	587	6810	1070	e850	342	e84	46	354
17	e540	372	266	789	635	8660	1060	e890	369	e82	46	133
18	e360	238	259	756	655	7110	1050	e890	309	e81	45	76
19	e470	209	258	824	626	6880	1050	e590	289	e80	54	59
20	448	230	256	802	666	4800	1050	354	292	79	123	46
21	477	251	e900	800	620	3270	1110	e390	260	69	141	46
22	444	e310	e600	790	607	1960	1030	e470	e240	70	150	e900
23	548	e306	e720	613	600	1670	932	e800	e200	59	137	e350
24	665	e301	e2600	660	576	1720	914	e1000	e195	61	114	e160
25	502	e300	e2200	660	e400	1660	936	e1050	e180	60	75	123
26	435	e310	e1500	1130	432	1620	1210	e1300	e160	62	56	104
27	430	294	e1300	888	466	1840	e5000	e900	e140	66	53	93
28	387	311	e1000	529	530	1630	1800	950	e135	70	46	86
29	381	305	623	745	---	1390	1270	e800	e143	70	47	84
30	370	277	e700	642	---	1510	e1100	e600	140	65	46	78
31	358	---	e780	545	---	1450	---	e520	---	60	46	---
TOTAL	20077	8680	20685	36014	21446	62326	38562	26192	10809	2817	2392	3790
MEAN	648	289	667	1162	766	2011	1285	845	360	90.9	77.2	126
MAX	2060	502	2600	3800	2800	8660	5000	1510	1250	213	323	900
MIN	123	187	256	529	400	383	914	354	135	59	45	46
AC-FT	39820	17220	41030	71430	42540	123600	76490	51950	21440	5590	4740	7520

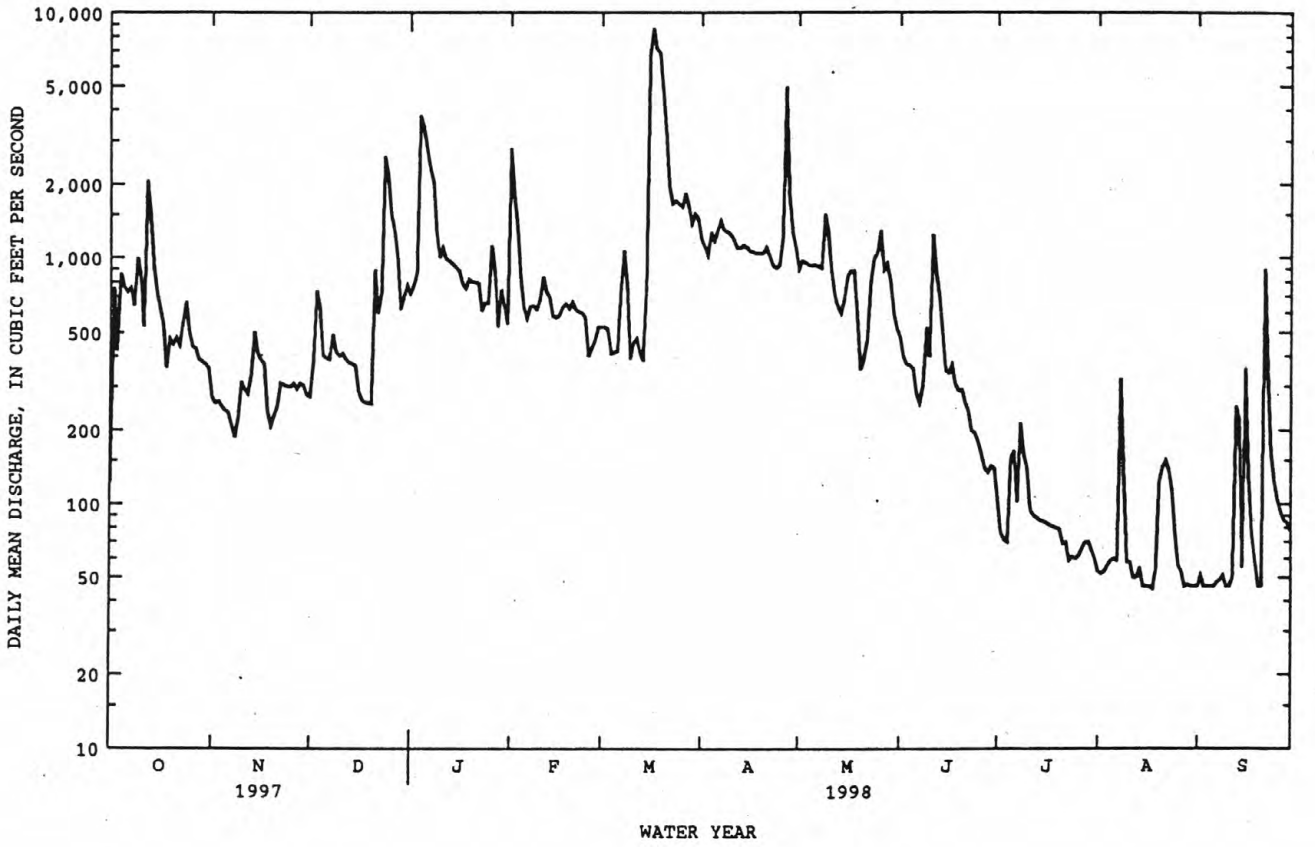
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1998, BY WATER YEAR (WY)

MEAN	301	334	407	353	397	653	558	1047	1220	414	384	443
MAX	860	928	968	1162	879	1993	1336	4095	3662	1044	966	1350
(WY)	1997	1997	1992	1998	1997	1990	1997	1993	1995	1989	1989	1989
MIN	92.3	95.7	109	102	95.5	116	121	122	130	90.9	77.2	92.9
(WY)	1993	1994	1989	1994	1991	1991	1991	1996	1996	1998	1998	1994

e Estimated

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1989 - 1998	
ANNUAL TOTAL	264540		253790			
ANNUAL MEAN	725		695		543	
HIGHEST ANNUAL MEAN					835	1993
LOWEST ANNUAL MEAN					167	1991
HIGHEST DAILY MEAN	4470	Apr 13	8660	Mar 17	22700	May 9 1993
LOWEST DAILY MEAN	123	Oct 1	45	Aug 18	28	Jul 28 1991
ANNUAL SEVEN-DAY MINIMUM	185	Jul 29	47	Aug 30	32	Jul 22 1991
INSTANTANEOUS PEAK FLOW			8940	Mar 17	38100	May 9 1993
INSTANTANEOUS PEAK STAGE			17.80	Mar 17	24.80	May 9 1993
ANNUAL RUNOFF (AC-FT)	524700		503400		393100	
10 PERCENT EXCEEDS	1400		1300		1100	
50 PERCENT EXCEEDS	502		459		242	
90 PERCENT EXCEEDS	247		59		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.
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, dissolved oxygen, and alkalinity 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 36.5°C, July 2, 1996; minimum recorded, 0.0°C, several days during winter period.
DISSOLVED OXYGEN: Maximum 20.0 mg/L, May 29, 1996; minimum 0.7 mg/L, July 8, 1994, Sept. 14, 1996.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded (greater than 20 percent missing record), 2,460 microsiemens, Oct. 1; minimum recorded 312 microsiemens, Mar. 16.
WATER TEMPERATURE: Maximum, 36.5°C, July 27, July 4; minimum, 1.5°C, Dec. 13.
DISSOLVED OXYGEN: Maximum, 19.9 mg/L, Aug. 7; minimum, 1.4 mg/L, Sept. 16.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
29...	0900	2.00	27.0	734	1028	1028	135	9.23	1460	8.4	8.3
29...	0904	10.0	26.5	734	1028	1028	135	9.23	1460	8.4	8.3
29...	0909	18.0	26.5	734	1028	1028	135	9.23	1470	8.5	8.4
29...	0913	26.0	26.5	734	1028	1028	135	9.23	1470	8.7	8.4
29...	0917	34.0	26.5	734	1028	1028	135	9.23	1470	8.9	8.4
29...	0921	42.0	26.5	734	1028	1028	135	9.23	1470	8.9	8.4
29...	0922	50.0	26.5	734	1028	1028	135	9.23	1470	8.7	8.4
29...	0926	58.0	27.0	734	1028	1028	135	9.23	1470	8.7	8.4
29...	0929	66.0	26.5	734	1028	1028	135	9.23	1470	8.5	8.4
29...	0931	74.0	26.5	734	1028	1028	135	9.23	1470	8.4	8.4
29...	0934	82.0	26.5	734	1028	1028	135	9.23	1470	8.5	8.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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												
15...	0900	1028	80020	719	912	8.2	13.5	15.5	88	749	8.6	88
NOV												
18...	0945	1028	80020	222	1340	8.3	6.5	4.5	9.2	745	11.8	93
DEC												
10...	0915	1028	80020	403	1380	8.2	1.5	5.0	14	739	12.5	101
JAN												
13...	0900	1028	80020	971	1350	8.3	-5.0	2.0	35	747	13.1	98
FEB												
10...	0915	1028	80020	670	1380	8.5	5.5	8.0	24	735	11.2	99
MAR												
17...	1120	1028	80020	8600	376	8.2	5.0	8.0	410	732	11.2	98
APR												
15...	0835	1028	80020	1130	1420	8.3	13.5	17.5	51	730	8.9	98
MAY												
20...	1155	1028	80020	354	1430	8.4	23.5	24.5	17	733	9.1	114
JUN												
17...	0915	1028	80020	365	1340	8.3	28.5	23.5	26	734	8.4	103
JUL												
07...	1355	1028	80020	82	1290	8.6	41.5	32.5	2.5	734	12.6	183
AUG												
11...	1200	1028	80020	57	1590	8.4	24.5	25.5	1.9	736	11.1	142
SEP												
02...	0737	1028	80020	45	1620	8.8	22.5	24.0	1.7	737	5.3	65

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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												
15...	2.1	2.8	1500	1600	--	--	--	--	--	--	--	--
NOV												
18...	1.4	--	550	160	430	160	100	41	115	36	2	5.9
DEC												
10...	.84	4.0	--	440	--	--	--	--	--	--	--	--
JAN												
13...	1.1	4.7	410	210	--	--	--	--	--	--	--	--
FEB												
10...	.94	2.6	450	330	470	190	110	44	118	35	2	5.3
MAR												
17...	1.7	8.6	K18000	44000	--	--	--	--	--	--	--	--
APR												
15...	.54	1.4	150	660	--	--	--	--	--	--	--	--
MAY												
20...	.65	--	130	220	450	200	110	44	131	38	3	6.0
JUN												
17...	--	7.8	K640	300	--	--	--	--	--	--	--	--
JUL												
07...	1.9	18	K22	K28	--	--	--	--	--	--	--	--
AUG												
11...	1.9	11	120	K51	400	140	87	44	174	48	4	5.0
SEP												
02...	3.3	7.5	91	K19000	--	--	--	--	--	--	--	--

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)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2) (00405)	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)
OCT												
15...	156	0	128	1.7	--	--	--	--	--	--	--	--
NOV												
18...	329	0	270	2.7	210	130	.61	16	806	797	1.10	483
DEC												
10...	264	0	216	3.1	--	--	--	--	--	--	--	--
JAN												
13...	276	0	226	2.3	--	--	--	--	--	--	--	--
FEB												
10...	337	2	280	1.9	240	130	.68	14	868	843	1.18	1570
MAR												
17...	93	0	76	1.5	--	--	--	--	--	--	--	--
APR												
15...	286	0	234	2.5	--	--	--	--	--	--	--	--
MAY												
20...	300	4	252	1.8	250	170	.67	8.9	910	876	1.24	870
JUN												
17...	259	4	219	1.7	--	--	--	--	--	--	--	--
JUL												
07...	233	14	214	1.2	--	--	--	--	--	--	--	--
AUG												
11...	302	11	266	2.1	150	260	.73	14	941	898	1.28	145
SEP												
02...	265	10	233	.7	--	--	--	--	--	--	--	--

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	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											
15...	178	1.71	7.6	.029	.10	1.74	.041	.05	.35	.39	.209
NOV											
18...	22	.982	4.3	.011	.04	.993	.064	.08	.35	.41	.200
DEC											
10...	36	.439	1.9	.015	.05	.454	.023	.03	.36	.38	.112
JAN											
13...	106	.616	2.7	.013	.04	.629	.041	.05	.48	.52	.095
FEB											
10...	77	.507	2.2	.010	.03	.517	.063	.08	.36	.42	.122
MAR											
17...	232	.674	3.0	.037	.12	.711	.386	.50	.61	.99	.099
APR											
15...	136	--	--	<.010	--	.193	.051	.07	.30	.35	.095
MAY											
20...	112	.226	1.0	.017	.06	.243	.025	.03	.38	.41	.081
JUN											
17...	73	--	--	<.010	--	<.050	.059	.08	.29	.34	.159
JUL											
07...	29	1.08	4.8	.020	.07	1.10	.038	.05	.76	.80	.261
AUG											
11...	16	1.27	5.6	.035	.12	1.30	.043	.06	.55	.59	.602
SEP											
02...	8	1.38	6.1	.058	.19	1.43	.236	.30	1.6	1.8	.706

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											
15...	.204	.63	--	--	--	--	--	--	--	--	--
NOV											
18...	.239	.73	4	156	<.50	<1.0	<5.0	<3.0	<10	<3.0	19
DEC											
10...	.121	.37	--	--	--	--	--	--	--	--	--
JAN											
13...	.104	.32	--	--	--	--	--	--	--	--	--
FEB											
10...	.128	.39	3	168	<1.0	<8.0	<14	<12	<10	<10	<100
MAR											
17...	.089	.27	--	--	--	--	--	--	--	--	--
APR											
15...	.092	.28	--	--	--	--	--	--	--	--	--
MAY											
20...	.100	.31	4	166	<1.0	<8.0	<14	<12	<10	<10	<100
JUN											
17...	.146	.45	--	--	--	--	--	--	--	--	--
JUL											
07...	.246	.75	--	--	--	--	--	--	--	--	--
AUG											
11...	.563	1.7	7	220	<1.0	<8.0	<14	<12	<10	<10	<100
SEP											
02...	.626	1.9	--	--	--	--	--	--	--	--	--

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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 15...	--	--	--	--	--	--	--	--	--	--	--
NOV 18...	34	20	<.1	<10	<10	<1	<1.0	1020	7	23	5.7
DEC 10...	--	--	--	--	--	--	--	--	--	--	--
JAN 13...	--	--	--	--	--	--	--	--	--	--	--
FEB 10...	34	8.1	<.1	<60	<40	<1	<4.0	1070	<10	<20	6.8
MAR 17...	--	--	--	--	--	--	--	--	--	--	--
APR 15...	--	--	--	--	--	--	--	--	--	--	--
MAY 20...	37	4.9	<.1	<60	<40	<1	<4.0	1140	<10	<20	7.3
JUN 17...	--	--	--	--	--	--	--	--	--	--	--
JUL 07...	--	--	--	--	--	--	--	--	--	--	--
AUG 11...	45	11	<.1	<60	<40	<1	<4.0	1330	<10	<20	13
SEP 02...	--	--	--	--	--	--	--	--	--	--	--

DATE	BROM-ACIL WATER WHLREC (UG/L) (30234)	BUTA-CHLOR WATER WHLREC (UG/L) (30235)	BUTYL-ATE WATER WHLREC (UG/L) (30236)	CARBOX-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)	PCNS UNFILT RECOVER (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)	FONOFOS (DY-FONATE) WATER WHOLE TOT.REC (UG/L) (82614)
NOV 18...	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200	<.200	<.100	<.010
FEB 10...	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200	<.200	<.100	<.010
MAY 20...	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200	<.200	<.100	<.010
JUN 17...	--	--	--	--	--	--	--	--	--	--	--	<.010
JUL 07...	--	--	--	--	--	--	--	--	--	--	--	<.010
AUG 11...	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200	<.200	<.100	<.010
SEP 02...	--	--	--	--	--	--	--	--	--	--	--	<.010

DATE	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)	AME-TRYNE TOTAL (UG/L) (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, TECH-NICAL TOTAL (UG/L) (39350)	CHLOR-PYRIFOS TOTAL RECOVER (UG/L) (38932)
NOV 18...	<.100	<.200	<.100	<.100	<.001	<.100	<.100	<.200	<.200	<.100	<.010
FEB 10...	<.100	<.200	<.100	<.100	<.001	<.100	<.100	<.200	<.200	<.100	<.010
MAY 20...	<.100	<.200	<.100	<.100	<.001	<.100	<.100	<.200	<.200	<.100	<.010
JUN 17...	--	--	--	--	--	--	--	--	--	--	<.010
JUL 07...	--	--	--	--	--	--	--	--	--	--	<.010
AUG 11...	<.100	<.200	<.100	<.100	<.001	<.100	<.100	<.200	<.200	<.100	<.010
SEP 02...	--	--	--	--	--	--	--	--	--	--	<.010

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	CYANAZINE TOTAL (UG/L) (81757)	2,4-D, TOTAL (UG/L) (39730)	P,P'-DDD UNFILT RECOVER (UG/L) (39360)	P,P'-DDE, TOTAL (UG/L) (39365)	P,P'-DDT UNFILT RECOVER (UG/L) (39370)	DEF TOTAL (UG/L) (39040)	DIAZINON, TOTAL (UG/L) (39570)	DIELDRIN TOTAL (UG/L) (39380)	DISULFOTON UNFILT RECOVER (UG/L) (39011)	2,4-DP TOTAL (UG/L) (82183)	ENDOSULFAN I TOTAL (UG/L) (39388)
NOV											
18...	<.200	.049	<.001	<.001	<.001	<.010	.010	<.001	<.020	<.010	<.001
FEB											
10...	<.200	.079	<.001	<.001	<.001	<.010	<.010	<.001	<.010	<.010	<.001
MAY											
20...	<.200	.048	<.001	<.001	<.001	<.040	<.020	<.001	<.020	<.010	<.001
JUN											
17...	--	--	--	--	--	<.010	<.010	--	<.010	--	--
JUL											
07...	--	--	--	--	--	<.010	<.010	--	<.010	--	--
AUG											
11...	<.200	.091	<.001	<.001	<.001	<.010	<.010	.001	<.010	<.010	<.001
SEP											
02...	--	--	--	--	--	<.010	--	--	<.010	--	--

DATE	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	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)	PARATHION, TOTAL (UG/L) (39540)	PERTHANE TOTAL (UG/L) (39034)
NOV											
18...	<.001	<.010	<.001	<.001	.001	<.020	<.010	<.010	<.010	<.010	<.100
FEB											
10...	<.001	<.010	<.001	<.001	<.001	<.010	<.010	<.010	<.010	<.010	<.100
MAY											
20...	<.001	<.010	<.001	<.001	.001	<.030	<.010	<.010	<.010	<.010	<.100
JUN											
17...	--	<.010	--	--	--	<.010	--	<.010	--	<.010	--
JUL											
07...	--	<.010	--	--	--	<.010	--	<.010	--	<.010	--
AUG											
11...	<.001	<.010	<.001	.001	.010	<.010	<.010	<.010	<.010	<.010	<.100
SEP											
02...	--	<.010	--	--	--	<.010	--	<.010	--	<.010	--

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)	TRIFLURALIN TOTAL RECOVER (UG/L) (39030)	TOTAL TRITHION (UG/L) (39786)
NOV											
18...	<.010	<.200	<.100	<.100	<.010	.170	<.100	<.010	<1.00	<.100	<.010
FEB											
10...	<.010	<.200	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<.100	<.010
MAY											
20...	<.010	<.200	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<.100	<.010
JUN											
17...	<.010	--	--	--	--	--	--	--	--	--	<.010
JUL											
07...	<.010	--	--	--	--	--	--	--	--	--	<.010
AUG											
11...	<.010	<.200	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<.100	<.010
SEP											
02...	<.010	--	--	--	--	--	--	--	--	--	<.010

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	2460	2310	2390	1390	1350	1370	---	---	---	1240	1200	1220
2	1820	1070	1430	1400	1370	1380	1390	1340	1370	1260	1230	1240
3	1410	1110	1270	1410	1340	1380	1340	978	1080	1320	1260	1280
4	---	---	---	1430	1380	1410	1300	1210	1260	1310	375	700
5	---	---	---	1450	1430	1440	1330	1290	1300	893	529	697
6	---	---	---	1440	1380	1420	1360	1330	1350	947	852	891
7	---	---	---	1450	1350	1420	1360	1330	1350	1030	944	996
8	1460	1250	1390	---	---	---	1350	1100	1210	1090	937	1020
9	1290	762	1040	---	---	---	1330	1230	1290	1160	1090	1120
10	1000	858	918	1420	1190	1260	1370	1320	1340	1230	1160	1190
11	1150	964	1000	1370	1240	1330	1380	1340	1360	---	---	---
12	1020	333	570	1390	1360	1380	1370	1350	1360	---	---	---
13	870	345	653	1390	1120	1320	1380	1370	1370	---	---	---
14	808	611	678	1250	1020	1130	1410	1380	1390	---	---	---
15	968	808	921	1320	1170	1270	1410	1400	1410	---	---	---
16	1040	952	988	1380	1320	1360	1430	1400	1420	---	---	---
17	1190	1040	1130	1410	1270	1380	1460	1410	1430	---	---	---
18	1360	1190	1270	1390	1340	1370	1470	1460	1460	---	---	---
19	1390	1340	1360	1430	1380	1400	1470	1450	1460	---	---	---
20	1420	1380	1400	1410	1370	1390	1470	1380	1450	---	---	---
21	1520	1240	1380	1400	1380	1390	1440	477	950	---	---	---
22	1280	1230	1260	1400	1390	1390	1020	555	802	1420	1370	1410
23	1310	672	1210	1420	1390	1400	1200	486	1010	1430	1400	1420
24	1140	646	930	1420	1390	1400	638	474	553	1430	1420	1430
25	1170	1050	1130	1420	1390	1400	672	603	644	1440	1400	1420
26	1260	1140	1200	1400	1380	1390	678	631	659	1410	956	1130
27	1300	1230	1260	---	---	---	781	668	726	1360	1210	1310
28	1340	1300	1320	---	---	---	865	778	814	1400	1350	1380
29	1350	1320	1340	---	---	---	1020	854	963	1400	1390	1390
30	1360	1340	1350	---	---	---	1130	1010	1070	1400	1390	1390
31	1370	1350	1360	---	---	---	1200	1130	1160	1410	1220	1390
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1220	432	590	1450	1390	1430	1360	1170	1270	1280	1230	1250
2	760	328	637	1460	1400	1430	1390	1360	1380	1390	1280	1380
3	903	760	866	1460	1400	1420	1390	1380	1390	---	---	---
4	1060	889	965	1490	1460	1470	1380	1280	1350	---	---	---
5	1150	1060	1100	1480	1460	1470	1400	1340	1370	1450	1440	1440
6	1210	1160	1180	1480	1430	1460	1410	1400	1400	---	---	---
7	1310	1250	1250	1490	632	1200	1410	1340	1400	1450	1420	1410
8	1330	1260	1320	1120	643	973	1370	1330	1360	1450	1420	1440
9	1370	1330	1350	1250	1110	1180	1370	1360	1360	---	---	---
10	1410	1360	1380	1320	1240	1270	1370	1350	1360	1210	981	1110
11	1400	1330	1360	1360	1320	1350	1370	1350	1370	1340	1210	1290
12	1400	1300	1380	1430	1350	1380	1380	1360	1370	1380	1330	1360
13	1420	1400	1410	1460	1430	1440	1360	1320	1350	1420	1360	1390
14	1440	1400	1430	1460	1440	1450	1350	1300	1330	1410	1370	1390
15	1450	1430	1440	1450	649	1220	1350	1330	1340	1460	1400	1420
16	1450	1430	1440	696	312	393	1340	1330	1330	1480	1420	1440
17	1460	1440	1450	470	423	443	1340	1330	1330	1470	1410	1450
18	1460	1410	1430	743	443	603	1340	1330	1330	---	---	---
19	1460	1430	1450	711	558	607	1330	1320	1320	---	---	---
20	1430	1370	1400	607	499	520	1340	1320	1330	1460	1430	1440
21	1430	1410	1420	649	545	582	---	---	---	1460	1410	1430
22	1440	1410	1420	714	649	683	---	---	---	1460	1380	1430
23	---	---	---	881	714	786	1480	1430	1450	1470	1390	1440
24	1460	1410	1430	1170	881	1070	1480	1450	1460	1450	1150	1390
25	1460	1430	1450	1290	1170	1240	1490	1470	1480	1470	917	1250
26	---	---	---	1340	1290	1320	1490	873	1400	1260	644	967
27	1450	863	1320	1350	1300	1310	873	382	627	1340	1170	1290
28	1450	1420	1430	1340	1270	1320	---	---	---	---	---	---
29	---	---	---	1350	1210	1240	1100	828	982	1280	1200	1240
30	---	---	---	1350	838	1270	1250	1110	1190	1320	1270	1300
31	---	---	---	1170	806	1040	---	---	---	1350	1290	1320
MONTH	---	---	---	1490	312	1120	---	---	---	---	---	---

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1350	1320	1330	1520	1410	1440	---	---	---	---	---	---
2	1400	1350	1370	1590	1540	1580	---	---	---	---	---	---
3	1390	1370	1380	1580	1540	1570	1650	1520	1570	1630	1530	1570
4	1380	1340	1370	---	---	---	1640	1560	1590	1680	1550	1610
5	1380	1350	1370	---	---	---	1600	1550	1560	---	---	---
6	1390	1300	1360	---	---	---	1600	1470	1540	---	---	---
7	1410	1340	1390	---	---	---	1730	1510	1540	---	---	---
8	1410	1120	1340	---	---	---	1870	1440	1660	---	---	---
9	1210	843	1050	1080	966	1020	1580	1460	1510	---	---	---
10	1220	1130	1170	1070	1010	1030	1480	1410	1440	1600	1470	1530
11	1130	338	618	1130	786	1010	1590	1480	1530	---	---	---
12	774	499	636	---	---	---	1610	1460	1550	---	---	---
13	900	704	807	---	---	---	1610	1490	1450	---	---	---
14	937	783	875	---	---	---	---	---	---	---	---	---
15	1090	878	958	---	---	---	1620	1370	1540	---	---	---
16	1340	1090	1250	---	---	---	1660	1540	1610	---	---	---
17	1390	1340	1370	---	---	---	1670	1570	1620	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	1390	1250	1300	---	---	---	1910	1480	1630	---	---	---
20	1410	1290	1350	---	---	---	1910	1570	1670	---	---	---
21	1460	1380	1410	---	---	---	1580	1380	1510	---	---	---
22	---	---	---	---	---	---	1570	1520	1540	---	---	---
23	---	---	---	---	---	---	1600	1520	1550	---	---	---
24	---	---	---	---	---	---	1560	1500	1530	---	---	---
25	1530	1450	1480	1620	1550	1600	---	---	---	---	---	---
26	1490	1430	1450	1580	1450	1540	---	---	---	1200	1050	1130
27	1650	1410	1480	1610	1540	1560	---	---	---	1240	1160	1200
28	1540	1480	1500	1590	1470	1520	---	---	---	1270	1210	1240
29	1500	1450	1470	1530	1430	1490	---	---	---	1280	1230	1260
30	---	---	---	1530	1450	1440	---	---	---	1290	1240	1260
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	27.5	21.0	24.0	16.5	14.0	15.0	10.5	10.0	10.5	---	---	---
2	25.0	21.5	23.5	14.0	11.5	13.0	10.0	9.5	10.0	---	---	---
3	25.0	21.5	23.5	13.0	9.5	11.5	10.5	7.0	9.0	---	---	---
4	24.5	21.5	23.0	14.5	10.5	12.5	8.0	6.0	7.0	---	---	---
5	24.5	21.0	23.0	14.5	12.0	13.0	6.5	4.5	5.5	---	---	---
6	24.5	22.0	23.5	12.0	9.0	10.0	6.0	3.5	5.0	---	---	---
7	23.5	22.0	23.0	11.5	7.5	9.5	6.0	5.0	5.5	4.5	3.5	4.0
8	23.5	22.0	22.5	13.0	9.5	11.5	6.5	5.0	5.5	4.5	3.5	4.0
9	23.0	21.5	22.0	12.5	9.0	10.5	8.5	6.5	7.5	4.5	3.5	4.0
10	24.0	21.5	23.0	9.5	8.0	8.5	7.5	4.5	5.5	4.5	3.5	3.5
11	23.5	22.0	22.5	9.0	6.5	8.0	4.5	4.0	4.5	4.0	3.0	3.5
12	22.0	19.0	21.0	8.5	7.0	7.5	4.0	3.0	4.0	4.0	4.0	4.0
13	19.0	17.5	18.5	8.5	7.5	7.5	5.0	1.5	3.5	4.0	3.5	3.5
14	19.0	16.0	18.0	8.0	5.5	6.5	6.0	3.5	5.0	3.5	3.0	3.5
15	20.0	16.5	18.0	6.0	4.0	5.0	7.0	4.0	5.5	4.5	2.5	3.5
16	20.0	17.0	18.5	6.5	3.5	5.0	8.0	5.0	6.5	4.5	3.0	4.0
17	19.5	16.5	18.0	6.0	4.0	5.0	7.5	4.5	6.5	6.0	3.0	4.5
18	20.0	16.0	18.0	8.5	4.0	6.5	8.5	5.5	7.0	6.0	4.5	5.5
19	19.5	15.5	18.0	10.0	6.5	8.0	9.5	6.5	8.0	6.0	3.5	5.0
20	18.5	16.0	17.5	9.0	7.5	8.5	8.5	5.0	6.5	7.5	5.0	6.0
21	17.5	15.0	16.5	10.0	7.5	8.5	5.5	4.5	5.0	7.0	4.5	5.5
22	16.0	13.5	15.0	11.0	8.5	9.5	5.5	4.5	5.0	5.0	3.5	4.0
23	15.5	13.5	14.0	11.0	8.0	10.0	5.5	4.5	5.0	4.5	3.0	4.0
24	15.0	14.0	14.5	12.0	9.0	10.5	4.5	4.0	4.5	6.0	3.0	4.5
25	15.5	12.5	14.5	13.0	9.5	11.0	4.0	3.5	4.0	6.5	4.5	5.5
26	12.5	8.5	9.5	13.0	11.0	12.0	4.5	3.5	4.0	7.0	6.5	6.5
27	12.5	8.5	10.5	13.5	10.5	12.0	4.5	2.5	4.0	8.5	5.5	7.0
28	13.0	9.5	11.5	15.0	13.5	14.0	4.0	3.0	3.5	9.0	6.5	8.0
29	12.5	11.0	12.0	14.0	12.0	12.5	5.0	2.5	3.5	9.0	6.5	8.0
30	17.0	12.5	15.0	12.0	10.5	10.5	6.0	4.0	5.0	9.5	6.5	8.0
31	17.0	14.0	16.0	---	---	---	6.0	3.5	5.0	9.0	8.0	8.5
MONTH	27.5	8.5	18.3	16.5	3.5	9.8	10.5	1.5	5.7	---	---	---

