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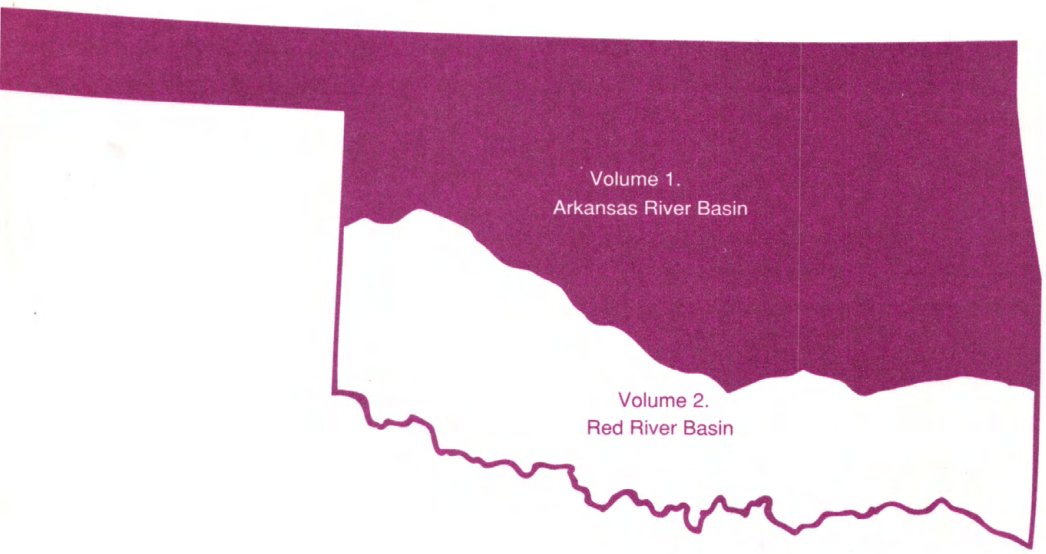
ar Resources Data
Oklahoma
Water Year 1999

olume 1. Arkansas River Basin

/ater-Data Report OK-99-1



S. Department of the Interior
S. Geological Survey

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

CALENDAR FOR WATER YEAR 1999

1998

OCTOBER

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1999

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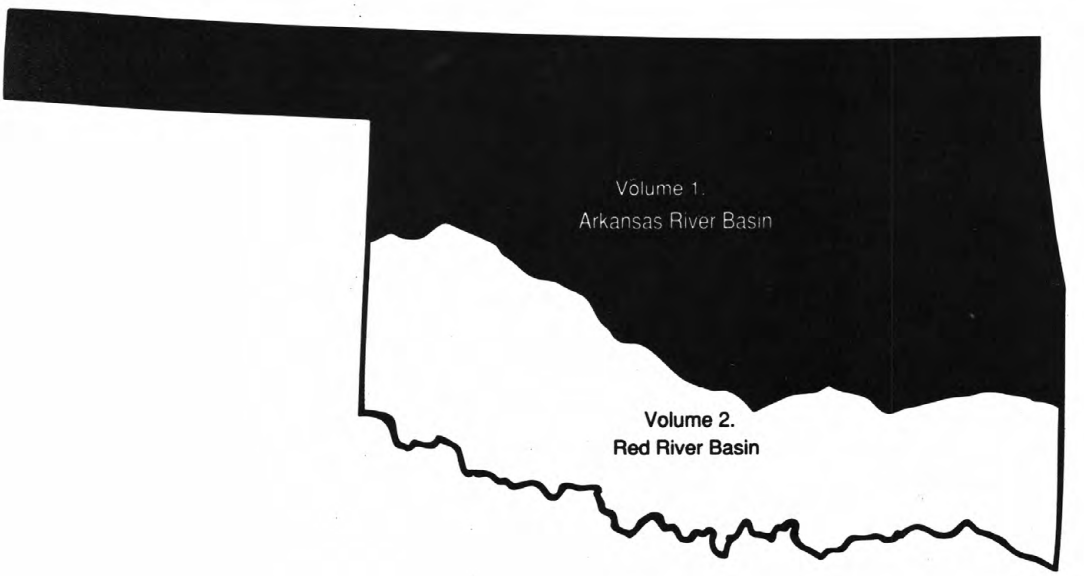
U.S. Department of the Interior
U.S. Geological Survey

Water Resources Data
State Name
Water Year 1999

Volume 1. Arkansas River Basin

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

Water-Data Report OK-99-1



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

2000

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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T.E. Coffey			

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 1999 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 129 gaging stations; stage and contents for 13 lakes or reservoirs and 1 gage height stations; water quality for 51 gaging stations; 22 partial-record or miscellaneous streamflow stations and 6 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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UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UL

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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

[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

[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
Mingo Creek at 46th Street North at Tulsa, OK	07178040	59.9	1987-98
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 Norman, OK	07229050'	25,853	1996-98
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 at Hefner Rd. at Oklahoma City, OK	07242247	66.7	1995-98
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
Mingo Creek at 46th Street North at Tulsa, OK	07178040	59.9	1987-98
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 at Cauthren, AR	07247000	203	1945-61 1975-79 1991-98
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
Poteau River near Panama, OK	07249413	1,767	1993-98
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 129 streamflow-gaging stations, and 22 partial-record or miscellaneous streamflow stations, (2) stage and content records for 13 lakes , reservoirs and gage height records for 1 stations; (3) water-quality records for 51 streamflow-gaging stations; (4) water-level records for 6 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-99-1" 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, 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

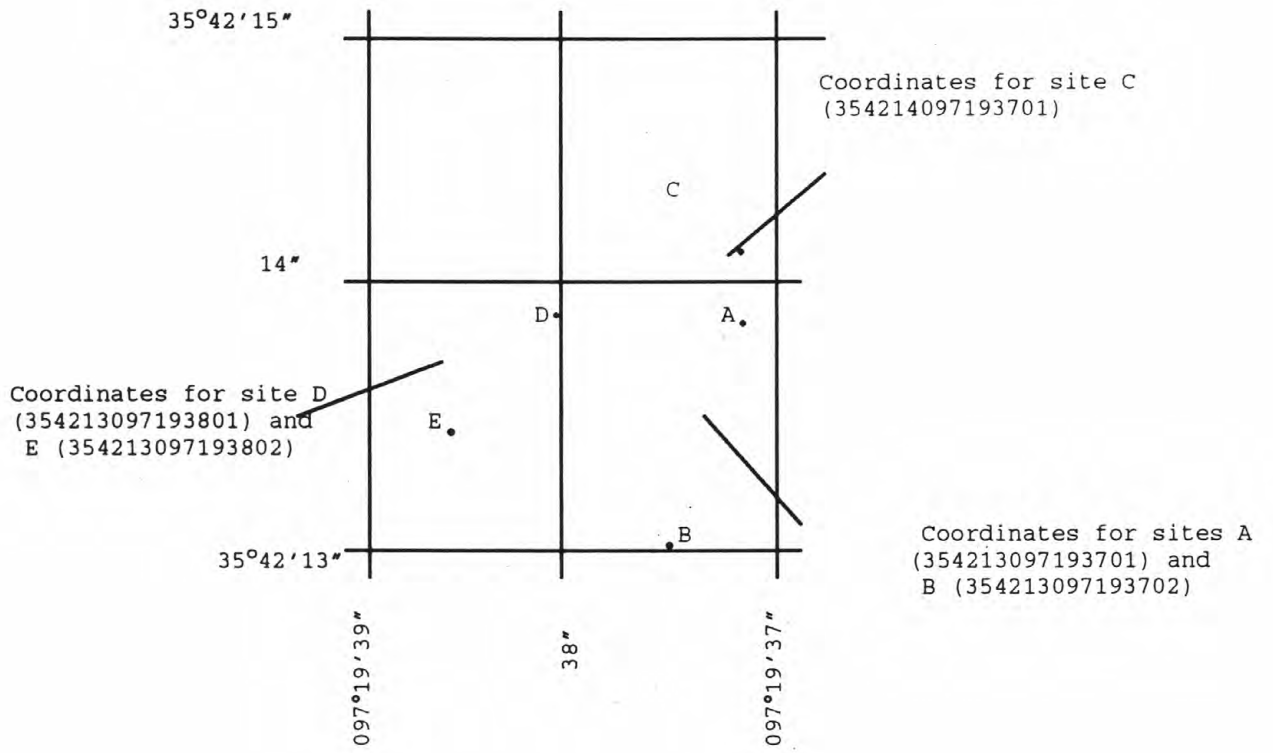
The surface-water and ground-water records published in this report are for the 1999 water year that began Oct. 1, 1998 and ended Sept. 30, 1999. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, 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 x 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.

3-Al0. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.

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.

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

4-A2. *Frequency curves,* by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.

4-B1. *Low-flow investigations,* by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.

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

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

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5-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.

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

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.

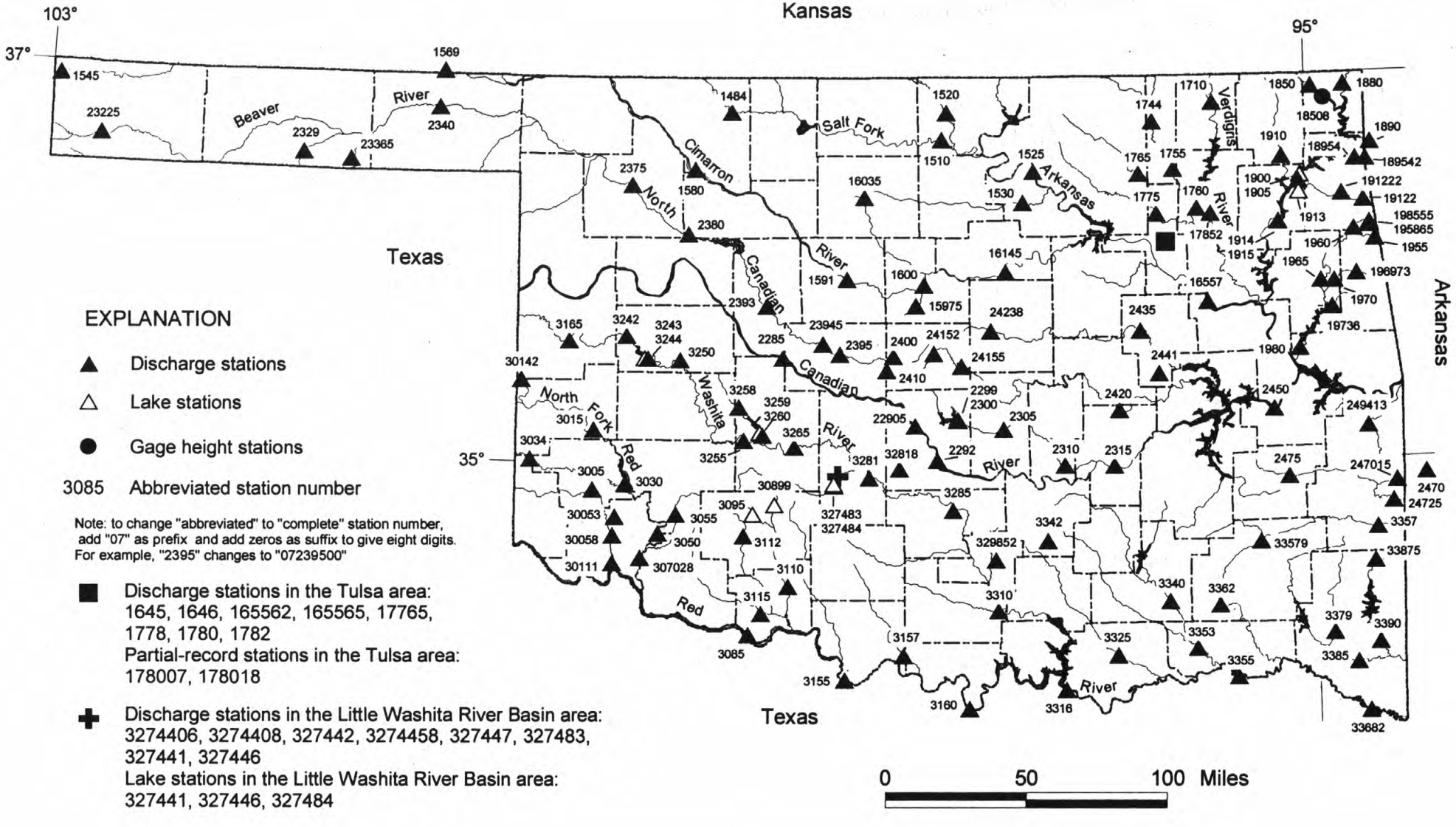


Figure 1.--Locations of continuous surface-water stations for water-year 1999.