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9.5	8.5	9.0	---	---	---	18.5	14.0	16.5	21.0	16.0	18.5
2	9.5	8.0	8.5	---	---	---	17.5	15.0	16.5	22.0	18.0	20.0
3	9.0	7.0	7.5	---	---	---	16.5	13.5	14.5	22.5	18.0	20.5
4	7.0	5.5	6.5	---	---	---	13.5	12.0	13.0	23.5	19.0	21.0
5	6.5	5.0	6.0	10.5	7.5	9.0	16.0	12.0	14.0	22.5	20.0	21.5
6	6.0	3.0	5.0	7.5	6.5	7.0	17.0	13.5	15.5	22.5	20.0	21.5
7	7.0	3.5	5.5	8.0	7.5	7.5	17.5	14.5	16.0	24.5	20.0	22.5
8	7.0	6.0	6.5	8.0	4.5	6.0	17.0	14.5	16.0	24.0	21.0	22.0
9	9.5	6.5	7.5	5.5	2.0	4.0	16.5	13.5	15.0	21.5	18.5	19.5
10	9.5	6.5	8.0	6.5	1.5	4.0	18.0	14.0	16.0	23.5	18.0	20.5
11	8.5	6.0	7.0	6.0	4.0	5.0	18.0	14.5	16.5	24.5	20.0	22.5
12	8.5	6.5	7.5	5.0	2.5	3.5	18.5	15.0	16.5	26.5	21.0	24.0
13	9.5	6.0	8.0	10.0	4.0	7.0	20.0	16.5	18.0	27.0	23.5	25.5
14	9.5	7.0	8.5	10.0	9.0	9.5	20.5	17.0	19.0	26.5	23.0	25.0
15	9.5	8.5	9.0	10.0	9.5	9.5	20.5	17.5	19.0	26.5	24.0	25.5
16	9.0	8.0	8.0	10.5	9.5	10.5	19.0	15.0	17.0	27.0	22.5	24.5
17	9.5	7.5	8.5	9.5	9.0	9.5	18.0	14.5	16.5	27.0	22.5	25.0
18	10.5	7.0	9.0	9.5	8.0	9.0	18.5	15.0	17.0	---	---	---
19	10.5	9.0	10.0	8.5	7.0	8.0	19.5	15.5	17.5	---	---	---
20	---	---	---	8.0	6.5	7.0	18.5	15.0	16.0	26.0	23.5	25.0
21	---	---	---	9.5	6.5	8.0	17.5	13.5	15.5	27.0	23.5	25.0
22	---	---	---	12.0	7.5	9.5	19.0	15.0	17.0	26.0	24.0	25.0
23	---	---	---	13.5	10.0	11.5	20.5	15.5	18.0	25.5	23.5	24.5
24	---	---	---	14.5	11.0	12.5	20.5	16.5	18.5	27.5	23.5	25.5
25	---	---	---	17.0	13.0	15.0	21.5	17.5	19.5	26.5	22.5	24.0
26	---	---	---	16.5	14.5	15.5	21.0	17.0	19.0	26.0	22.0	24.0
27	---	---	---	16.0	15.0	15.5	17.0	14.5	16.0	27.0	23.5	25.5
28	---	---	---	17.5	14.5	16.0	---	---	---	28.5	24.0	26.0
29	---	---	---	19.0	16.0	17.5	14.0	13.0	13.5	30.5	25.5	28.0
30	---	---	---	18.5	17.0	18.0	19.0	13.0	15.5	30.0	25.5	27.5
31	---	---	---	17.5	15.0	16.0	---	---	---	29.5	24.0	27.0
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	30.5	25.0	28.0	32.0	25.5	29.0	35.5	26.5	30.5	---	---	---
2	31.0	25.0	28.0	34.0	25.5	29.5	33.0	26.5	30.0	---	---	---
3	31.0	25.0	28.0	34.0	26.0	29.5	30.0	26.5	28.0	32.5	25.0	28.5
4	28.5	21.5	24.0	34.0	26.5	30.0	27.5	25.5	26.5	33.5	24.5	29.0
5	21.5	19.0	20.5	30.0	26.5	28.5	29.5	24.0	26.5	34.0	25.0	29.5
6	25.0	17.5	21.0	33.5	26.5	29.5	31.5	23.5	27.0	32.0	24.5	28.0
7	25.5	20.0	23.0	35.5	27.0	30.5	33.0	24.0	28.0	33.5	24.5	28.5
8	23.5	21.0	22.5	32.0	26.0	29.5	28.5	24.5	26.5	32.5	25.5	28.5
9	29.0	22.5	25.0	35.0	27.5	31.0	32.5	25.0	28.5	30.0	23.0	26.0
10	28.0	24.0	26.5	35.0	27.5	31.5	29.0	25.0	27.0	28.5	20.5	24.5
11	26.5	23.0	24.5	34.0	27.5	30.5	31.0	24.5	27.5	28.5	21.5	24.5
12	29.5	23.5	26.0	34.5	26.5	30.5	32.0	25.5	28.5	25.5	22.0	24.0
13	31.0	26.0	28.5	35.0	27.5	31.0	32.0	25.5	28.5	23.0	21.5	22.5
14	30.0	25.0	27.5	35.5	27.5	31.0	32.0	25.0	28.5	29.0	23.0	25.5
15	28.0	23.5	26.0	34.0	27.0	30.5	33.0	24.5	28.5	28.5	23.0	25.5
16	29.5	22.5	26.0	33.5	26.5	30.0	33.5	25.5	29.0	26.5	23.0	24.5
17	29.0	23.5	26.5	34.5	25.5	30.0	34.0	25.0	29.0	28.0	23.0	25.0
18	32.5	25.0	28.5	34.0	26.0	30.0	34.0	25.5	29.5	29.0	23.0	25.5
19	33.0	26.5	30.0	34.5	26.0	30.0	34.5	26.0	30.0	28.5	23.0	25.5
20	33.0	26.5	29.5	34.0	26.0	30.0	33.5	27.0	30.5	29.0	22.0	25.0
21	33.0	27.0	30.0	34.0	26.0	30.0	33.0	26.5	29.5	29.0	22.5	25.0
22	33.0	26.0	29.5	34.5	26.0	30.0	32.5	26.0	29.0	23.5	17.5	20.5
23	31.5	25.5	28.5	35.0	26.0	30.0	33.0	26.0	29.5	19.0	17.0	18.0
24	31.0	24.0	27.5	34.5	27.5	30.5	33.0	26.5	29.5	---	---	---
25	31.5	23.0	27.5	35.0	27.0	30.5	34.5	26.5	30.0	---	---	---
26	32.0	24.0	28.0	34.0	25.5	29.5	33.0	27.0	30.0	28.5	23.5	25.5
27	33.5	25.0	29.0	36.5	26.5	31.0	33.0	26.0	29.5	30.5	24.0	27.0
28	34.0	26.0	30.0	34.5	28.0	31.0	33.0	26.5	29.0	31.5	25.5	28.0
29	33.5	26.5	30.0	34.0	27.0	30.0	32.5	24.5	28.5	31.0	25.5	28.0
30	31.5	26.5	29.0	34.0	25.5	29.5	32.5	23.0	27.0	30.0	24.5	27.0
31	---	---	---	34.5	26.5	30.0	---	---	---	---	---	---
MONTH	34.0	17.5	27.0	36.5	25.5	30.1	---	---	---	---	---	---

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.2	6.3	11.1	9.8	8.1	8.8	---	---	---	12.6	11.4	12.1
2	8.9	5.3	6.8	10.3	8.5	9.3	11.1	10.2	10.7	11.4	10.2	11.1
3	9.6	6.7	7.8	10.7	9.0	9.8	11.1	8.9	10.0	10.8	10.0	10.3
4	---	---	---	---	---	---	12.1	11.1	11.6	11.4	10.0	10.8
5	---	---	---	---	---	---	12.8	11.5	12.2	11.4	11.0	11.2
6	---	---	---	11.3	9.3	10.3	13.2	12.1	12.6	11.3	11.0	11.1
7	---	---	---	11.0	9.5	10.3	12.7	12.0	12.4	11.7	11.3	11.6
8	8.7	7.1	7.8	---	---	---	12.5	11.2	11.9	12.2	11.7	12.0
9	7.8	6.0	7.1	---	---	---	11.9	11.2	11.6	12.4	12.1	12.2
10	7.6	6.8	7.2	10.9	9.7	10.3	12.6	11.2	12.1	12.6	12.1	12.4
11	7.9	6.5	7.1	11.5	10.1	10.7	13.2	12.4	12.8	12.4	11.3	11.8
12	7.5	6.0	6.7	11.7	10.4	10.9	13.5	12.7	13.1	---	---	---
13	8.3	6.8	7.6	11.5	10.0	10.7	13.8	12.6	13.3	---	---	---
14	8.4	7.7	8.1	11.1	10.0	10.5	13.3	12.4	12.8	---	---	---
15	8.8	8.0	8.4	12.1	11.1	11.7	13.2	12.0	12.6	---	---	---
16	8.7	8.0	8.3	12.6	11.5	12.0	12.6	11.7	12.1	---	---	---
17	9.2	8.1	8.6	12.5	11.6	11.9	12.6	11.2	12.0	---	---	---
18	9.6	8.1	8.8	11.8	10.7	11.5	12.0	10.8	11.4	---	---	---
19	10.3	8.0	9.0	11.4	10.5	11.0	11.8	10.7	11.2	---	---	---
20	11.4	8.3	9.5	11.4	10.5	10.9	12.5	10.8	11.7	---	---	---
21	10.9	8.5	9.4	11.3	10.3	10.9	12.0	10.5	11.3	---	---	---
22	11.2	8.9	9.8	11.1	10.0	10.5	11.8	11.2	11.6	12.7	11.9	12.3
23	10.1	8.1	9.0	11.4	9.9	10.7	12.2	11.1	11.8	12.8	12.1	12.4
24	9.0	8.1	8.5	11.7	9.8	10.6	11.7	11.1	11.4	12.8	11.4	12.2
25	9.2	8.4	8.8	11.6	9.4	10.5	12.2	11.6	12.0	12.1	10.6	11.4
26	10.7	8.9	10.1	11.6	9.2	10.4	12.3	12.2	12.3	11.0	10.2	10.6
27	10.7	9.4	10.2	---	---	---	12.7	12.1	12.4	11.7	10.4	11.0
28	10.4	9.1	9.7	---	---	---	12.6	12.3	12.5	10.7	9.3	10.1
29	10.1	9.1	9.6	---	---	---	12.9	11.9	12.6	11.9	9.7	10.8
30	9.4	8.3	9.0	---	---	---	12.5	11.8	12.1	11.7	9.6	10.7
31	9.5	8.2	8.7	---	---	---	12.8	11.8	12.3	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	13.1	11.1	12.1	---	---	---	10.9	9.1	10.1
2	---	---	---	13.2	11.4	12.3	---	---	---	11.0	9.2	10.0
3	---	---	---	13.1	11.4	12.3	11.8	9.7	10.7	11.3	9.2	10.2
4	---	---	---	12.5	10.6	11.6	11.8	10.6	11.1	11.5	9.0	10.1
5	12.6	11.8	12.2	12.0	10.3	11.2	11.9	10.6	11.2	11.2	8.8	9.9
6	13.4	12.3	12.8	12.9	11.1	12.0	11.3	9.9	10.6	11.3	8.9	9.8
7	13.5	12.1	12.8	11.8	10.2	11.0	10.7	9.8	10.2	12.9	8.4	10.3
8	12.7	11.8	12.3	12.3	10.2	11.4	10.9	9.7	10.2	12.8	8.3	10.2
9	12.4	11.1	11.9	13.4	11.9	12.7	11.3	10.0	10.6	9.8	6.9	8.3
10	12.3	10.9	11.6	13.8	12.0	13.0	11.2	10.2	10.6	10.2	7.5	9.1
11	12.6	11.5	12.1	13.5	11.9	12.7	11.1	9.8	10.4	11.9	8.9	10.1
12	12.5	11.4	12.0	13.9	12.5	13.3	11.0	9.5	10.2	12.6	8.7	10.3
13	12.6	11.3	12.0	13.1	11.0	12.4	10.9	9.3	9.9	15.6	8.2	11.3
14	12.5	11.2	11.8	12.1	10.9	11.4	10.7	9.0	9.7	17.0	8.3	12.0
15	12.4	11.0	11.6	11.7	10.2	10.8	10.5	8.9	9.6	14.8	8.2	11.1
16	12.2	11.1	11.6	---	---	---	10.8	9.1	10.0	12.1	8.8	10.2
17	12.5	11.2	11.8	---	---	---	11.0	9.6	10.3	12.6	9.0	10.5
18	12.5	11.2	11.8	---	---	---	10.9	9.6	10.2	---	---	---
19	12.7	10.9	11.6	---	---	---	10.7	9.2	10.0	---	---	---
20	12.5	10.6	11.5	---	---	---	10.7	9.4	10.0	14.8	8.4	11.1
21	12.8	10.7	11.6	---	---	---	10.5	9.1	9.8	18.5	8.3	12.5
22	12.7	10.8	11.5	---	---	---	10.5	9.4	9.9	12.1	7.6	9.7
23	12.8	10.8	11.6	---	---	---	10.5	9.1	9.9	---	---	---
24	12.8	10.2	11.4	10.9	10.0	10.5	10.5	9.2	9.8	---	---	---
25	11.6	9.6	10.5	11.2	10.2	10.7	10.3	9.1	9.6	---	---	---
26	12.7	9.4	10.9	11.2	10.1	10.6	9.8	7.6	9.0	---	---	---
27	13.0	10.2	11.5	10.7	10.1	10.3	---	---	---	---	---	---
28	13.2	10.7	11.9	11.6	10.0	10.7	---	---	---	---	---	---
29	---	---	---	11.5	10.3	10.8	10.6	9.7	10.2	9.0	6.5	7.5
30	---	---	---	---	---	---	11.0	9.6	10.5	12.5	6.5	8.9
31	---	---	---	---	---	---	---	---	---	11.9	6.4	8.7
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	12.0	6.3	8.6	14.2	3.1	7.6	15.4	2.0	7.0	---	---	---
2	13.2	5.8	9.0	17.8	3.3	9.0	---	---	---	---	---	---
3	12.3	5.8	8.5	17.4	2.6	9.0	---	---	---	12.3	3.1	6.7
4	9.5	5.8	7.7	17.6	3.3	9.1	---	---	---	12.7	3.0	6.8
5	11.3	7.1	9.0	11.5	3.4	7.0	---	---	---	12.4	2.8	6.5
6	12.6	7.0	9.3	11.8	4.1	7.3	---	---	---	11.3	2.8	6.1
7	11.1	5.4	7.9	11.9	4.1	7.4	19.9	4.8	10.7	12.1	2.7	6.3
8	9.0	3.9	6.2	12.0	4.2	7.2	11.2	4.4	6.8	11.7	2.6	6.1
9	11.0	3.2	5.8	16.2	2.6	7.9	17.6	5.0	10.2	11.2	3.1	6.4
10	12.4	4.6	8.1	15.7	3.1	8.2	15.9	4.1	8.6	11.1	3.4	6.5
11	6.5	3.9	5.3	18.0	2.4	8.3	17.6	4.7	10.0	10.6	3.3	6.3
12	12.2	5.7	8.3	18.0	2.2	8.6	18.0	4.2	10.1	9.4	3.1	5.8
13	11.8	5.9	8.1	18.1	1.9	8.6	17.4	3.9	9.5	6.2	1.9	3.8
14	13.4	5.7	8.0	17.4	1.8	8.3	16.5	3.9	9.1	4.8	2.0	3.2
15	14.4	5.9	9.7	16.4	2.3	8.4	16.6	3.8	9.1	6.4	3.0	4.5
16	15.5	6.7	10.5	17.7	2.8	9.0	17.6	3.8	9.3	4.2	1.4	2.8
17	13.4	6.4	9.6	17.3	2.8	8.6	---	---	---	7.3	3.2	4.7
18	15.3	6.6	10.2	17.9	2.7	8.8	---	---	---	8.2	3.7	5.4
19	15.2	6.1	9.9	18.2	2.2	8.7	---	---	---	9.3	3.4	5.8
20	13.9	6.2	9.4	16.0	2.0	7.6	19.8	3.5	10.1	9.4	3.0	5.4
21	15.1	5.9	9.9	17.2	2.1	8.5	18.0	3.6	9.3	10.5	2.7	5.5
22	15.1	6.3	10.0	18.7	2.3	8.8	16.1	3.9	8.6	---	---	---
23	17.1	6.0	10.6	---	---	---	15.6	3.6	8.3	---	---	---
24	17.0	6.1	10.9	---	---	---	13.8	3.7	7.7	---	---	---
25	14.5	6.2	9.9	19.3	3.3	9.7	14.7	3.5	7.6	---	---	---
26	14.8	5.3	9.3	15.8	3.0	8.1	14.7	2.6	7.6	13.7	6.1	8.9
27	17.3	4.7	9.8	17.2	2.6	8.1	13.1	2.7	7.0	18.4	5.4	10.6
28	17.2	3.8	9.3	14.0	1.6	6.6	12.3	2.1	6.2	17.7	4.1	9.6
29	13.7	3.2	7.6	13.5	1.7	6.4	11.9	2.9	6.6	17.0	3.6	8.9
30	11.4	3.3	6.6	14.2	1.9	6.6	---	---	---	15.6	3.7	8.0
31	---	---	---	14.1	2.3	6.8	---	---	---	---	---	---
MONTH	17.3	3.2	8.8	---	---	---	---	---	---	---	---	---

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK

LOCATION.--Lat 35°30'01", long 97°11'37", in SW ¼ NW ¼ 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 fair. 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	337	467	355	700	2990	611	1410	1110	616	232	133	112
2	563	366	379	734	2410	625	1280	1140	510	194	124	113
3	1060	351	742	814	1660	626	1100	1140	415	180	121	115
4	936	360	796	3510	860	569	1250	1100	450	168	127	113
5	1290	351	617	4140	e780	525	1280	1090	443	166	127	109
6	1270	334	457	3630	660	542	1380	1080	420	269	127	105
7	1260	337	492	2610	e650	634	1610	1050	339	239	128	93
8	1100	293	543	2350	e735	1510	1370	1030	341	193	130	104
9	1440	287	579	1920	719	1290	1350	1170	560	283	378	107
10	1600	379	492	1370	739	766	1410	1740	606	206	173	110
11	1040	445	502	1160	913	608	1290	1160	1310	177	137	106
12	1700	396	509	1220	944	708	1210	1000	1170	163	130	106
13	2460	402	467	1170	841	677	1190	780	713	160	121	139
14	1440	548	463	1080	755	617	1250	660	649	154	120	334
15	986	619	461	1040	689	593	1250	689	454	165	117	221
16	895	505	433	1020	712	7530	1180	892	375	165	109	169
17	663	483	367	973	735	10300	1170	1010	396	163	104	388
18	572	433	353	877	813	8600	1190	1000	427	158	106	197
19	426	325	355	929	771	8670	1190	985	367	156	101	166
20	578	320	347	953	833	6360	1180	721	361	150	121	136
21	576	352	612	927	798	4800	1280	433	345	153	179	117
22	663	345	1120	919	765	2650	1200	481	314	143	190	841
23	576	344	781	803	764	1990	1120	943	303	140	190	1670
24	997	339	3190	738	756	1910	1070	1160	263	140	183	514
25	791	338	2270	778	645	1890	1100	1140	261	137	165	242
26	655	348	2250	1160	524	1780	1190	1440	245	134	130	183
27	590	346	1560	1230	643	1990	6060	1350	238	131	121	161
28	547	423	1420	830	613	1920	3170	1000	208	134	117	164
29	527	442	1070	778	---	1630	1620	1080	207	141	115	144
30	522	365	749	806	---	1410	1250	869	234	140	111	147
31	511	---	862	705	---	1910	---	644	---	134	108	---
TOTAL	28571	11643	25593	41874	25717	76241	44600	31087	13540	5268	4343	7226
MEAN	922	388	826	1351	918	2459	1487	1003	451	170	140	241
MAX	2460	619	3190	4140	2990	10300	6060	1740	1310	283	378	1670
MIN	337	287	347	700	524	525	1070	433	207	131	101	93
AC-FT	56670	23090	50760	83060	51010	151200	88460	61660	26860	10450	8610	14330

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1998, BY WATER YEAR (WY)

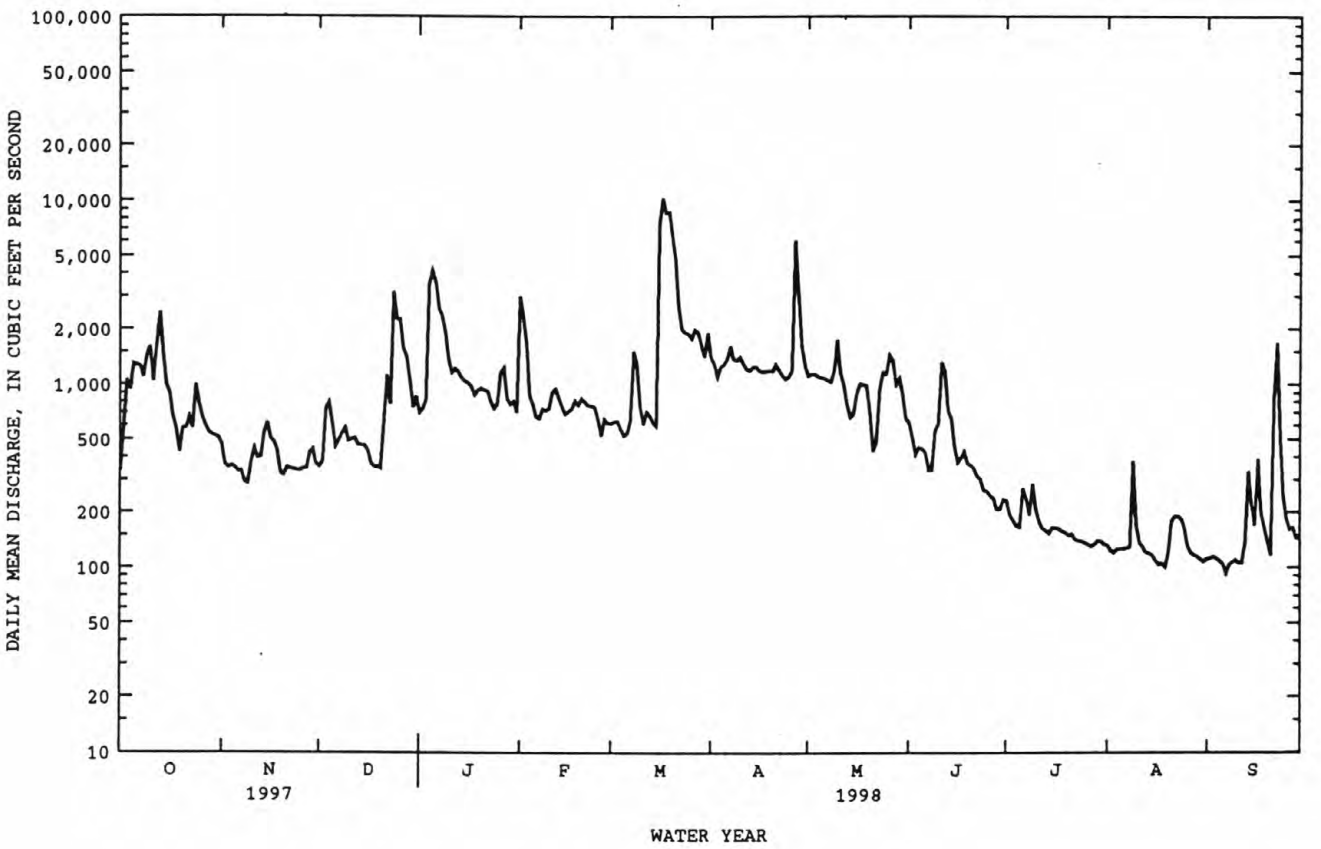
MEAN	445	388	325	318	375	592	553	963	932	380	283	329
MAX	3634	1627	1209	1351	1293	2596	2312	4265	4041	1154	1228	1699
(WY)	1987	1975	1992	1998	1987	1990	1988	1993	1989	1989	1989	1989
MIN	71.3	56.7	68.1	58.3	61.1	76.1	76.6	79.5	75.5	87.7	54.5	64.0
(WY)	1970	1970	1977	1970	1970	1971	1971	1971	1972	1970	1972	1972

e Estimated

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1969 - 1998	
ANNUAL TOTAL	331634		315703			
ANNUAL MEAN	909		865		490	
HIGHEST ANNUAL MEAN					1322	1987
LOWEST ANNUAL MEAN					93.0	1972
HIGHEST DAILY MEAN	5590	Apr 13	10300	Mar 17	20000	May 29 1987
LOWEST DAILY MEAN	185	Sep 30	93	Sep 7	28	Aug 8 1972
ANNUAL SEVEN-DAY MINIMUM	278	Sep 12	104	Sep 6	31	Jul 30 1972
INSTANTANEOUS PEAK FLOW			11000	Mar 17	27200	May 29 1987
INSTANTANEOUS PEAK STAGE			15.66	Mar 17	[a]22.64	May 29 1987
ANNUAL RUNOFF (AC-FT)	657800		626200		355300	
10 PERCENT EXCEEDS	1670		1580		1050	
50 PERCENT EXCEEDS	648		612		218	
90 PERCENT EXCEEDS	332		132		71	

[a]At present site.



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 malfunctions 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, dis- solved oxygen, and alkalinity were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily (observed), 4,700 microsiemens, Sept. 25, 1980; minimum, 125 microsiemens, Apr. 21, 1990.
pH: Maximum, 9.5 units, June 13, 14, 1996; 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.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded (greater than 20% missing record), 1,560 microsiemens, May 17; minimum recorded, 171 microsiemens, Mar. 16, 17.
pH: Maximum recorded (greater than 20% missing record), 9.2 units, July 31; minimum recorded, 7.5 units, Apr. 26, 27.
WATER TEMPERATURE: Maximum, 35.5°C, July 14; minimum, 2.0°C Dec. 29.
DISSOLVED OXYGEN: Maximum recorded (greater than 20% missing record), 18.1 mg/L, June 25; minimum recorded, 4.6 mg/L, June 27.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
30...	1027	9.00	28.5	734	1028	1028	250	5.34	1170	13.5	8.8
30...	1030	19.0	28.0	734	1028	1028	250	5.34	1160	14.6	8.8
30...	1033	29.0	28.0	734	1028	1028	250	5.34	1170	14.8	8.8
30...	1035	39.0	28.0	734	1028	1028	250	5.34	1160	14.8	8.8
30...	1037	49.0	28.0	734	1028	1028	250	5.34	1160	14.7	8.8
30...	1040	59.0	28.0	734	1028	1028	250	5.34	1170	14.7	8.8
30...	1043	69.0	28.0	734	1028	1028	250	5.34	1160	14.4	8.8
30...	1048	79.0	28.0	734	1028	1028	250	5.34	1160	8.8	8.8
30...	1052	89.0	28.0	734	1028	1028	250	5.34	1160	14.1	8.8
30...	1057	99.0	28.0	734	1028	1028	250	5.34	1160	14.1	8.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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												
15...	1015	1028	80020	960	692	8.1	19.5	17.5	130	750	8.1	86
NOV												
18...	1100	1028	80020	409	1250	8.3	10.5	6.5	16	746	10.9	91
DEC												
10...	1030	1028	80020	478	1210	8.2	2.5	6.5	11	742	11.2	94
JAN												
13...	1015	1028	80020	1070	1290	8.3	-5.0	3.5	54	748	11.9	91
FEB												
10...	1045	1028	80020	710	1260	8.4	6.0	9.0	23	738	11.2	101
MAR												
17...	1252	1028	80020	9940	373	8.2	9.5	9.5	410	734	10.2	92
APR												
15...	1035	1028	80020	1200	1370	8.3	19.0	19.5	67	732	9.0	103
MAY												
20...	1010	1028	80020	780	1350	8.3	29.0	24.5	29	739	8.2	102
JUN												
17...	1100	1028	80020	381	1130	8.7	33.0	25.0	22	734	11.3	143
JUL												
07...	1145	1028	80020	250	1230	8.7	41.5	30.0	10	737	12.6	173
AUG												
11...	1300	1028	80020	139	1120	8.8	27.0	26.5	2.3	737	13.5	174
SEP												
02...	0922	1028	80020	119	1250	8.1	23.5	24.5	3.2	735	6.6	83

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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 15...	2.9	3.2	3900	--	--	--	--	--	--	--	--	--
NOV 18...	2.5	--	500	130	390	150	93	37	110	38	2	6.5
DEC 10...	1.6	5.0	--	720	--	--	--	--	--	--	--	--
JAN 13...	1.6	4.0	510	270	--	--	--	--	--	--	--	--
FEB 10...	1.9	2.6	530	K180	410	150	100	39	108	36	2	5.9
MAR 17...	1.5	7.9	K17000	80000	--	--	--	--	--	--	--	--
APR 15...	.79	2.0	1000	670	--	--	--	--	--	--	--	--
MAY 20...	.69	--	560	200	420	190	100	40	120	38	3	5.9
JUN 17...	.66	9.7	95	40	--	--	--	--	--	--	--	--
JUL 07...	3.5	17	K27	52	--	--	--	--	--	--	--	--
AUG 11...	6.5	11	K3200	2300	270	110	57	30	123	49	3	4.5
SEP 02...	5.7	11	K46	K14000	--	--	--	--	--	--	--	--

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)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2) (00405)	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)
OCT 15...	131	0	107	1.7	--	--	--	--	--	--	--	--
NOV 18...	281	0	230	2.3	210	120	.69	14	734	741	1.00	811
DEC 10...	303	0	248	2.7	--	--	--	--	--	--	--	--
JAN 13...	266	0	218	2.2	--	--	--	--	--	--	--	--
FEB 10...	327	*0	268	2.4	200	120	.71	14	776	756	1.06	1490
MAR 17...	88	0	72	1.6	--	--	--	--	--	--	--	--
APR 15...	288	0	236	2.3	--	--	--	--	--	--	--	--
MAY 20...	--	--	225	2.1	240	160	.73	8.5	856	824	1.16	1800
JUN 17...	225	6	194	.8	--	--	--	--	--	--	--	--
JUL 07...	219	15	205	.8	--	--	--	--	--	--	--	--
AUG 11...	169	14	162	.5	140	150	.97	8.6	667	634	.91	250
SEP 02...	215	0	176	2.6	--	--	--	--	--	--	--	--

*pH of filtered sample <8.3: therefore no carbonate value.

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	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											
15...	284	2.40	11	.042	.14	2.44	.074	.10	.35	.43	.251
NOV											
18...	38	2.07	9.2	.022	.07	2.09	<.020	--	--	.39	.373
DEC											
10...	44	1.16	5.1	.025	.08	1.19	.028	.04	.43	.46	.142
JAN											
13...	154	1.10	4.9	.024	.08	1.12	.039	.05	.42	.46	.147
FEB											
10...	80	1.44	6.4	.022	.07	1.46	.033	.04	.43	.46	.169
MAR											
17...	4	.745	3.3	.033	.11	.778	.244	.31	.52	.76	.111
APR											
15...	174	.337	1.5	.016	.05	.353	.103	.13	.33	.44	.183
MAY											
20...	140	.244	1.1	.031	.10	.275	.020	.03	.40	.42	.136
JUN											
17...	57	.063	.28	.021	.07	.084	.088	.11	.49	.58	.036
JUL											
07...	40	2.36	10	.028	.09	2.39	.056	.07	1.1	1.1	.291
AUG											
11...	41	5.61	25	.047	.15	5.66	.055	.07	.82	.88	1.15
SEP											
02...	28	3.74	17	.246	.81	3.99	.503	.65	1.2	1.8	1.26

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											
15...	.242	.74	--	--	--	--	--	--	--	--	--
NOV											
18...	.404	1.2	4	141	<.50	<1.0	<5.0	<3.0	<10	6.4	<10
DEC											
10...	.143	.44	--	--	--	--	--	--	--	--	--
JAN											
13...	.154	.47	--	--	--	--	--	--	--	--	--
FEB											
10...	.171	.52	3	165	<1.0	<8.0	<14	<12	<10	<10	<100
MAR											
17...	.106	.33	--	--	--	--	--	--	--	--	--
APR											
15...	.164	.50	--	--	--	--	--	--	--	--	--
MAY											
20...	.164	.50	4	150	<1.0	<8.0	<14	<12	<10	<10	<100
JUN											
17...	.044	.13	--	--	--	--	--	--	--	--	--
JUL											
07...	.226	.69	--	--	--	--	--	--	--	--	--
AUG											
11...	1.03	3.2	5	121	<1.0	<8.0	<14	<12	<10	13	<100
SEP											
02...	.991	3.0	--	--	--	--	--	--	--	--	--

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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 15...	--	--	--	--	--	--	--	--	--	--	--
NOV 18...	30	6.2	<.1	<10	<10	<1	<1.0	944	6	<3.0	7.2
DEC 10...	--	--	--	--	--	--	--	--	--	--	--
JAN 13...	--	--	--	--	--	--	--	--	--	--	--
FEB 10...	29	11	<.1	<60	<40	<1	<4.0	1030	<10	<20	7.0
MAR 17...	--	--	--	--	--	--	--	--	--	--	--
APR 15...	--	--	--	--	--	--	--	--	--	--	--
MAY 20...	34	<4.0	<.1	<60	<40	<1	<4.0	1050	10	<20	5.9
JUN 17...	--	--	--	--	--	--	--	--	--	--	--
JUL 07...	--	--	--	--	--	--	--	--	--	--	--
AUG 11...	29	4.0	<.1	<60	<40	<1	<4.0	777	<10	<20	14
SEP 02...	--	--	--	--	--	--	--	--	--	--	--

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	BROM-ACIL WATER WHLREC (UG/L) (30234)	BUTA-CHLOR WATER WHLREC (UG/L) (30235)	BUTYL-ATE WATER WHLREC (UG/L) (30236)	CARBOX-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)	PCNS UNFILT RECOVER (UG/L) (39250)	HEXAZI-NONE WATER WHOLE RECOV-ERABLE (UG/L) (30264)
NOV 18...	1100	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200
FEB 10...	1045	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200
MAY 20...	1010	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200
JUN 17...	1100	1028	80020	--	--	--	--	--	--	--	--	--
JUL 07...	1145	1028	80020	--	--	--	--	--	--	--	--	--
AUG 11...	1300	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200
SEP 02...	0922	1028	80020	--	--	--	--	--	--	--	--	--

DATE	METOLA-CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	METRI-BUZIN WATER WHOLE TOT.REC (UG/L) (82611)	FONOFOS (DY-FONATE) WATER WHOLE TOT.REC (UG/L) (82614)	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)	AME-TRYNE TOTAL (UG/L) (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)
NOV 18...	<.200	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.100	<.100	<.200	<.200
FEB 10...	<.200	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.100	.200	<.200	<.200
MAY 20...	<.200	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.100	.100	<.200	<.200
JUN 17...	--	--	<.010	--	--	--	--	--	--	--	--	--
JUL 07...	--	--	<.010	--	--	--	--	--	--	--	--	--
AUG 11...	<.200	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.100	<.100	<.200	<.200
SEP 02...	--	--	<.010	--	--	--	--	--	--	--	--	--

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	CHLORDANE, TECHNICAL TOTAL (UG/L) (39350)	CHLORPYRIFOS TOTAL RECOVER (UG/L) (38932)	CYANAZINE TOTAL (UG/L) (81757)	2,4-D, TOTAL (UG/L) (39730)	P,P'-DDD UNFILT RECOVER (UG/L) (39360)	P,P'-DDE, TOTAL (UG/L) (39365)	P,P'-DDT UNFILT RECOVER (UG/L) (39370)	DEF TOTAL (UG/L) (39040)	DIAZINON, TOTAL (UG/L) (39570)	DIELDRIN TOTAL (UG/L) (39380)	DISULFOTON UNFILT RECOVER (UG/L) (39011)	2,4-DP TOTAL (UG/L) (82183)
NOV												
18...	<.100	.010	<.200	.046	<.001	<.001	<.001	<.010	.030	<.001	<.020	<.010
FEB												
10...	<.100	<.010	<.200	.102	<.001	<.001	<.001	<.010	<.010	.001	<.010	<.010
MAY												
20...	<.100	<.010	<.200	.039	<.001	<.001	<.001	<.040	.020	.002	<.010	<.010
JUN												
17...	--	<.010	--	--	--	--	--	<.010	.030	--	<.010	--
JUL												
07...	--	<.010	--	--	--	--	--	<.010	.040	--	<.010	--
AUG												
11...	<.100	<.010	<.200	.074	<.001	<.001	<.001	<.010	.034	.002	<.010	<.010
SEP												
02...	--	<.010	--	--	--	--	--	<.010	.047	--	<.010	--

DATE	ENDOSULFAN I TOTAL (UG/L) (39388)	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	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)	PARATHION, TOTAL (UG/L) (39540)	PERTHANE TOTAL (UG/L) (39034)
NOV												
18...	<.001	<.001	<.010	<.001	<.001	.003	<.020	<.010	<.010	<.010	<.010	<.100
FEB												
10...	<.001	<.001	<.010	<.001	<.001	.004	<.010	<.010	<.010	<.010	<.010	<.100
MAY												
20...	<.001	<.001	<.010	<.001	<.001	.004	<.030	<.010	<.010	<.010	<.010	<.100
JUN												
17...	--	--	<.010	--	--	--	<.010	--	<.010	--	<.010	--
JUL												
07...	--	--	<.010	--	--	--	<.010	--	<.010	--	<.010	--
AUG												
11...	<.001	<.001	<.010	<.001	.001	.020	<.010	<.010	<.010	<.010	<.010	<.100
SEP												
02...	--	--	<.010	--	--	--	<.010	--	<.010	--	<.010	--

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)	TRIFLURALIN TOTAL RECOVER (UG/L) (39030)	TOTAL TRITHION (UG/L) (39786)
NOV											
18...	<.010	<.200	<.100	<.100	<.010	.157	<.100	<.010	<1.00	<.100	<.010
FEB											
10...	<.010	<.200	<.100	<.100	<.010	.150	<.100	<.010	<1.00	<.100	<.010
MAY											
20...	<.010	<.200	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<.100	<.010
JUN											
17...	<.010	--	--	--	--	--	--	--	--	--	<.010
JUL											
07...	<.010	--	--	--	--	--	--	--	--	--	<.010
AUG											
11...	<.010	<.200	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<.100	<.010
SEP											
02...	<.010	--	--	--	--	--	--	--	--	--	<.010

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	1260	1230	1250	---	---	---	---	---	---
2	---	---	---	1240	1220	1230	---	---	---	---	---	---
3	---	---	---	1270	1240	1250	---	---	---	---	---	---
4	---	---	---	1280	1200	1250	---	---	---	---	---	---
5	---	---	---	1280	1250	1260	1230	1190	1210	---	---	---
6	---	---	---	1300	1280	1290	1270	1210	1230	---	---	---
7	---	---	---	1300	1260	1280	1280	1270	1280	---	---	---
8	---	---	---	1290	1230	1250	1270	1210	1230	---	---	---
9	---	---	---	1280	1250	1260	1230	1080	1120	---	---	---
10	1030	891	970	1320	1250	1280	1250	1170	1210	---	---	---
11	996	976	986	1290	1130	1170	1290	1250	1270	---	---	---
12	1150	507	967	1240	1160	1210	1300	1280	1290	---	---	---
13	546	373	419	1240	1200	1210	1300	1280	1290	---	---	---
14	---	---	---	1220	1090	1160	1310	1280	1300	---	---	---
15	---	---	---	1150	1000	1070	1310	1270	1290	---	---	---
16	---	---	---	1210	1110	1170	1300	1260	1280	---	---	---
17	---	---	---	1260	1210	1240	1280	1240	1270	---	---	---
18	---	---	---	1270	1230	1250	1280	1240	1260	---	---	---
19	---	---	---	1230	1170	1190	1270	1240	1250	---	---	---
20	---	---	---	1220	1180	1200	1350	1260	1270	---	---	---
21	---	---	---	1260	1230	1240	1270	979	1120	---	---	---
22	1360	1280	1320	1270	1230	1250	998	495	578	---	---	---
23	1280	1250	1260	1270	1240	1250	---	---	---	---	---	---
24	1270	741	1020	1280	1240	1260	---	---	---	---	---	---
25	1090	759	909	1280	1240	1250	---	---	---	---	---	---
26	1120	1020	1070	1280	1250	1260	---	---	---	---	---	---
27	1210	1020	1140	1270	1250	1260	---	---	---	1210	944	1070
28	1240	1180	1210	1270	974	1120	---	---	---	1270	1210	1250
29	1250	1210	1240	1210	1050	1120	---	---	---	1330	1250	1300
30	1280	1230	1260	1230	1100	1170	---	---	---	1340	1300	1320
31	1280	1250	1260	---	---	---	---	---	---	1310	1030	1260
MONTH	---	---	---	1320	974	1220	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1030	380	630	1320	1280	1300	1300	1170	1260	---	---	---
2	590	412	548	1320	1280	1300	1340	1260	1300	---	---	---
3	806	581	671	1320	1260	1290	1350	1250	1320	---	---	---
4	844	789	784	1310	1260	1280	1380	1310	1350	---	---	---
5	947	844	907	1350	1250	1310	1380	1320	1350	---	---	---
6	1100	944	1020	1340	1300	1310	1410	1370	1400	---	---	---
7	1150	1100	1120	1330	1070	1330	1410	1400	1410	---	---	---
8	1220	1150	1190	1210	679	868	1410	1380	1390	1450	1410	1440
9	1240	1210	1220	1110	934	1040	1400	1390	1390	1450	1360	1410
10	1270	1220	1240	1170	1110	1150	1390	1360	1380	1410	825	1050
11	1310	1270	1290	1280	1160	1200	1370	1330	1350	1320	1150	1210
12	1290	1260	1270	1300	1270	1280	1380	1360	1370	1490	1280	1360
13	1300	1290	1300	1320	1290	1300	1370	1350	1360	1450	1330	1360
14	1320	1290	1300	1320	1300	1310	1370	1300	1340	1440	1280	1340
15	1310	1290	1300	1320	823	1200	1360	1340	1350	1360	1290	1320
16	1310	1290	1300	823	171	383	---	---	---	1450	1360	1400
17	1310	1290	1300	351	171	295	---	---	---	1560	1370	1420
18	1330	1290	1310	626	343	524	1430	1400	1410	1420	1370	1390
19	1310	1280	1290	629	425	546	1440	1390	1420	1420	1360	1390
20	1310	1250	1270	526	436	478	1430	1400	1410	1380	1280	1330
21	1290	1250	1270	520	444	474	1420	1350	1400	1310	1200	1250
22	1290	1270	1280	627	520	580	---	---	---	1290	1200	1240
23	1320	1280	1300	754	627	687	1410	1390	1400	1380	1270	1330
24	1310	1270	1290	1050	754	880	1430	1360	1400	1380	1290	1340
25	1300	1240	1270	1220	1050	1150	---	---	---	1340	1280	1310
26	1300	1240	1260	1300	1220	1260	---	---	---	---	---	---
27	1310	1280	1290	1330	1290	1310	1100	373	569	---	---	---
28	1310	1250	1280	1320	1280	1300	625	390	545	---	---	---
29	---	---	---	1330	1290	1330	856	625	727	---	---	---
30	---	---	---	1330	1310	1330	---	---	---	---	---	---
31	---	---	---	1330	778	1090	---	---	---	---	---	---
MONTH	1330	380	1160	1350	171	1040	---	---	---	---	---	---

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	1250	1090	1180	1180	1120	1150	---	---	---
2	---	---	---	1200	1120	1160	1210	1100	1160	1220	1120	1160
3	1310	1210	1260	1190	1090	1130	1210	1080	1140	1280	1160	1210
4	1300	1180	1220	1210	1090	1130	1140	1080	1100	1260	1120	1190
5	1180	1130	1140	1190	1020	1110	1200	1100	1150	1280	1170	1210
6	1220	1100	1150	1400	1060	1290	1160	1080	1120	1270	1160	1210
7	1180	1080	1130	1370	1250	1300	1120	1050	1090	1290	1170	1220
8	1160	1100	1120	1250	1080	1130	1080	985	1040	1280	1150	1220
9	1140	972	1080	1200	1020	1120	---	---	---	1200	1130	1150
10	1120	832	992	1060	933	994	---	---	---	1220	1050	1140
11	1090	420	820	1060	982	1010	1120	1070	1090	1190	1120	1150
12	513	327	416	1160	976	1060	1190	1070	1120	1220	1070	1150
13	---	---	---	1210	1100	1150	1170	1090	1130	1070	981	1010
14	---	---	---	1220	1110	1150	1270	1110	1160	1130	681	957
15	---	---	---	1230	1120	1180	1250	1140	1190	777	655	711
16	---	---	---	1260	1160	1210	1230	1070	1140	---	---	---
17	---	---	---	1270	1140	1200	1250	1090	1170	---	---	---
18	---	---	---	1310	1140	1220	---	---	---	---	---	---
19	---	---	---	1300	1160	1230	---	---	---	1120	1010	1060
20	---	---	---	1310	1180	1240	---	---	---	1070	1010	1040
21	---	---	---	1280	1180	1230	---	---	---	1060	812	1010
22	---	---	---	1280	1180	1220	---	---	---	886	324	644
23	---	---	---	1300	1170	1220	---	---	---	348	284	314
24	1290	1170	1230	1270	1200	1230	---	---	---	474	300	383
25	1220	1100	1160	---	---	---	---	---	---	623	474	552
26	1200	1110	1140	---	---	---	---	---	---	753	623	683
27	1150	1090	1120	---	---	---	---	---	---	927	753	836
28	1160	1020	1080	1210	1130	1160	---	---	---	995	904	943
29	1180	1100	1140	1220	1130	1170	---	---	---	1020	924	966
30	1190	1110	1150	1190	1130	1160	---	---	---	1030	942	977
31	---	---	---	1180	1120	1150	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.8	8.1	8.5	---	---	---	---	---	---	8.5	8.5	8.5
2	8.6	8.0	8.1	---	---	---	---	---	---	8.5	8.4	8.5
3	8.2	8.0	8.1	---	---	---	---	---	---	8.5	8.4	8.4
4	8.3	8.1	8.2	---	---	---	---	---	---	8.5	8.0	8.3
5	8.2	8.1	8.1	---	---	---	8.3	7.8	8.2	8.1	8.0	8.1
6	8.3	8.1	8.2	---	---	---	8.3	8.2	8.3	---	---	---
7	---	---	---	---	---	---	8.4	7.9	8.3	8.2	8.1	8.2
8	---	---	---	---	---	---	8.4	8.3	8.3	8.3	8.2	8.2
9	---	---	---	---	---	---	8.3	8.2	8.2	8.3	8.3	8.3
10	8.3	7.9	8.2	---	---	---	8.3	8.2	8.2	---	---	---
11	8.2	7.9	8.1	---	---	---	8.3	8.3	8.3	---	---	---
12	8.4	7.9	8.2	---	---	---	8.3	8.3	8.3	---	---	---
13	8.2	8.1	8.2	---	---	---	8.3	8.3	8.3	---	---	---
14	8.2	7.9	8.1	---	---	---	8.4	8.3	8.4	---	---	---
15	8.2	8.1	8.2	---	---	---	8.4	8.4	8.4	---	---	---
16	8.4	8.1	8.3	---	---	---	8.5	8.4	8.4	---	---	---
17	8.5	8.2	8.3	---	---	---	8.5	8.4	8.4	---	---	---
18	8.7	8.3	8.6	---	---	---	8.5	8.4	8.4	---	---	---
19	8.7	8.4	8.6	---	---	---	8.5	8.1	8.5	---	---	---
20	9.0	8.5	8.6	---	---	---	8.6	8.4	8.5	---	---	---
21	8.7	8.4	8.6	---	---	---	8.6	8.3	8.5	---	---	---
22	8.7	8.5	8.5	8.4	8.3	8.3	8.3	8.1	8.2	---	---	---
23	8.6	8.4	8.5	8.4	8.3	8.3	8.3	8.1	8.3	8.5	8.4	8.4
24	8.4	8.3	8.4	8.4	8.4	8.4	8.3	8.1	8.1	8.5	8.3	8.4
25	8.5	8.3	8.4	8.4	8.3	8.4	8.2	8.1	8.1	8.5	8.4	8.4
26	8.6	8.3	8.5	8.4	8.3	8.4	8.2	8.1	8.2	8.5	8.2	8.4
27	8.5	8.4	8.5	8.4	8.3	8.4	8.3	8.2	8.2	8.4	8.2	8.3
28	8.6	8.3	8.4	8.4	8.1	8.3	8.3	8.2	8.2	8.4	8.4	8.4
29	8.4	8.2	8.3	8.4	8.2	8.3	8.4	8.3	8.4	8.5	8.3	8.4
30	8.3	8.0	8.2	8.3	8.3	8.3	8.4	8.4	8.4	8.6	8.3	8.5
31	---	---	---	---	---	---	8.5	8.4	8.4	8.5	8.4	8.5
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.4	8.0	8.1	8.6	8.2	8.3	8.4	8.3	8.3	---	---	---
2	8.1	7.8	8.0	8.6	8.4	8.6	8.4	8.3	8.3	---	---	---
3	8.3	8.1	8.3	8.6	8.2	8.6	8.4	8.3	8.4	---	---	---
4	8.4	8.3	8.3	8.4	8.2	8.3	8.5	8.3	8.4	---	---	---
5	8.4	8.3	8.4	8.5	8.0	8.3	8.5	8.4	8.4	---	---	---
6	8.5	8.4	8.4	8.5	8.1	8.5	8.5	8.4	8.5	---	---	---
7	8.5	8.3	8.4	8.5	8.2	8.4	8.5	8.4	8.4	---	---	---
8	8.4	8.2	8.3	8.4	8.1	8.2	8.5	8.4	8.4	---	---	---
9	8.4	8.2	8.3	8.3	8.0	8.2	8.5	8.2	8.5	---	---	---
10	8.4	8.3	8.4	8.5	8.3	8.5	8.5	8.1	8.5	---	---	---
11	8.4	8.4	8.4	8.4	8.3	8.4	---	---	---	---	---	---
12	8.4	8.4	8.4	8.5	8.4	8.5	---	---	---	---	---	---
13	8.4	8.3	8.4	8.5	8.4	8.4	---	---	---	---	---	---
14	---	---	---	8.4	8.3	8.4	---	---	---	---	---	---
15	8.4	8.3	8.3	8.4	8.3	8.4	---	---	---	---	---	---
16	8.4	8.3	8.4	8.3	8.0	8.1	---	---	---	---	---	---
17	8.5	8.4	8.4	8.1	8.0	8.1	---	---	---	---	---	---
18	8.5	8.4	8.5	8.2	8.0	8.1	---	---	---	---	---	---
19	---	---	---	8.2	8.0	8.1	---	---	---	---	---	---
20	---	---	---	8.2	8.1	8.1	8.3	8.1	8.3	---	---	---
21	---	---	---	8.1	8.1	8.1	---	---	---	8.5	8.1	8.3
22	---	---	---	8.1	8.1	8.1	---	---	---	8.5	8.1	8.3
23	8.6	8.1	8.5	8.1	8.1	8.1	---	---	---	8.3	8.2	8.3
24	---	---	---	8.2	8.1	8.2	8.3	8.2	8.3	8.2	8.2	8.2
25	8.6	8.5	8.5	8.3	8.2	8.2	8.3	8.2	8.3	8.2	8.2	8.2
26	8.6	8.4	8.4	8.3	8.3	8.3	8.3	8.2	8.2	---	---	---
27	8.6	8.5	8.6	8.3	8.3	8.3	8.2	7.5	7.9	---	---	---
28	8.6	8.4	8.5	8.3	8.2	8.3	7.8	7.5	7.8	---	---	---
29	---	---	---	8.3	8.3	8.3	7.9	7.8	7.9	---	---	---
30	---	---	---	8.4	8.3	8.3	---	---	---	---	---	---
31	---	---	---	8.3	8.0	8.2	---	---	---	---	---	---
MAX	---	---	---	8.6	8.4	8.6	---	---	---	---	---	---
MIN	---	---	---	8.1	8.0	8.1	---	---	---	---	---	---

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	9.0	8.3	8.7	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	8.9	8.3	8.6	---	---	---	---	---	---	---	---	---
4	8.6	8.3	8.5	---	---	---	---	---	---	---	---	---
5	8.8	8.4	8.5	---	---	---	---	---	---	---	---	---
6	8.9	8.4	8.6	---	---	---	---	---	---	---	---	---
7	9.0	8.5	8.7	---	---	---	9.0	8.5	8.7	---	---	---
8	8.7	8.2	8.5	---	---	---	8.7	8.3	8.4	---	---	---
9	8.4	8.0	8.3	---	---	---	9.1	8.1	8.5	---	---	---
10	8.7	7.9	8.3	---	---	---	8.8	8.2	8.4	---	---	---
11	8.3	7.9	8.0	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	8.7	7.9	8.2
20	---	---	---	---	---	---	---	---	---	8.8	8.1	8.3
21	---	---	---	---	---	---	---	---	---	8.6	7.7	8.2
22	---	---	---	---	---	---	---	---	---	---	---	---
23	8.8	8.1	8.5	---	---	---	---	---	---	---	---	---
24	8.7	8.3	8.4	---	---	---	---	---	---	---	---	---
25	9.0	8.4	8.6	---	---	---	---	---	---	---	---	---
26	8.8	8.0	8.4	---	---	---	---	---	---	---	---	---
27	8.8	7.9	8.3	---	---	---	---	---	---	---	---	---
28	8.8	8.1	8.4	---	---	---	---	---	---	---	---	---
29	8.7	8.0	8.3	---	---	---	---	---	---	---	---	---
30	8.7	8.0	8.3	9.1	8.1	8.7	---	---	---	---	---	---
31	---	---	---	9.2	7.9	8.4	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	28.0	22.5	25.0	17.5	15.5	16.5	---	---	---	7.5	4.0	5.5
2	26.5	22.0	24.5	15.5	13.0	14.5	---	---	---	12.0	7.5	9.5
3	26.0	23.0	24.5	14.0	11.0	12.5	---	---	---	14.5	12.0	13.0
4	25.5	22.0	23.5	14.5	11.0	12.5	---	---	---	14.0	6.0	9.0
5	25.5	22.5	24.0	15.5	13.0	14.0	7.0	5.0	6.0	6.0	6.0	6.0
6	25.5	23.0	24.0	13.0	10.5	11.5	6.5	4.0	5.5	7.0	6.0	7.0
7	24.5	23.0	23.5	11.5	8.5	10.0	6.0	5.0	5.5	6.5	4.5	5.5
8	24.0	22.5	23.0	13.5	9.0	11.5	7.0	5.0	6.0	4.5	3.5	4.0
9	23.0	22.0	22.5	13.0	10.5	12.0	9.0	6.5	7.5	4.5	3.5	4.0
10	24.0	22.0	23.0	11.0	9.0	10.0	8.0	6.0	6.5	4.0	3.5	4.0
11	23.5	22.5	23.0	10.0	7.5	8.5	6.0	4.0	5.0	4.0	3.5	3.5
12	22.5	20.5	22.0	9.0	8.5	9.0	4.5	4.0	4.0	---	---	---
13	20.5	18.0	19.0	9.5	8.5	9.0	5.0	2.0	4.0	---	---	---
14	19.0	16.5	17.5	9.0	7.0	8.0	6.5	3.5	5.0	---	---	---
15	20.0	16.5	18.5	7.0	5.0	6.0	8.0	4.5	6.0	---	---	---
16	20.5	17.0	19.0	7.5	4.0	6.0	8.5	6.0	7.0	---	---	---
17	19.5	17.0	18.5	7.5	5.0	6.0	8.5	5.5	7.5	---	---	---
18	19.5	16.5	18.0	9.0	5.5	7.5	9.5	6.5	8.0	---	---	---
19	20.5	16.5	18.5	11.0	7.5	9.0	10.5	7.5	9.0	---	---	---
20	19.5	16.5	18.5	10.5	9.0	10.0	9.5	6.5	8.0	---	---	---
21	18.5	15.5	17.0	11.5	9.5	10.5	6.5	5.5	6.5	---	---	---
22	16.5	13.5	15.0	12.5	10.0	11.0	5.5	4.5	5.0	---	---	---
23	15.5	14.0	14.5	12.5	9.5	11.0	5.5	5.0	5.0	5.0	3.5	4.0
24	15.5	14.5	15.0	13.0	10.0	11.5	5.0	3.5	4.0	6.5	3.5	5.0
25	16.5	14.0	15.5	14.0	10.5	12.5	3.5	3.5	3.5	7.5	5.0	6.0
26	14.0	9.5	11.0	14.0	12.5	13.5	3.5	3.0	3.5	8.0	7.0	7.0
27	11.5	8.5	10.0	15.0	12.0	13.5	4.0	2.5	3.5	8.5	6.0	7.0
28	13.5	10.0	12.0	16.0	15.0	15.5	4.0	3.0	3.5	10.0	7.0	8.5
29	13.5	11.5	12.5	15.0	12.5	13.5	4.0	2.0	3.0	10.0	8.0	9.0
30	17.5	13.5	15.5	12.5	10.5	11.0	6.5	3.5	5.0	10.5	7.5	9.0
31	18.5	15.5	17.0	---	---	---	6.0	4.0	5.0	9.5	8.5	9.0
MONTH	28.0	8.5	18.9	17.5	4.0	10.9	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	10.0	9.0	9.5	11.0	8.0	9.5	17.0	13.5	15.0	---	---	---
2	10.0	8.5	9.0	10.0	7.0	8.5	18.0	15.0	16.5	---	---	---
3	9.0	7.5	8.5	11.0	6.5	8.5	16.0	14.0	15.0	---	---	---
4	8.5	7.0	7.5	11.0	8.5	10.0	15.5	12.5	13.5	---	---	---
5	7.5	6.5	7.0	10.5	9.0	10.0	16.0	11.5	14.0	---	---	---
6	7.5	5.0	6.0	9.0	7.5	8.0	18.0	14.0	16.0	---	---	---
7	8.5	5.0	7.0	8.5	7.5	8.0	18.0	15.5	16.5	---	---	---
8	9.0	7.0	8.0	8.5	4.0	6.0	17.5	15.5	16.5	---	---	---
9	10.0	7.0	8.5	5.0	2.0	3.5	17.5	14.0	16.0	---	---	---
10	9.5	8.5	9.5	6.5	1.5	4.0	---	---	---	---	---	---
11	9.5	7.0	8.0	7.0	4.0	5.5	---	---	---	---	---	---
12	9.5	7.5	8.5	5.0	3.0	4.0	19.0	15.5	17.0	---	---	---
13	10.5	7.0	8.5	9.5	3.0	6.0	20.5	16.5	18.5	---	---	---
14	11.5	8.5	10.0	11.0	9.0	10.0	21.5	18.0	19.5	---	---	---
15	11.0	9.5	10.5	11.0	9.5	10.0	22.5	19.0	20.0	---	---	---
16	10.5	9.5	9.5	10.0	9.0	9.5	19.0	15.5	18.0	---	---	---
17	10.5	8.5	9.5	9.5	9.0	9.0	18.5	15.5	17.0	---	---	---
18	11.5	8.5	10.0	9.0	8.0	8.5	19.0	16.0	17.5	---	---	---
19	12.5	10.0	11.5	8.5	7.0	8.0	---	---	---	---	---	---
20	13.0	9.5	11.0	7.5	6.5	7.0	---	---	---	---	---	---
21	12.5	10.5	11.5	8.5	6.0	7.5	---	---	---	26.5	23.0	24.5
22	12.5	11.0	11.5	11.0	8.0	9.5	---	---	---	25.5	23.5	24.5
23	14.0	10.5	12.0	14.5	10.5	12.0	---	---	---	25.0	23.0	24.0
24	15.5	11.5	13.5	15.5	12.5	14.0	---	---	---	27.0	23.5	25.0
25	17.0	13.5	15.0	18.0	14.0	16.0	21.0	17.5	19.0	26.0	24.0	25.0
26	16.0	13.0	14.5	17.5	16.5	17.0	20.0	16.5	19.0	26.0	22.5	24.0
27	13.5	11.0	12.5	17.0	16.0	16.5	16.5	14.5	15.0	26.5	23.5	25.0
28	12.5	9.5	11.0	17.5	15.0	16.0	14.5	13.0	13.5	28.0	24.0	26.0
29	---	---	---	19.0	17.0	17.5	13.5	12.5	13.0	30.0	26.0	27.5
30	---	---	---	18.5	17.0	18.0	17.0	12.5	14.5	30.0	26.5	28.5
31	---	---	---	17.0	15.0	16.0	---	---	---	29.0	25.0	27.0
MONTH	17.0	5.0	10.0	19.0	1.5	10.1	---	---	---	---	---	---

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	30.5	25.5	28.0	31.0	26.0	28.5	34.5	27.0	30.5	32.0	23.5	27.0
2	30.5	26.0	28.5	33.5	26.0	29.5	32.5	27.0	30.0	32.0	25.0	28.5
3	31.0	25.5	28.0	33.5	26.5	30.0	30.0	27.0	28.5	32.5	26.0	29.0
4	28.0	22.5	25.0	33.5	27.5	30.0	28.0	25.5	27.0	33.5	25.5	29.5
5	22.5	20.0	21.0	31.0	27.5	29.0	30.0	24.5	27.0	33.5	26.0	29.5
6	24.5	18.5	21.0	33.0	27.0	30.0	30.5	24.0	27.5	32.0	25.5	28.5
7	25.0	20.0	22.5	34.0	28.0	30.5	32.5	25.0	28.0	32.5	25.5	28.5
8	23.5	21.0	22.0	34.0	27.5	30.5	29.5	25.0	27.0	32.5	26.5	29.0
9	27.0	22.0	24.5	35.0	29.0	31.5	31.0	26.0	28.0	29.5	24.0	26.5
10	28.0	24.5	26.0	34.5	28.5	31.5	29.0	26.0	27.0	28.5	21.5	25.0
11	26.5	24.0	25.0	33.0	28.0	30.5	30.5	25.0	27.5	28.0	22.5	25.0
12	28.0	23.5	25.5	34.0	27.0	30.5	32.5	26.0	29.0	26.0	23.0	24.5
13	30.5	26.0	28.0	34.5	28.0	31.0	32.0	26.0	28.5	25.0	23.0	24.0
14	30.0	26.0	28.0	35.5	28.0	31.5	32.0	25.5	28.5	28.0	24.5	25.5
15	28.0	25.0	26.5	34.0	27.5	31.0	32.5	25.5	29.0	29.0	25.0	27.0
16	28.5	23.0	25.5	33.5	27.5	30.5	32.5	26.0	29.0	28.5	25.0	26.5
17	28.5	23.5	26.0	34.0	26.5	30.0	33.0	25.5	29.0	28.5	25.0	26.5
18	31.0	25.0	27.5	33.5	26.5	30.0	33.5	26.5	29.5	30.5	24.5	27.5
19	32.0	26.5	29.0	34.0	26.5	30.0	33.0	26.5	29.5	30.0	25.0	27.5
20	32.0	26.5	29.5	34.0	27.0	30.5	32.5	27.0	30.0	30.5	24.5	27.5
21	32.5	27.0	29.5	33.5	27.0	30.0	---	---	---	31.0	25.5	27.5
22	32.5	26.0	29.0	33.0	26.5	30.0	---	---	---	26.0	22.5	24.0
23	31.5	26.5	29.0	34.0	26.5	30.0	---	---	---	22.5	21.0	22.0
24	31.0	25.0	28.0	33.0	28.0	30.5	---	---	---	26.5	22.0	24.0
25	31.5	25.5	28.5	34.5	28.0	31.0	---	---	---	28.5	24.0	26.0
26	32.0	25.5	28.5	33.0	26.5	29.5	---	---	---	28.5	24.0	26.0
27	33.0	26.0	29.5	35.0	27.0	30.5	---	---	---	30.0	24.5	27.0
28	34.0	27.0	30.5	34.0	28.5	31.0	---	---	---	31.0	26.0	28.0
29	34.0	27.5	30.5	33.0	27.5	30.0	---	---	---	31.0	25.5	28.0
30	32.0	27.5	29.5	33.0	26.0	29.5	---	---	---	30.0	25.0	27.5
31	---	---	---	34.0	27.0	30.0	---	---	---	---	---	---
MONTH	34.0	18.5	27.0	35.5	26.0	30.3	---	---	---	33.5	21.0	26.8

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	13.9	5.8	9.2	---	---	---	---	---	---	---	---	---
2	15.1	5.5	8.8	---	---	---	---	---	---	---	---	---
3	6.9	5.3	6.0	---	---	---	---	---	---	---	---	---
4	7.8	5.3	6.2	---	---	---	---	---	---	---	---	---
5	6.9	5.5	6.1	10.2	8.1	9.1	12.0	8.0	10.3	---	---	---
6	7.6	6.1	6.7	10.9	8.6	9.6	11.8	9.7	11.3	---	---	---
7	7.8	6.4	7.0	10.8	9.4	10.0	11.8	9.8	11.1	---	---	---
8	8.2	7.0	7.5	10.5	9.0	9.7	12.5	10.5	11.7	---	---	---
9	---	---	---	9.5	8.8	9.1	11.8	10.2	11.1	---	---	---
10	---	---	---	11.1	9.4	10.2	12.4	11.4	11.9	---	---	---
11	---	---	---	11.0	9.8	10.4	13.2	12.0	12.6	---	---	---
12	---	---	---	11.3	9.8	10.5	13.4	12.2	12.7	---	---	---
13	---	---	---	11.2	9.9	10.6	13.7	12.5	13.0	---	---	---
14	---	---	---	10.9	9.9	10.5	13.6	12.6	13.2	---	---	---
15	---	---	---	11.4	9.7	10.6	13.4	12.1	12.9	---	---	---
16	---	---	---	11.2	9.6	10.4	12.1	10.6	11.3	---	---	---
17	---	---	---	10.8	8.7	9.8	12.7	10.1	11.8	---	---	---
18	---	---	---	11.6	7.6	10.0	12.3	11.3	11.9	---	---	---
19	---	---	---	11.1	7.7	9.4	12.1	10.9	11.6	13.2	12.4	12.7
20	---	---	---	9.8	7.4	8.7	12.1	10.6	11.3	12.9	11.9	12.6
21	---	---	---	10.1	7.3	8.5	12.3	11.0	11.8	---	---	---
22	14.1	9.2	10.9	10.3	7.6	8.9	---	---	---	---	---	---
23	11.8	8.2	9.9	10.6	8.3	9.3	---	---	---	13.2	12.7	13.0
24	11.4	7.6	9.7	10.7	8.1	9.4	---	---	---	13.2	12.6	12.8
25	---	---	---	10.6	7.7	9.2	---	---	---	12.8	12.2	12.6
26	---	---	---	10.8	7.5	8.8	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	11.7	9.6	10.6	---	---	---	9.5	8.8	9.2
2	---	---	---	11.4	9.8	10.6	---	---	---	9.6	8.7	9.0
3	---	---	---	11.2	9.9	10.5	---	---	---	10.6	8.8	9.7
4	---	---	---	10.3	9.1	9.7	---	---	---	10.9	8.8	9.7
5	---	---	---	10.2	8.7	9.3	---	---	---	9.4	8.2	8.9
6	---	---	---	10.5	9.3	9.8	---	---	---	9.8	7.8	8.7
7	---	---	---	---	---	---	---	---	---	11.4	8.1	9.5
8	---	---	---	---	---	---	---	---	---	11.7	8.1	9.8
9	---	---	---	---	---	---	---	---	---	10.0	8.3	9.1
10	10.7	10.3	10.5	---	---	---	---	---	---	8.5	5.9	7.4
11	11.5	10.5	11.0	---	---	---	---	---	---	9.7	7.9	8.6
12	11.2	10.7	10.9	---	---	---	---	---	---	9.9	7.9	8.7
13	11.4	10.7	11.0	---	---	---	---	---	---	11.3	7.1	8.7
14	11.1	10.4	10.7	---	---	---	---	---	---	12.1	6.3	8.9
15	10.7	10.0	10.2	---	---	---	---	---	---	13.8	5.7	8.9
16	10.6	9.9	10.2	---	---	---	---	---	---	10.5	5.9	8.1
17	11.1	10.0	10.5	---	---	---	---	---	---	9.4	6.9	8.0
18	11.0	10.0	10.4	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	10.7	9.4	10.1	---	---	---	---	---	---	13.3	7.0	9.5
22	10.9	9.6	10.1	---	---	---	---	---	---	12.9	6.9	9.9
23	---	---	---	---	---	---	10.3	9.6	9.9	8.8	7.4	8.2
24	11.3	9.5	10.1	9.4	9.2	9.3	10.2	9.1	9.6	8.4	7.7	8.0
25	10.8	8.6	9.6	9.4	9.0	9.2	10.1	8.8	9.5	8.2	7.6	7.9
26	11.1	8.1	9.4	---	---	---	9.0	6.7	8.1	8.1	5.2	6.9
27	11.6	8.9	10.1	---	---	---	9.3	7.1	8.4	8.6	6.0	7.3
28	---	---	---	9.1	8.2	8.6	9.1	8.2	8.6	9.8	7.8	8.6
29	---	---	---	9.1	8.3	8.7	9.9	9.1	9.5	8.6	7.9	8.2
30	---	---	---	8.7	8.0	8.4	9.9	9.5	9.8	13.2	7.8	9.8
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	14.8	6.1	10.5	---	---	---	---	---	---	---	---	---
4	10.9	6.2	8.6	---	---	---	---	---	---	---	---	---
5	11.9	7.4	9.4	---	---	---	---	---	---	---	---	---
6	11.2	7.4	9.2	---	---	---	---	---	---	---	---	---
7	11.6	7.1	8.9	---	---	---	---	---	---	---	---	---
8	11.3	6.3	8.0	---	---	---	---	---	---	---	---	---
9	8.4	5.6	7.2	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	12.7	5.7	8.9	---	---	---	---	---	---	---	---	---
25	18.1	5.8	11.0	---	---	---	---	---	---	---	---	---
26	15.2	5.0	10.1	---	---	---	---	---	---	---	---	---
27	15.0	4.6	9.7	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

Canadian River at Calvin May 5, 1941

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK

LOCATION.--Lat 35°15'56", long 96°12'21", in NE ¼ SW ¼ 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.