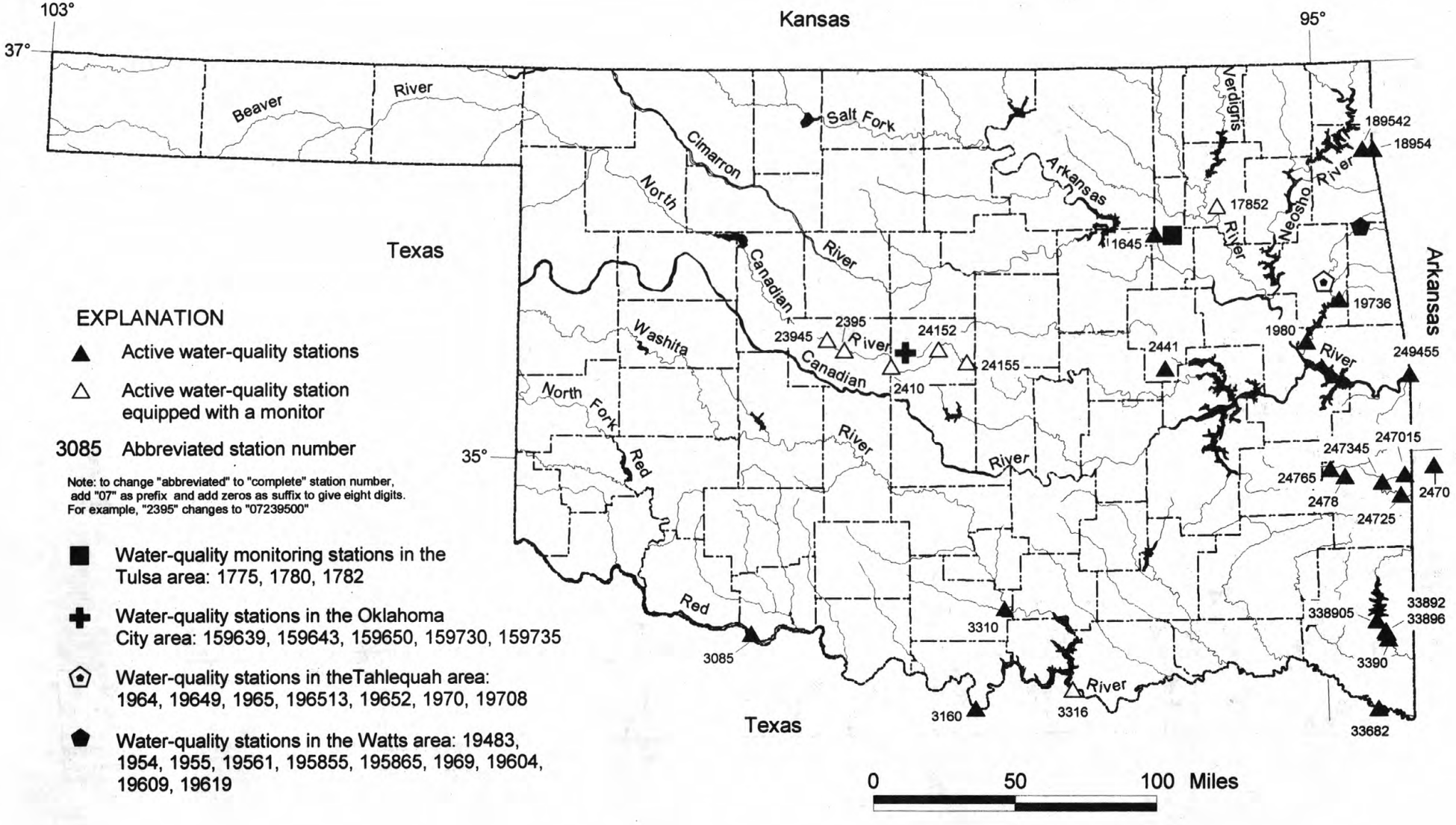


Figure 2.--Locations of water-quality stations for water-year 1999.

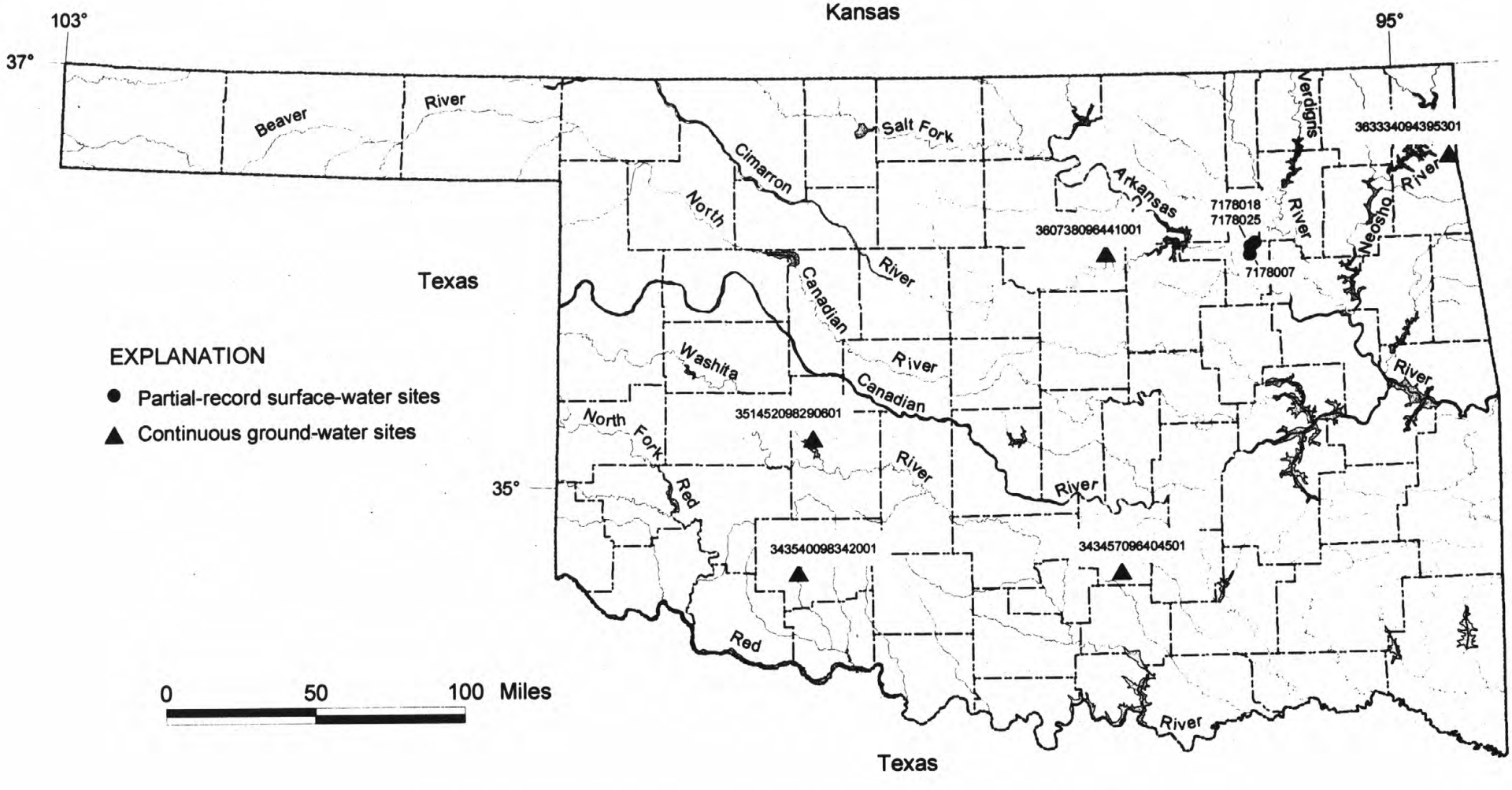


Figure 3.--Locations of partial-record surface-water stations and ground-water wells for water-year 1999.

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)
Nov 1	0500	11,600	14.83				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158	7190	146	124	498	151	273	448	1980	1040	64	37
2	278	2240	146	e100	379	150	269	483	1670	2190	57	35
3	85	995	147	e45	319	140	305	541	1370	1180	54	34
4	48	661	149	e50	285	138	303	503	1300	653	83	35
5	44	473	141	e75	261	141	537	414	728	448	429	35
6	42	367	133	98	257	135	647	355	496	368	950	36
7	40	306	126	101	256	126	455	322	387	312	e300	38
8	36	288	124	106	248	162	385	297	318	269	e240	35
9	32	257	127	84	223	201	346	284	275	242	e185	34
10	33	251	130	102	214	194	316	284	547	233	e700	33
11	34	237	128	115	212	175	292	280	738	236	e450	38
12	33	218	127	137	193	231	272	402	672	236	e190	42
13	31	205	124	142	184	676	373	327	555	209	e145	43
14	29	200	117	129	183	528	930	264	418	193	e130	44
15	27	190	118	135	183	552	2420	239	343	177	e115	44
16	29	179	119	129	178	730	1440	231	304	162	e100	52
17	29	166	115	126	167	548	769	340	299	143	89	59
18	29	161	112	125	166	432	586	506	299	138	79	62
19	28	149	115	127	158	411	488	347	556	135	71	64
20	33	137	113	128	160	460	424	275	452	127	67	74
21	32	138	e100	127	155	426	382	256	356	119	63	62
22	31	144	e60	127	154	390	358	243	372	112	61	62
23	32	149	e55	116	162	360	394	225	494	105	60	62
24	33	140	e70	116	160	333	388	208	772	99	63	60
25	33	138	e75	109	164	323	1060	211	701	92	63	59
26	34	131	e85	104	167	312	1370	362	550	88	56	57
27	34	132	e100	104	161	302	1010	346	418	82	52	53
28	40	133	e115	100	152	293	722	283	323	76	48	74
29	35	137	139	131	---	278	573	244	276	70	43	90
30	109	143	154	391	---	276	501	224	499	62	40	74
31	2730	---	135	812	---	276	---	226	---	66	40	---
TOTAL	4241	16255	3645	4415	5999	9850	18588	9970	18468	9662	5087	1527
MEAN	137	542	118	142	214	318	620	322	616	312	164	50.9
MAX	2730	7190	154	812	498	730	2420	541	1980	2190	950	90
MIN	27	131	55	45	152	126	269	208	275	62	40	33
AC-FT	8410	32240	7230	8760	11900	19540	36870	19780	36630	19160	10090	3030

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1999, BY WATER YEAR (WY)

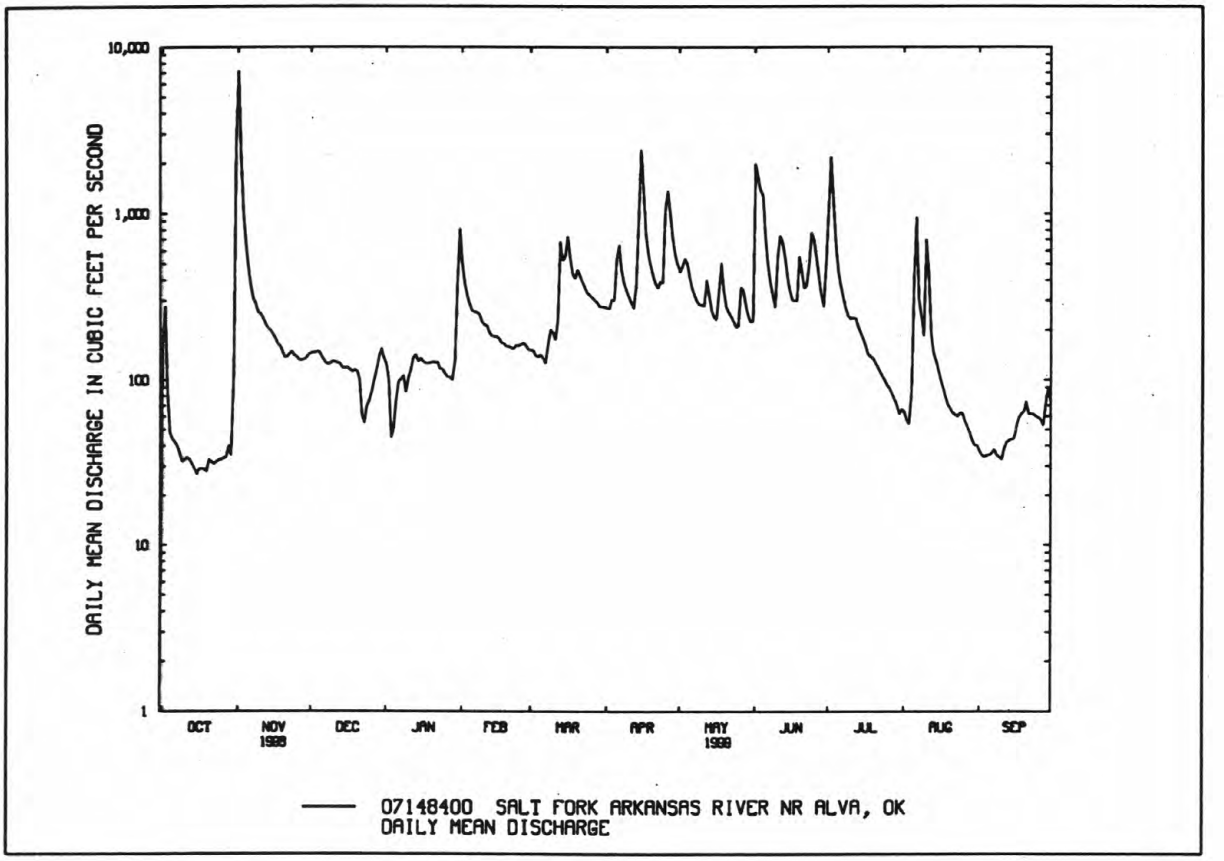
MEAN	107	109	75.2	82.4	97.5	169	208	263	259	133	104	82.6
MAX	620	542	251	269	227	822	620	856	689	411	598	557
(WY)	1986	1999	1997	1998	1987	1987	1999	1993	1989	1982	1996	1996
MIN	2.35	.95	14.8	15.3	17.4	29.2	22.5	27.1	31.3	5.17	2.66	.94
(WY)	1992	1981	1981	1981	1981	1981	1981	1992	1994	1984	1980	1980

e Estimated

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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1980 - 1999	
ANNUAL TOTAL	84529.0		107707			
ANNUAL MEAN	232		295		[a]141	
HIGHEST ANNUAL MEAN					295	1999
LOWEST ANNUAL MEAN					40.5	1994
HIGHEST DAILY MEAN	7190	Nov 1	7190	Nov 1	7880	Mar 24 1987
LOWEST DAILY MEAN	1.1	Sep 29	27	Oct 15	[b].43	Aug 24 1984
ANNUAL SEVEN-DAY MINIMUM	1.8	Sep 24	29	Oct 13	.48	Aug 18 1984
INSTANTANEOUS PEAK FLOW			11600	Nov 1	[c]12800	Oct 10 1985
INSTANTANEOUS PEAK STAGE			14.83	Nov 1	15.24	Oct 10 1985
ANNUAL RUNOFF (AC-FT)	167700		213600		102100	
10 PERCENT EXCEEDS	434		553		300	
50 PERCENT EXCEEDS	153		161		66	
90 PERCENT EXCEEDS	24		41		6.0	

[a]Average discharge, water years 1938-51, 158 ft^3/s.
[b]No flow in several years 1939-48.
[c]Maximum discharge for period of record 27,000 ft^3/s, Oct. 23, 1941, from rating curve extended above 13,000 ft^3/s.



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.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 2	1915	18,600	19.87	Apr 27	0430	22,300	20.93
Oct 5	2300	18,700	19.94	May 18	2230	14,600	18.27
Nov 2	1130	50,800	26.29	Jun 14	2000	11,700	16.50
Nov 10	1900	11,900	16.72	Jun 20	0100	18,100	19.69
Jan 31	1500	18,100	19.75	Jun 25	1230	26,400	22.04
Mar 17	1445	12,400	16.95	Jul 2	1400	15,400	18.69
Apr 16	1930	18,800	19.95	Jul 11	1900	15,100	18.51

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	205	28400	2170	692	9510	795	1620	5130	4150	12400	e515	210
2	12400	47000	1300	694	5720	721	1690	4620	4930	14700	e502	197
3	11900	37100	1030	e670	4230	697	2080	4200	5440	12500	905	194
4	3350	26600	1200	e650	3170	642	1900	4560	6240	8990	919	186
5	12100	15600	2300	e650	2860	633	2000	4290	5670	7420	e520	181
6	12500	10700	4190	e660	2640	637	3280	3500	4480	6760	e508	181
7	5110	9860	7490	656	2730	616	3590	3120	4250	6220	e499	179
8	3000	9330	4230	600	2850	613	2980	2800	3880	5640	e485	258
9	2000	8860	2430	613	2550	645	3050	2500	3520	5110	544	383
10	1420	10800	1760	648	2310	910	2840	2360	5840	8840	552	233
11	1100	9820	1390	662	2160	796	2550	2190	10200	14800	552	183
12	890	7900	1240	620	2080	1420	2360	2000	6430	9690	538	227
13	760	6500	1170	627	1900	6690	2170	1870	9830	5450	530	545
14	633	5590	1090	653	1620	6830	8230	1840	11400	3760	560	843
15	566	4910	1020	662	1460	5810	15100	1830	8540	3100	542	562
16	583	4320	956	677	2550	9290	18100	1820	7230	2700	e525	444
17	1260	3770	932	680	2270	11800	14700	5670	7400	2390	e480	366
18	2230	3400	915	682	1460	8110	8540	13600	6030	2170	e449	358
19	3410	3150	953	702	1210	5820	6950	9690	10800	1950	e430	371
20	2380	2830	868	701	1140	5280	6270	3730	14000	1740	e401	469
21	1490	2570	785	679	1000	4130	5750	4870	6070	1520	e380	792
22	723	2330	e710	672	959	3480	7310	6410	4310	1350	e359	567
23	526	2190	e690	686	883	3140	7610	6310	6610	1190	e341	410
24	464	2020	e700	672	933	2860	4930	3840	13500	1080	e325	354
25	416	1820	e720	684	854	2630	12200	2710	25300	835	e311	334
26	381	1710	722	652	819	2410	19700	3190	17400	626	300	293
27	356	1550	684	633	765	2240	19300	2680	10600	589	276	254
28	349	1440	665	645	779	2080	10100	2550	7760	563	273	242
29	352	1380	675	784	---	1950	7000	2160	5130	547	251	346
30	367	2650	686	4180	---	1850	5690	1890	6710	e526	229	439
31	6220	---	696	16300	---	1740	---	2590	---	e529	223	---
TOTAL	89441	276100	46367	39786	63412	97265	209590	120520	243650	145685	14224	10601
MEAN	2885	9203	1496	1283	2265	3138	6986	3888	8122	4700	459	353
MAX	12500	47000	7490	16300	9510	11800	19700	13600	25300	14800	919	843
MIN	205	1380	665	600	765	613	1620	1820	3520	526	223	179
AC-FT	177400	547600	91970	78920	125800	192900	415700	239100	483300	289000	28210	21030

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1999, BY WATER YEAR (WY)

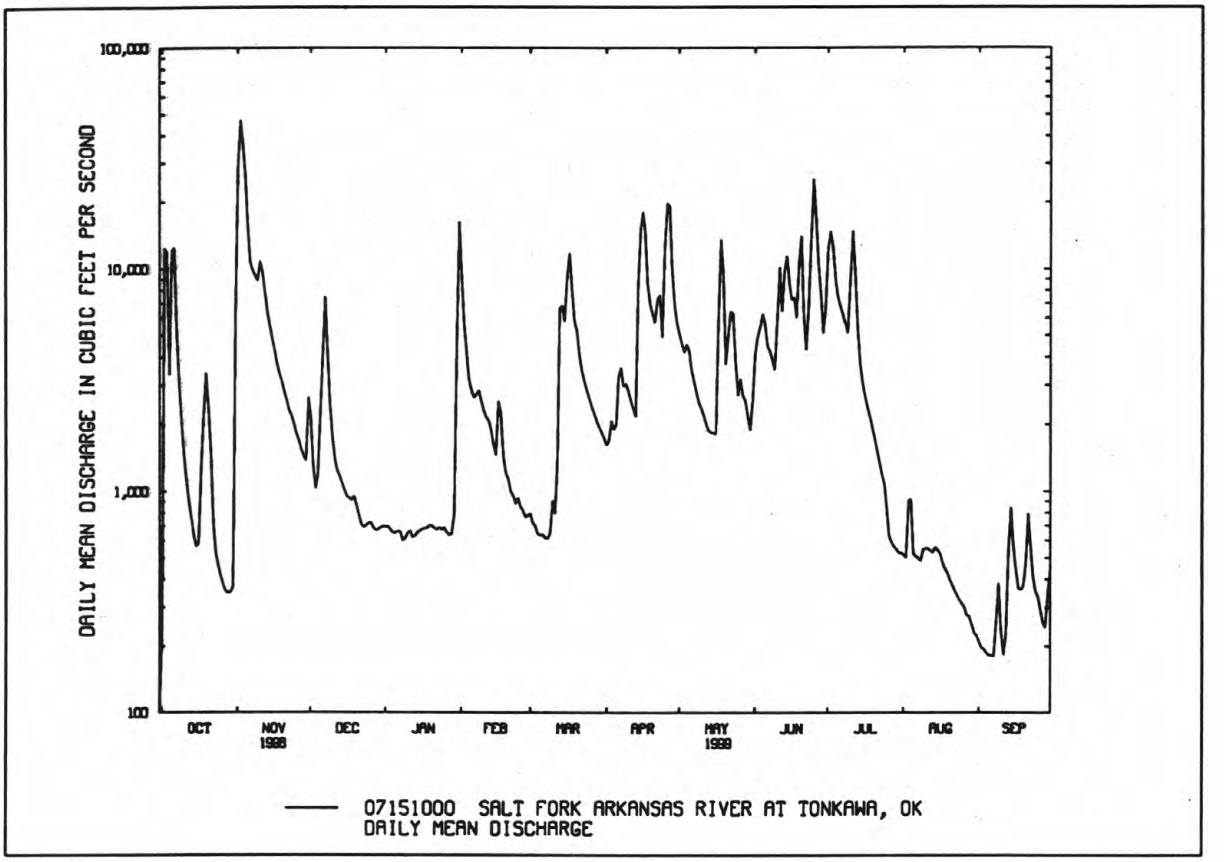
MEAN	917	834	427	406	594	1039	1333	1753	1627	996	704	660
MAX	9412	9203	2129	2124	5171	6188	7916	12770	8379	8821	6157	3448
(WY)	1987	1999	1998	1998	1949	1973	1973	1993	1995	1951	1995	1949
MIN	.64	4.82	3.56	7.52	10.9	10.6	13.6	8.78	7.92	5.69	5.50	.000
(WY)	1957	1955	1955	1957	1957	1955	1955	1956	1956	1954	1956	1956

e Estimated

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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1942 - 1999	
ANNUAL TOTAL	926723		1356641			
ANNUAL MEAN	2539		3717		942	
HIGHEST ANNUAL MEAN					3717	1999
LOWEST ANNUAL MEAN					95.5	1954
HIGHEST DAILY MEAN	47000	Nov 2	47000	Nov 2	57800	Oct 12 1973
LOWEST DAILY MEAN	73	Sep 9	179	Sep 7	[a].00	Aug 31 1956
ANNUAL SEVEN-DAY MINIMUM	75	Sep 6	190	Sep 1	.00	Aug 31 1956
INSTANTANEOUS PEAK FLOW			50800	Nov 2	97300	Oct 11 1973
INSTANTANEOUS PEAK STAGE			26.29	Nov 2	28.98	Oct 11 1973
ANNUAL RUNOFF (AC-FT)	1838000		2691000		682100	
10 PERCENT EXCEEDS	5410		9740		2170	
50 PERCENT EXCEEDS	1200		1850		268	
90 PERCENT EXCEEDS	146		381		34	

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



ARKANSAS RIVER BASIN

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.