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 fair. 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	502	642	e595	1110	3030	953	2680	3080	1260	e338	e153	e148
2	405	608	e582	1040	3910	1000	2630	2470	1080	e328	e148	e133
3	e392	586	577	1100	3950	962	2290	2000	883	e313	e143	e128
4	e365	572	576	5490	3000	945	2040	1770	818	e298	e134	e123
5	e360	522	657	8610	2480	944	1880	4740	776	e282	e137	e118
6	617	466	695	7730	1850	944	1780	3950	672	e268	e140	e113
7	689	451	909	7890	1580	1120	2000	2360	627	e256	e141	e108
8	1020	444	887	9130	1370	3580	2010	1910	642	249	e141	e102
9	1230	441	803	6640	1240	2380	2090	1750	655	237	e140	e93
10	1370	458	867	4810	1240	2130	2040	2650	615	273	e140	e103
11	1290	449	820	3220	1260	1920	1850	1900	640	298	e175	e106
12	1490	434	787	2350	1220	1490	1890	2160	643	251	201	e118
13	1790	441	737	1960	1200	1140	1850	1870	787	281	363	e120
14	2600	488	691	1920	1330	1050	1730	1590	1470	266	363	e133
15	2210	513	686	1900	1370	1800	1710	1430	1290	223	216	e183
16	1740	501	672	1820	1310	8190	1680	1210	1000	e198	e185	e235
17	1310	528	647	1730	1270	14800	1700	1060	944	e194	e178	e203
18	1070	641	630	1640	1210	13000	1620	1020	821	e192	e169	e170
19	954	635	620	1550	1210	11800	1570	1130	695	e190	e160	e213
20	798	578	576	1420	1210	11900	1560	1290	636	e186	e153	e245
21	726	561	825	1340	1240	10200	1560	1260	637	e179	e148	233
22	599	e558	2340	1340	1240	7780	1530	1230	615	e172	e140	345
23	614	e553	1670	1310	1230	5140	1530	1040	547	e173	e155	401
24	693	e558	5210	1280	1230	3610	1570	815	522	e168	e178	e420
25	730	e559	4810	1270	1180	3010	1470	772	489	e162	e195	365
26	767	e559	3930	1210	1170	2770	1420	1220	457	e152	e210	1140
27	1220	e557	3090	1180	1150	2670	11600	1720	434	e143	e224	980
28	959	e630	2850	1240	1070	2540	13200	1880	e405	e142	e219	642
29	790	e680	1960	1690	---	2630	7390	1680	e385	e145	e208	452
30	707	e605	1690	1490	---	2660	4460	1440	e360	147	e187	367
31	689	---	1430	1150	---	2970	---	1230	---	e151	e162	---
TOTAL	30696	16218	43819	87560	45750	128028	84330	55627	21805	6855	5606	8240
MEAN	990	541	1414	2825	1634	4130	2811	1794	727	221	181	275
MAX	2600	680	5210	9130	3950	14800	13200	4740	1470	338	363	1140
MIN	360	434	576	1040	1070	944	1420	772	360	142	134	93
AC-FT	60890	32170	86910	173700	90750	253900	167300	110300	43250	13600	11120	16340

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1998, BY WATER YEAR (WY)

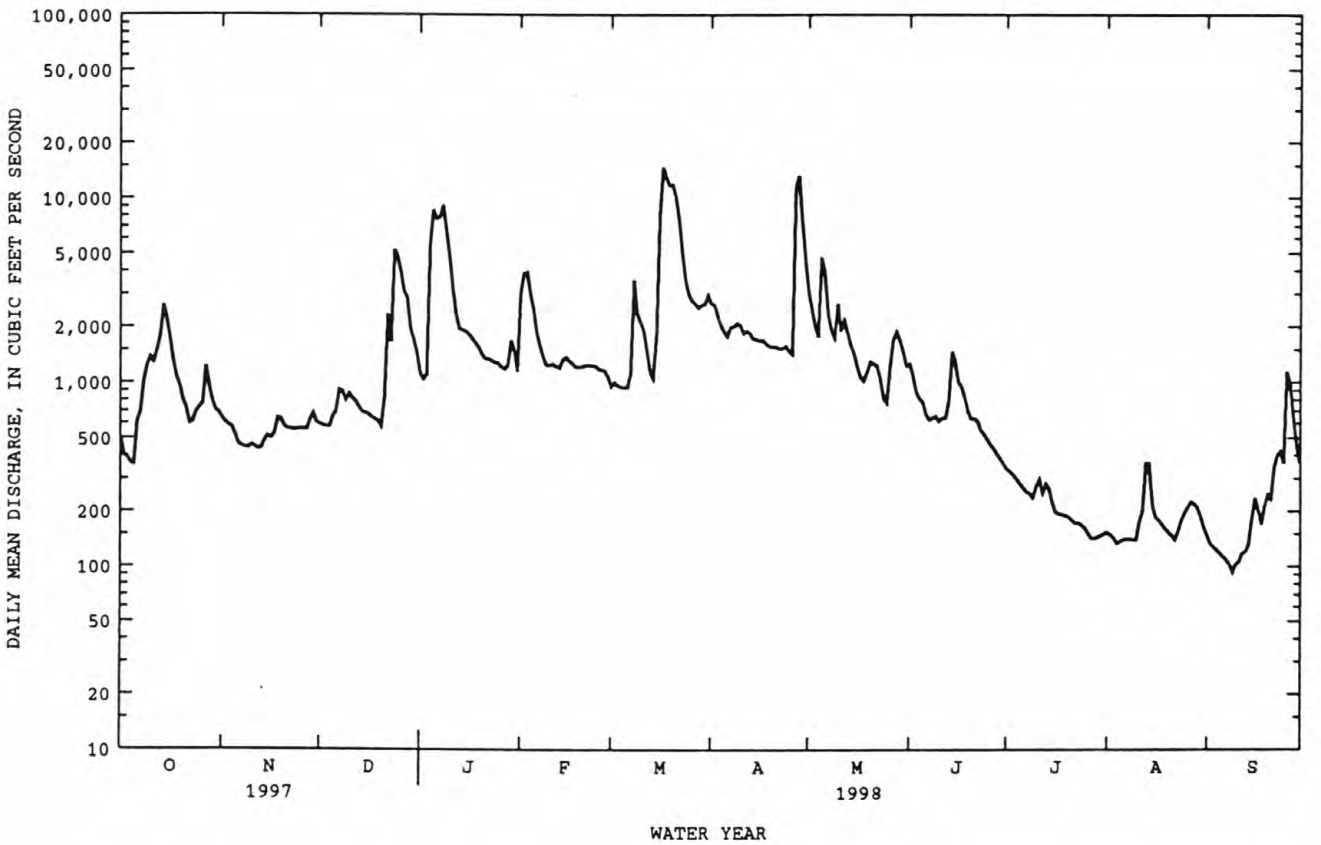
MEAN	700	666	496	456	598	877	1134	1755	1581	669	384	479
MAX	4914	4580	3225	2825	3037	5684	6643	6989	6081	3230	2667	3894
(WY)	1987	1942	1993	1998	1985	1990	1945	1993	1957	1951	1950	1950
MIN	4.25	16.7	43.8	44.3	56.6	43.5	72.8	85.3	73.4	42.5	8.71	.000
(WY)	1957	1955	1955	1940	1957	1940	1955	1940	1953	1954	1956	1954

e Estimated

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1938 - 1998	
ANNUAL TOTAL	443849		534534			
ANNUAL MEAN	1216		1464		816	
HIGHEST ANNUAL MEAN					2229	1993
LOWEST ANNUAL MEAN					156	1956
HIGHEST DAILY MEAN	9030	Feb 21	14800	Mar 17	55800	Apr 15 1945
LOWEST DAILY MEAN	350	Aug 6	93	Sep 9	.00	Aug 27 1954
ANNUAL SEVEN-DAY MINIMUM	381	Aug 3	106	Sep 5	.00	[a]Aug 27 1954
INSTANTANEOUS PEAK FLOW			16800	Apr 27	66000	Apr 15 1945
INSTANTANEOUS PEAK STAGE			16.42	Apr 27	26.40	Apr 15 1945
ANNUAL RUNOFF (AC-FT)	880400		1060000		591400	
10 PERCENT EXCEEDS	2400		2800		1860	
50 PERCENT EXCEEDS	883		887		304	
90 PERCENT EXCEEDS	483		162		69	

[a]No flow Aug. 27 to Oct. 11, 1954, Aug. 25 to Oct. 22, 1956.



07242247 DEEP FORK AT HEFNER ROAD AT OKLAHOMA CITY, OK

LOCATION.--Lat 35°34'48", long 97°25'37", SE ¼ SE ¼ sec. 20, T.13 N., R.2 W., Oklahoma County, Hydrologic Unit 11100303, near left downstream abutment of bridge .7 mi east of intersection of I-35 and Hefner Road, .2 mi west of Sooner Road, and at mile 221.4

DRAINAGE AREA.--66.6 mi^2.

PERIOD OF RECORD.--October 1995 to June, 1998 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 999.355 ft above sea level. Auxiliary water-stage recorder 0.8 mi downstream.

REMARKS.--Records poor. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e5.4	12	9.7	e12	502	11	e13	20	7.9	---	---	---
2	e5.2	12	36	e11	38	11	e11	35	7.9	---	---	---
3	e5.1	12	95	e10	24	11	e10	36	7.1	---	---	---
4	e5.0	11	17	1150	24	11	e9.8	32	6.7	---	---	---
5	e5.0	11	13	449	23	e11	17	31	6.9	---	---	---
6	e4.9	10	11	e25	22	11	26	30	6.9	---	---	---
7	e9.5	10	11	e75	19	255	27	26	6.7	---	---	---
8	80	11	58	e21	21	72	26	23	210	---	---	---
9	794	12	20	e17	19	17	21	314	140	---	---	---
10	29	69	14	e15	17	9.7	17	57	14	---	---	---
11	21	16	14	e14	16	11	19	28	455	---	---	---
12	1140	12	13	e13	15	11	15	23	20	---	---	---
13	89	62	11	e12	15	11	11	20	14	---	---	---
14	258	73	10	e11	14	10	8.7	19	16	---	---	---
15	148	19	11	10	15	429	8.0	20	13	---	---	---
16	117	12	11	23	17	2400	9.5	17	12	---	---	---
17	e23	11	10	27	15	908	7.2	14	12	---	---	---
18	e17	10	11	32	14	291	7.4	14	10	---	---	---
19	e13	10	11	35	16	838	7.3	13	9.2	---	---	---
20	e11	11	10	38	44	e150	22	26	9.1	---	---	---
21	22	12	320	29	16	e20	29	21	8.6	---	---	---
22	10	13	50	28	e14	e16	7.0	13	7.9	---	---	---
23	132	12	602	26	13	e15	5.6	12	7.7	---	---	---
24	59	14	451	26	13	e14	5.8	11	7.9	---	---	---
25	22	11	e24	27	13	e14	4.7	194	7.0	---	---	---
26	19	10	e22	270	12	e12	316	255	7.3	---	---	---
27	15	11	e20	35	12	e12	1180	24	7.0	---	---	---
28	16	15	e18	24	12	e11	30	15	6.9	---	---	---
29	14	15	e17	20	---	e10	e25	12	6.6	---	---	---
30	15	11	e15	20	---	352	e23	10	7.2	---	---	---
31	13	---	e13	227	---	67	---	9.2	---	---	---	---
TOTAL	3117.1	530	1948.7	2732	995	6021.7	1919.0	1374.2	1058.5	---	---	---
MEAN	101	17.7	62.9	88.1	35.5	194	64.0	44.3	35.3	---	---	---
MAX	1140	73	602	1150	502	2400	1180	314	455	---	---	---
MIN	4.9	10	9.7	10	12	9.7	4.7	9.2	6.6	---	---	---
AC-FT	6180	1050	3870	5420	1970	11940	3810	2730	2100	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1998, BY WATER YEAR (WY)

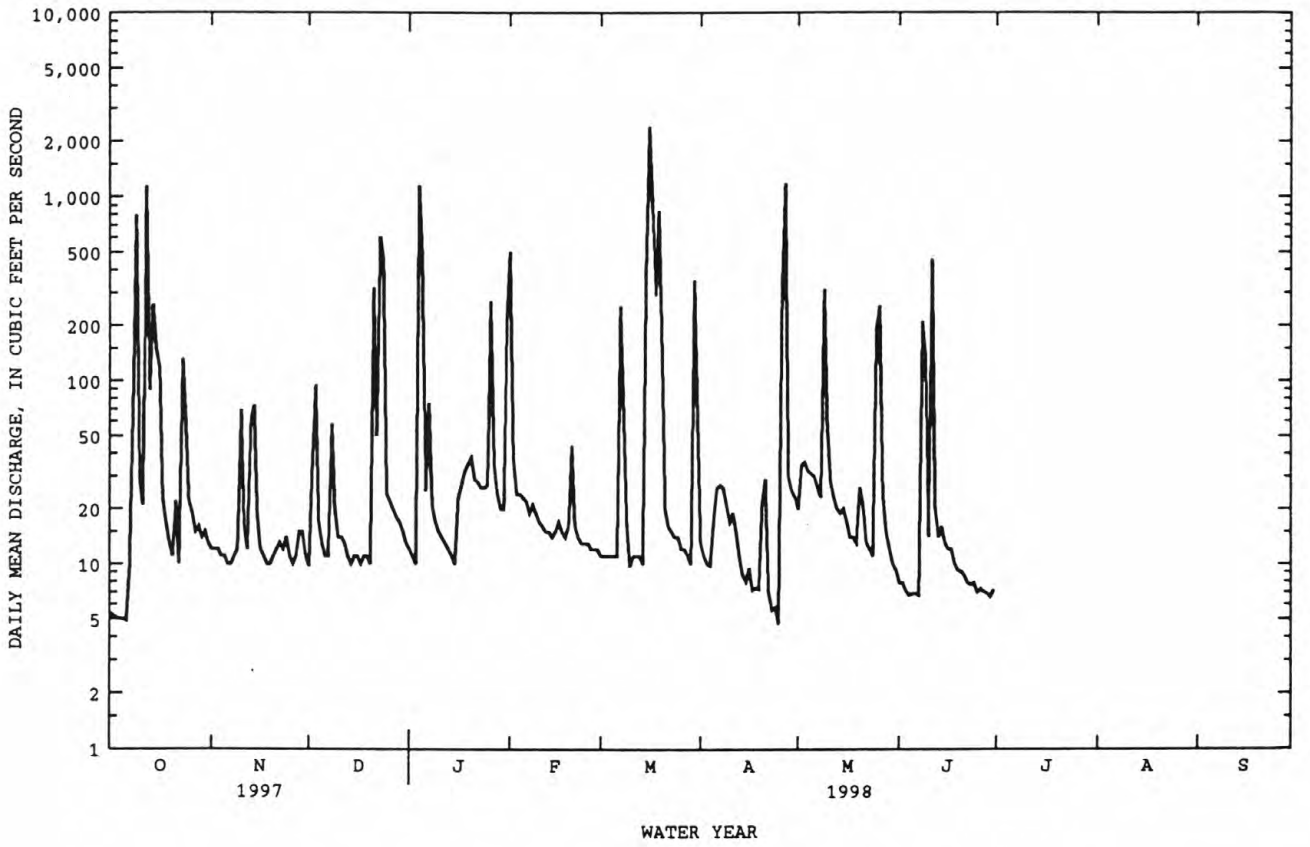
MEAN	53.6	36.9	37.6	36.7	38.3	77.8	54.9	40.3	28.6	134	59.4	35.5
MAX	101	75.3	62.9	88.1	69.2	194	76.7	49.6	35.3	206	74.5	46.3
(WY)	1998	1997	1998	1998	1997	1998	1997	1997	1998	1996	1996	1996
MIN	28.8	17.7	12.3	10.5	11.2	18.9	24.0	27.0	19.7	60.9	44.3	24.7
(WY)	1997	1998	1997	1997	1996	1996	1996	1996	1997	1997	1997	1997

e Estimated

07242247 DEEP FORK AT HEFNER ROAD AT OKLAHOMA CITY, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR PERIOD OCT. 1997-JUNE 1998		WATER YEARS 1995 - 1998	
ANNUAL TOTAL	16917.1					
ANNUAL MEAN	46.3				42.9	
HIGHEST ANNUAL MEAN					45.1	1996
LOWEST ANNUAL MEAN					40.7	1997
HIGHEST DAILY MEAN	1140	Oct 12	2400	Mar 16	4200	Jul 11 1996
LOWEST DAILY MEAN	2.1	Jul 25	4.7	Apr 25	2.1	Oct 1 1995
ANNUAL SEVEN-DAY MINIMUM	5.2	Sep 30	5.7	Oct 1	4.2	Apr 14 1996
INSTANTANEOUS PEAK FLOW			4480	Apr 27	9100	Jul 11 1996
INSTANTANEOUS PEAK STAGE			16.29	Apr 27	[a]21.70	Jul 11 1996
ANNUAL RUNOFF (AC-FT)	33560				31100	
10 PERCENT EXCEEDS	75		145		68	
50 PERCENT EXCEEDS	11		15		12	
90 PERCENT EXCEEDS	5.2		7.9		6.0	

[a]From floodmark.



07242380 DEEP FORK NEAR WARWICK, OK

LOCATION.--Lat 35°40'51", long 97°00'29", NW ¼ NE ¼ 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 poor. 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e30	e53	e49	299	e1400	75	1000	1430	77	50	25	18
2	28	e30	e60	304	e510	71	858	1090	e70	54	24	17
3	e27	e37	e200	319	e660	72	757	973	e65	47	24	19
4	e28	e42	e202	4050	e780	75	488	894	e60	43	24	19
5	e27	e40	e165	2190	e680	77	470	2670	e57	43	26	18
6	e26	e38	e65	1810	e380	81	476	e1400	e54	43	27	17
7	e25	e36	e58	1280	e160	512	453	e900	e51	41	24	16
8	218	e32	138	1050	e130	538	469	e700	65	48	24	15
9	6960	e40	206	e700	e125	281	389	e650	465	51	24	16
10	e800	e80	177	e660	e155	418	243	e600	207	44	23	15
11	e500	e80	165	e570	131	362	99	e550	e910	42	28	16
12	e1900	e70	62	e600	e125	332	79	e620	e400	41	32	16
13	e1200	e82	50	e610	e120	145	81	e615	e410	e39	33	31
14	e390	e85	50	e770	e120	116	64	e550	e900	37	27	43
15	e450	e72	46	e755	e110	850	59	e300	e400	32	26	26
16	605	e65	39	659	e115	8570	55	e250	e140	30	24	23
17	e610	e70	41	407	e140	6380	50	e240	e98	29	23	20
18	e600	e160	36	389	e250	1880	48	e180	e90	29	21	20
19	e596	e158	35	374	e240	3850	47	e160	e80	28	21	19
20	e560	e60	33	370	e235	1780	48	e130	e75	27	20	18
21	e555	e42	470	347	109	1300	140	e110	e70	25	19	18
22	e530	e37	332	322	103	1040	139	99	e65	25	20	439
23	e500	e44	1360	222	95	996	48	94	61	25	19	94
24	e300	e46	3060	130	90	1370	e45	89	57	26	18	50
25	e148	e51	799	115	89	1360	e43	96	54	26	18	37
26	e150	e57	435	523	83	1200	e150	339	53	25	20	31
27	e145	e70	312	426	79	1060	4000	500	52	25	19	30
28	e140	e150	260	474	75	987	2230	584	50	26	17	29
29	e142	e100	231	337	---	922	1780	237	48	27	18	28
30	e80	e68	229	388	---	1060	1640	110	45	25	18	27
31	e50	---	238	215	---	945	---	101	---	24	17	---
TOTAL	18320	1995	9603	21665	7289	38705	16448	17261	5229	1077	703	1185
MEAN	591	66.5	310	699	260	1249	548	557	174	34.7	22.7	39.5
MAX	6960	160	3060	4050	1400	8570	4000	2670	910	54	33	439
MIN	25	30	33	115	75	71	43	89	45	24	17	15
AC-FT	36340	3960	19050	42970	14460	76770	32620	34240	10370	2140	1390	2350

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

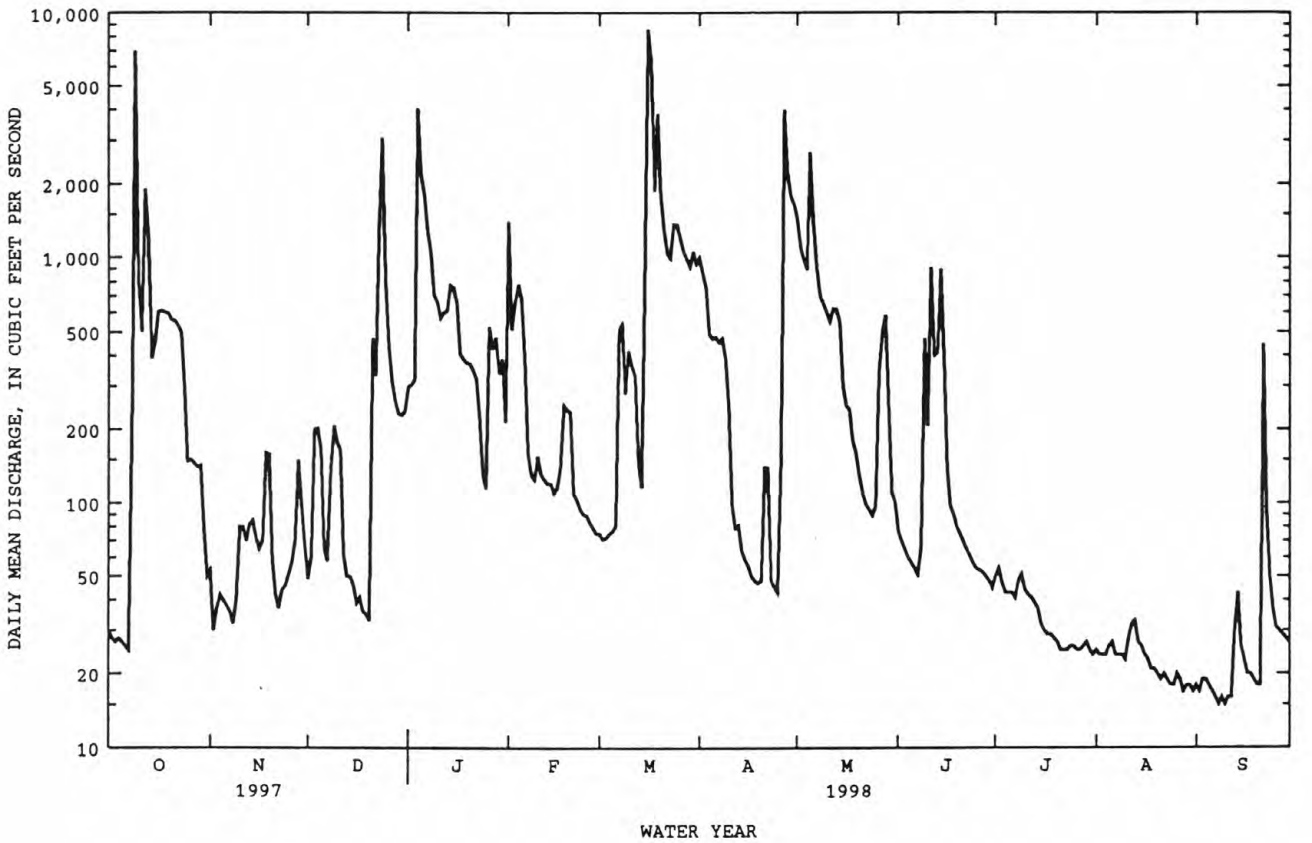
MEAN	143	206	217	181	193	447	484	696	637	231	175	267
MAX	591	539	683	699	516	1249	1435	2494	2978	738	630	1527
(WY)	1998	1997	1993	1998	1993	1998	1990	1993	1995	1995	1989	1989
MIN	46.7	64.9	60.7	55.8	47.0	59.3	101	56.3	70.5	31.2	22.7	39.5
(WY)	1993	1996	1989	1997	1996	1991	1989	1996	1988	1990	1998	1998

e Estimated

07242380 DEEP FORK NEAR WARWICK, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1988 - 1998	
ANNUAL TOTAL	80145.8		139480			
ANNUAL MEAN	220		382		323	
HIGHEST ANNUAL MEAN					574	1995
LOWEST ANNUAL MEAN					119	1991
HIGHEST DAILY MEAN	6960	Oct 9	8570	Mar 16	19000	May 9 1993
LOWEST DAILY MEAN	5.1	Sep 19	15	Sep 8,10	[a]3.9	Dec 13 1987
ANNUAL SEVEN-DAY MINIMUM	8.2	Sep 15	16	Sep 6	8.2	Sep 15 1997
INSTANTANEOUS PEAK FLOW			14400	Oct 9	34600	Jun 9 1995
INSTANTANEOUS PEAK STAGE			18.25	Oct 9	[b]21.28	Jun 9 1995
ANNUAL RUNOFF (AC-FT)	159000		276700		234100	
10 PERCENT EXCEEDS	517		931		732	
50 PERCENT EXCEEDS	76		90		96	
90 PERCENT EXCEEDS	29		24		30	

[a]Minimum daily discharge for period of record, .05 ft^3/s Aug. 23, 1987.
[b]Maximum gage height for period of record, 22.05 ft, Oct. 21, 1983.



07243500 DEEP FORK NEAR BEGGS, OK

LOCATION.--Lat 35°40'26", long 96°04'06", NW ¼ SW ¼ 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.

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 good. Some regulation by Arcadia Lake (station 07242340) since November 1986. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	179	369	468	2650	1890	374	2470	10800	477	78	23	9.6
2	137	318	441	1220	3280	346	2190	10200	333	85	23	9.3
3	114	258	439	984	3130	327	1950	8620	257	110	e24	9.0
4	99	224	540	2360	2950	308	1710	7130	222	135	e25	8.8
5	90	201	596	4020	2960	306	1520	5900	201	127	e24	8.2
6	81	185	632	4420	2570	301	1350	4880	186	108	e25	7.4
7	76	174	538	4990	1770	677	1250	4550	175	90	e26	7.5
8	76	167	556	6330	1330	3790	1280	4070	168	82	e27	7.4
9	1880	163	652	9390	1030	4220	1180	3870	179	77	e26	6.9
10	2860	167	670	10200	851	4190	1070	4400	239	68	e25	6.6
11	2430	171	694	9310	776	4030	992	4560	346	67	e24	6.7
12	2370	176	612	8190	724	3930	891	4090	542	63	23	6.6
13	3020	190	506	6970	662	3300	767	2520	903	60	24	13
14	3280	213	433	5780	617	1750	644	1530	1050	51	24	19
15	3490	237	369	4460	589	1430	574	1200	623	42	23	25
16	3620	242	310	2940	576	3960	534	1030	513	43	23	29
17	3570	235	280	1960	579	6060	490	868	595	46	23	27
18	3440	235	265	1620	567	8670	457	682	423	45	49	24
19	2460	223	255	1320	544	11400	431	607	307	44	44	29
20	1200	204	247	1100	533	17200	408	544	249	43	35	38
21	886	201	886	1010	567	18300	390	475	174	41	29	38
22	737	243	2610	946	583	15100	383	428	146	39	23	38
23	669	256	2450	887	568	11700	386	389	127	38	21	30
24	646	222	4270	826	508	9440	427	361	113	36	18	31
25	667	192	4600	770	465	7740	459	352	103	34	15	31
26	884	177	4820	725	454	6370	404	510	95	32	14	108
27	1220	173	4700	788	432	5200	2240	708	89	31	13	117
28	1060	184	5060	936	407	4150	5080	613	85	30	12	86
29	696	266	6160	1040	---	3360	8300	597	82	27	13	63
30	514	482	6130	949	---	2770	9940	654	78	25	11	50
31	426	---	4900	871	---	2560	---	628	---	24	10	---
TOTAL	42877	6748	56089	99962	31912	163259	50167	87766	9080	1821	719	890.0
MEAN	1383	225	1809	3225	1140	5266	1672	2831	303	58.7	23.2	29.7
MAX	3620	482	6160	10200	3280	18300	9940	10800	1050	135	49	117
MIN	76	163	247	725	407	301	383	352	78	24	10	6.6
AC-FT	85050	13380	111300	198300	63300	323800	99510	174100	18010	3610	1430	1770

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1998, BY WATER YEAR (WY)

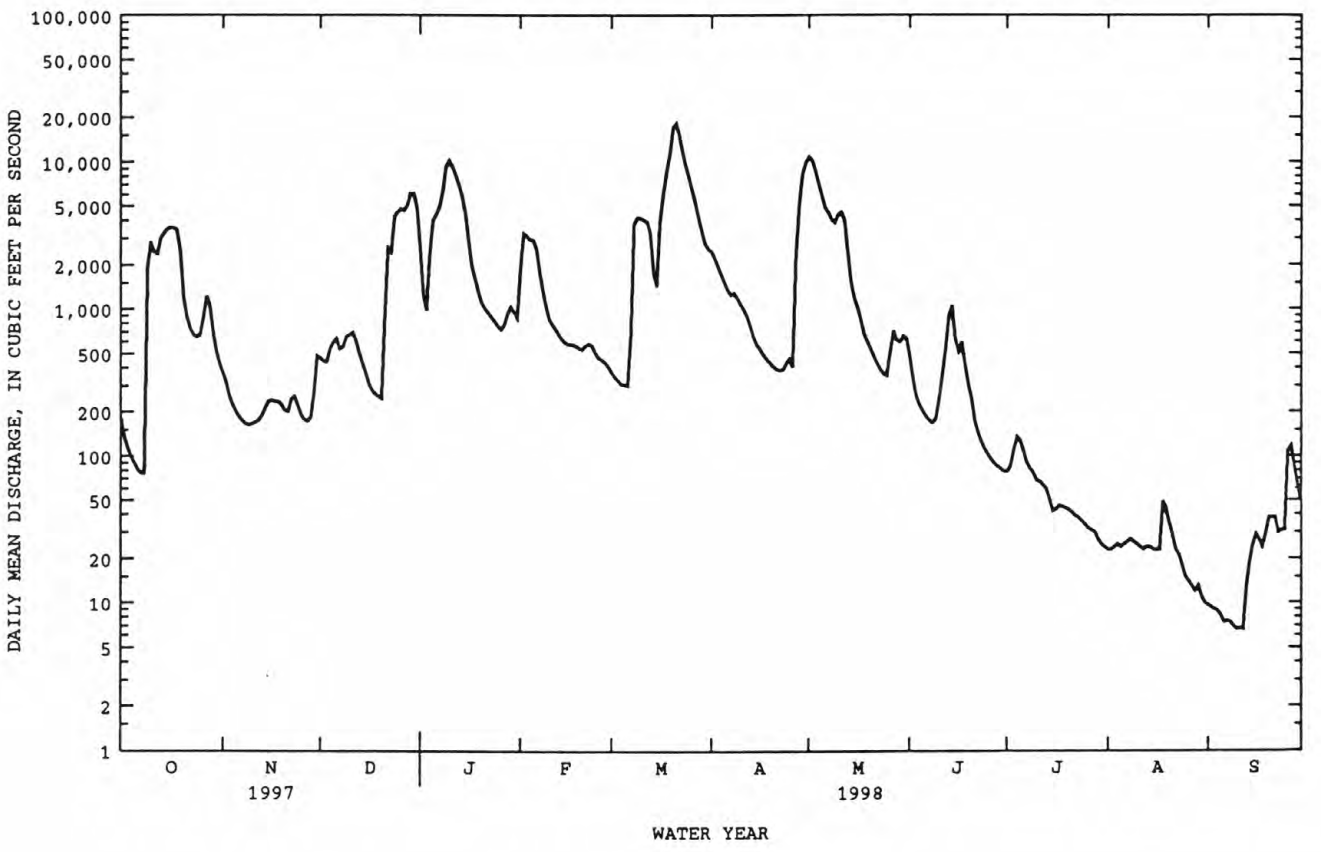
MEAN	703	770	564	442	659	1223	1546	2350	1923	596	254	376
MAX	5464	8391	4797	3749	4388	8895	9520	12470	8994	3950	2416	1947
(WY)	1942	1975	1993	1985	1985	1990	1945	1943	1974	1950	1992	1989
MIN	.000	.000	.51	7.74	20.3	9.65	37.0	120	59.0	5.67	3.31	.000
(WY)	1955	1955	1955	1940	1957	1940	1955	1996	1953	1954	1954	1956

e Estimated

07243500 DEEP FORK NEAR BEGGS, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1939 - 1998	
ANNUAL TOTAL	345096		551290.0			
ANNUAL MEAN	945		1510		950	
HIGHEST ANNUAL MEAN					2645	1993
LOWEST ANNUAL MEAN					114	1956
HIGHEST DAILY MEAN	6160	Dec 29	18300	Mar 21	55600	May 11 1943
LOWEST DAILY MEAN	65	Sep 22	6.6	Sep 10, 12	[a].00	Sep 20 1939
ANNUAL SEVEN-DAY MINIMUM	74	Sep 17	7.0	Sep 6	.00	Sep 29 1939
INSTANTANEOUS PEAK FLOW			18900	Mar 21	66800	May 11 1943
INSTANTANEOUS PEAK STAGE			26.82	Mar 21	34.55	May 11 1943
ANNUAL RUNOFF (AC-FT)	684500		1093000		688500	
10 PERCENT EXCEEDS	3290		4550		2650	
50 PERCENT EXCEEDS	284		457		170	
90 PERCENT EXCEEDS	129		24		20	

[a]At times in 1939, 1954, 1956.



07244100 COAL CREEK NEAR HENRYETTA, OK

LOCATION.--Lat 35°27'10", long 95°57'20", in NE ¼ SW ¼ sec.5, T.11 N., R.13 E., Okmulgee County, Hydrologic Unit 11100303, at downstream right abutment of abandoned railroad bridge at edge of Dewar, .4 mi downstream from an unnamed tributary, 2 mi northeast of Henryetta, and at mile 12.1.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--22.3 mi^2.

PERIOD OF RECORD.--March 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is 621.01 ft above sea level.

REMARKS.--Records good. Low flows regulated by releases of effluent from the City of Henryetta treatment plant .5 mi upstream. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	3.5	20	17	31	5.8	16	6.9	2.8	3.0	1.4	1.2
2	3.1	3.4	27	17	28	5.4	12	5.5	e3.3	3.0	1.3	1.1
3	3.1	3.2	72	17	20	5.3	11	4.6	e3.8	2.6	1.3	1.1
4	3.0	3.1	30	846	17	5.0	8.6	4.5	e4.0	2.1	1.9	1.1
5	3.2	3.3	20	192	14	5.4	7.8	522	4.8	1.8	3.9	1.1
6	3.0	3.1	16	511	13	5.4	7.9	67	3.9	1.8	2.3	1.1
7	3.2	3.0	16	369	11	164	11	34	3.0	1.7	1.8	1.2
8	9.2	2.8	87	466	10	80	9.5	23	3.7	4.8	1.7	1.2
9	149	3.5	42	178	9.6	36	7.4	49	4.5	4.0	2.3	1.1
10	13	14	26	102	9.2	25	6.5	59	4.7	2.8	2.2	1.0
11	6.4	7.8	19	56	8.4	20	5.8	25	16	2.4	2.4	1.1
12	49	6.5	16	44	7.6	15	5.3	16	5.8	2.2	1.7	1.2
13	47	26	14	e39	7.3	13	4.8	11	2.7	2.2	2.4	13
14	12	24	12	33	7.3	12	4.4	8.4	2.3	1.9	2.3	34
15	7.1	14	11	34	8.3	300	3.9	6.8	1.8	1.8	2.1	5.9
16	5.2	9.2	9.9	29	9.2	603	4.0	5.2	1.6	1.9	1.9	2.0
17	3.5	6.7	9.2	25	13	207	3.9	4.1	1.4	1.7	1.6	1.5
18	2.8	5.9	8.1	21	12	62	3.6	3.9	11	1.9	1.5	1.3
19	2.8	5.6	7.6	19	11	152	3.5	3.7	41	1.6	1.4	1.2
20	2.3	5.2	8.4	18	12	57	3.4	3.4	8.9	1.7	1.3	1.1
21	2.9	4.9	389	17	10	39	3.4	3.5	4.9	1.6	1.4	1.0
22	3.2	4.5	93	15	9.3	32	3.5	3.4	3.7	1.6	1.4	21
23	5.2	4.3	285	14	9.1	28	3.1	3.4	2.9	1.7	1.4	3.8
24	7.8	4.1	521	13	8.3	24	3.0	3.4	2.2	1.6	1.5	1.9
25	42	3.8	70	12	8.2	21	2.8	7.4	2.2	1.7	1.5	1.3
26	28	3.9	44	49	8.7	19	2.9	9.9	2.1	1.7	1.6	1.1
27	11	4.0	34	37	7.7	16	98	5.6	2.2	1.6	1.6	.97
28	6.9	236	29	26	7.9	15	27	4.2	2.0	1.6	1.3	1.0
29	5.4	66	27	21	---	13	14	3.6	2.1	1.3	1.2	.99
30	4.5	30	23	17	---	13	9.5	3.5	2.1	1.4	1.1	3.9
31	4.1	---	19	16	---	21	---	3.4	---	1.3	1.3	---
TOTAL	451.9	515.3	2005.2	3270	328.1	2019.3	307.5	914.3	157.4	64.0	54.0	110.46
MEAN	14.6	17.2	64.7	105	11.7	65.1	10.3	29.5	5.25	2.06	1.74	3.68
MAX	149	236	521	846	31	603	98	522	41	4.8	3.9	34
MIN	2.3	2.8	7.6	12	7.3	5.0	2.8	3.4	1.4	1.3	1.1	.97
AC-FT	896	1020	3980	6490	651	4010	610	1810	312	127	107	219

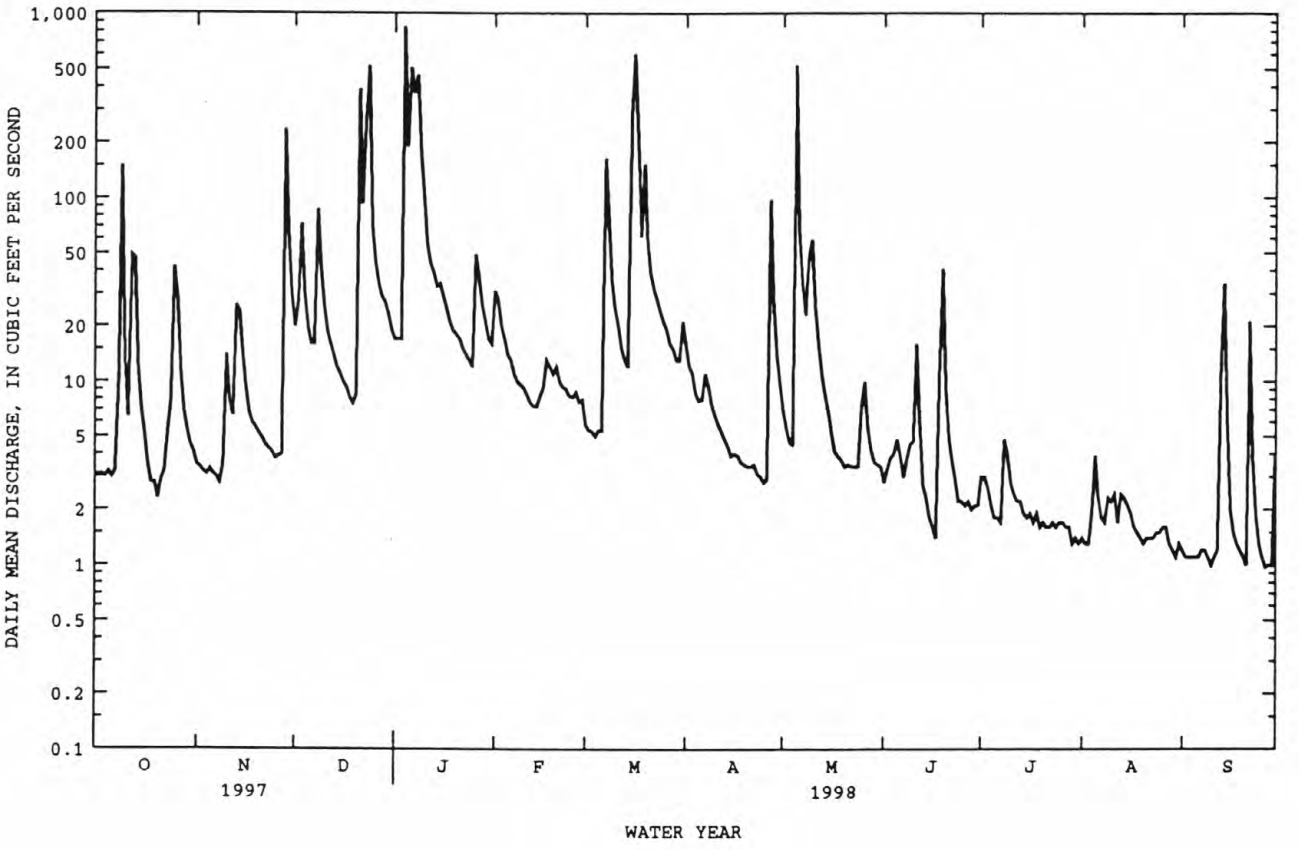
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

MEAN	10.5	23,7	36.0	54.2	30.0	38.9	14.9	15.9	13.1	8.46	2.08	12.6
MAX	14.6	30.2	64.7	105	48.3	65.1	19.5	29.5	28.9	16.0	2.85	32.0
(WY)	1998	1997	1998	1998	1997	1998	1997	1998	1997	1996	1997	1996
MIN	6.36	17.2	7.28	2.86	11.7	12.7	10.3	6.93	5.21	2.06	1.64	1.94
(WY)	1997	1998	1997	1997	1998	1997	1998	1997	1996	1998	1996	1997

e Estimated

07244100 COAL CREEK NEAR HENRYETTA, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1996 - 1998	
ANNUAL TOTAL	6845.9		10197.46			
ANNUAL MEAN	18.8		27.9		21.1	
HIGHEST ANNUAL MEAN					27.9	1998
LOWEST ANNUAL MEAN					14.3	1997
HIGHEST DAILY MEAN	620	Jun 17	846	Jan 4	846	Jan 4 1998
LOWEST DAILY MEAN	1.0	Jun 7	.97	Sep 27	.68	May 28 1996
ANNUAL SEVEN-DAY MINIMUM	1.1	Jun 3	1.1	Sep 4	.92	Jul 2 1996
INSTANTANEOUS PEAK FLOW			1970	Jan 4	1970	Jan 4 1998
INSTANTANEOUS PEAK STAGE			21.43	Jan 4	21.43	Jan 4 1998
ANNUAL RUNOFF (AC-FT)	13580		20230		15280	
10 PERCENT EXCEEDS	29		43		30	
50 PERCENT EXCEEDS	4.2		5.4		4.0	
90 PERCENT EXCEEDS	1.6		1.4		1.3	



07244100 COAL CREEK NEAR HENRYETTA, OK --Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--March 1996 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: March 1996 to current year.

INSTRUMENTATION.--Water temperature recorder provides continuous readings.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 33.0°C, July 3, 1996; minimum, 4.0°C, Jan. 16, Mar. 10,12, 13, 1998.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum observed (greater than 20 percent missing record), 32.5°C, July 27; minimum recorded, 4.0°C, Jan. 16, Mar. 10, 12, 13.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.5	20.0	22.0	18.0	16.0	17.0	12.5	11.5	12.0	7.5	5.5	6.0
2	24.0	20.5	22.5	16.0	14.0	15.0	11.5	10.5	11.5	10.0	7.0	8.5
3	25.0	22.0	23.5	14.0	13.0	13.5	10.5	9.5	10.0	12.5	10.0	11.0
4	24.5	21.5	23.0	14.5	11.5	13.0	10.0	8.5	9.0	12.5	9.5	11.0
5	24.0	21.0	22.5	15.5	14.0	14.5	8.5	7.0	7.5	10.0	9.0	9.5
6	24.5	22.0	23.0	14.5	12.0	13.0	8.0	6.0	7.0	11.0	10.0	10.5
7	23.5	22.0	23.0	12.5	11.0	12.0	8.0	6.0	7.0	10.0	6.5	8.0
8	23.0	22.5	23.0	13.0	11.0	12.0	7.0	5.5	6.0	6.5	4.5	5.5
9	23.0	20.5	21.5	13.5	12.5	13.0	8.5	6.5	7.5	6.0	5.5	6.0
10	23.0	21.0	22.0	13.5	11.0	12.0	8.5	6.5	7.5	---	---	---
11	23.0	21.5	22.5	12.0	9.5	11.0	7.0	6.5	6.5	---	---	---
12	22.5	20.0	21.5	11.5	10.5	11.0	7.0	5.5	6.5	6.5	5.5	6.0
13	20.0	18.0	19.5	11.0	9.0	10.0	7.0	4.5	5.5	---	---	---
14	20.0	17.0	18.0	10.5	8.5	9.5	7.0	4.5	6.0	---	---	---
15	20.0	16.5	18.0	10.0	7.5	9.0	8.0	5.0	6.0	6.0	4.5	5.0
16	20.0	17.0	18.5	---	---	---	8.5	6.0	7.0	6.5	4.0	5.5
17	19.0	17.0	18.0	8.5	6.0	7.5	8.5	5.5	7.0	7.5	4.5	6.0
18	18.0	15.5	17.0	10.0	7.5	8.5	8.5	6.0	7.0	8.0	5.5	6.5
19	19.0	16.0	17.5	10.5	8.0	9.0	9.5	7.0	8.0	8.0	5.0	6.5
20	19.0	17.0	18.0	10.0	9.0	9.5	9.0	7.5	8.0	8.0	6.0	7.0
21	18.5	15.5	17.0	11.0	9.5	10.0	8.0	6.5	7.5	8.0	6.0	7.0
22	16.5	14.0	15.0	11.5	9.5	10.0	7.5	7.0	7.0	7.5	5.5	6.5
23	16.0	15.0	15.5	11.0	8.5	10.0	7.5	6.0	7.0	7.0	4.5	5.5
24	17.5	16.0	16.5	12.0	10.0	11.0	7.0	6.0	6.5	7.5	4.5	5.5
25	18.0	16.5	17.0	13.5	10.5	11.5	7.0	6.5	7.0	7.5	5.5	6.5
26	16.5	14.0	15.0	14.0	12.5	13.5	7.5	6.5	7.0	7.5	6.0	6.5
27	15.0	13.0	14.0	14.5	12.0	13.0	7.0	5.5	6.5	8.0	6.0	7.0
28	15.0	12.5	13.5	15.5	14.5	14.5	6.5	5.5	6.0	9.0	6.5	7.5
29	15.0	13.0	14.0	14.5	13.0	14.0	6.5	4.5	5.5	9.5	6.5	8.0
30	17.5	14.5	16.0	13.5	12.0	12.5	7.0	5.0	6.0	10.0	6.5	8.0
31	19.0	16.5	17.5	---	---	---	7.0	4.5	5.5	9.5	7.5	8.5
MONTH	25.0	12.5	18.9	---	---	---	12.5	4.5	7.2	---	---	---

07244100 COAL CREEK NEAR HENRYETTA, OK --Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	10.0	8.0	9.0	11.0	8.0	9.5	19.5	14.5	16.5	18.0	15.0	16.0
2	10.0	7.5	8.5	10.5	7.0	9.0	20.5	14.5	17.0	18.5	16.0	17.0
3	9.5	7.5	8.5	12.0	6.5	9.0	17.0	14.5	16.5	19.0	16.0	17.5
4	9.0	7.0	8.0	11.5	8.5	10.0	15.5	13.5	14.5	19.5	16.5	17.5
5	8.0	6.5	7.0	11.0	9.0	10.0	19.0	12.0	15.0	18.5	15.5	17.0
6	9.0	6.0	7.0	9.5	8.0	9.0	20.0	14.0	16.5	18.5	17.0	17.5
7	9.0	5.5	7.0	9.5	8.5	9.0	20.5	15.5	17.5	19.5	17.5	18.5
8	9.0	6.0	7.5	8.5	6.5	7.5	19.5	15.5	17.0	19.5	18.0	18.5
9	9.5	6.5	8.0	8.0	5.0	6.5	19.5	14.0	16.0	19.0	17.5	18.5
10	9.5	8.0	8.5	8.0	4.0	6.0	20.0	13.5	16.5	18.5	17.5	18.0
11	10.5	7.5	8.5	8.0	4.5	6.0	20.5	14.0	17.0	19.5	17.5	18.5
12	10.0	6.5	8.0	6.0	4.0	5.0	19.5	15.5	17.5	21.0	18.5	19.5
13	11.0	7.0	9.0	10.0	4.0	6.5	22.0	16.5	19.0	21.5	19.0	20.0
14	11.5	8.0	9.5	9.5	7.0	8.0	22.5	16.0	19.0	21.0	19.5	20.0
15	10.0	9.0	9.5	10.0	8.5	9.5	22.0	18.5	20.0	22.0	19.5	20.5
16	9.5	9.0	9.5	9.5	9.0	9.5	20.0	16.5	17.5	21.5	18.5	20.0
17	9.5	8.0	9.0	10.0	9.5	9.5	19.0	14.0	16.5	20.5	18.5	19.5
18	11.5	7.0	8.5	11.5	9.5	10.5	---	---	---	22.0	19.5	20.5
19	11.5	9.0	10.0	11.0	8.5	9.5	---	---	---	22.0	19.5	21.0
20	12.5	8.5	10.0	10.0	8.0	8.5	---	---	---	21.5	20.0	20.5
21	12.5	8.5	10.5	11.0	7.5	9.0	---	---	---	21.5	20.0	20.5
22	11.5	10.5	11.0	12.5	8.5	10.5	---	---	---	21.5	20.5	20.5
23	13.0	9.5	11.0	14.0	10.5	12.0	---	---	---	20.5	20.0	20.0
24	14.5	9.5	11.5	16.0	12.0	13.5	---	---	---	21.5	19.0	20.5
25	14.5	12.0	13.0	18.0	14.0	15.5	---	---	---	21.0	19.5	20.5
26	15.5	12.0	13.5	18.5	15.5	17.0	---	---	---	21.0	19.5	20.0
27	14.5	10.5	12.0	18.0	16.0	16.5	---	---	---	20.5	19.5	20.0
28	12.0	9.5	11.0	20.5	15.0	17.0	15.5	15.0	15.5	21.5	19.0	20.5
29	---	---	---	19.5	17.0	18.0	15.5	15.0	15.0	22.5	20.0	21.0
30	---	---	---	19.0	17.0	18.0	16.5	15.0	15.5	23.0	20.5	22.0
31	---	---	---	18.5	15.5	17.0	---	---	---	23.5	21.0	22.0
MONTH	15.5	5.5	9.4	20.5	4.0	10.7	---	---	---	23.5	15.0	19.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	---	---	---	27.5	23.5	25.5
2	---	---	---	---	---	---	---	---	---	28.0	24.0	26.0
3	---	---	---	---	---	---	---	---	---	28.0	24.0	26.0
4	---	---	---	---	---	---	---	---	---	29.0	25.0	27.0
5	---	---	---	---	---	---	---	---	---	29.0	25.5	27.0
6	---	---	---	---	---	---	---	---	---	29.0	25.5	27.0
7	---	---	---	---	---	---	---	---	---	28.5	24.5	26.5
8	---	---	---	---	---	---	---	---	---	28.0	24.5	26.5
9	---	---	---	---	---	---	---	---	---	26.5	23.5	25.0
10	---	---	---	---	---	---	---	---	---	24.0	20.0	22.5
11	---	---	---	---	---	---	---	---	---	25.0	21.0	23.0
12	---	---	---	---	---	---	---	---	---	23.5	22.5	23.0
13	---	---	---	---	---	---	---	---	---	24.5	22.0	23.0
14	---	---	---	---	---	---	---	---	---	24.5	23.0	23.5
15	---	---	---	---	---	---	---	---	---	26.0	23.5	24.5
16	---	---	---	---	---	---	---	---	---	25.0	23.0	23.5
17	---	---	---	---	---	---	---	---	---	25.5	22.5	24.0
18	---	---	---	---	---	---	---	---	---	25.5	23.0	24.0
19	---	---	---	---	---	---	30.0	26.0	28.0	26.0	23.0	24.5
20	---	---	---	---	---	---	29.5	26.0	27.5	26.0	23.5	25.0
21	---	---	---	---	---	---	29.5	25.5	27.5	27.5	24.0	25.5
22	---	---	---	---	---	---	28.5	25.0	26.5	25.5	22.0	24.0
23	---	---	---	---	---	---	29.0	25.5	27.0	24.5	22.0	23.0
24	---	---	---	---	---	---	29.0	25.5	27.0	25.0	22.5	24.0
25	---	---	---	---	---	---	28.5	25.5	27.0	26.5	23.5	25.0
26	---	---	---	---	---	---	28.5	25.5	27.0	26.0	24.0	25.0
27	---	---	---	---	---	---	29.0	25.5	27.5	26.5	23.5	25.0
28	---	---	---	---	---	---	27.5	26.0	27.0	26.5	24.0	25.0
29	---	---	---	---	---	---	28.0	24.5	26.0	26.5	23.0	25.0
30	---	---	---	---	---	---	27.5	23.5	26.0	26.0	22.0	24.5
31	---	---	---	---	---	---	28.0	23.5	26.0	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	29.0	20.0	24.8

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK

LOCATION.--Lat 35°15'50", long 95°14'21", in SE ¼ SE ¼ 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1880	4200	4500	20400	15700	4300	39400	24700	5800	3620	1040	3590
2	e1700	2700	e2600	19400	15500	6200	39500	21300	6200	2960	1390	3880
3	2600	3000	e1900	18200	15400	6800	33200	21200	1400	2940	2520	3400
4	1500	5900	e2200	15400	15400	6500	28500	19700	180	2120	603	2900
5	e800	6000	e2000	e2000	16000	8300	28300	16200	e120	639	124	2940
6	e680	4400	e1600	11800	18200	9200	25200	24300	e110	3430	1130	882
7	e540	2900	e1450	22700	18100	3700	21600	23500	e105	4020	2490	3280
8	e390	e940	2000	18200	18100	7250	21500	23200	e100	5970	603	1060
9	e500	e780	2700	17200	17300	11600	21500	23100	e1450	5390	500	198
10	1300	4800	5600	35200	15200	15500	22100	23100	1880	5110	523	177
11	4300	4000	6850	43500	15000	15300	22000	19000	e1200	1590	109	166
12	4900	3800	8300	43000	14800	15400	21900	13900	2300	298	106	195
13	5600	3400	6000	42500	15000	14400	21700	13800	e1400	2730	161	340
14	5300	2200	5400	42100	12100	12800	22000	9000	e660	2790	124	1880
15	5800	e1650	6700	42000	12000	13000	19900	11500	e930	2470	103	357
16	5600	e1400	3900	41500	11900	14600	12500	7300	e850	2160	100	242
17	e3600	2500	2000	41900	12000	9800	10500	5200	3600	2150	2110	3650
18	e1500	e3500	2900	42000	11900	13300	10200	8100	6000	1830	4700	1330
19	e800	4300	3750	42200	11900	21400	10600	7400	6700	935	4050	478
20	e480	4000	e2000	45200	12000	15300	10000	6100	2800	3500	4460	179
21	2500	e840	e1500	55900	5200	15100	7400	5000	e2200	4520	4080	663
22	3300	e1050	2700	52100	e4900	19400	6800	4800	4800	4960	1020	606
23	2900	e1200	5800	37500	7300	28400	7800	e1150	3500	4150	1870	196
24	3600	e810	2600	33400	5600	39400	6400	e1000	3120	4080	4150	164
25	e2800	e620	6800	33200	7600	53500	5700	e880	3420	1860	4820	1110
26	e1300	e520	16400	34100	5000	47400	5000	6000	2760	1230	4820	766
27	4000	e490	21000	32800	4800	41100	9500	7000	583	3320	4010	164
28	4900	e470	21100	32600	5500	40900	16700	7200	96	4030	4030	2040
29	4500	5200	22400	32400	---	40700	24400	6000	3540	3240	1380	2830
30	3600	6800	27100	26300	---	36500	26900	4300	4500	4200	194	973
31	5500	---	24900	16100	---	34300	---	5600	---	2840	3720	---
TOTAL	88670	84370	226650	992800	339400	621350	558700	370530	72304	95082	61040	40636
MEAN	2860	2812	7311	32030	12120	20040	18620	11950	2410	3067	1969	1355
MAX	5800	6800	27100	55900	18200	53500	39500	24700	6700	5970	4820	3880
MIN	390	470	1450	2000	4800	3700	5000	880	96	298	100	164
AC-FT	175900	167300	449600	1969000	673200	1232000	1108000	734900	143400	188600	121100	80600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1998, BY WATER YEAR (WY)

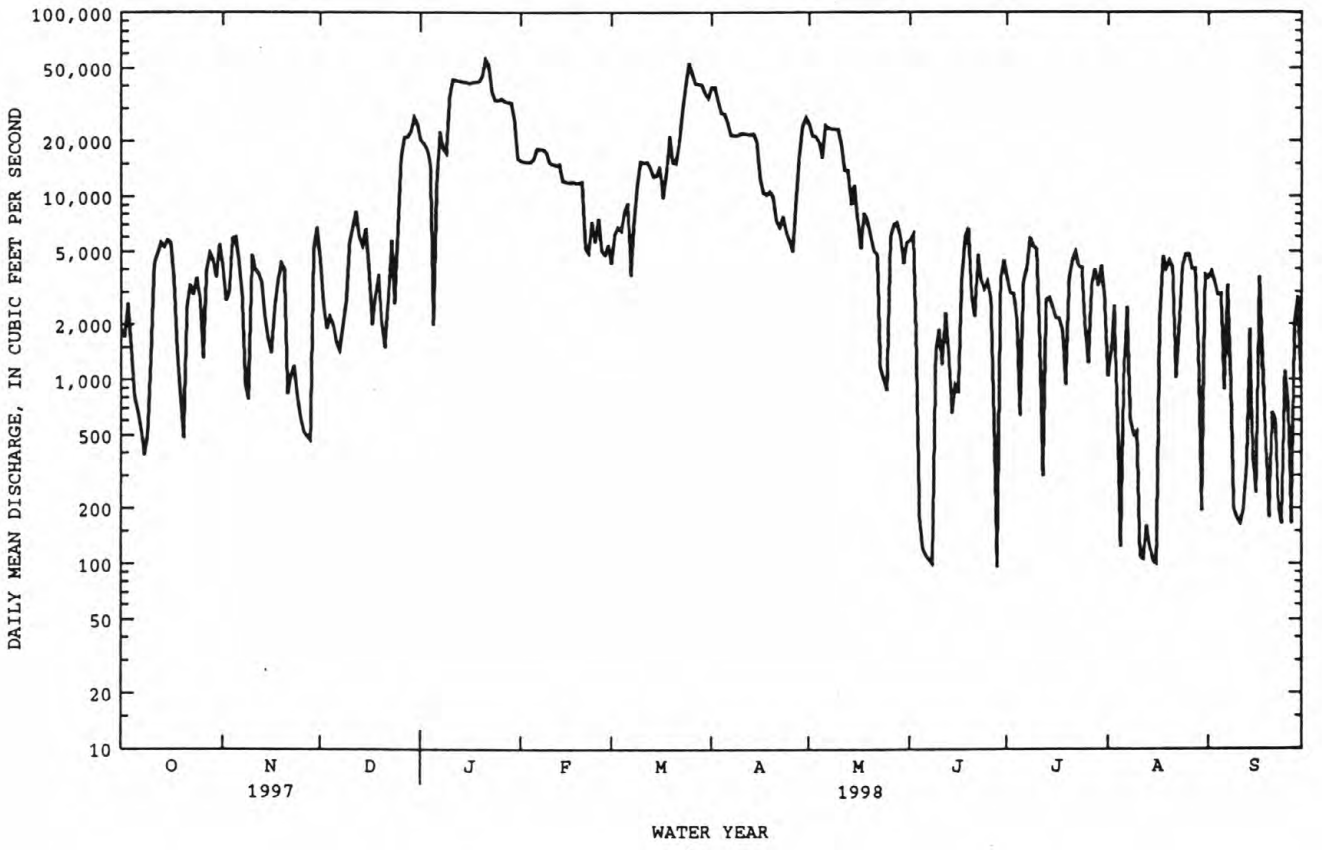
MEAN	2919	5767	6972	6644	6232	9490	9372	13160	11190	4769	3618	2605
MAX	13100	21930	29600	32030	19480	30340	37980	64970	35550	13870	20050	13910
(WY)	1987	1975	1993	1998	1993	1985	1990	1990	1982	1995	1992	1992
MIN	241	248	247	119	127	129	81.5	148	600	259	692	558
(WY)	1979	1983	1981	1981	1981	1981	1981	1981	1988	1988	1985	1985

e Estimated

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1968 - 1998	
ANNUAL TOTAL	2158039		3551532			
ANNUAL MEAN	5912		9730		[a]6896	
HIGHEST ANNUAL MEAN					15200	1993
LOWEST ANNUAL MEAN					1012	1981
HIGHEST DAILY MEAN	32500	Feb 25	55900	Jan 21	226000	May 5 1990
LOWEST DAILY MEAN	200	Sep 11	96	Jun 28	[b]17	Dec 1 1980
ANNUAL SEVEN-DAY MINIMUM	737	Nov 22	175	Aug 10	39	Oct 7 1985
INSTANTANEOUS PEAK FLOW			56500	Jan 21	[c]241000	May 3 1990
INSTANTANEOUS PEAK STAGE			14.95	Jan 21	[d]25.32	May 3 1990
ANNUAL RUNOFF (AC-FT)	4280000		7044000		4996000	
10 PERCENT EXCEEDS	13500		26500		17000	
50 PERCENT EXCEEDS	3900		4520		3710	
90 PERCENT EXCEEDS	940		566		146	

[a]Prior to regulation, water years 1939-63, 6,005 ft^3/s.
[b]Minimum daily discharge for period of record was 0.4 ft^3/s, 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.



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 September 13, 1991.