EXTREMES 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 5	0630	14,900	27.66	Jun 1	0330	11,200	24.15
Nov 1	1630	60,700	34.40	Jun 19	2000	20,800	29.90
Jan 31	1530	19,300	29.61	Jun 25	1500	25,100	30.83
Apr 6	1630	8,150	21.69	Jul 2	1730	34,700	32.56
Apr 14	2330	22,400	30.27	Jul 10	2200	13,900	26.64
Apr 26	1530	9,930	23.02				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	51500	2150	440	7660	378	519	945	10300	8730	197	118
2	3310	58000	1220	e350	2120	368	583	816	4210	31200	199	116
3	2290	27200	837	e300	1500	352	1100	751	2490	19400	527	114
4	1470	4840	775	e290	1120	352	1990	954	2950	3070	259	118
5	11300	2740	1020	e300	890	346	1630	2810	1790	1780	249	122
6	3630	2030	2720	346	790	338	6320	1280	1070	1320	280	120
7	835	1750	5600	373	1000	334	3380	780	760	1130	290	118
8	387	1780	2310	376	1440	388	1580	631	601	1220	275	124
9	236	1750	1100	e350	1100	588	1170	556	522	1420	274	138
10	182	4330	829	339	814	658	930	537	3020	8360	239	233
11	155	3110	719	356	702	532	770	506	1570	6240	208	174
12	129	1670	659	413	625	840	670	495	1060	1390	193	256
13	120	1290	626	423	573	3430	781	548	4830	881	180	283
14	114	1120	602	400	519	2840	14300	535	3870	719	169	220
15	106	1010	581	384	501	3720	19900	490	1400	613	162	165
16	204	930	563	366	637	6840	10900	449	3140	537	159	149
17	2200	860	544	366	594	4820	2700	1190	6890	484	154	145
18	5360	810	537	370	520	3130	1760	1020	2070	448	153	144
19	857	764	541	369	478	2010	1340	725	11900	412	146	170
20	246	736	539	356	466	1890	1100	489	15900	375	137	222
21	168	706	528	348	438	1540	943	1470	4010	341	139	212
22	137	671	412	346	419	1200	917	995	1490	314	142	194
23	127	646	e350	335	413	963	914	2390	3800	296	141	168
24	118	626	e370	332	408	838	786	3180	9850	278	138	156
25	112	613	e400	317	402	742	3710	1430	22300	263	135	150
26	108	590	455	304	391	678	9180	1150	7890	252	132	144
27	107	575	497	302	383	629	5020	805	1880	254	127	140
28	101	562	511	298	381	604	2220	558	1280	239	120	1470
29	108	619	517	316	---	585	1610	471	965	228	118	1450
30	126	2580	470	2740	---	562	1160	423	1030	214	116	394
31	10700	---	445	17200	---	536	---	5850	---	209	120	---
TOTAL	45197	176408	29427	30105	27284	43031	99883	35229	134838	92617	5878	7727
MEAN	1458	5880	949	971	974	1388	3329	1136	4495	2988	190	258
MAX	11300	58000	5600	17200	7660	6840	19900	5850	22300	31200	527	1470
MIN	101	562	350	290	381	334	519	423	522	209	116	114
AC-FT	89650	349900	58370	59710	54120	85350	198100	69880	267500	183700	11660	15330

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1999, BY WATER YEAR (WY)

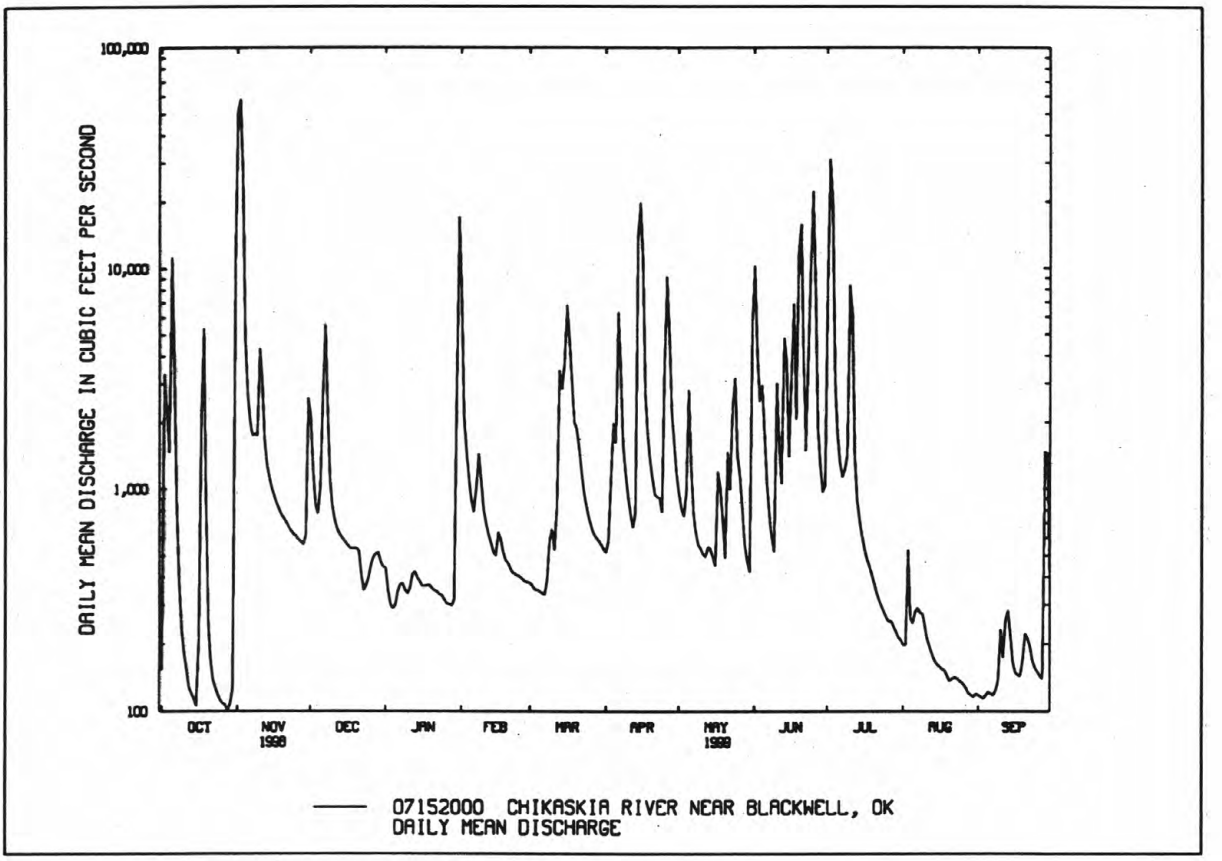
MEAN	546	528	267	252	367	650	805	1063	1057	551	347	483
MAX	5244	5880	1649	1659	3732	4561	4748	8589	5093	5129	2467	3395
(WY)	1960	1999	1945	1949	1949	1973	1944	1993	1951	1951	1995	1973
MIN	.90	1.08	1.34	4.35	10.3	30.7	29.4	27.1	26.1	6.17	.55	.64
(WY)	1957	1955	1955	1957	1957	1957	1955	1956	1972	1954	1936	1956

e Estimated

07152000 CHIKASKIA RIVER NEAR BLACKWELL, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1936 - 1999	
ANNUAL TOTAL	439407		727624			
ANNUAL MEAN	1204		1993		581	
HIGHEST ANNUAL MEAN					1993	1999
LOWEST ANNUAL MEAN					71.0	1954
HIGHEST DAILY MEAN	58000	Nov 2	58000	Nov 2	69500	Jun 22 1942
LOWEST DAILY MEAN	16	Sep 7	101	Oct 28	[a].00	Jul 18 1954
ANNUAL SEVEN-DAY MINIMUM	24	Sep 5	111	Oct 24	.00	Aug 12 1954
INSTANTANEOUS PEAK FLOW			60700	Nov 1	85000	Jun 22 1942
INSTANTANEOUS PEAK STAGE			34.40	Nov 1	34.40	Nov 1 1998
ANNUAL RUNOFF (AC-FT)	871600		1443000		420800	
10 PERCENT EXCEEDS	1780		3830		869	
50 PERCENT EXCEEDS	419		581		140	
90 PERCENT EXCEEDS	62		144		22	

[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.--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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4070	21400	11400	4050	37100	5030	6800	13100	37000	37000	14300	2530
2	13300	79700	12300	4500	33500	5090	6690	11800	39500	47000	14100	2310
3	44300	110000	10100	e5100	23400	4020	6350	10800	34800	47400	14300	2200
4	37700	95000	9440	e5200	20600	3570	11100	19100	32400	51800	16700	2190
5	48500	67000	9370	e5200	18600	2460	8670	20300	30800	34200	17300	2210
6	48100	61600	10500	e5250	17400	2240	8060	12500	29500	23600	13500	2260
7	29100	58200	15400	6450	20600	2310	10300	11000	27000	27600	11100	2140
8	16500	56400	20800	6940	18400	2550	21000	9300	21200	27700	8210	2590
9	12400	54300	14700	6810	16000	3420	18400	8210	15600	26300	7930	2250
10	10900	55300	9540	6720	13600	5080	17700	8080	13900	28500	12000	2230
11	9710	56500	15100	6970	10400	6650	16900	8680	18800	35200	9040	3010
12	9010	53800	17700	7110	7340	8820	16200	6910	24900	42500	4430	3120
13	8560	49500	17000	7140	4990	17500	11500	6710	18600	29500	4600	3240
14	8350	48600	16700	6900	6270	22800	7160	8150	22500	21400	4580	4240
15	8010	47000	14800	5440	6040	24200	19300	8730	26100	19800	3980	6090
16	6040	45600	12500	5300	7210	22900	41400	8680	20900	18600	3580	3460
17	5660	40100	10300	5240	10700	26400	46700	9450	20200	18600	3940	3080
18	6650	30800	8500	5160	12500	28100	34300	14700	29700	18300	4470	2890
19	12800	25600	8750	5140	8870	21800	25600	22900	39500	17800	4020	2490
20	12400	23600	8460	5220	7580	18200	23300	23900	49300	18700	3690	1840
21	9430	22700	8120	3600	7150	18900	22300	21700	55600	19000	3280	3040
22	5840	22000	6180	3090	6880	14800	21700	23500	42900	19800	2760	6040
23	6880	21100	5840	3550	6200	12800	23300	37700	38300	19900	2620	4990
24	6560	16800	5730	3770	5940	11600	24700	35800	41100	19600	2590	4340
25	5620	15300	4620	3710	6040	10800	32900	30100	60500	19200	2830	3750
26	5210	14900	4300	3930	6290	10200	37300	31100	57400	18900	3060	2920
27	3310	14400	3840	3960	6050	9720	41600	27400	46100	19400	2930	2030
28	4700	11800	3480	3350	5660	9410	37100	29900	26100	19100	2300	4910
29	4790	9540	3280	3430	---	9020	23100	28000	19200	18800	1950	19200
30	2970	10600	3230	9020	---	8740	15800	26700	21300	18500	1390	15600
31	2250	---	3140	27500	---	7320	---	32500	---	15600	1670	---
TOTAL	409620	1239140	305120	184750	351310	356450	637230	567400	960700	799300	203150	123190
MEAN	13210	41300	9843	5960	12550	11500	21240	18300	32020	25780	6553	4106
MAX	48500	110000	20800	27500	37100	28100	46700	37700	60500	51800	17300	19200
MIN	2250	9540	3140	3090	4990	2240	6350	6710	13900	15600	1390	1840
AC-FT	812500	2458000	605200	366500	696800	707000	1264000	1125000	1906000	1585000	402900	244300

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1999, BY WATER YEAR (WY)

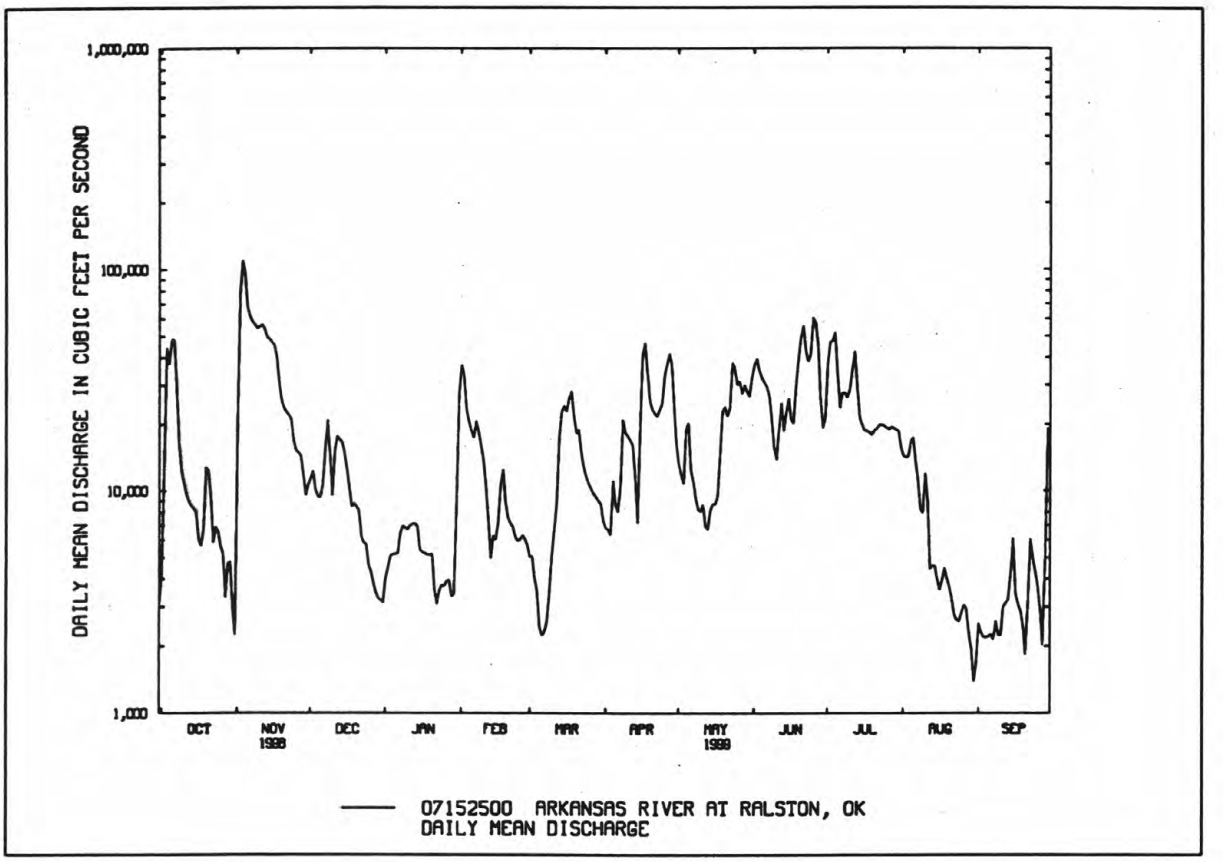
MEAN	5072	5886	3579	3803	4518	7866	9228	10170	11310	7667	4847	3906
MAX	41580	41300	9843	12450	17510	27120	25300	52840	41910	25780	21280	17660
(WY)	1987	1999	1999	1993	1993	1987	1984	1993	1995	1999	1995	1989
MIN	161	251	453	500	487	402	305	2001	2139	908	390	205
(WY)	1992	1981	1983	1977	1981	1981	1981	1996	1988	1991	1978	1984

e Estimated

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1977 - 1999	
ANNUAL TOTAL	4290990		6137360			
ANNUAL MEAN	11760		16810		[a]6490	
HIGHEST ANNUAL MEAN					16810	1999
LOWEST ANNUAL MEAN					1292	1981
HIGHEST DAILY MEAN	110000	Nov 3	110000	Nov 3	170000	Oct 4 1986
LOWEST DAILY MEAN	410	Sep 12	1390	Aug 30	[b]52	Sep 18 1978
ANNUAL SEVEN-DAY MINIMUM	488	Sep 9	2030	Aug 29	103	Oct 19 1991
INSTANTANEOUS PEAK FLOW			113000	Nov 3	[c]174000	Oct 4 1986
INSTANTANEOUS PEAK STAGE			18.51	Nov 3	[d]22.20	Oct 4 1986
ANNUAL RUNOFF (AC-FT)	8511000		12170000		4702000	
10 PERCENT EXCEEDS	25700		37900		16300	
50 PERCENT EXCEEDS	8100		11500		3040	
90 PERCENT EXCEEDS	908		3130		485	

[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.

EXTREMES 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)
Oct 5	0900	10,600	19.72	Apr 25	1530	11,400	20.78
Nov 3	0600	7,350	14.84	May 4	1900	6,520	13.62
Jan 30	2400	5,860	12.61	Jun 24	2300	6,800	14.04
Mar 13	0715	4,790	11.00	Jul 1	2100	7,540	15.12

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	2890	333	e56	2340	61	144	2340	846	6580	26	12
2	114	6390	203	62	1380	58	137	1910	970	6170	25	12
3	863	6600	150	e59	825	55	181	1630	507	2390	132	12
4	703	2970	421	e54	551	51	315	3850	323	1560	317	11
5	9210	1990	530	e50	387	50	270	5150	233	1070	251	12
6	6760	1490	394	47	300	49	202	2300	170	749	285	12
7	5630	1160	1120	49	906	48	155	1500	133	534	204	12
8	2210	1080	898	51	782	200	128	1070	109	415	141	18
9	1630	790	550	47	430	327	114	784	90	355	104	540
10	1230	1420	387	46	301	193	102	755	337	1450	79	444
11	903	1410	292	47	245	130	89	694	1500	2120	60	1280
12	595	745	235	50	182	1260	79	521	895	1010	48	2040
13	400	492	186	53	140	4540	73	402	850	623	38	2320
14	304	355	153	53	118	3790	94	308	867	410	30	1310
15	237	277	133	50	106	3060	148	232	657	287	25	696
16	181	220	114	47	102	3360	158	189	604	214	22	484
17	154	175	96	48	93	3190	134	825	524	171	20	350
18	606	142	88	46	128	2000	108	2410	364	139	19	267
19	450	121	101	45	148	1190	92	1280	531	113	17	212
20	255	111	96	46	135	1310	82	679	423	91	16	717
21	181	96	93	43	117	1540	77	1120	428	77	15	456
22	135	84	83	43	98	850	287	1130	287	67	13	248
23	102	75	75	45	87	604	996	2320	593	58	16	162
24	82	70	72	50	78	459	866	1500	3010	51	15	111
25	e68	66	70	57	73	366	9210	736	4970	46	14	101
26	e54	63	e67	54	70	299	11000	502	2400	42	14	99
27	e46	62	e65	49	72	255	10300	309	1160	38	15	71
28	38	61	e63	46	65	234	5540	228	740	35	15	57
29	32	60	e61	170	---	202	3520	180	497	33	14	48
30	29	290	e59	2440	---	177	2880	186	3860	30	13	42
31	29	---	e57	4530	---	157	---	568	---	27	13	---
TOTAL	33241	31755	7245	8533	10259	30065	47481	37608	28878	26955	2016	12156
MEAN	1072	1058	234	275	366	970	1583	1213	963	870	65.0	405
MAX	9210	6600	1120	4530	2340	4540	11000	5150	4970	6580	317	2320
MIN	10	60	57	43	65	48	73	180	90	27	13	11
AC-FT	65930	62990	14370	16930	20350	59630	94180	74600	57280	53470	4000	24110

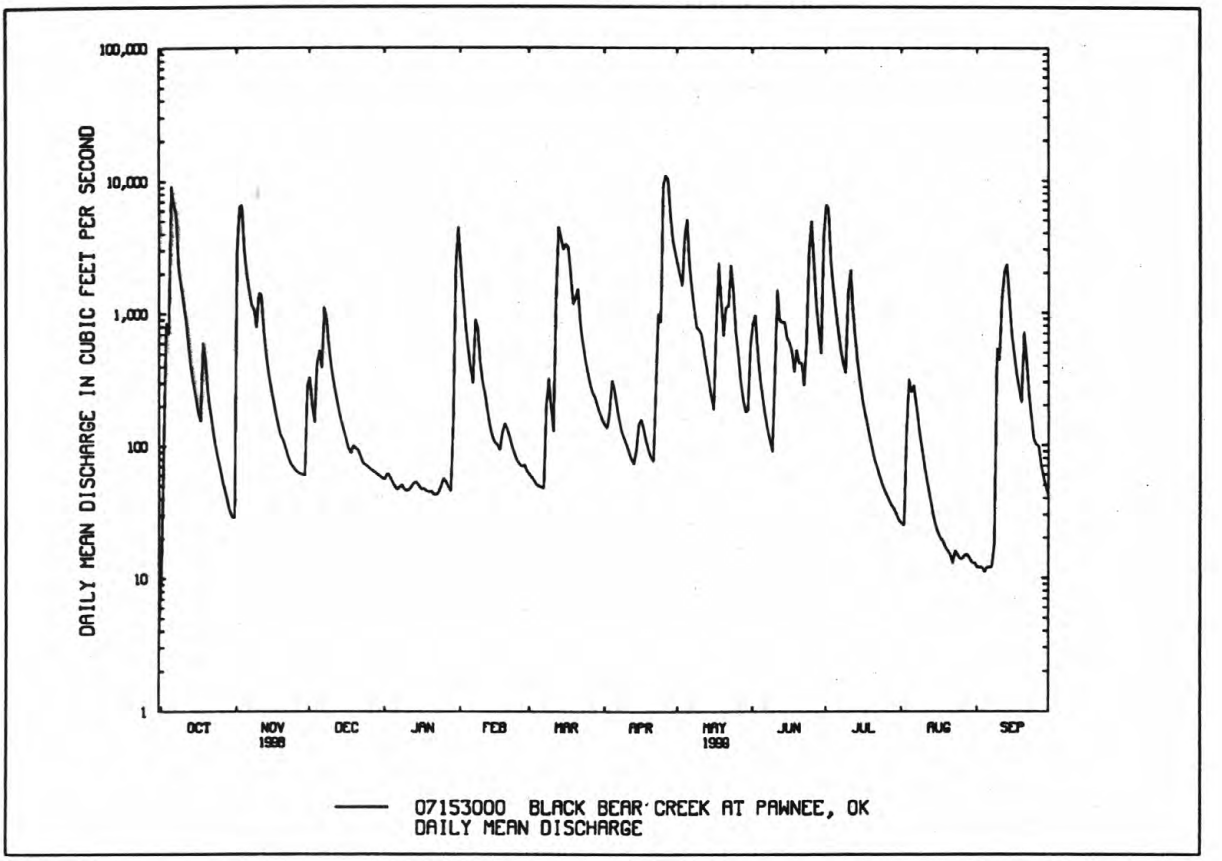
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1999, BY WATER YEAR (WY)

MEAN	229	164	90.4	75.4	124	283	317	496	346	177	110	181
MAX	4025	2359	715	595	1013	1607	1583	2933	2181	950	1592	1354
(WY)	1987	1975	1993	1993	1987	1990	1999	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 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1945 - 1999	
ANNUAL TOTAL	178146.1		276192			
ANNUAL MEAN	488		757		216	
HIGHEST ANNUAL MEAN					835	1987
LOWEST ANNUAL MEAN					23.1	1954
HIGHEST DAILY MEAN	9210	Oct 5	11000	Apr 26	25400	Oct 3 1959
LOWEST DAILY MEAN	1.9	Sep 8	10	Oct 1	.00	at times
ANNUAL SEVEN-DAY MINIMUM	2.1	Sep 5	12	Sep 1	.00	Jul 17 1954
INSTANTANEOUS PEAK FLOW			11400	Apr 25	30200	Oct 3 1959
INSTANTANEOUS PEAK STAGE			20.78	Apr 25	31.43	Oct 3 1959
ANNUAL RUNOFF (AC-FT)	353400		547800		156700	
10 PERCENT EXCEEDS	1200		2160		408	
50 PERCENT EXCEEDS	87		181		16	
90 PERCENT EXCEEDS	5.2		37		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 poor. Extensive diversions for irrigation upstream from station. Satellite telemeter at station.