REMARKS.--No estimated daily discharges. Records good. 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 sedi- ment 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	42	108	273	213	438	740	35	158	1.7	1.4	3.1
2	3.0	38	77	234	184	344	452	28	105	1.9	1.3	2.9
3	2.8	17	653	214	158	286	331	49	71	1.8	1.9	3.2
4	2.7	11	336	388	136	244	260	55	49	1.7	2.6	3.4
5	2.9	8.4	188	10000	119	357	218	39	37	1.5	2.7	3.5
6	3.1	7.5	126	2860	104	315	184	57	26	1.4	2.7	3.9
7	5.1	17	110	2720	92	837	177	62	18	1.2	2.4	4.2
8	10	13	924	3450	82	1390	146	60	14	1.0	2.3	4.6
9	46	9.1	584	1790	75	903	114	52	11	.91	2.0	4.9
10	264	10	332	1350	646	593	91	205	11	.96	1.8	22
11	53	81	221	1170	5110	442	73	137	15	1.3	1.9	44
12	17	60	175	1070	1450	354	63	94	16	1.8	2.2	52
13	158	358	138	886	1080	312	51	68	16	2.9	2.4	70
14	127	494	113	675	788	271	43	52	31	3.6	2.3	64
15	37	237	93	583	560	348	37	43	15	2.4	2.2	77
16	16	132	77	457	631	1680	44	34	7.6	1.7	2.3	95
17	10	85	64	367	1640	1810	62	26	5.7	1.4	2.4	92
18	7.4	60	53	303	1250	1100	43	21	4.8	1.2	2.3	81
19	6.3	45	45	253	855	2750	33	17	5.5	1.2	2.3	78
20	5.1	34	116	212	647	1600	27	14	16	1.3	2.1	79
21	4.7	26	1280	184	482	1040	23	12	9.7	1.2	1.8	82
22	4.7	23	856	271	497	804	21	11	5.9	1.1	1.6	91
23	4.7	19	890	292	475	611	17	9.6	4.3	1.2	1.5	96
24	6.5	15	5440	209	347	473	15	8.8	3.5	1.8	1.6	79
25	34	12	1520	175	288	380	13	7.7	3.1	2.5	1.8	75
26	151	11	1140	708	1360	310	11	28	2.6	2.1	1.8	75
27	87	9.5	978	800	949	277	197	403	2.3	1.7	1.8	73
28	33	9.3	715	505	625	378	125	626	2.0	1.8	1.7	71
29	17	192	572	375	---	257	67	566	1.7	2.1	2.0	70
30	12	186	431	300	---	220	47	548	1.6	1.8	2.5	71
31	11	---	337	248	---	1270	---	255	---	1.5	3.1	---
TOTAL	1145.0	2261.8	18692	33322	20843	22394	3725	3623.1	669.3	51.67	64.7	1570.7
MEAN	36.9	75.4	603	1075	744	722	124	117	22.3	1.67	2.09	52.4
MAX	264	494	5440	10000	5110	2750	740	626	158	3.6	3.1	96
MIN	2.7	7.5	45	175	75	220	11	7.7	1.6	.91	1.3	2.9
AC-FT	2270	4490	37080	66090	41340	44420	7390	7190	1330	102	128	3120

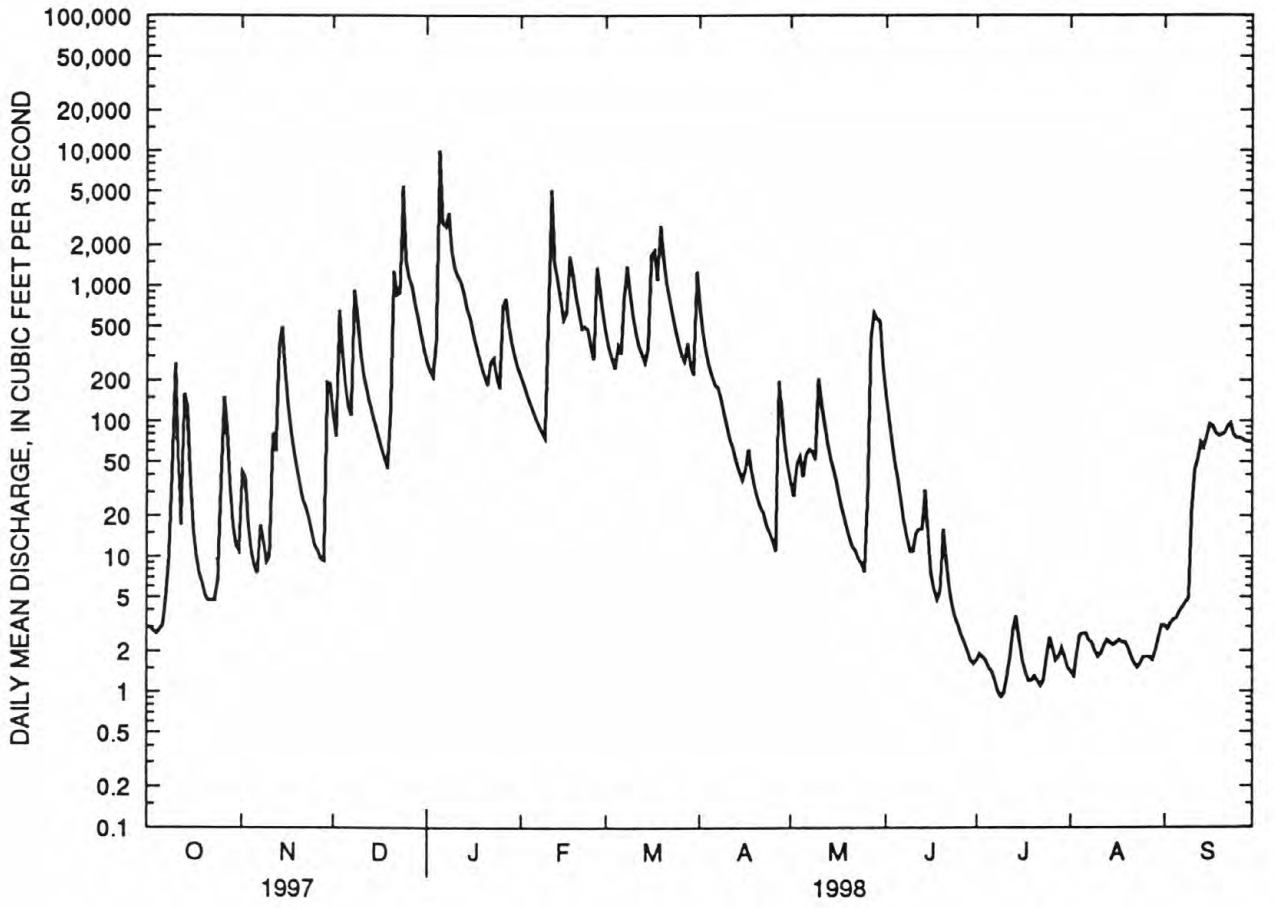
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1998, BY WATER YEAR (WY)

MEAN	107	305	365	308	386	426	345	470	214	57.9	21.3	24.3
MAX	1423	1900	1078	1075	1246	849	1092	2080	846	314	93.7	166
(WY)	1985	1997	1983	1998	1989	1975	1991	1990	1986	1981	1996	1996
MIN	.015	2.09	2.02	14.1	35.6	59.9	42.5	13.6	2.36	.41	.81	.19
(WY)	1979	1996	1990	1981	1996	1986	1976	1977	1988	1980	1976	1980

07247000 POTEAU RIVER AT CAUTHRON, AR--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1975 - 1998	
ANNUAL TOTAL	90161.0		108362.27			
ANNUAL MEAN	247		297		[a]252	
HIGHEST ANNUAL MEAN					432	1985
LOWEST ANNUAL MEAN					48.7	1976
HIGHEST DAILY MEAN	5960	Feb 21	10000	Jan 5	16900	May 3 1990
LOWEST DAILY MEAN	1.9	Sep 30	.91	Jul 9	.00	Aug 30 1976
ANNUAL SEVEN-DAY MINIMUM	2.4	Aug 27	1.2	Jul 5	.00	Oct 7 1978
INSTANTANEOUS PEAK FLOW			12900	Jan 5	[b]24000	May 3 1990
INSTANTANEOUS PEAK STAGE			19.51	Jan 5	[c]22.17	May 3 1990
INSTANTANEOUS LOW FLOW			.84	Jul 9,10	.00	at times
ANNUAL RUNOFF (AC-FT)	178800		214900		182500	
10 PERCENT EXCEEDS	618		802		612	
50 PERCENT EXCEEDS	48		57		51	
90 PERCENT EXCEEDS	4.3		1.8		1.7	

[a]Prior to regulation, water years 1940-74, 218 ft^3/s.
[b]Maximum discharge for period of record, 32,200 ft^3/s May 20, 1960.
[c]Maximum gage height for period of record, 23.76 ft May 20, 1960.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1945-61, 1975-79, December 1991 to current year.

REMARKS.--Samples were collected bi-monthly. Specific conductance, pH, water temperature, alkalinity,and dissolved oxygen were determined in the field.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	STREAM WIDTH (FT) (00004)	SAMPLING DEPTH (FEET) (00003)	DEPTH AT SAMPLE LOCATION, TOTAL (FEET) (81903)	SAMPLE LOCATION, CROSS SECTION (FT FM R BK) (72103)
SEP							
17...	1018	80513	80513	130	.50	1.00	16.0
17...	1021	80513	80513	130	1.00	2.00	78.0
17...	1023	80513	80513	130	1.00	2.00	90.0
17...	1024	80513	80513	130	1.50	3.00	102.0
17...	1025	80513	80513	130	1.00	2.00	114.0
17...	1026	80513	80513	130	1.50	3.00	126.0
17...	1028	80513	80513	130	2.00	4.00	138.0
17...	1030	80513	80513	130	2.00	4.00	150.0
17...	1031	80513	80513	130	1.50	3.00	162.0
17...	1032	80513	80513	130	1.00	2.00	174.0

DATE	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	BAROMETRIC PRESSURE (MM OF HG) (00025)
SEP						
17...	89	5.9	21.5	5.0	57	750
17...	89	5.9	21.4	5.0	58	750
17...	89	5.9	21.4	5.1	59	750
17...	89	5.9	21.4	5.2	59	750
17...	89	5.9	21.4	5.2	60	750
17...	89	5.9	21.4	4.7	54	750
17...	89	5.9	21.4	4.8	55	750
17...	89	5.9	21.4	5.4	62	750
17...	89	5.9	21.4	4.8	55	750
17...	89	5.9	21.5	4.6	53	750

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)	BAROMETRIC PRESSURE (MM OF HG) (00025)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT										
09...	1030	80513	81213	19	238	7.3	750	21.9	5.9	69
DEC										
11...	1130	80513	81213	234	186	7.6	751	6.2	8.9	73
JAN										
05...	1230	80513	81213	12100	33	7.4	747	13.9	10.6	104
APR										
06...	1130	80513	81213	187	54	7.7	743	14.8	8.5	86
JUN										
03...	1100	80513	81213	75	67	7.2	742	27.0	5.3	69
AUG										
19...	1000	80513	81213	2.5	72	7.5	750	28.0	5.3	69

07247000 POTEAU RIVER AT CAUTHRON, AR--Continued

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	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)
OCT										
09...	1100	680	K3900	25	3.6	3.9	33	68	3	6.4
DEC										
11...	470	450	650	15	2.6	2.1	5.8	42	.6	1.9
JAN										
05...	K10000	K10000	E11000	8	1.7	1.0	<.10	--	--	2.1
APR										
06...	170	140	K49	12	2.0	1.6	5.0	45	.6	1.3
JUN										
03...	78	86	84	15	2.8	1.9	6.1	43	.7	2.4
AUG										
19...	62	K26	K12	25	3.7	3.8	20	59	2	4.6

DATE	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	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)
OCT										
09...	17	30	128	--	--	<.010	--	<.020	<.010	--
DEC										
11...	8.5	5.5	56	--	--	<.010	--	.390	.025	.03
JAN										
05...	3.1	1.8	34	--	--	<.010	--	.110	.040	.05
APR										
06...	6.5	3.5	46	--	--	<.010	--	<.020	.038	.05
JUN										
03...	6.8	4.1	46	.093	.41	.017	.06	.110	.110	.14
AUG										
19...	12	17	100	--	--	<.010	--	<.020	<.010	--

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, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT										
09...	--	.77	--	.080	<.020	<.010	--	59	3.0	93
DEC										
11...	.31	.34	.73	.150	.170	.080	.25	18	11	97
JAN										
05...	1.1	1.1	1.2	.300	.110	.130	.40	199	6500	83
APR										
06...	.24	.28	--	.100	.060	.070	.21	40	20	35
JUN										
03...	.21	.32	.43	.130	.070	.030	.09	32	6.5	94
AUG										
19...	--	.51	--	.060	.020	.010	.03	59	.39	88

07247015 POTEAU RIVER NEAR LOVING, OK

LOCATION.--Lat 34°52'47", long 94°29'02", in SW ¼ NW ¼ 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	e35	139	327	253	523	e980	56	186	5.4	3.3	1.4
2	10	e60	96	277	217	414	e680	47	130	5.2	3.2	1.3
3	11	24	698	242	185	342	e440	44	96	5.1	3.9	1.1
4	10	28	515	448	157	292	e310	59	73	5.1	5.0	1.0
5	9.9	25	255	8390	134	343	e260	64	58	4.7	4.8	1.0
6	8.8	24	162	6510	116	384	e220	195	49	4.3	4.7	1.1
7	8.3	20	119	3510	101	706	195	112	39	4.1	4.7	1.1
8	11	22	768	5290	90	2030	189	78	33	3.7	4.9	1.1
9	e50	27	736	2500	82	1020	142	188	29	3.4	4.7	1.1
10	e410	28	441	1670	277	679	115	431	28	3.2	4.6	.97
11	e200	26	295	1280	6770	521	94	241	27	3.2	5.0	.88
12	e56	67	223	1110	2140	427	79	137	26	3.1	4.9	20
13	e110	170	174	889	1220	368	69	92	29	3.0	4.8	40
14	e230	622	141	665	827	326	60	70	25	3.3	4.3	41
15	e150	297	114	581	609	390	55	59	34	4.0	3.8	37
16	e100	160	94	494	599	1770	78	50	26	5.0	3.5	43
17	e48	97	80	405	1860	3260	73	43	18	4.9	3.3	51
18	e24	67	68	338	1860	1520	71	37	15	3.9	3.2	45
19	e17	52	59	285	932	3300	56	33	16	3.1	3.0	40
20	e13	42	160	238	709	2730	48	29	15	2.7	3.0	39
21	e11	35	1430	205	551	1220	42	27	17	2.3	2.9	38
22	10	30	1250	254	510	838	38	25	19	2.1	3.1	45
23	14	27	972	375	551	655	36	23	14	2.3	3.2	47
24	e41	25	7310	262	415	532	33	22	11	2.4	2.9	46
25	108	22	2450	209	340	438	31	20	9.3	2.8	2.6	38
26	e200	21	1350	521	1480	360	28	225	8.3	3.6	2.3	36
27	130	20	1080	952	1230	314	77	461	7.4	3.5	2.0	36
28	57	20	775	609	710	409	241	645	6.6	4.1	1.6	35
29	41	62	641	462	---	325	103	721	6.2	4.4	1.4	34
30	e28	263	519	363	---	270	70	539	5.7	3.9	1.3	34
31	21	---	409	299	---	1400	---	314	---	3.7	1.3	---
TOTAL	2146.8	2418	23523	39960	24925	28106	4913	5087	1056.5	115.5	107.2	757.05
MEAN	69.3	80.6	759	1289	890	907	164	164	35.2	3.73	3.46	25.2
MAX	410	622	7310	8390	6770	3300	980	721	186	5.4	5.0	51
MIN	8.3	20	59	205	82	270	28	20	5.7	2.1	1.3	.88
AC-FT	4260	4800	46660	79260	49440	55750	9740	10090	2100	229	213	1500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1998, BY WATER YEAR (WY)

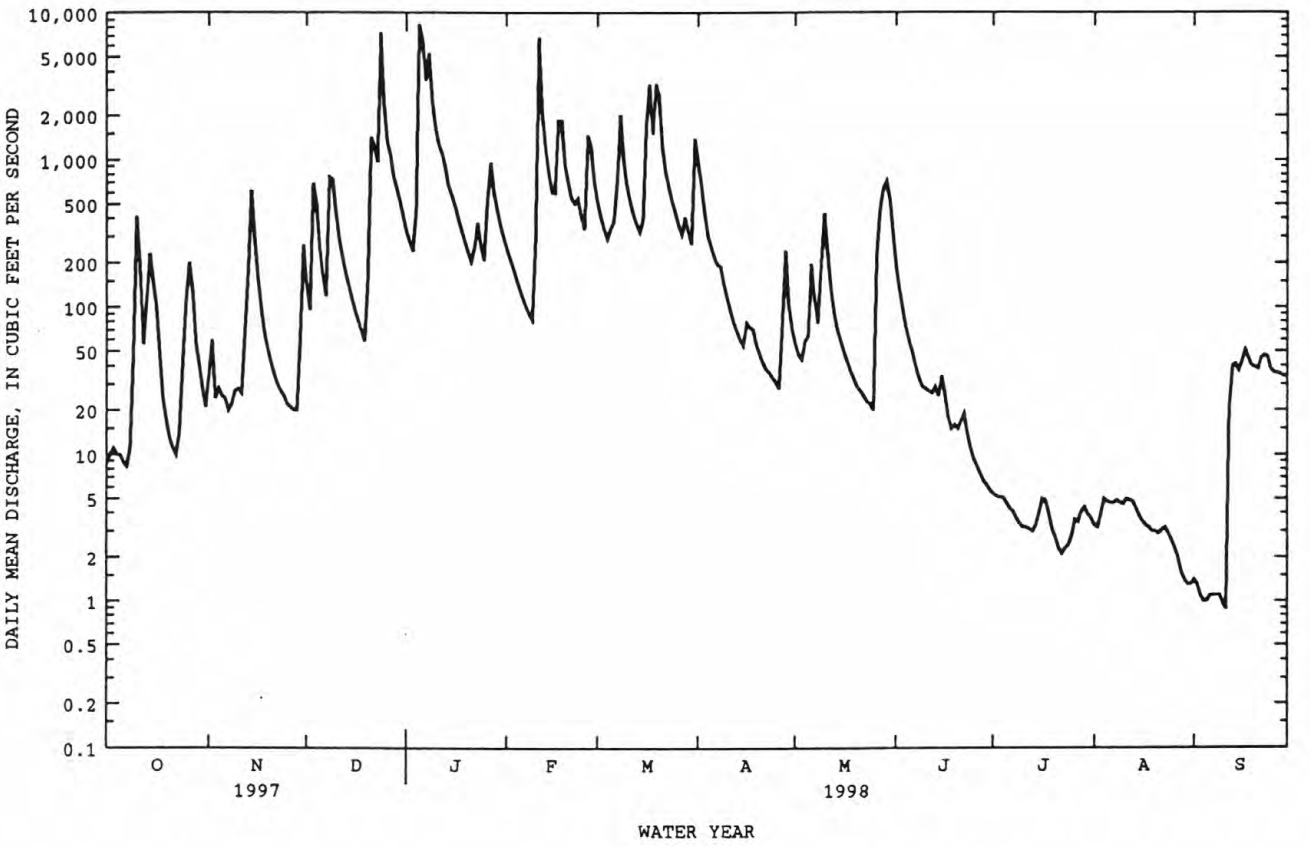
MEAN	71.1	684	616	686	510	500	343	387	211	29.1	15.7	58.8
MAX	202	2217	800	1289	1172	907	627	898	600	77.0	66.1	190
(WY)	1994	1997	1994	1998	1997	1998	1996	1993	1992	1996	1996	1996
MIN	3.73	3.25	47.6	141	34.1	170	64.4	24.8	12.6	3.73	3.46	5.87
(WY)	1995	1996	1996	1997	1996	1996	1992	1997	1994	1998	1998	1997

e Estimated

07247015 POTEAU RIVER NEAR LOVING, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1992 - 1998	
ANNUAL TOTAL	110841.7		133115.05			
ANNUAL MEAN	304		365		343	
HIGHEST ANNUAL MEAN					469	1997
LOWEST ANNUAL MEAN					139	1996
HIGHEST DAILY MEAN	7880	Feb 21	8390	Jan 5	12500	Nov 25 1996
LOWEST DAILY MEAN	5.0	Sep 22	.88	Sep 11	.36	Sep 21 1994
ANNUAL SEVEN-DAY MINIMUM	5.3	Sep 19	1.0	Sep 5	.51	Sep 16 1994
INSTANTANEOUS PEAK FLOW			9130	Jan 5	13200	Nov 25 1996
INSTANTANEOUS PEAK STAGE			[a]26.06	Jan 5	28.66	Nov 25 1996
ANNUAL RUNOFF (AC-FT)	219900		264000		248200	
10 PERCENT EXCEEDS	708		831		796	
50 PERCENT EXCEEDS	50		59		58	
90 PERCENT EXCEEDS	6.8		3.2		3.8	

[a]From high-water mark.



07247015 POTEAU RIVER AT LOVING, OK--Continued

WATER-QUALITY RECORDS

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 1997 TO SEPTEMBER 1998

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											
08...	0755	4.00	29.0	751	1028	1028	8.1	8.74	101	4.2	7.4
08...	0757	6.00	29.0	751	1028	1028	8.1	8.74	95	4.2	7.4
08...	0759	8.00	29.0	751	1028	1028	8.1	8.74	98	4.1	7.3
08...	0800	10.0	29.0	751	1028	1028	8.1	8.74	95	4.1	7.3
08...	0802	12.0	29.0	751	1028	1028	8.1	8.74	95	4.1	7.4
08...	0804	16.0	29.0	751	1028	1028	8.1	8.74	95	4.1	7.3
08...	0806	16.0	29.0	751	1028	1028	8.1	8.74	96	4.1	7.3
08...	0808	18.0	29.0	751	1028	1028	8.1	8.74	95	4.1	7.3
08...	0810	20.0	29.0	751	1028	1028	8.1	8.74	96	4.1	7.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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												
08...	1400	1028	80020	10	95	7.1	24.0	21.5	1.7	749	4.9	57
DEC												
08...	1250	1028	80020	1010	78	6.7	6.0	5.5	25	748	11.3	92
FEB												
13...	0750	1028	80020	1290	42	6.3	2.5	7.5	19	762	11.1	93
APR												
07...	1410	1028	80020	195	57	7.3	19.5	17.5	8.8	741	8.9	96
JUN												
08...	1255	1028	80020	37	69	7.1	26.0	23.5	7.5	750	6.3	75
AUG												
12...	1215	1028	80020	5.1	119	7.3	32.5	28.5	5.9	753	5.1	66

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	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											
08...	840	K1800	1000	24	--	3.4	3.6	7.1	36	.6	3.0
DEC											
08...	4300	8000	3300	18	5	3.1	2.6	6.6	40	.7	2.4
FEB											
13...	420	330	340	11	5	1.8	1.5	3.2	37	.4	1.1
APR											
07...	110	130	32	15	4	2.5	2.0	4.9	39	.6	1.3
JUN											
08...	120	57	53	17	--	3.0	2.3	5.6	38	.6	2.1
AUG											
12...	140	88	86	25	--	3.4	4.0	12	46	1	3.4

07247015 POTEAU RIVER AT LOVING, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)	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)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)
OCT											
08...	34	0	28	6.4	5.9	49	48	.07	1.32	5	--
DEC											
08...	16	0	13	11	6.3	59	40	.08	161	40	--
FEB											
13...	7	0	6	6.0	2.7	41	21	.06	143	16	--
APR											
07...	13	0	11	6.8	3.6	42	28	.06	22.1	13	.002
JUN											
08...	21	0	18	7.1	4.1	51	36	.07	5.09	16	--
AUG											
12...	33	0	27	7.1	10	73	57	.10	1.01	20	--

DATE	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 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)
OCT											
08...	--	<.010	--	.088	--	--	.08	.44	.53	--	--
DEC											
08...	--	<.010	--	.120	<.020	--	--	.58	.70	.177	.120
FEB											
13...	--	<.010	--	.144	.056	.07	.32	.38	.52	.082	.075
APR											
07...	.01	.070	.23	.072	.063	.08	.24	.31	.38	.093	.070
JUN											
08...	--	<.010	--	.213	.066	.08	.55	.62	.83	.118	.069
AUG											
12...	--	<.010	--	.099	.069	.09	.67	.74	.84	.088	.028

DATE	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	CHLOROHPYLL A PHYTOPLANKTON ACID M. (UG/L) (32211)	PHEOPHYTIN PHYTOPLANKTON, ACID M. (UG/L) (32218)	CHLOROPHYLL A PHYTOPLANKTON, UNCORR. (UG/L) (32230)	CHLOROPHYLL B PHYTOPLANKTON, UNCORR. (UG/L) (32231)	CHLOROPHYLL C PHYTOPLANKTON, UNCORR. (UG/L) (32232)
OCT											
08...	.281	.86	51	29	.78	20	<1.00	2.00	1.00	<1.00	<1.00
DEC											
08...	.103	.32	22	38	104	93	<1.00	9.00	4.00	<1.00	<1.00
FEB											
13...	.070	.21	20	29	101	89	1.00	2.00	2.00	<1.00	<1.00
APR											
07...	.067	.21	35	21	11	92	3.00	2.00	4.00	<1.00	<1.00
JUN											
08...	.038	.12	70	18	1.8	87	<1.00	9.00	4.00	<1.00	<1.00
AUG											
12...	.025	.08	160	52	.72	90	<1.00	9.00	3.00	<1.00	<1.00

07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OK

LOCATION.--Lat 34°46'25", long 94°30'43", NE ¼ SW ¼ 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.

REVISED RECORDS.--WDR OK-96-1: 1993(M), 1995(M).

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.

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)
Dec 24	0100	6,700	13.30	Feb 11	0100	5,110	12.11
Jan 5	0700	13,900	17.26				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

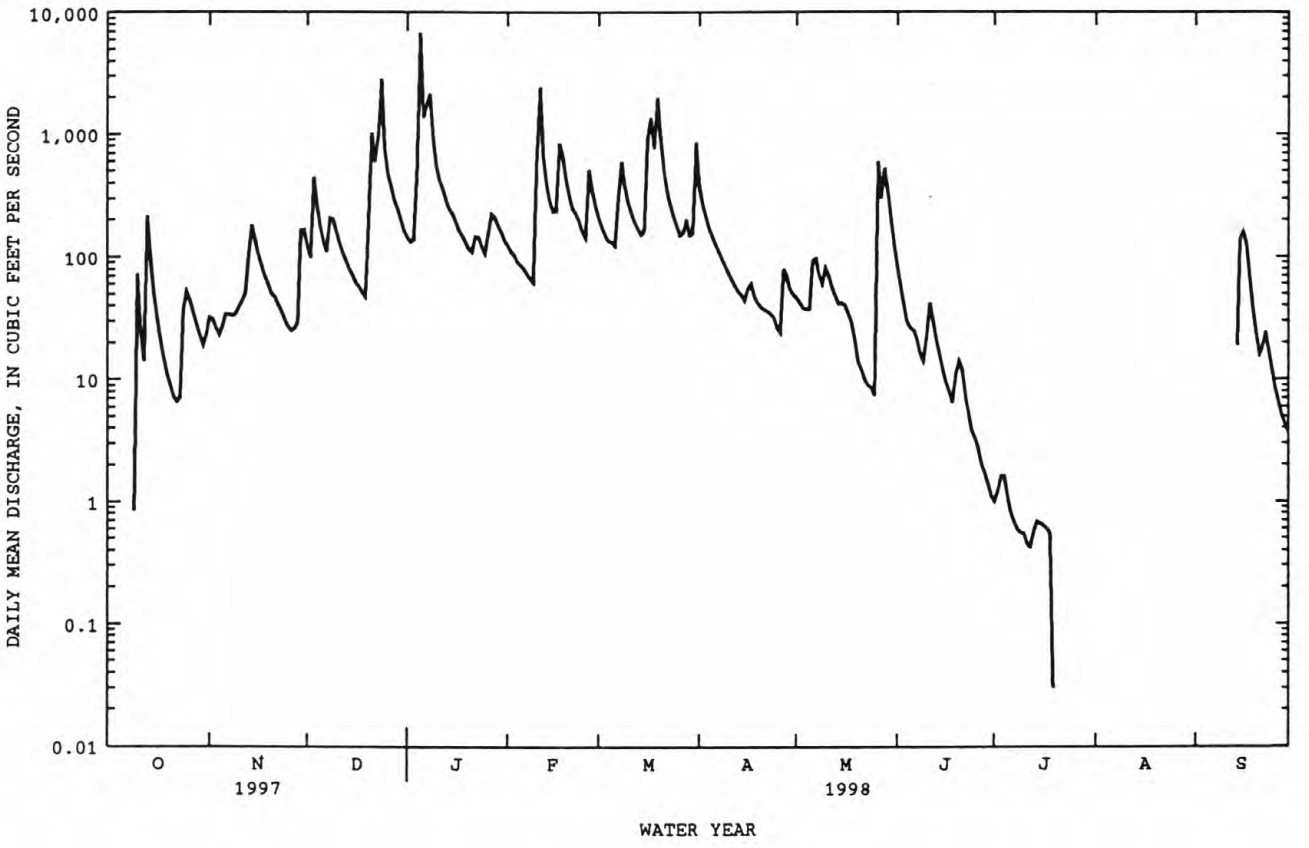
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	32	121	144	125	210	384	46	82	1.0	.00	.00
2	.00	31	99	133	111	177	269	42	57	1.2	.00	.00
3	.00	26	443	138	104	151	214	38	40	1.6	.00	.00
4	.00	23	267	490	91	134	172	37	29	1.6	.00	.00
5	.00	27	178	6770	86	133	147	37	26	1.1	.00	.00
6	.00	34	133	1370	81	124	128	94	25	.80	.00	.00
7	.00	34	111	1770	73	295	112	97	21	.68	.00	.00
8	.00	33	207	2130	66	595	97	71	16	.59	.00	.00
9	.84	34	203	927	62	383	84	60	14	.55	.00	.00
10	72	39	161	550	610	279	74	81	22	.54	.00	.00
11	25	44	129	422	2410	228	65	70	42	.44	.00	.00
12	14	50	108	359	664	192	58	56	30	.42	.00	.00
13	214	100	93	289	394	170	52	48	21	.56	.00	.00
14	98	180	80	244	285	152	49	41	16	.68	.00	19
15	50	139	71	224	236	164	44	42	12	.66	.00	139
16	32	105	62	193	238	933	55	40	9.4	.63	.00	158
17	21	83	57	165	840	1360	60	34	7.9	.60	.00	128
18	15	69	51	149	661	767	48	29	6.4	.54	.00	67
19	11	59	47	132	429	1980	42	21	11	.03	.00	37
20	8.9	50	181	116	318	916	39	14	14	.00	.00	23
21	7.2	47	1020	110	249	514	37	12	12	.00	.00	16
22	6.6	41	596	147	226	352	36	10	7.3	.00	.00	18
23	7.1	36	975	146	197	271	34	8.9	5.3	.00	.00	24
24	37	31	2820	122	162	217	32	8.5	3.8	.00	.00	17
25	52	27	749	107	143	180	26	7.4	3.3	.00	.00	12
26	44	25	470	155	514	150	24	599	2.7	.00	.00	8.3
27	35	26	377	225	354	158	79	302	2.0	.00	.00	6.5
28	28	29	291	211	263	202	70	523	1.7	.00	.00	5.2
29	23	165	250	181	---	150	54	339	1.4	.00	.00	4.4
30	19	167	201	161	---	156	49	202	1.1	.00	.00	3.7
31	23	---	164	137	---	854	---	124	---	.00	.00	---
TOTAL	843.64	1786	10715	18417	9992	12547	2634	3133.8	542.3	14.22	0.00	686.10
MEAN	27.2	59.5	346	594	357	405	87.8	101	18.1	.46	.000	22.9
MAX	214	180	2820	6770	2410	1980	384	599	82	1.6	.00	158
MIN	.00	23	47	107	62	124	24	7.4	1.1	.00	.00	.00
AC-FT	1670	3540	21250	36530	19820	24890	5220	6220	1080	28	.00	1360

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1998, BY WATER YEAR (WY)

MEAN	66.5	347	294	375	246	236	186	215	60.4	18.7	9.88	66.1
MAX	208	1215	489	594	613	405	401	553	177	77.4	36.2	378
(WY)	1994	1997	1993	1998	1997	1998	1993	1993	1992	1996	1996	1992
MIN	1.41	1.03	24.0	135	30.2	90.2	87.8	37.4	16.0	.46	.000	.000
(WY)	1996	1996	1996	1997	1996	1995	1998	1997	1994	1998	1998	1995

07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1992 - 1998	
ANNUAL TOTAL	56310.28		61311.06			
ANNUAL MEAN	154		168		176	
HIGHEST ANNUAL MEAN					246	1997
LOWEST ANNUAL MEAN					66.9	1996
HIGHEST DAILY MEAN	4600	Feb 20	6770	Jan 5	9640	Nov 24 1996
LOWEST DAILY MEAN	.00	Sep 7	.00	at times	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 7	.00	Oct 1	.00	Sep 20 1994
INSTANTANEOUS PEAK FLOW			13900	Jan 5	19600	Nov 5 1994
INSTANTANEOUS PEAK STAGE			17.26	Jan 5	19.61	Nov 5 1994
ANNUAL RUNOFF (AC-FT)	111700		121600		127600	
10 PERCENT EXCEEDS	292		366		352	
50 PERCENT EXCEEDS	46		44		46	
90 PERCENT EXCEEDS	.22		.00		.67	



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 periodically and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field. No flow Oct. 8, Aug.11.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
08...	0920	2.00	29.0	748	1028	1028	.60	3.72	46	5.2	7.2
08...	0922	4.00	29.0	748	1028	1028	.60	3.72	47	5.3	7.2
08...	0924	6.00	29.0	748	1028	1028	.60	3.72	45	5.2	7.2
08...	0926	8.00	29.0	748	1028	1028	.60	3.72	45	5.2	7.2
08...	0928	10.0	29.0	748	1028	1028	.60	3.72	45	5.1	7.2
08...	0930	12.0	29.0	748	1028	1028	.60	3.72	45	5.2	7.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)
DEC												
08...	1410	1028	80020	268	30	7.3	7.0	6.5	5.1	743	11.7	97
FEB												
12...	1250	1028	80020	617	22	6.6	8.0	8.0	7.4	755	11.6	98
APR												
08...	1310	1028	80020	98	27	6.9	19.5	16.5	4.1	743	8.3	87
JUN												
10...	1245	1028	80020	23	31	6.9	29.0	26.0	3.8	746	7.8	98

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	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)
DEC											
08...	220	870	330	7	2	1.0	.97	2.6	42	.4	.73
FEB											
12...	K35	220	110	6	3	.90	.80	1.8	39	.3	.56
APR											
08...	40	K6	K11	7	2	1.1	.96	2.3	40	.4	.63
JUN											
10...	120	75	73	8	--	1.4	1.2	2.4	37	.4	.66

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)	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)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)
DEC											
08...	6	0	5	4.1	2.5	27	15	.04	19.5	2	--
FEB											
12...	3	0	2	3.5	1.7	27	12	.04	45.0	3	--
APR											
08...	6	0	5	3.0	2.7	26	14	.04	6.88	4	.036
JUN											
10...	11	0	9	2.9	1.8	28	16	.04	1.74	6	--

07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	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 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-PHORUS DIS-SOLVED (MG/L AS P) (00666)
DEC											
08...	--	<.010	--	.066	<.020	--	--	.11	.18	--	.026
FEB											
12...	--	<.010	--	.137	.038	.05	.08	.12	.26	--	.015
APR											
08...	.16	.045	.15	.081	.053	.07	.07	.12	.20	.023	--
JUN											
10...	--	<.010	--	.067	.042	.05	.19	.23	.30	.012	<.010

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	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)	CHLORO-HPYLL A PHYTO-PLANK-TON ACID M. (UG/L) (32211)	PHEO-PHYTIN PHYTO-PLANK-TON, ACID M. (UG/L) (32218)	CHLORO-PHYLL A PHYTO-PLANK-TON, UNCORR. (UG/L) (32230)	CHLORO-PHYLL B PHYTO-PLANK-TON, UNCORR. (UG/L) (32231)	CHLORO-PHYLL C PHYTO-PLANK-TON, UNCORR. (UG/L) (32232)
DEC											
08...	.034	.10	<4.0	6	4.3	96	<1.00	<1.00	<1.00	<1.00	<1.00
FEB											
12...	.025	.08	5.2	15	25	100	<1.00	<1.00	<1.00	<1.00	<1.00
APR											
08...	.018	.06	9.3	8	2.1	91	<1.00	<1.00	<1.00	<1.00	<1.00
JUN											
10...	<.010	--	12	6	.37	100	<1.00	6.00	<1.00	<1.00	<1.00

07247345 BLACK FORK AT HODGEN, OK

LOCATION.--Lat 34°50'35", long 94°37'28", in SE ¼ SE ¼, 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 on periodically. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
08...	1045	1.00	29.5	753	1028	1028	3.7	9.37	49	5.2	7.2
08...	1047	2.00	29.5	753	1028	1028	3.7	9.37	47	5.3	7.2
08...	1049	3.00	29.5	753	1028	1028	3.7	9.37	47	5.3	7.2
08...	1051	4.00	29.5	753	1028	1028	3.7	9.37	47	5.3	7.1
08...	1053	5.00	29.5	753	1028	1028	3.7	9.37	47	5.3	7.1
08...	1055	6.00	30.0	753	1028	1028	3.7	9.37	48	5.2	7.1
08...	1058	7.00	30.0	753	1028	1028	3.7	9.37	48	5.2	7.2
08...	1100	8.00	30.0	753	1028	1028	3.7	9.37	48	5.2	7.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
08...	0930	1028	80020	.29	60	6.8	22.5	22.0	2.3	753	5.0
DEC											
10...	0900	1028	80020	268	33	6.3	3.5	7.0	7.9	756	10.6
FEB											
13...	1030	1028	80020	805	28	6.5	9.0	8.0	13	762	11.5
APR											
09...	0930	1028	80020	142	35	7.0	12.0	17.5	5.4	758	9.3
JUN											
11...	0845	1028	80020	32	35	6.8	26.5	25.0	5.7	748	6.5
AUG											
11...	1220	1028	80020	.40	57	7.1	31.0	29.5	3.0	753	4.5

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	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)
OCT											
08...	58	72	190	810	15	--	2.6	2.1	4.2	34	.5
DEC											
10...	88	--	120	200	8	2	1.3	1.1	2.8	41	.4
FEB											
13...	97	88	110	160	7	3	1.2	.98	2.2	38	.4
APR											
09...	97	42	21	K9	9	3	1.6	1.3	2.8	37	.4
JUN											
11...	80	62	55	33	9	1	1.6	1.3	2.6	35	.4
AUG											
11...	60	40	27	640	17	--	3.1	2.3	4.0	31	.4

07247345 BLACK FORK AT HODGEN, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	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)	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)	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 08...	1.9	20	0	16	5.4	4.1	33	35	.04	.03	22
DEC 10...	.78	7	0	5	4.3	2.8	31	17	.04	22.4	3
FEB 13...	.72	5	0	4	4.2	1.9	33	15	.04	71.7	4
APR 09...	.79	8	0	6	3.8	2.2	29	17	.04	11.1	4
JUN 11...	.79	10	0	8	3.6	2.0	31	17	.04	2.64	11
AUG 11...	1.6	25	0	20	2.4	3.1	40	29	.05	.04	12

DATE	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 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)
OCT 08...	--	<.010	--	.079	--	--	--	.95	1.0	--	--
DEC 10...	--	<.010	--	.057	<.020	--	--	.11	.16	.013	.059
FEB 13...	--	<.010	--	.150	.067	.09	.07	.14	.29	.018	.031
APR 09...	.00	.059	.19	.058	.055	.07	.10	.15	.21	.022	.014
JUN 11...	--	<.010	--	.062	.103	.13	.21	.31	.37	.033	.037
AUG 11...	--	<.010	--	.064	.110	.14	.88	.99	1.1	.076	.014

DATE	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	CHLOROHPYLL A PHYTOPLANKTON ACID M. (UG/L) (32211)	PHEOPHYTIN PHYTOPLANKTON, ACID M. (UG/L) (32218)	CHLOROPHYLL A PHYTOPLANKTON, UNCORR. (UG/L) (32230)	CHLOROPHYLL B PHYTOPLANKTON, UNCORR. (UG/L) (32231)	CHLOROPHYLL C PHYTOPLANKTON, UNCORR. (UG/L) (32232)
OCT 08...	--	--	36	43	.03	64	<1.00	19.0	12.0	<1.00	<1.00
DEC 10...	.070	.21	<4.0	7	5.1	100	<1.00	<1.00	<1.00	<1.00	<1.00
FEB 13...	.036	.11	5.6	11	24	97	<1.00	<1.00	<1.00	<1.00	<1.00
APR 09...	.024	.07	20	9	3.5	87	<1.00	2.00	1.00	<1.00	<1.00
JUN 11...	.022	.07	21	8	.68	97	<1.00	5.00	2.00	<1.00	<1.00
AUG 11...	.023	.07	48	26	.03	41	2.00	15.0	11.0	4.00	<1.00

07247500 FOURCHE MALINE NEAR RED OAK, OK

LOCATION.--Lat 34°54'45", long 95°09'20", in NW ¼ NW ¼ 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.