EXTREMES 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)
May 2	1615	5,680	16.13	Jul 18	0815	2,420	13.19

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115	e3.3	.78	.90	1.7	e1.0	e1.0	2320	3.5	1.4	1.4	2.0
2	6.9	e2.3	.87	.91	1.5	e1.1	e1.1	3290	2.8	1.0	1.6	1.5
3	2.5	e1.6	.94	.89	1.4	e1.0	e1.2	367	3.1	1.1	1.1	2.0
4	.77	e1.1	.94	.90	1.5	e1.1	e1.4	274	3.8	3.2	35	2.2
5	.31	e1.1	.84	.91	1.5	1.0	e1.8	86	3.6	2.4	520	2.2
6	.18	e1.1	.82	.95	1.3	1.1	e1.7	55	3.3	15	188	1.9
7	.16	e1.0	.81	.98	1.4	e1.1	e1.6	39	3.3	37	42	1.3
8	.14	e1.0	.78	.96	1.3	e1.2	e1.5	33	3.3	2.6	11	1.5
9	.13	e1.0	.73	.93	1.2	e1.2	e1.4	27	2.6	2.7	6.0	1.6
10	.11	e1.0	.75	.97	1.2	e1.3	e1.3	24	3.6	3.5	4.0	.96
11	e.10	e.95	.78	.93	1.2	e1.4	e1.2	21	3.7	2.4	3.3	2.6
12	e.10	e.90	.79	.83	1.2	1.4	e1.1	20	4.4	2.3	3.6	2.5
13	e.10	e.84	.83	.70	1.3	1.8	e1.1	19	7.8	1.6	3.1	2.1
14	e.10	e.80	.83	.85	1.3	1.9	e1.3	16	7.5	1.9	2.4	2.4
15	e.09	e.79	.75	.83	1.2	1.8	e1.5	8.2	e5.2	1.4	2.2	4.9
16	e.09	e.81	.71	.85	1.2	1.7	e1.4	6.8	e4.4	1.1	2.7	6.8
17	e.09	e.82	.74	.81	1.3	1.4	e1.3	6.1	e3.9	2.2	2.0	5.8
18	e.09	e.81	.76	.84	1.3	1.6	e1.3	5.7	e3.7	569	1.7	5.5
19	e.08	e.80	.79	.95	1.3	1.9	e1.4	4.3	6.0	35	2.5	3.4
20	e.08	e.79	e.70	.93	1.3	1.8	e1.3	4.7	6.4	6.4	2.5	3.2
21	e.09	e.79	e.65	1.0	1.2	1.6	e1.5	4.8	5.1	192	2.1	3.2
22	e.09	e.80	e.60	.96	1.1	e1.6	e1.5	4.7	4.9	22	2.1	3.2
23	e.08	e.81	e.57	.96	1.0	e1.5	e1.5	4.0	3.5	4.6	2.4	3.1
24	e.08	e.80	e.55	1.0	1.0	e1.4	e1.5	4.1	3.3	3.0	2.0	3.1
25	e.09	e.78	e.62	1.0	1.1	e1.3	e1.9	4.2	3.0	2.2	2.2	3.3
26	e.10	e.77	.77	1.1	.90	e1.3	e1.8	4.4	54	1.7	1.3	3.7
27	e.11	e.76	.80	1.0	1.1	e1.3	e1.6	4.4	5.0	2.3	1.4	3.3
28	e.12	e.75	.77	1.1	1.0	e1.2	e1.9	4.3	3.3	2.3	2.2	3.3
29	e.19	e.75	.80	1.4	---	e1.1	e3.5	4.4	1.6	1.7	1.5	4.2
30	e.30	.74	.90	2.1	---	e1.0	e200	4.1	1.5	.87	2.4	3.5
31	e2.9	---	.88	2.0	---	e.90	---	3.4	---	.65	2.4	---
TOTAL	131.27	30.56	23.85	31.44	35.00	42.00	243.6	6673.6	171.1	926.52	858.1	90.26
MEAN	4.23	1.02	.77	1.01	1.25	1.35	8.12	215	5.70	29.9	27.7	3.01
MAX	115	3.3	.94	2.1	1.7	1.9	200	3290	54	569	520	6.8
MIN	.08	.74	.55	.70	.90	.90	1.0	3.4	1.5	.65	1.1	.96
AC-FT	260	61	47	62	69	83	483	13240	339	1840	1700	179

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1999, BY WATER YEAR (WY)

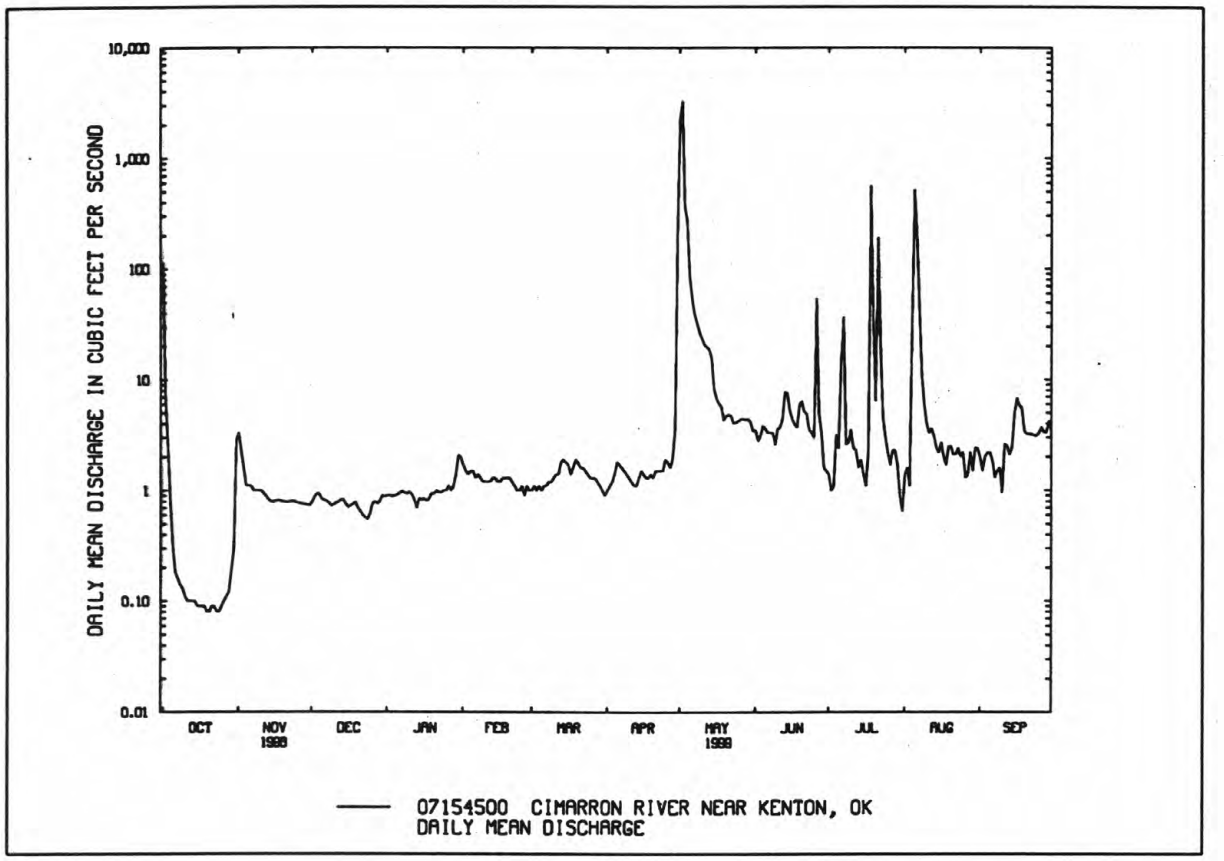
MEAN	10.3	1.94	2.07	1.97	1.73	1.45	5.66	36.3	32.2	33.1	53.5	26.4
MAX	334	12.1	9.59	8.07	6.76	4.42	116	525	514	204	406	235
(WY)	1966	1966	1966	1988	1966	1958	1977	1955	1965	1958	1965	1963
MIN	.000	.000	.000	.000	.000	.002	.000	.029	.000	.000	.000	.000
(WY)	1965	1965	1965	1965	1994	1994	1965	1975	1954	1993	1972	1956

e Estimated

07154500 CIMARRON RIVER NEAR KENTON, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1951 - 1999	
ANNUAL TOTAL	962.45		9257.30			
ANNUAL MEAN	2.64		25.4		17.3	
HIGHEST ANNUAL MEAN					95.2	1965
LOWEST ANNUAL MEAN					.65	1993
HIGHEST DAILY MEAN	201	Aug 4	3290	May 2	11000	Jun 17 1965
LOWEST DAILY MEAN	.00	Jun 18	.08	Oct 19,20,23,24	.00	most years
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 18	.08	Oct 18	.00	Jun 14 1952
INSTANTANEOUS PEAK FLOW			5680	May 2	[a]43400	Oct 17 1965
INSTANTANEOUS PEAK STAGE			16.13	May 2	[b]22.32	Oct 17 1965
ANNUAL RUNOFF (AC-FT)	1910		18360		12560	
10 PERCENT EXCEEDS	3.2		6.2		7.7	
50 PERCENT EXCEEDS	.75		1.4		.90	
90 PERCENT EXCEEDS	.00		.74		.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 good except for estimated winter periods which are poor. Natural flow affected by irrigational development. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

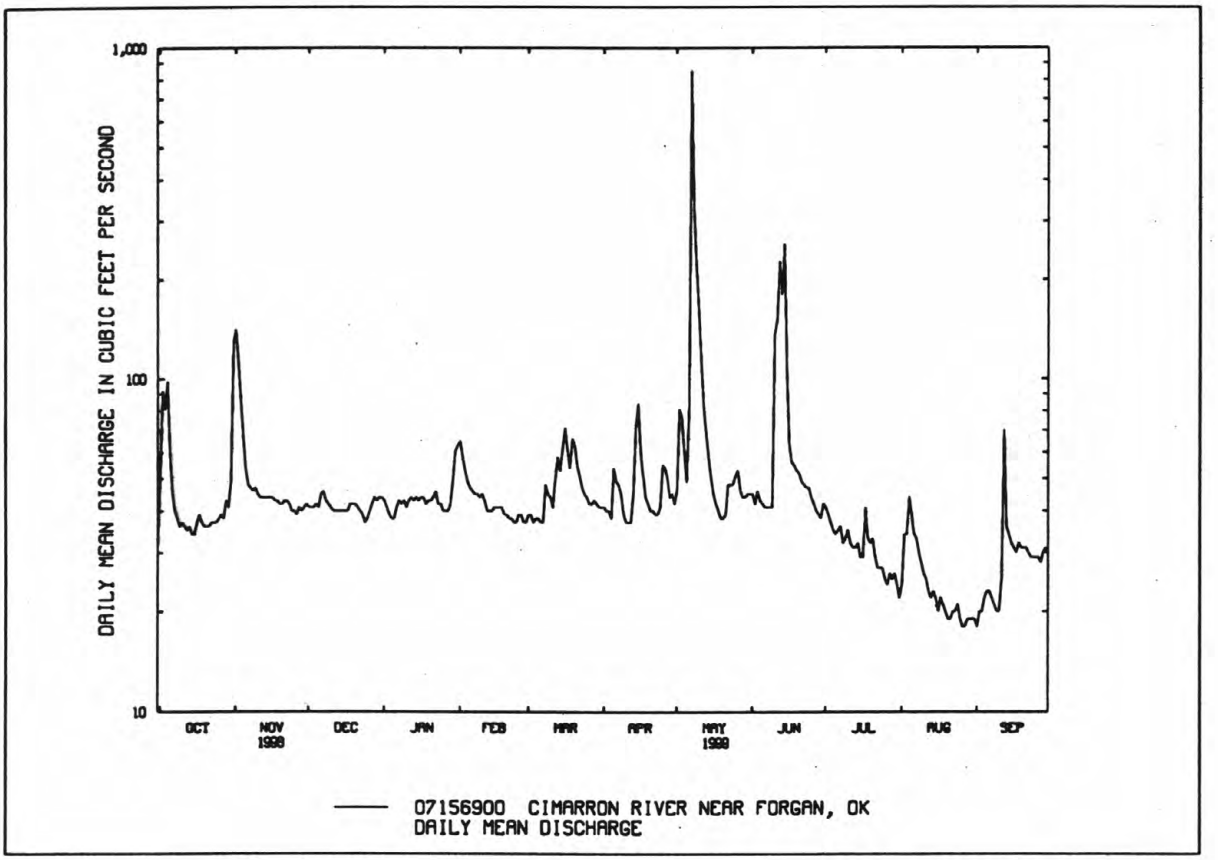
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	141	41	43	65	39	41	46	45	41	24	18
2	92	113	41	e41	58	39	40	81	42	39	34	20
3	81	86	41	e39	53	37	40	77	46	37	34	20
4	98	67	42	e38	49	38	38	60	43	35	44	22
5	61	54	41	38	47	38	54	49	42	34	39	23
6	46	48	45	41	46	37	49	81	41	35	34	23
7	40	47	46	43	45	37	48	854	41	36	33	22
8	38	46	43	42	45	48	45	329	41	32	30	21
9	36	47	42	43	44	45	39	220	41	33	28	20
10	37	45	41	41	45	44	37	161	137	35	26	20
11	36	44	40	43	43	41	37	112	151	32	25	25
12	35	44	40	44	40	50	37	82	227	31	23	70
13	36	44	40	43	40	58	45	68	180	31	22	36
14	34	44	40	44	40	53	72	58	256	32	23	34
15	34	44	40	43	41	62	84	50	104	29	22	32
16	37	44	40	44	41	71	60	45	63	29	20	31
17	39	43	40	44	41	61	51	42	56	41	22	30
18	37	43	42	42	41	54	44	40	55	33	21	32
19	36	42	42	43	39	66	42	38	53	32	20	31
20	36	42	42	43	39	63	40	38	52	33	19	31
21	36	43	e41	44	38	55	40	39	49	29	19	31
22	37	43	e40	46	38	51	39	48	48	27	20	30
23	37	42	e39	42	37	47	39	48	47	27	20	29
24	37	40	e37	42	37	45	41	48	47	27	21	29
25	38	40	e38	40	39	44	55	51	44	25	19	29
26	39	39	e40	40	39	42	54	53	42	24	18	29
27	38	41	e42	40	37	42	50	46	40	26	18	28
28	43	40	e44	42	37	43	44	44	39	25	19	30
29	41	41	43	50	---	42	45	44	38	26	19	31
30	49	42	44	61	---	41	42	45	42	24	19	30
31	130	---	44	63	---	41	---	45	---	22	19	---
TOTAL	1463	1539	1281	1352	1204	1474	1392	3042	2152	962	754	857
MEAN	47.2	51.3	41.3	43.6	43.0	47.5	46.4	98.1	71.7	31.0	24.3	28.6
MAX	130	141	46	63	65	71	84	854	256	41	44	70
MIN	34	39	37	38	37	37	37	38	38	22	18	18
AC-FT	2900	3050	2540	2680	2390	2920	2760	6030	4270	1910	1500	1700
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1999, BY WATER YEAR (WY)												
MEAN	68.3	54.6	56.5	56.0	59.9	59.2	70.4	75.0	62.5	47.9	50.3	47.6
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 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1966 - 1999	
ANNUAL TOTAL	14516		17472			
ANNUAL MEAN	39.8		47.9		59.0	
HIGHEST ANNUAL MEAN					145	1966
LOWEST ANNUAL MEAN					34.7	1994
HIGHEST DAILY MEAN	141	Nov 1	854	May 7	7490	Oct 20 1965
LOWEST DAILY MEAN	15	Jun 30	18	Aug 26,27,Sep 1	[a]13	Jun 19 1988
ANNUAL SEVEN-DAY MINIMUM	17	Jun 24	19	Aug 26	15	Jul 13 1986
INSTANTANEOUS PEAK FLOW			1380	May 7	21200	Oct 20 1965
INSTANTANEOUS PEAK STAGE			4.91	May 7	8.10	Oct 20 1965
ANNUAL RUNOFF (AC-FT)	28790		34660		42740	
10 PERCENT EXCEEDS	51		61		83	
50 PERCENT EXCEEDS	41		41		45	
90 PERCENT EXCEEDS	24		25		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 September 1999 (discontinued). 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.--Records fair. 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)
Nov 1	0430	10,400	10.41				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	6110	239	196	793	252	469	817	324	6030	62	19
2	402	2390	217	194	726	250	461	884	566	2580	57	17
3	172	1600	220	e162	627	233	1110	1180	972	1710	55	17
4	79	1150	365	e160	555	227	791	1690	999	1120	54	44
5	59	807	285	e170	495	231	1030	1210	618	847	218	79
6	33	611	240	e172	478	224	1230	883	514	700	746	33
7	20	523	225	e175	462	220	914	734	e410	611	471	25
8	15	486	211	163	435	268	777	657	355	539	315	20
9	12	419	212	144	414	372	637	604	327	502	261	17
10	9.6	404	216	168	404	306	563	942	1010	1010	354	23
11	7.7	350	216	205	406	305	488	834	1470	772	303	111
12	6.7	325	217	228	364	379	446	681	1780	543	210	735
13	6.8	307	212	216	349	953	880	597	2420	462	176	893
14	5.9	299	206	219	347	884	4540	545	1990	396	e151	374
15	4.6	294	205	228	342	807	3670	492	1470	347	e127	234
16	5.8	278	204	222	334	761	2570	443	1130	e295	e106	190
17	6.4	270	207	227	331	727	1600	491	972	e260	91	181
18	5.7	263	209	233	329	710	1250	487	907	e241	80	177
19	5.5	250	205	225	317	815	1020	373	901	227	70	179
20	5.2	236	197	222	311	874	830	337	796	213	62	212
21	5.3	231	e190	222	302	800	709	331	805	191	56	195
22	5.1	226	e80	221	293	746	646	321	756	177	49	159
23	5.1	222	e100	217	295	666	608	326	921	161	44	126
24	5.0	206	e120	213	287	620	609	302	1390	147	39	111
25	5.1	205	e125	208	282	594	1940	310	2620	132	33	102
26	5.7	198	e150	206	279	567	2170	491	1830	118	28	93
27	5.9	196	e170	205	272	544	1900	464	1270	108	24	86
28	12	208	178	195	254	546	1440	461	954	97	20	96
29	10	220	171	231	---	535	1080	426	745	89	18	265
30	30	247	173	554	---	503	923	382	1950	79	16	147
31	2830	---	180	849	---	481	---	345	---	69	14	---
TOTAL	3781.11	19531	6145	7250	11083	16400	37301	19040	33172	20773	4310	4960
MEAN	122	651	198	234	396	529	1243	614	1106	670	139	165
MAX	2830	6110	365	849	793	953	4540	1690	2620	6030	746	893
MIN	.01	196	80	144	254	220	446	302	324	69	14	17
AC-FT	7500	38740	12190	14380	21980	32530	73990	37770	65800	41200	8550	9840

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1999, BY WATER YEAR (WY)

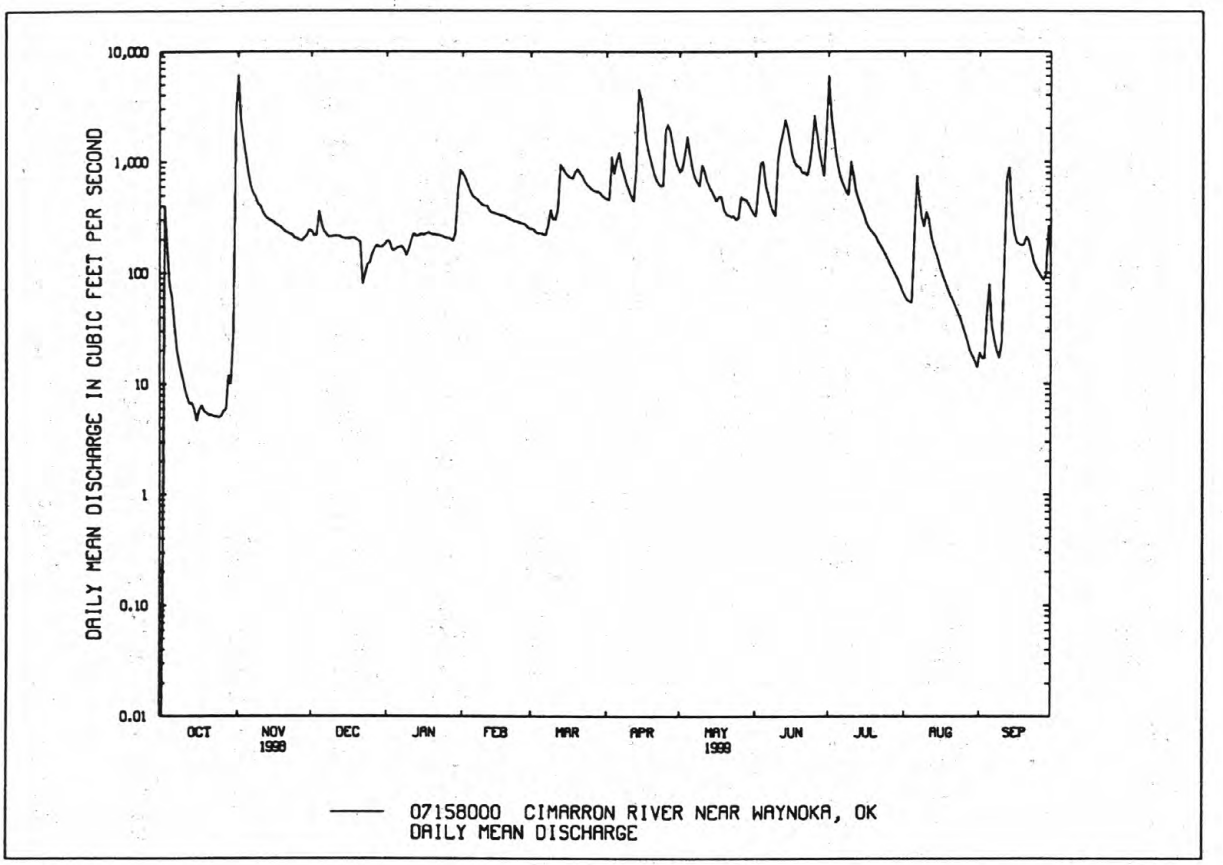
MEAN	213	131	118	132	183	246	370	787	603	341	229	264
MAX	2644	651	493	465	1011	2196	2944	5673	3674	3826	2507	1475
(WY)	1942	1999	1974	1998	1949	1973	1942	1957	1957	1950	1950	1973
MIN	.000	.000	1.98	2.65	30.1	12.6	6.00	10.6	.60	.008	.000	.000
(WY)	1940	1981	1955	1940	1957	1955	1956	1967	1966	1974	1970	1956

e Estimated

07158000 CIMARRON RIVER NEAR WAYNOKA, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1938 - 1999	
ANNUAL TOTAL	119785.05		183746.11			
ANNUAL MEAN	328		503		302	
HIGHEST ANNUAL MEAN					1081	1957
LOWEST ANNUAL MEAN					43.2	1991
HIGHEST DAILY MEAN	6110	Nov 1	6110	Nov 1	51600	May 16 1957
LOWEST DAILY MEAN	.00	Jul 22	.01	Oct 1	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 2	5.2	Oct 19	.00	Sep 3 1939
INSTANTANEOUS PEAK FLOW			10400	Nov 1	[a]94500	May 16 1957
INSTANTANEOUS PEAK STAGE			10.41	Nov 1	15.10	May 16 1957
ANNUAL RUNOFF (AC-FT)	237600		364500		218700	
10 PERCENT EXCEEDS	707		1020		492	
50 PERCENT EXCEEDS	227		285		87	
90 PERCENT EXCEEDS	.00		27		.55	

[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 September 1999 (discontinued).