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 floodmarks.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 5	0530	5,250	17.26	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	21	181	134	202	120	266	53	e20	e3.4	.59	.25
2	4.4	20	118	121	200	103	184	43	e13	e3.7	.55	.25
3	4.3	13	538	112	167	98	155	33	e8.3	e4.0	.47	.25
4	4.2	9.9	383	1340	153	84	125	27	6.6	e9.8	.44	.25
5	4.4	7.8	189	4240	145	81	110	99	5.9	e6.0	.44	.25
6	4.2	6.7	120	2450	134	81	98	229	4.6	e5.5	.36	.24
7	4.3	6.0	92	1820	118	222	123	336	3.9	e3.2	.32	.25
8	5.2	6.0	158	1800	95	657	130	266	3.5	e2.6	.26	.25
9	25	9.8	188	1340	93	411	106	172	3.7	e2.9	.25	.25
10	151	16	134	1120	90	222	90	175	19	e2.7	.38	.25
11	56	21	97	1050	84	176	78	131	137	e2.2	.53	.25
12	38	29	76	991	76	151	67	104	106	e3.5	.52	.24
13	300	38	65	922	66	134	61	88	62	e4.1	.58	5.2
14	137	69	58	817	59	120	54	78	30	e2.1	2.4	330
15	65	65	52	724	58	465	50	69	17	e8.8	3.4	637
16	44	49	46	590	69	1380	50	57	23	e8.4	1.9	359
17	31	36	41	467	131	1550	51	47	14	e4.0	1.2	231
18	24	28	36	354	175	1050	46	44	10	e3.0	1.0	110
19	19	24	32	183	148	951	39	36	654	e2.6	.79	55
20	14	20	135	130	142	862	38	32	308	e2.2	.73	23
21	13	17	880	117	123	604	33	27	140	e1.7	.62	8.7
22	12	15	936	139	118	418	33	24	87	1.5	.61	202
23	21	13	662	146	126	232	34	19	57	1.0	.58	108
24	137	13	1720	128	114	177	31	15	e30	.96	.51	60
25	110	9.0	1190	127	102	156	30	12	e18	.68	.42	28
26	208	11	873	602	174	141	37	430	e9.0	.73	.25	13
27	103	11	686	693	196	130	271	272	e6.0	.77	.25	6.4
28	58	13	390	386	147	141	157	158	e4.6	.75	.25	4.2
29	40	554	254	236	---	127	99	87	e3.8	.68	.25	3.1
30	28	438	197	185	---	151	69	e43	e3.6	.64	.25	2.1
31	21	---	157	164	---	442	---	e32	---	.59	.25	---
TOTAL	1690.9	1589.2	10684	23628	3505	11637	2715	3238	1808.5	94.70	21.35	2188.68
MEAN	54.5	53.0	345	762	125	375	90.5	104	60.3	3.05	.69	73.0
MAX	300	554	1720	4240	202	1550	271	430	654	9.8	3.4	637
MIN	4.2	6.0	32	112	58	81	30	12	3.5	.59	.25	.24
AC-FT	3350	3150	21190	46870	6950	23080	5390	6420	3590	188	42	4340

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1998, BY WATER YEAR (WY)

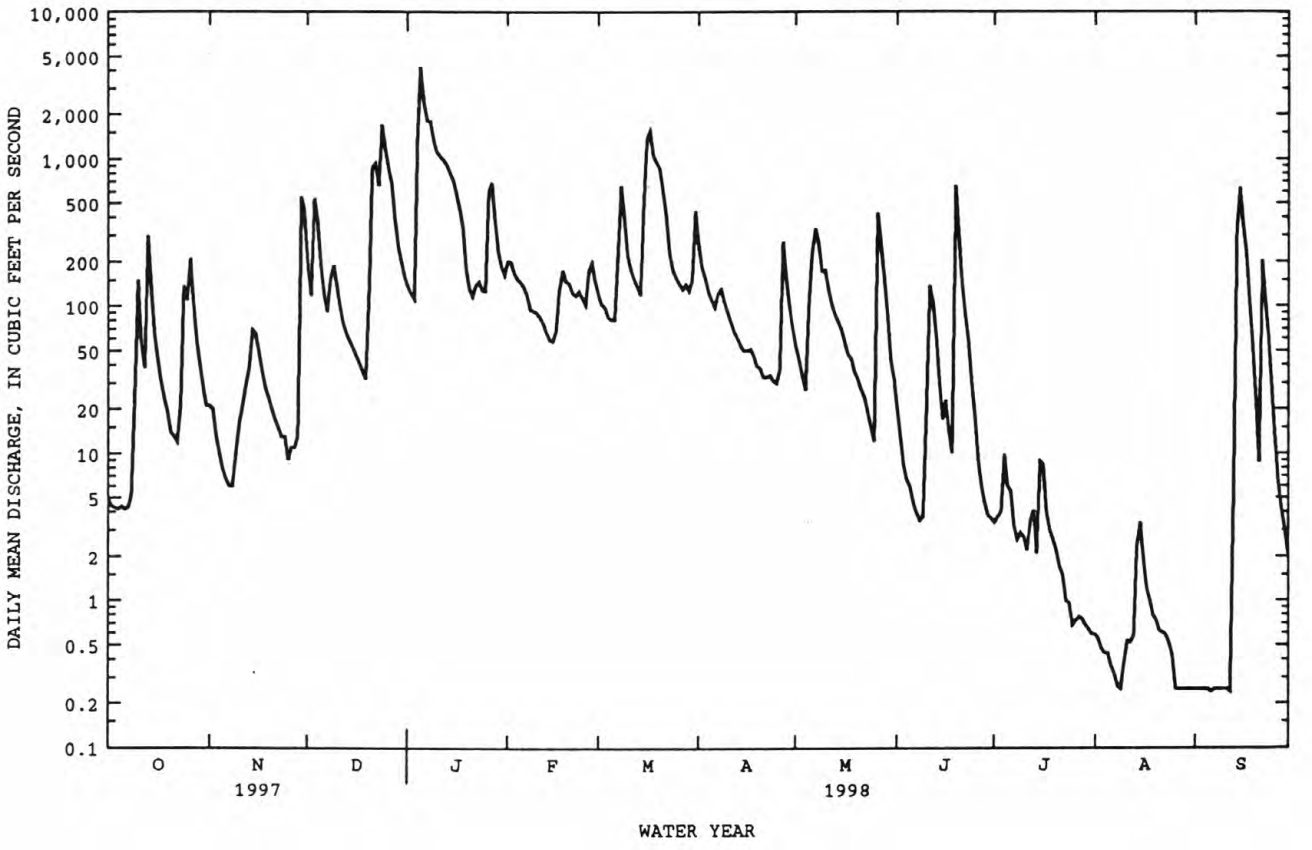
MEAN	69.0	130	137	112	184	225	264	271	118	55.0	17.4	46.9
MAX	675	811	726	762	715	1100	1224	1377	695	847	189	547
(WY)	1971	1986	1972	1998	1945	1945	1957	1960	1945	1950	1964	1950
MIN	.000	.000	.000	.000	1.75	2.42	18.6	8.85	.91	.042	.000	.000
(WY)	1939	1957	1964	1964	1967	1967	1950	1988	1963	1955	1943	1939

e Estimated

07247500 FOURCHE MALINE NEAR RED OAK, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1939 - 1998	
ANNUAL TOTAL	51171.8		62800.33			
ANNUAL MEAN	140		172		136	
HIGHEST ANNUAL MEAN					317	1945
LOWEST ANNUAL MEAN					18.3	1956
HIGHEST DAILY MEAN	3180	Feb 21	4240	Jan 5	18900	May 19 1960
LOWEST DAILY MEAN	2.5	Jul 22	.24	Sep 6, 12	.00	at times
ANNUAL SEVEN-DAY MINIMUM	3.0	Jul 17	.25	Sep 6	.00	Oct 1 1938
INSTANTANEOUS PEAK FLOW			5250	Jan 5	[a]41500	May 19 1960
INSTANTANEOUS PEAK STAGE			17.26	Jan 5	[b]24.79	May 19 1960
ANNUAL RUNOFF (AC-FT)	101500		124600		98330	
10 PERCENT EXCEEDS	440		440		312	
50 PERCENT EXCEEDS	29		52		18	
90 PERCENT EXCEEDS	4.4		.62		.25	

[a]From rating curve extended above 25,000 ft^3/s.
[b]From floodmark.



07247650 FOURCHE MALINE NEAR LEFLORE, OK

LOCATION.--Lat 34°55'11", long 94°56'43", in NE ¼ SE ¼, 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. No flow Oct. 8, Aug. 13.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
09...	0845	6.00	29.0	751	1028	1028	5.8	8.38	117	4.0	7.3
09...	0848	8.00	29.0	751	1028	1028	5.8	8.32	114	4.0	7.3
09...	0850	10.0	29.0	751	1028	1028	5.8	8.38	115	4.0	7.3
09...	0852	12.0	29.0	751	1028	1028	5.8	8.38	118	4.2	7.3
09...	0854	14.0	29.0	751	1028	1028	8.5	8.38	115	4.2	7.3
09...	0856	16.0	29.0	751	1028	1028	5.8	8.38	116	4.2	7.3
09...	0858	18.0	29.0	751	1028	1028	5.8	8.38	116	4.2	7.2
09...	0900	20.0	29.0	751	1028	1028	5.8	8.38	115	4.2	7.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)
DEC												
09...	1100	1028	80020	450	79	7.0	12.5	6.5	28	748	11.3	94
FEB												
12...	1055	1028	80020	207	78	7.2	10.0	7.5	24	763	10.8	90
APR												
08...	1100	1028	80020	163	94	7.2	18.0	17.0	24	750	7.6	80
JUN												
10...	1025	1028	80020	13	115	7.0	29.0	24.0	22	752	5.1	61

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	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)
DEC											
09...	800	730	1100	22	7	4.7	2.4	6.0	35	.6	1.7
FEB											
12...	K130	510	280	20	7	4.4	2.3	6.6	39	.6	1.3
APR											
08...	230	140	320	27	4	5.9	2.9	7.3	36	.6	1.3
JUN											
10...	420	--	630	33	2	7.1	3.8	7.9	32	.6	2.2

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)	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)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)
DEC											
09...	18	0	14	11	4.8	58	40	.08	70.5	20	--
FEB											
12...	16	0	13	14	4.9	62	42	.08	34.7	8	--
APR											
08...	28	0	23	13	4.3	61	49	.08	26.8	21	.062
JUN											
10...	38	0	31	13	4.8	77	58	.10	2.77	36	--

07247650 FOURCHE MALINE NEAR LEFLORE, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	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 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-PHORUS DIS-SOLVED (MG/L AS P) (00666)
DEC											
09...	--	<.010	--	.053	<.020	--	--	.44	.49	.055	.022
FEB											
12...	--	<.010	--	.091	.098	.13	.20	.30	.39	.038	.041
APR											
08...	.27	.070	.23	.132	.072	.09	.29	.36	.50	.044	.016
JUN											
10...	--	<.010	--	.145	.093	.12	.57	.66	.81	.060	<.010

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	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)	CHLORO-HPYLL A PHYTO-PLANK-TON ACID M. (UG/L) (32211)	PHEO-PHYTIN PHYTO-PLANK-TON, ACID M. (UG/L) (32218)	CHLORO-PHYLL A PHYTO-PLANK-TON, UNCORR. (UG/L) (32230)	CHLORO-PHYLL B PHYTO-PLANK-TON, UNCORR. (UG/L) (32231)	CHLORO-PHYLL C PHYTO-PLANK-TON, UNCORR. (UG/L) (32232)
DEC											
09...	.021	.06	41	36	44	92	<1.00	<1.00	<1.00	<1.00	<1.00
FEB											
12...	.053	.16	36	25	14	87	<1.00	<1.00	<1.00	<1.00	<1.00
APR											
08...	.019	.06	71	37	16	93	<1.00	2.00	1.00	<1.00	<1.00
JUN											
10...	.012	.04	279	37	1.3	100	<1.00	12.0	3.00	<1.00	<1.00

07247800 HOLSON CREEK AT SUMMERFIELD, OK

LOCATION.--Lat 34°52'46", long 94°51'11", in SW ¼ NW ¼, 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. No flow Oct.8, Aug. 13.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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											
08...	1245	2.00	33.0	748	1028	1028	.68	21.88	57	6.4	7.5
08...	1247	4.00	33.5	748	1028	1028	.68	21.88	55	6.3	7.4
08...	1250	6.00	33.5	748	1028	1028	.68	21.88	55	6.5	7.4
08...	1253	8.00	33.5	748	1028	1028	.68	21.88	55	6.5	7.4
08...	1255	10.0	33.5	748	1028	1028	.68	21.88	56	6.6	7.4
08...	1258	12.0	33.5	748	1028	1028	.68	21.88	57	6.6	7.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)
DEC											
09...	0815	1028	80020	52	51	6.5	4.5	7.5	10	748	11.1
FEB											
12...	0845	1028	80020	171	36	*6.9	-2.0	7.0	20	760	11.9
APR											
08...	0820	1028	80020	57	38	6.7	10.5	16.0	8.3	749	8.2
JUN											
10...	0825	1028	80020	2.2	55	7.0	24.0	25.0	2.2	752	6.0

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	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)
DEC											
09...	94	250	82	750	12	4	1.8	1.8	4.2	41	.5
FEB											
12...	98	60	250	190	8	6	1.3	1.3	2.9	41	.4
APR											
08...	85	40	K6	55	10	3	1.5	1.4	3.1	39	.4
JUN											
10...	74	110	--	210	16	1	2.6	2.2	3.8	32	.4

DATE	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)	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)	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)
DEC											
09...	.85	10	0	8	7.6	4.6	35	26	.05	4.91	2
FEB											
12...	.65	3	0	2	5.9	2.6	36	16	.05	16.6	4
APR											
08...	.76	8	0	6	5.2	2.4	32	19	.04	4.91	2
JUN											
10...	1.1	18	0	14	4.5	3.5	35	27	.05	.20	8

*pH, Lab (standard units).

07247800 HOLSON CREEK AT SUMMERFIELD, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	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 TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
DEC											
09...	--	--	<.010	--	<.050	<.020	--	--	<.10	<.010	<.010
FEB											
12...	--	--	<.010	--	<.050	.029	.04	.10	.13	.021	.014
APR											
08...	.000	.00	.057	.19	.057	.062	.08	--	<.10	.023	--
JUN											
10...	--	--	<.010	--	<.050	.102	.13	.24	.34	<.010	<.010

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	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)	CHLORO-HPYLL A PHYTO-PLANK-TON ACID M. (UG/L) (32211)	PHEO-PHYTIN PHYTO-PLANK-TON, ACID M. (UG/L) (32218)	CHLORO-PHYLL A PHYTO-PLANK-TON, UNCORR. (UG/L) (32230)	CHLORO-PHYLL B PHYTO-PLANK-TON, UNCORR. (UG/L) (32231)	CHLORO-PHYLL C PHYTO-PLANK-TON, UNCORR. (UG/L) (32232)
DEC											
09...	<.010	--	<4.0	11	1.5	100	<1.00	<1.00	<1.00	<1.00	<1.00
FEB											
12...	.032	.10	8.9	15	6.9	90	<1.00	<1.00	<1.00	<1.00	<1.00
APR											
08...	.021	.06	12	10	1.5	95	<1.00	<1.00	<1.00	<1.00	<1.00
JUN											
10...	.010	.03	52	8	.05	94	<1.00	6.00	2.00	<1.00	<1.00

07249413 POTEAU RIVER NEAR PANAMA, OK

LOCATION.--Lat 35°09'56", long 94°39'10", in SE ¼, SE ¼ 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.

WATER-DISCHARGE RECORDS

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 fair. 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	212	754	7820	7780	4510	e4250	1840	259	e118	26	22
2	45	156	723	7570	7760	4080	e3580	1100	789	e117	24	21
3	43	117	3280	7050	7500	3810	e3140	900	895	e115	23	73
4	43	94	3780	8510	7350	2740	e3040	880	885	e114	24	89
5	43	100	2670	23400	7250	2780	e2940	985	867	e113	28	91
6	43	124	2260	35000	7040	3140	e2880	3800	863	e112	29	89
7	43	125	2110	24600	5220	2270	3640	7740	857	e109	27	85
8	47	99	3200	19500	3860	6160	4880	3390	839	e81.0	27	84
9	85	92	3510	16500	3690	4030	6370	2120	866	e69.0	26	84
10	328	134	2690	11400	3650	3210	7000	4170	385	e67.0	26	82
11	211	274	2300	7540	7850	4510	6940	2880	301	e38.0	25	84
12	144	270	2110	8570	9240	4980	6710	2330	320	e38.0	25	89
13	1490	570	1110	9330	5610	4740	6410	2290	316	e39.0	25	134
14	982	e660	673	9000	4480	2680	4960	2160	256	e37.0	26	830
15	410	e440	623	8950	4220	2580	2970	2050	220	35	26	2410
16	244	e320	593	8890	4580	8470	1800	1280	202	37	28	2710
17	159	e265	800	8590	7070	12900	1080	948	161	36	27	1680
18	123	848	754	8250	9310	11700	438	904	122	35	16	1390
19	105	983	504	7970	6580	8970	267	445	119	33	22	1100
20	91	952	580	7760	5160	11500	219	288	121	31	24	951
21	83	901	5640	7710	4570	7680	199	268	e120	27	25	885
22	78	578	7790	7890	4320	4610	218	201	e120	25	25	1100
23	89	469	4240	8080	4470	3730	293	118	119	25	25	1750
24	410	449	12400	7770	4220	3430	284	99	153	27	25	1570
25	605	434	14100	7450	3990	3270	274	93	190	27	24	1440
26	1350	332	7130	8500	5370	3760	261	134	186	35	22	1040
27	560	261	5370	10800	7530	4480	706	420	183	43	22	851
28	307	256	7050	9960	5760	5450	1030	473	165	41	25	814
29	214	917	8080	8680	---	5790	1460	284	e120	35	23	780
30	170	1180	8100	8080	---	5640	1740	284	e119	30	22	488
31	162	---	8070	7840	---	e6000	---	283	---	27	22	---
TOTAL	8752	12612	122994	338960	165430	163600	79979	45157	11118	1716.0	764	22816
MEAN	282	420	3968	10930	5908	5277	2666	1457	371	55.4	24.6	761
MAX	1490	1180	14100	35000	9310	12900	7000	7740	895	118	29	2710
MIN	43	92	504	7050	3650	2270	199	93	119	25	16	21
AC-FT	17360	25020	244000	672300	328100	324500	158600	89570	22050	3400	1520	45260

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1998, BY WATER YEAR (WY)

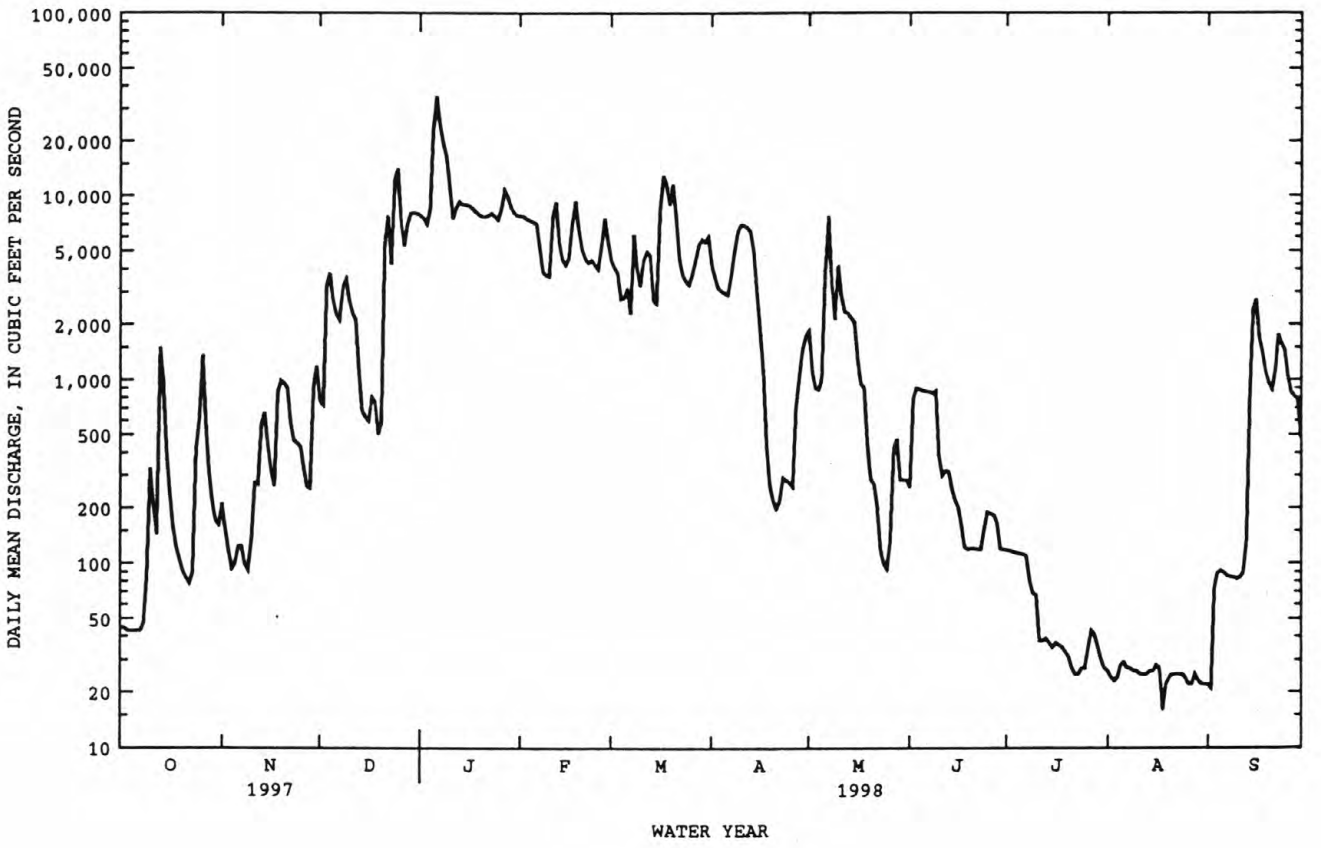
MEAN	491	2757	3845	4598	4245	4328	3954	5064	2389	374	285	723
MAX	1067	9861	8135	10930	7467	8242	8000	16670	5531	715	818	2678
(WY)	1997	1997	1997	1998	1990	1997	1990	1990	1990	1996	1992	1992
MIN	15.0	11.5	10.4	899	262	907	1814	403	180	55.4	24.6	57.3
(WY)	1990	1990	1990	1997	1996	1996	1994	1997	1994	1998	1998	1994

e Estimated

07249413 POTEAU RIVER NEAR PANAMA, OK--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1989 - 1998	
ANNUAL TOTAL	764830		973898.0			
ANNUAL MEAN	2095		2668		2778	
HIGHEST ANNUAL MEAN					3907	1990
LOWEST ANNUAL MEAN					1149	1996
HIGHEST DAILY MEAN	21600	Feb 22	35000	Jan 6	67000	May 3 1990
LOWEST DAILY MEAN	13	Aug 15	16	Aug 18	6.8	Dec 4 1989
ANNUAL SEVEN-DAY MINIMUM	15	Aug 28	22	Aug 27	7.4	Dec 2 1989
INSTANTANEOUS PEAK FLOW			37200	Jan 6	74600	May 3 1990
INSTANTANEOUS PEAK STAGE			41.45	Jan 6	[a]46.59	May 3 1990
ANNUAL RUNOFF (AC-FT)	1517000		1932000		2012000	
10 PERCENT EXCEEDS	7790		7830		7610	
50 PERCENT EXCEEDS	434		789		841	
90 PERCENT EXCEEDS	31		28		30	

[a]At present datum.



07249413 POTEAU RIVER NEAR PANAMA, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1989 to January 1991, October 1993 to June 1998 (discontinued).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1993 to June 1998 (discontinued).

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum 36.5°C, June 29, 1994, July 2, 3, 1996; minimum 0.0°C, several days during winter period.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded 32.5°C, June 25, 26, 27; minimum observed 2.5°C, Dec. 17.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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...	1340	15.0	23.0	750	1028	1028	900	10.12	142	5.6	7.1
09...	1343	25.0	23.0	750	1028	1028	900	10.12	146	5.8	7.1
09...	1346	35.0	23.0	750	1028	1028	900	10.12	145	5.8	7.1
09...	1348	45.0	23.0	750	1028	1028	900	10.12	146	5.8	7.1
09...	1352	55.0	23.0	750	1028	1028	900	10.12	146	5.8	7.1
09...	1355	65.0	23.0	750	1028	1028	900	10.12	146	5.8	7.1
09...	1358	75.0	23.5	750	1028	1028	900	10.12	147	5.8	7.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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										
03...	1135	1028	80020	53	138	7.0	27.0	24.0	750	6.8
NOV										
18...	1050	1028	80020	900	182	7.2	10.5	7.0	765	10.6
DEC										
09...	1300	1028	80020	3450	115	7.0	9.5	7.0	747	11.0
JAN										
27...	1035	1028	80020	11000	95	6.6	4.0	7.5	758	11.4
FEB										
11...	1440	1028	80020	9150	96	6.5	11.5	8.5	756	11.2
MAR										
25...	1040	1028	80020	3240	74	7.0	24.0	12.0	757	10.6
APR										
07...	1055	1028	80020	3600	75	7.0	18.5	16.5	747	8.9
MAY										
14...	1000	1028	80020	2010	72	6.9	26.0	23.5	753	7.3
JUN										
09...	1325	1028	80020	900	146	7.1	29.0	23.0	750	5.8

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	CHLORINE, TOTAL RESIDUAL (MG/L) (50060)	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)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)
OCT									
03...	82	.08	29	0	24	22	94	7	<.10
NOV									
18...	87	.04	35	0	29	35	108	9	<.10
DEC									
09...	92	.02	25	0	20	19	--	3	<.10
JAN									
27...	96	.04	20	0	16	17	73	4	<.10
FEB									
11...	97	.04	20	0	16	17	71	5	<.10
MAR									
25...	99	.02	20	0	16	12	57	4	<.10
APR									
07...	93	.02	18	0	15	12	55	3	<.10
MAY									
14...	87	.08	20	0	16	11	46	4	<.10
JUN									
09...	69	.04	41	0	33	21	92	9	<.10

07249413 POTEAU RIVER NEAR PANAMA, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	24.0	22.0	23.0	15.5	15.0	15.0	---	---	---	6.0	5.5	6.0
2	24.0	22.0	22.5	15.0	14.0	15.0	---	---	---	6.5	6.0	6.0
3	24.5	22.0	23.0	14.5	13.0	14.0	---	---	---	7.5	6.5	7.0
4	25.0	22.5	23.5	13.5	12.5	13.0	---	---	---	11.0	7.5	8.5
5	24.5	22.5	23.5	14.0	12.5	13.0	---	---	---	12.5	11.0	12.0
6	24.5	22.5	23.5	13.0	12.5	13.0	---	---	---	13.0	12.5	12.5
7	24.0	23.0	23.5	12.5	12.0	12.5	---	---	---	12.5	11.0	12.0
8	23.5	23.0	23.5	12.5	11.0	12.0	---	---	---	11.0	8.0	9.5
9	23.0	23.0	23.0	12.5	11.5	12.0	8.0	7.0	7.5	8.0	8.0	8.0
10	23.0	22.0	22.5	12.0	11.0	11.5	7.0	7.0	7.0	8.5	8.0	8.0
11	22.5	22.0	22.0	11.0	10.5	10.5	---	---	---	9.5	8.5	9.0
12	22.5	21.5	22.0	10.5	10.0	10.5	---	---	---	9.5	9.5	9.5
13	21.5	19.0	20.0	---	---	---	---	---	---	9.5	9.5	9.5
14	19.5	18.5	18.5	---	---	---	---	---	---	9.5	9.0	9.0
15	18.5	17.5	18.0	---	---	---	---	---	---	9.0	9.0	9.0
16	18.0	17.0	17.5	---	---	---	---	---	---	9.0	8.5	8.5
17	18.0	17.0	17.5	---	---	---	---	---	---	9.0	8.5	8.5
18	18.0	16.5	17.0	---	---	---	---	---	---	9.0	8.5	9.0
19	17.5	16.0	16.5	---	---	---	---	---	---	9.0	8.5	9.0
20	18.0	16.0	17.0	---	---	---	---	---	---	9.0	8.5	8.5
21	17.5	16.0	16.5	---	---	---	---	---	---	9.0	8.5	9.0
22	16.5	15.5	16.0	---	---	---	---	---	---	9.0	8.5	9.0
23	15.5	14.5	14.5	---	---	---	---	---	---	8.5	8.0	8.5
24	---	---	---	---	---	---	---	---	---	8.5	8.0	8.5
25	16.0	15.0	15.5	---	---	---	---	---	---	8.5	8.0	8.0
26	16.5	15.0	15.5	---	---	---	---	---	---	8.0	7.5	8.0
27	15.0	13.5	14.0	---	---	---	---	---	---	8.0	7.5	7.5
28	13.5	12.5	13.0	---	---	---	---	---	---	8.5	8.0	8.0
29	12.5	12.0	12.5	---	---	---	---	---	---	8.5	8.0	8.5
30	14.0	12.5	13.5	---	---	---	---	---	---	8.5	8.5	8.5
31	15.0	14.0	14.5	---	---	---	---	---	---	9.0	8.5	8.5
MONTH	---	---	---	---	---	---	---	---	---	13.0	5.5	8.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9.0	8.5	8.5	11.5	11.0	11.0	---	---	---	19.0	17.5	18.0
2	8.5	8.5	8.5	11.0	10.0	10.5	---	---	---	19.0	18.0	18.5
3	9.0	8.5	8.5	10.0	9.5	9.5	---	---	---	20.0	18.5	19.0
4	9.0	8.5	8.5	10.0	9.5	9.5	---	---	---	21.0	19.0	20.0
5	8.5	8.0	8.5	10.0	10.0	10.0	---	---	---	21.5	20.0	20.5
6	8.5	8.0	8.0	10.0	10.0	10.0	---	---	---	20.5	19.0	19.5
7	8.0	7.5	8.0	10.0	10.0	10.0	---	---	---	21.0	19.5	20.0
8	8.0	7.5	8.0	10.0	8.5	9.5	17.0	16.5	17.0	22.0	20.5	21.0
9	8.0	8.0	8.0	8.5	7.0	8.0	17.0	16.5	17.0	22.0	21.0	21.5
10	8.0	8.0	8.0	7.0	6.5	7.0	17.0	16.5	16.5	21.0	19.5	20.0
11	8.5	8.0	8.0	7.5	7.0	7.0	17.0	16.5	17.0	22.0	20.5	21.0
12	8.0	7.5	8.0	7.5	7.0	7.0	17.5	16.5	17.0	23.5	21.5	22.5
13	8.5	8.0	8.0	7.5	7.0	7.0	18.0	17.0	17.5	24.0	22.5	23.5
14	9.0	8.0	8.5	8.5	7.5	8.0	19.0	18.0	18.5	24.0	23.5	23.5
15	9.0	8.5	9.0	10.0	8.5	9.0	20.0	19.0	19.5	24.5	23.5	24.0
16	9.0	8.5	9.0	10.0	9.5	9.5	20.0	19.0	19.5	25.0	23.0	24.0
17	9.0	8.5	9.0	10.5	9.5	10.0	19.5	18.5	19.0	25.0	24.0	24.5
18	8.5	8.0	8.5	11.5	10.5	11.0	18.5	17.5	18.0	25.5	24.0	25.0
19	9.0	8.5	8.5	12.0	10.5	11.0	19.0	17.5	18.0	26.5	24.0	25.0
20	9.5	9.0	9.0	10.5	9.0	10.0	18.5	17.5	18.0	27.0	25.5	26.0
21	10.0	9.0	9.5	9.5	8.5	9.0	18.5	17.0	18.0	27.5	26.0	26.5
22	10.0	9.5	10.0	10.5	9.5	10.0	18.5	17.0	18.0	27.5	26.5	27.0
23	10.5	9.5	10.0	11.5	10.5	11.0	19.0	17.5	18.0	27.0	26.0	26.5
24	11.0	10.5	10.5	12.5	11.5	12.0	19.5	18.0	18.5	28.0	25.5	26.5
25	11.5	11.0	11.0	13.0	11.5	12.0	20.0	19.0	19.5	28.0	26.5	27.0
26	12.0	11.0	11.5	13.5	12.5	13.0	20.5	19.5	20.0	27.5	26.0	26.5
27	12.0	11.5	12.0	14.0	13.0	13.5	20.5	18.5	19.5	26.5	24.5	25.5
28	12.0	11.5	11.5	15.0	14.0	14.0	18.5	18.0	18.0	25.0	24.0	24.5
29	---	---	---	15.5	15.0	15.0	18.5	17.5	18.0	26.5	24.5	25.5
30	---	---	---	---	---	---	18.0	17.5	18.0	28.0	25.5	27.0
31	---	---	---	---	---	---	---	---	---	29.5	27.5	28.5
MONTH	12.0	7.5	9.1	---	---	---	---	---	---	29.5	17.5	23.5

07249413 POTEAU RIVER NEAR PANAMA, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	30.0	28.5	29.0	---	---	---	---	---	---	---	---	---
2	30.0	28.0	29.0	---	---	---	---	---	---	---	---	---
3	28.5	27.0	28.0	---	---	---	---	---	---	---	---	---
4	29.5	28.0	28.5	---	---	---	---	---	---	---	---	---
5	28.0	25.5	27.0	---	---	---	---	---	---	---	---	---
6	25.5	25.0	25.5	---	---	---	---	---	---	---	---	---
7	26.0	24.5	25.0	---	---	---	---	---	---	---	---	---
8	25.5	25.0	25.0	---	---	---	---	---	---	---	---	---
9	25.0	23.5	24.0	---	---	---	---	---	---	---	---	---
10	26.0	24.0	25.0	---	---	---	---	---	---	---	---	---
11	26.5	25.0	26.0	---	---	---	---	---	---	---	---	---
12	28.0	25.5	27.0	---	---	---	---	---	---	---	---	---
13	29.5	27.5	28.5	---	---	---	---	---	---	---	---	---
14	30.5	29.0	29.5	---	---	---	---	---	---	---	---	---
15	30.0	28.5	29.5	---	---	---	---	---	---	---	---	---
16	29.5	28.0	29.0	---	---	---	---	---	---	---	---	---
17	30.0	28.0	29.0	---	---	---	---	---	---	---	---	---
18	30.0	28.5	29.0	---	---	---	---	---	---	---	---	---
19	30.0	28.5	29.5	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	31.5	30.5	31.0	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	32.0	31.0	31.5	---	---	---	---	---	---	---	---	---
25	32.5	30.5	32.0	---	---	---	---	---	---	---	---	---
26	32.5	31.0	32.0	---	---	---	---	---	---	---	---	---
27	32.5	31.0	31.5	---	---	---	---	---	---	---	---	---
28	32.0	30.5	31.5	---	---	---	---	---	---	---	---	---
29	32.0	30.5	31.5	---	---	---	---	---	---	---	---	---
30	32.0	30.5	31.0	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07191222 Beaty Creek near Jay, OK

07249455 ARKANSAS RIVER NEAR FORT SMITH, AR

LOCATION.--Lat 35°23'30", long 94°25'56", in NW ¼, SW ¼ sec.08, T.8 N., R.32 E., Sebastian County, Hydrologic Unit 11110104, at U.S. Highway 64 bridge at Aklahoma and Arkansas state line, .7 mi downstream from Poteau River, 6.6 mi upstream from Lee Creek, 8.0 mi upstream from Arkansas River at Van Buren, and at mile 324.5.

DRAINAGE AREA.--149,977 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1997 to current year, some data collected prior to period of record and are available in the district office.

GAGE.--Water-stage recorder. Datum of gage is 380.24 ft above sea level. Auxiliary water-stage recorder 8.0 mi downstream.

REMARKS.--Records good above 30,000 ft^3/s and poor below. Flow regulated by Lock and Dam 12 upstream and Lock and Dam 13 downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	50400	23600	39000	e35200	e18900
2	---	---	---	---	---	---	---	47800	34000	38800	e35200	e18500
3	---	---	---	---	---	---	---	49100	37400	56600	e23800	e28000
4	---	---	---	---	---	---	---	44300	39800	52100	e20300	e18600
5	---	---	---	---	---	---	---	e32900	36300	51600	e27900	e10100
6	---	---	---	---	---	---	---	e34100	37200	46600	e20400	e15300
7	---	---	---	---	---	---	---	49000	43500	e39600	e26000	8680
8	---	---	---	---	---	---	---	66000	36400	e40100	e20300	e13900
9	---	---	---	---	---	---	---	40300	48500	e35700	e13800	e12900
10	---	---	---	---	---	---	---	48600	29800	57900	e18300	e6100
11	---	---	---	---	---	---	---	38800	21500	75500	e11900	e2370
12	---	---	---	---	---	---	---	37700	25600	59700	e21900	e2160
13	---	---	---	---	---	---	---	39300	21500	47700	e25900	e12400
14	---	---	---	---	---	---	---	38400	31700	52800	e23000	e10400
15	---	---	---	---	---	---	---	46100	39200	42900	e20200	e11000
16	---	---	---	---	---	---	---	41400	34900	35900	e14200	e12500
17	---	---	---	---	---	---	---	38400	55800	39500	21700	e28200
18	---	---	---	---	---	---	---	33300	61100	27000	50400	e21500
19	---	---	---	---	---	---	---	33000	70100	47500	58500	e16800
20	---	---	---	---	---	---	---	24200	64000	48000	55500	e4460
21	---	---	---	---	---	---	---	e22300	56300	41300	42500	e4440
22	---	---	---	---	---	---	---	e11300	52800	51600	48500	e8410
23	---	---	---	---	---	---	---	e17100	49900	46000	59000	e13000
24	---	---	---	---	---	---	---	e23000	49400	33800	61400	e11700
25	---	---	---	---	---	---	---	e13200	47100	33100	52300	e18600
26	---	---	---	---	---	---	---	e15100	e36600	39600	40200	e27500
27	---	---	---	---	---	---	---	e6820	e36100	37500	44000	e30400
28	---	---	---	---	---	---	---	e22300	e35900	33000	31100	52500
29	---	---	---	---	---	---	---	21200	e37100	36900	28200	39300
30	---	---	---	---	---	---	---	32600	40000	e39000	21000	38800
31	---	---	---	---	---	---	---	45400	---	e34900	26700	---
TOTAL	---	---	---	---	---	---	---	1063420	1233100	1361200	999300	517420
MEAN	---	---	---	---	---	---	---	34300	41100	43910	32240	17250
MAX	---	---	---	---	---	---	---	66000	70100	75500	61400	52500
MIN	---	---	---	---	---	---	---	6820	21500	27000	11900	2160
AC-FT	---	---	---	---	---	---	---	2109000	2446000	2700000	1982000	1026000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1997, BY WATER YEAR (WY)

MEAN	---	---	---	---	---	---	---	34300	41100	43910	32240	17250
MAX	---	---	---	---	---	---	---	34300	41100	43910	32240	17250
(WY)	---	---	---	---	---	---	---	1997	1997	1997	1997	1997
MIN	---	---	---	---	---	---	---	34300	41100	43910	32240	17250
(WY)	---	---	---	---	---	---	---	1997	1997	1997	1997	1997

SUMMARY STATISTICS FOR PERIOD MAY TO SEPTEMBER 1997

HIGHEST DAILY MEAN	75500	Jul 11
LOWEST DAILY MEAN	2160	Sep 12
ANNUAL SEVEN-DAY MINIMUM	8130	Sep 10
INSTANTANEOUS PEAK FLOW	81800	Jul 11
INSTANTANEOUS PEAK STAGE	15.27	Jul 11
10 PERCENT EXCEEDS	52800	
50 PERCENT EXCEEDS	35700	
90 PERCENT EXCEEDS	12400	

e Estimated

07249455 ARKANSAS RIVER NEAR FORT SMITH, AR--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e33900	e17600	e24900	95400	55900	e37100	133000	123000	38100	e13100	e7190	e3650
2	e17200	e5460	e20900	89300	60500	e30600	129000	107000	37900	e22700	e19300	e1940
3	e23200	e12100	e38400	89100	56400	e29100	136000	104000	e20200	25400	e15300	e5630
4	e19100	e8010	e27000	109000	47900	27100	133000	103000	19100	19200	e13800	e5170
5	e12800	e7740	e24300	198000	50000	36800	127000	104000	e20600	e20000	e11100	e4200
6	e2910	e12200	e12100	172000	60300	38400	126000	100000	8180	13500	e10600	e3990
7	e9490	e6670	e11700	166000	57100	38800	118000	104000	2690	e15100	e10100	e2050
8	e9770	e5880	22700	187000	49200	73000	126000	102000	e10700	e15200	4290	e2640
9	49300	e8550	33500	179000	46400	84500	137000	87900	e25400	e10300	9470	e1940
10	41700	e19600	43100	147000	48600	65100	135000	83700	e23900	e13300	e14700	e45
11	35100	e6580	39800	152000	54300	70200	134000	77400	e24300	12800	e14800	e2790
12	37400	e7980	e37900	162000	39600	71200	128000	74000	e23100	e15900	e8480	e76
13	50800	e22100	e30900	160000	39700	69700	127000	69800	e23100	e23300	e12100	e467
14	41500	e22900	e22800	151000	32700	56000	125000	66100	24700	e21600	e11600	55200
15	35700	e25500	e23100	152000	30700	55800	115000	46500	e4290	e20000	e7160	e34100
16	30800	e7500	e17800	153000	36200	89600	96700	42900	e5720	e22900	5860	e4160
17	37100	e4000	e29000	152000	37000	138000	64800	e29200	7720	e20200	e15000	22800
18	e20100	e20400	e16000	147000	45500	128000	56900	e31500	e9200	e6900	e11400	e17600
19	e27000	e16900	e11400	145000	36800	128000	54400	e37000	e12500	e6890	e9910	e9500
20	e20500	e14100	e11900	138000	38400	165000	50300	e37200	12300	e17200	e9320	e9830
21	e18800	e9740	e21600	135000	e36400	156000	52100	e19400	14600	e12200	e7660	e8170
22	e18100	e6980	62800	131000	33900	136000	53200	e28800	14100	e12200	9820	e13500
23	e20500	e2030	49400	105000	22100	132000	37100	e29500	e10200	e16400	e8300	e19200
24	e17300	e3180	98900	87500	e22100	131000	e40500	e29900	e13300	14400	e12900	e14000
25	e16700	e2780	111000	83500	31800	131000	e35100	19600	e13700	5830	e12800	e11300
26	e22300	e92	92400	95200	40600	135000	e28500	e28600	13700	e7160	e11500	e9980
27	e10200	e1390	86500	107000	e4700	137000	e47600	e31100	e3510	e13800	e10600	e1000
28	e19500	e5210	90600	91000	e41800	134000	81400	24600	e3610	e14100	e9590	e14600
29	e10700	39200	89700	82000	---	136000	109000	36100	e11900	e13900	e2020	e12500
30	e4600	33100	89600	75400	---	140000	118000	32300	e11400	9770	e2330	e13800
31	e16800	---	87800	55700	---	138000	---	34300	---	e8320	e12200	---
TOTAL	730870	355472	1379500	3992100	1156600	2938000	2854600	1844400	463720	463570	321200	305828
MEAN	23580	11850	44500	128800	41310	94770	95150	59500	15460	14950	10360	10190
MAX	50800	39200	111000	198000	60500	165000	137000	123000	38100	25400	19300	55200
MIN	2910	92	11400	55700	4700	27100	28500	19400	2690	5830	2020	45
AC-FT	1450000	705100	2736000	7918000	2294000	5828000	5662000	3658000	919800	919500	637100	606600

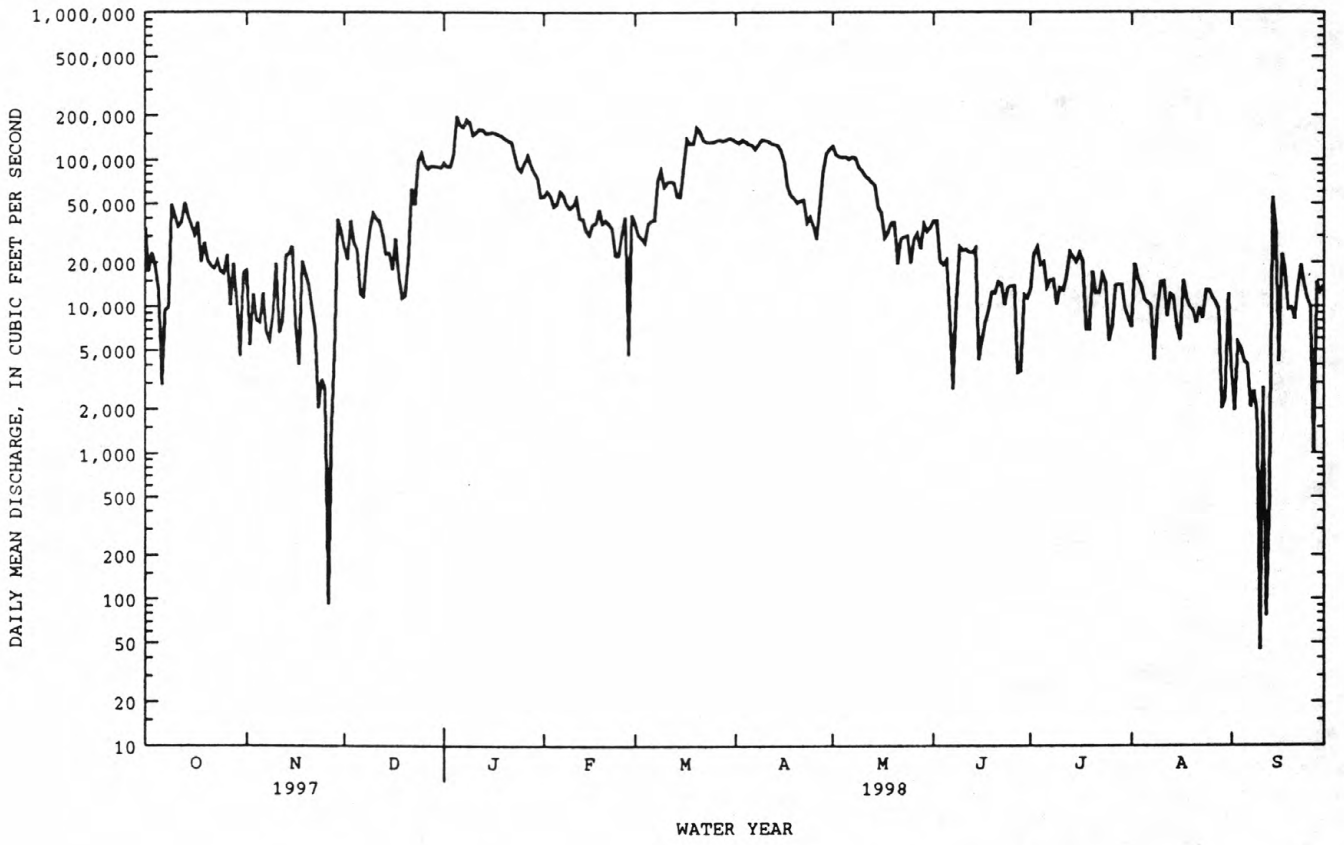
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1998, BY WATER YEAR (WY)

MEAN	23580	11850	44500	128800	41310	94770	95150	46900	28280	29430	21300	13720
MAX	23580	11850	44500	128800	41310	94770	95150	59500	41100	43910	32240	17250
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1997	1997	1997	1997
MIN	23580	11850	44500	128800	41310	94770	95150	34300	15460	14950	10360	10190
(WY)	1998	1998	1998	1998	1998	1998	1998	1997	1998	1998	1998	1998

e Estimated

07249455 ARKANSAS RIVER NEAR FORT SMITH, AR--Continued

SUMMARY STATISTICS	FOR 1998 WATER YEAR		WATER YEARS 1997 - 1998	
ANNUAL TOTAL	16805860			
ANNUAL MEAN	46040		46040	
HIGHEST ANNUAL MEAN			46040	1998
LOWEST ANNUAL MEAN			46040	1998
HIGHEST DAILY MEAN	198000	Jan 5	198000	Jan 5 1998
LOWEST DAILY MEAN	45	Sep 10	45	Sep 10 1998
ANNUAL SEVEN-DAY MINIMUM	1430	Sep 7	1430	Sep 7 1998
INSTANTANEOUS PEAK FLOW	206000	Jan 5	206000	Jan 5 1998
INSTANTANEOUS PEAK STAGE	25.82	Jan 5	25.82	Jan 5 1998
ANNUAL RUNOFF (AC-FT)	33330000		33360000	
10 PERCENT EXCEEDS	131000		109000	
50 PERCENT EXCEEDS	25400		30800	
90 PERCENT EXCEEDS	5870		7470	



07249455 ARKANSAS RIVER AT FORT SMITH, AR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1996 to current year.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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...	0905	945	24.5	753	1028	1028	30900	11.89	845	7.1	7.7
09...	0915	845	24.0	753	1028	1028	30900	--	850	7.4	7.7
09...	0930	745	24.0	753	1028	1028	30900	--	850	7.5	7.9
09...	0940	645	24.0	753	1028	1028	30900	--	870	7.7	8.0
09...	0950	545	24.0	753	1028	1028	30900	--	890	7.8	8.0
09...	0958	445	24.0	753	1028	1028	30900	--	893	7.9	8.0
09...	1010	345	24.5	753	1028	1028	30900	11.75	900	7.8	8.0
09...	1020	245	24.5	753	1028	1028	30900	--	890	7.8	8.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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...	1310	1028	80020	E8000	1040	7.8	28.5	23.5	6.0	757	8.5	101
DEC												
16...	1435	1028	80020	20100	564	8.0	21.0	7.5	11	757	12.1	102
FEB												
11...	1118	1028	80020	58700	683	7.5	7.0	6.5	25	757	11.7	96
APR												
10...	1015	1028	80020	143000	529	8.1	16.5	14.0	27	765	9.1	88
JUN												
09...	0945	1028	80020	30900	897	8.0	21.5	24.0	13	753	7.8	94
AUG												
12...	0840	1028	80020	E1000	1000	8.2	26.5	27.5	4.1	758	8.4	108

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	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											
07...	K5	K8	40	190	76	53	14	125	58	4	5.8
DEC											
16...	100	110	52	140	46	40	9.5	54	45	2	4.4
FEB											
11...	400	300	540	140	60	39	11	73	52	3	3.2
APR											
10...	K24	K5	K17	150	58	41	10	47	41	2	3.3
JUN											
09...	590	96	310	200	88	55	15	93	50	3	4.5
AUG											
12...	140	60	230	210	120	55	18	113	53	3	4.5

07249455 ARKANSAS RIVER AT FORT SMITH, AR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)	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)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)
OCT											
07...	136	0	112	89	190	562	552	.76	--	12	--
DEC											
16...	114	0	93	54	80	322	300	.44	17500	19	--
FEB											
11...	100	0	82	69	100	380	352	.52	60200	31	.639
APR											
10...	107	0	87	64	58	305	281	.41	118000	78	.858
JUN											
09...	138	0	113	100	130	517	472	.70	43100	33	.541
AUG											
12...	113	0	92	110	160	567	518	.77	--	12	--

DATE	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 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)
OCT											
07...	--	<.010	--	.423	--	--	--	.93	1.4	--	--
DEC											
16...	--	<.010	--	.442	<.020	--	--	.53	.97	.065	.058
FEB											
11...	2.8	.014	.05	.653	.065	.08	.46	.52	1.2	.110	.072
APR											
10...	3.8	.078	.26	.936	.078	.10	.51	.58	1.5	.138	.118
JUN											
09...	2.4	.019	.06	.560	.219	.28	1.1	1.4	1.9	.141	.076
AUG											
12...	--	<.010	--	.080	.056	.07	.73	.79	.87	.099	.049

DATE	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	CHLOROHPYLL A PHYTOPLANKTON ACID M. (UG/L) (32211)	PHEOPHYTIN PHYTOPLANKTON, ACID M. (UG/L) (32218)	CHLOROPHYLL A PHYTOPLANKTON, UNCORR. (UG/L) (32230)	CHLOROPHYLL B PHYTOPLANKTON, UNCORR. (UG/L) (32231)	CHLOROPHYLL C PHYTOPLANKTON, UNCORR. (UG/L) (32232)
OCT											
07...	--	--	2.7	70	--	96	5.00	11.0	12.0	<1.00	1.00
DEC											
16...	.051	.16	6.2	40	2170	95	<1.00	9.00	4.00	<1.00	<1.00
FEB											
11...	.068	.21	18	79	12500	97	<1.00	5.00	4.00	<1.00	<1.00
APR											
10...	.114	.35	<4.0	91	35200	92	3.00	5.00	6.00	<1.00	<1.00
JUN											
09...	.079	.24	18	75	6260	96	<1.00	7.00	5.00	<1.00	<1.00
AUG											
12...	.057	.17	<4.0	72	--	98	<1.00	39.0	21.0	<1.00	<1.00

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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.

Crest-stage partial record stations

The following table contains peaks for a crest-stage station. A crest-stage gage is a device that will register the peak stage occurring between inspections of the gage. The date of the peak is not always certain, but is determined by nearby continuous-record stations, weather records or local inquiry. On this particular station, peaks through July were in an earth channel. Peaks from October 1995 will be from a concrete-lined channel.

Station number	Station name	Location	Drainage Area (mi^2)	Period of Record	Peaks	
					Date	Gage height (ft)
07178007	Bell Creek at Tulsa, OK	Lat 36°06'20", long 95°52'46" in SE 1/4, SW 1/4, sec.24, T.19N, R.13E, Tulsa County, Hydrologic Unit 11070107, at downstream webwall of two-barrel culvert on State Highway 51, 800 ft west northwest of 41st Street overpass and at mile 0.5. Datum of gage is 650.00 ft mean sea level.	1.03	1996-98	01-04-98 03-07-98 03-16-98 03-19-98 04-27-98 09-13-98	8.80 12.47 10.07 9.04 9.16 9.70
07178018	Mill Creek at Tulsa, OK	Lat 36°08'52", long 95°52'27" in SW 1/4, SE 1/4, sec.1, T.19N, R.13E, Tulsa County, Hydrologic Unit 11070107, at right downstream webwall of three-barrel culvert on 11th Street, .3 mi west of Mingo Road and .2 mi upstream from Mingo Creek. Datum of gage is 607.22 ft mean sea level.	4.76	1994-98	04-27-98	6.64
07178025	Cooley Creek abv. 115th E. Ave. at Tulsa, OK	Lat 36°09'48", long 95°50'54" in SW 1/4, SW 1/4, sec.32, T.20N, R.13E, Tulsa County, Hydrologic Unit 11070107, at downstream webwall of four-barrel culvert, approx. .2 mi north on Garnett from Admiral/Garnett intersection. Datum of gage is 630.62 ft mean sea level.	5.86	1997-98	08-11-97 08-18-97 09-23-97 03-07-98 03-16-98 03-19-98 04-27-98 06-30-98 07-01-98 07-12-98 09-13-98	4.19 3.66 4.77 4.22 3.88 2.86 5.24 3.92 3.62 3.42 3.17
07178027	Cooley Creek at Hwy 169 at Tulsa, OK	Lat 36°09'43", long 95°51'37" in NE 1/4, NW 1/4, sec.06, T.19N, R.14E, Tulsa County, Hydrologic Unit 11070107, at upstream webwall of three-barrel culvert on U.S. Highway 169, approx. 100 ft west of Hwy. 169 and 600 ft north of Admiral Rd. and Hwy. 169 bridge crossing. Datum of gage is 614.978 ft mean sea level.	6.14	1997-98	08-01-97 09-23-97 03-07-98 03-16-98 03-19-98 04-27-98 07-12-98 09-13-98	1.50 0.93 3.05 2.50 1.11 3.96 1.38 1.18

ARKANSAS RIVER BASIN

DISCHARGE AT PARTIAL-RECORD STATIONS AND 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	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 1993-98	05-12-98 06-10-98 07-14-98 08-13-98 09-01-98	16 22 3.8 1.5 1.4
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.	1993-98	05-12-98 06-18-98 07-16-98 08-13-98 09-01-98	48 28 6.1 6.0 6.7
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 220th St., 0.4 mi east of State Hightway 74.	1993-98	05-13-98 06-18-98 07-14-98 08-13-98 09-01-98	57 34 17 23 12
07159730	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 206th St., 0.2 mi west of Western Avenue, 1.8 mi south of Logan County line.	1993-98	05-12-98 06-10-98 07-14-98 08-13-98	4.7 9.5 .25 .26
07159735	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 lines.	1993-98	05-13-98 06-18-98 07-16-98 08-14-98 09-01-98	16 6.3 6.0 6.8 4.3

ARKANSAS RIVER BASIN

DISCHARGE AT PARTIAL-RECORD STATIONS AND 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	Period of record	Measurements	
				Date	Discharge (ft^3/s)
		ARKANSAS RIVER BASIN			
07194830	Illinois River near Pedro, Ar.	Lat 36°10'32", long 94°23'30", in NE 1/4, SE1/4, sec.4 T.17 N., R.32 W., Benton County, Hydrologic Unit 11110103, at county road bridge, 0.9mi northeast of Pedro, Ar.	1996-98	10-20-97	61
				11-19-97	98
				12-02-97	82
				01-14-98	648
				02-19-98	316
				03-18-98	1400
				04-23-98	166
				05-13-98	124
				06-04-98	85
				07-15-98	54
				08-19-98	28
				09-24-98	88
07195610	Illinois River above Flint Creek near Flint, Ok.	Lat 36°10'26", long 94°43'14", in NE 1/4 NW 1/4, sec. 35, T.20 N., R.24 E., Delaware County, Hydrologic Unit 11110103, at Fiddlers Bend, 100 ft upstream from Flint Creek, and 1.4 mi southwest of Flint, Ok.	1996-98	11-19-97	315
				05-12-98	489
				07-15-98	225
				09-02-98	104
07196040	Illinois River below Flint Creek near Flint, Ok.	Lat 36°10'25", long 94°43'22", in NW 1/4 NW 1/4, sec. 35, T.20 N., R.24 E., Delaware County, Hydrologic Unit 11110103, 0.2 mi below Flint Creek, 1.4 mi southwest of Flint, Ok.	1996-98	11-19-97	370
				05-12-98	534
				07-15-98	241
				09-02-98	119
07196090	Illinois River at Chewey, Ok.	Lat 36°06'15", long 94°46'57", in SE 1/4 SE 1/4, sec. 19, T.19 N., R.24 E., Adair County, Hydrologic Unit 11110103, at Hampton Bridge, 0.85 mi west of Chewey, Ok.	1996-98	10-21-97	253
				11-14-97	371
				12-03-97	577
				01-28-98	1180
				02-19-98	807
				03-18-98	4490
				04-23-98	564
				05-13-98	527
				06-18-98	256
				07-15-98	249
				08-18-98	169
				09-22-98	182
07196190	Illinois River near Scraper, Ok.	Lat 35°05'40", long 94°49'47", in SW 1/4 SW 1/4, sec. 26, T.19 N., R.23 E., Cherokee County, Hydrologic Unit 11110103, adjacent to State Highway 10 at Round Hollow Public Access Area, 1.2 mi northeast of Scraper, Ok.	1996-98	11-14-97	380
				05-13-98	541
				07-12-98	326
				09-02-98	112
07196400	Illinois River at No Head Hollow near Tahlequah, Ok.	Lat 35°58'02", long 94°54'39", in SW 1/4 NE 1/4, sec. 12, T.17 N., R.22 E., Cherokee County, Hydrologic Unit 11110103, adjacent to State Highway 10 at No Head Hollow Public Use Area, 5.7 mi northeast of Tahlequah, Ok.	1996-98	11-20-97	413
				05-13-98	566
				07-14-98	338
				09-02-98	105

ARKANSAS RIVER BASIN

DISCHARGE AT PARTIAL-RECORD STATIONS AND 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	Period of record	Measurements	
				Date	Discharge (ft^3/s)
		ARKANSAS RIVER BASIN			
07196490	Illinois River near Briggs, Ok.	Lat 35°56′34″, long 94°54′57″, in NE 1/4, NW1/4, sec.24 T.17 N., R.22 E., Cherokee County, Hydrologic Unit 11110103, adjacent to State Highway 10, 0.1 mi downstream of Echota Public Use Area, 4.6 mi northwest of Briggs, ok.	1996-98	11-13-97 05-13-98 07-14-98 09-01-98	324 558 314 110
07196513	Illinois River below Tahleqhah Creek near Tahlequah, OK.	Lat 35°53′01″, long 94°56′37″, in NW 1/4, SW1/4, sec.11 T.16 N., R.22 E., Cherokee County, Hydrologic Unit 11110103, 0.2 mi downstream from Tahlequah Creek, 2.1 mi upstream from Baron Fork, 2.1 mi southeast of Tahlequah.	1996-98	06-17-98 08-19-98	302 187
07196520	Illinois River near Park Hill, OK.	Lat 35°51′11″, long 94°54′55″, in NE 1/4, NW1/4, sec.24 T.16 N., R.22 E., Cherokee County, Hydrologic Unit 11110103, adjacent to unimproved road, 0.2 mi upstream from Barron Fork, 2.4mi southeast of Park Hill, Ok.	1996-98	11-12-97 05-14-98 07-13-98 09-01-98	284 578 294 122
07197080	Baron Fork at Welling, OK.	Lat 35°52′08″, long 94°53′52″, in NE 1/4, NE1/4, sec.18 T.16 N., R.23 E., Cherokee County, Hydrologic Unit 11110103, at county road bridge, 0.3mi south of Welling, Ok.	1996-98	10-21-97 11-12-97 12-03-97 01-27-98 02-18-98 03-19-98 04-22-98 05-13-98 06-02-98 07-13-98 08-17-98 09-01-98	92 73 423 597 340 2050 263 187 154 74 21 12
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.	1992-98	10-08-97 12-10-97 02-13-98 04-09-98 06-11-98 07-08-98 08-11-98	.29 268 805 142 32 3.7 .40
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.	1992-98	12-09-97 02-12-98 04-08-98 06-10-98 07-09-98	450 207 163 13 5.8
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.	1992-98	12-09-97 02-12-98 04-08-98 06-10-98 07-08-98	52 171 57 2.2 .68

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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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