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

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

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

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 2	0730	70,300	21.91	Apr 25	2000	37,300	19.86
Apr 15	1100	27,300	18.77	Jun 10	2130	32,900	19.42
Apr 22	1730	14,900	16.87	Jun 24	0230	13,600	16.55

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	36800	693	583	3870	390	1050	3190	868	2610	386	192
2	1620	55600	664	570	2070	370	1010	2710	954	8380	372	184
3	5800	18400	691	625	1540	362	1050	2450	1290	6170	394	177
4	4400	7850	2010	696	1250	376	5070	3300	1600	3370	912	172
5	2070	5040	1420	717	1050	353	4680	3150	4210	2490	1600	173
6	2670	3610	2390	697	922	339	3920	2970	2070	1920	2060	175
7	1350	2710	4260	590	863	338	4730	2330	1360	1580	1970	170
8	861	2140	1800	620	995	385	2450	1990	1070	1370	1630	175
9	668	1800	1190	630	1170	431	1910	1770	902	1240	1040	179
10	557	2400	959	565	909	437	1600	1730	20800	5870	815	167
11	491	2000	851	494	783	513	1370	1810	16100	7750	675	218
12	450	1550	802	531	727	1210	1210	1950	7940	5300	1060	312
13	425	1270	767	600	667	7490	1110	1790	7860	3540	886	415
14	407	1150	734	578	617	5760	2190	1550	8300	2330	601	1420
15	387	1080	706	578	567	3920	22100	1380	5260	1680	506	1270
16	377	1020	680	552	538	3610	14500	1270	3610	1220	446	686
17	417	972	667	557	1130	4120	7320	1290	2890	991	411	504
18	613	916	664	550	756	2720	4520	2230	2360	865	383	421
19	1350	866	647	529	612	2890	3630	3400	2070	788	360	375
20	710	837	650	506	546	4310	3010	2230	1930	733	341	350
21	480	823	e620	482	509	2970	2620	1440	2040	686	326	368
22	410	805	e580	470	512	2280	9090	1340	2400	649	311	441
23	375	744	e560	487	471	1900	6440	e1180	7050	614	293	388
24	353	728	e580	482	459	1670	3560	e1070	10500	583	273	352
25	340	695	e610	467	447	1490	27200	e1010	7890	554	251	323
26	329	677	e670	466	432	1360	24600	e1000	6660	522	245	297
27	318	659	e700	446	412	1270	13200	e980	5440	495	237	275
28	318	656	639	433	405	1200	8160	e970	3440	470	225	263
29	309	641	620	465	---	1140	5810	e1210	2600	445	216	256
30	327	684	625	1290	---	1110	4140	e1080	2140	427	208	249
31	1880	---	600	2880	---	1080	---	e1010	---	405	200	---
TOTAL	31161	155123	30049	20136	25229	57794	193250	56780	143604	66047	19633	10947
MEAN	1005	5171	969	650	901	1864	6442	1832	4787	2131	633	365
MAX	5800	55600	4260	2880	3870	7490	27200	3400	20800	8380	2060	1420
MIN	99	641	560	433	405	338	1010	970	868	405	200	167
AC-FT	61810	307700	59600	39940	50040	114600	383300	112600	284800	131000	38940	21710

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1999, BY WATER YEAR (WY)

MEAN	828	927	481	410	566	1190	1206	2283	1594	601	558	643
MAX	9071	5171	1864	1549	2410	4840	6442	11750	6969	2131	2622	2311
(WY)	1987	1999	1998	1998	1987	1998	1999	1993	1995	1999	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

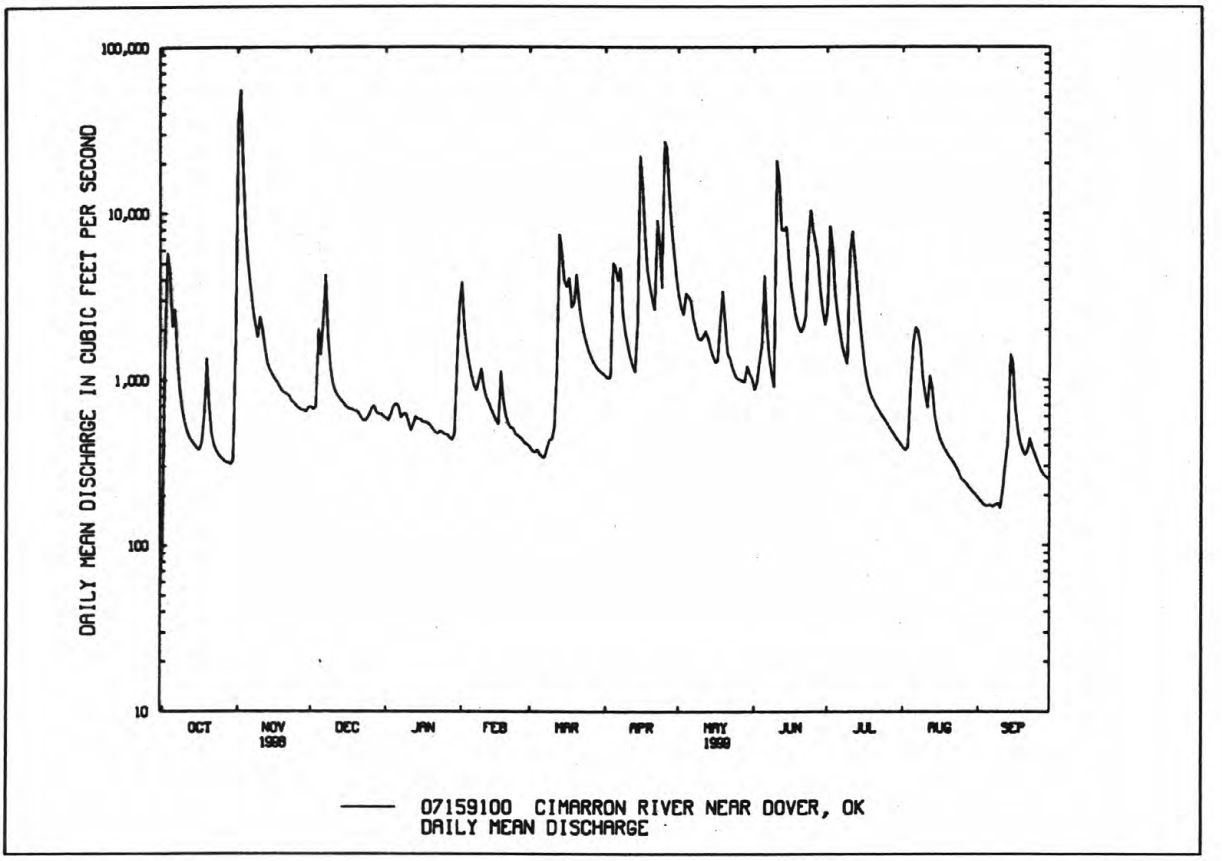
e Estimated

ARKANSAS RIVER BASIN

07159100 CIMARRON RIVER NEAR DOVER, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1974 - 1999	
ANNUAL TOTAL	535007		809753			
ANNUAL MEAN	1466		2219		942	
HIGHEST ANNUAL MEAN					2804	1987
LOWEST ANNUAL MEAN					265	1991
HIGHEST DAILY MEAN	55600	Nov 2	55600	Nov 2	80200	Oct 3 1986
LOWEST DAILY MEAN	23	Sep 10	99	Oct 1	4.3	Sep 23 1980
ANNUAL SEVEN-DAY MINIMUM	24	Sep 7	173	Sep 4	7.5	Sep 19 1980
INSTANTANEOUS PEAK FLOW			70300	Nov 2	123000	Oct 3 1986
INSTANTANEOUS PEAK STAGE			21.91	Nov 2	*26.10	Oct 3 1986
ANNUAL RUNOFF (AC-FT)	1061000		1606000		682400	
10 PERCENT EXCEEDS	2400		4700		1920	
50 PERCENT EXCEEDS	647		868		287	
90 PERCENT EXCEEDS	70		339		62	

*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 1998 TO SEPTEMBER 1999

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									
26...	1100	1028	80020	24	698	8.0	20.5	21.0	740
JUN									
28...	1045	1028	80020	16	718	7.9	29.0	26.5	732
JUL									
21...	1000	1028	80020	6.5	1050	7.9	30.5	27.0	740
AUG									
17...	0915	1028	80020	2.4	1170	8.4	30.0	26.5	734
SEP									
09...	0900	1028	80020	5.0	685	8.0	18.5	22.0	740

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								
26...	7.9	91	209	0	171	<.010	<.010	<.010
JUN								
28...	6.5	84	251	0	206	<.010	<.010	<.010
JUL								
21...	4.4	57	337	0	276	<.010	<.010	<.010
AUG								
17...	4.3	56	300	7	258	<.010	<.010	<.010
SEP								
09...	5.0	59	168	0	138	<.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								
26...	.190	<.010	<.010	<.010	<.010	<.010	<.010	<.010
JUN								
28...	.145	<.010	<.010	<.010	<.010	<.010	<.010	<.010
JUL								
21...	.027	<.010	<.010	<.010	<.010	<.010	<.010	<.010
AUG								
17...	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010
SEP								
09...	.160	<.010	<.010	.126	<.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 1998 TO SEPTEMBER 1999

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									
27...	1300	1028	80020	39	988	8.2	25.5	20.5	742
JUL									
21...	1115	1028	80020	21	1140	8.0	33.0	26.0	740
AUG									
11...	1015	1028	1028	11	1150	8.1	38.5	27.0	733
25...	1045	1028	1028	7.9	1170	7.9	32.0	24.5	737
SEP									
09...	0950	1028	80020	5.2	706	8.1	23.0	22.5	740

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								
27...	8.6	99	295	0	242	<.010	<.010	<.010
JUL								
21...	6.9	88	322	0	264	<.010	<.010	<.010
AUG								
11...	5.9	77	246	0	202	<.010	<.010	<.010
25...	5.7	71	215	0	176	<.010	<.010	<.010
SEP								
09...	7.0	83	171	0	140	<.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								
27...	.550	<.010	<.010	<.010	<.010	<.010	<.010	<.010
JUL								
21...	.017	<.010	<.010	<.010	<.010	<.010	<.010	<.010
AUG								
11...	E.008	<.010	<.010	<.010	<.010	<.010	<.010	<.010
25...	.039	<.010	<.010	<.010	<.010	<.010	<.010	<.010
SEP								
09...	.210	<.030	<.010	E.159	<.010	<.010	<.010	<.010

07159650 DEER CREEK AT OKLAHOMA CITY, OK

LOCATION.--Lat 35°41'24", long 97°35'06", in SW 1/4, NW 1/4, sec 13, T.14 N., R.4 W., Oklahoma County, Hydrologic Unit 11050002, at bridge on 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 1998 TO SEPTEMBER 1999

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									
27...	1130	1028	80020	64	1040	8.1	24.5	20.5	742
JUN									
28...	1300	1028	80020	126	898	7.8	29.0	25.5	734
JUL									
28...	1015	1028	80020	21	1210	8.0	32.5	26.0	737
AUG									
17...	1045	1028	80020	18	1200	8.0	33.5	25.5	732
SEP									
10...	1100	1028	80020	13	1090	7.9	31.5	23.5	735

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								
27...	8.5	97	271	0	222	<.010	<.010	<.010
JUN								
28...	7.1	91	262	0	215	<.010	<.010	<.010
JUL								
28...	5.7	73	222	0	182	<.010	<.010	<.010
AUG								
17...	6.1	78	164	0	134	<.010	<.010	<.010
SEP								
10...	6.0	74	126	0	103	<.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								
27...	.053	<.010	<.010	<.010	<.010	<.010	<.010	<.010
JUN								
28...	.126	<.010	<.010	<.010	<.010	<.010	<.010	<.010
JUL								
28...	.048	<.010	<.010	<.010	<.010	<.010	<.010	<.010
AUG								
17...	.021	<.010	<.010	<.010	<.010	<.010	<.010	<.010
SEP								
10...	.159	<.030	<.010	E.014	<.010	<.010	<.010	<.010

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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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 26...	1245	1028	80020	12	314	7.9	25.5	21.5	740
JUN 30...	1015	1028	80020	9.5	1070	8.0	21.5	23.5	730
JUL 27...	1130	1028	80020	.45	755	8.2	34.0	28.5	738
AUG 18...	1045	1028	80020	1.2	1140	8.2	33.0	25.0	732
SEP 09...	1055	1028	80020	3.2	558	7.8	25.0	23.0	740

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 26...	7.3	85	126	0	103	<.010	.027	<.010
JUN 30...	6.3	78	311	0	255	<.010	.014	<.010
JUL 27...	5.0	67	334	0	274	<.010	<.010	<.010
AUG 18...	4.6	58	298	0	244	<.010	<.010	<.010
SEP 09...	4.6	55	110	0	90	<.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 26...	.390	<.010	<.010	.016	<.010	<.010	<.010	<.010
JUN 30...	.153	<.010	<.010	<.010	<.010	<.010	<.010	<.010
JUL 27...	.016	<.010	<.010	<.010	<.010	<.010	<.010	<.010
AUG 18...	.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010
SEP 09...	.172	<.010	<.010	.135	<.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.

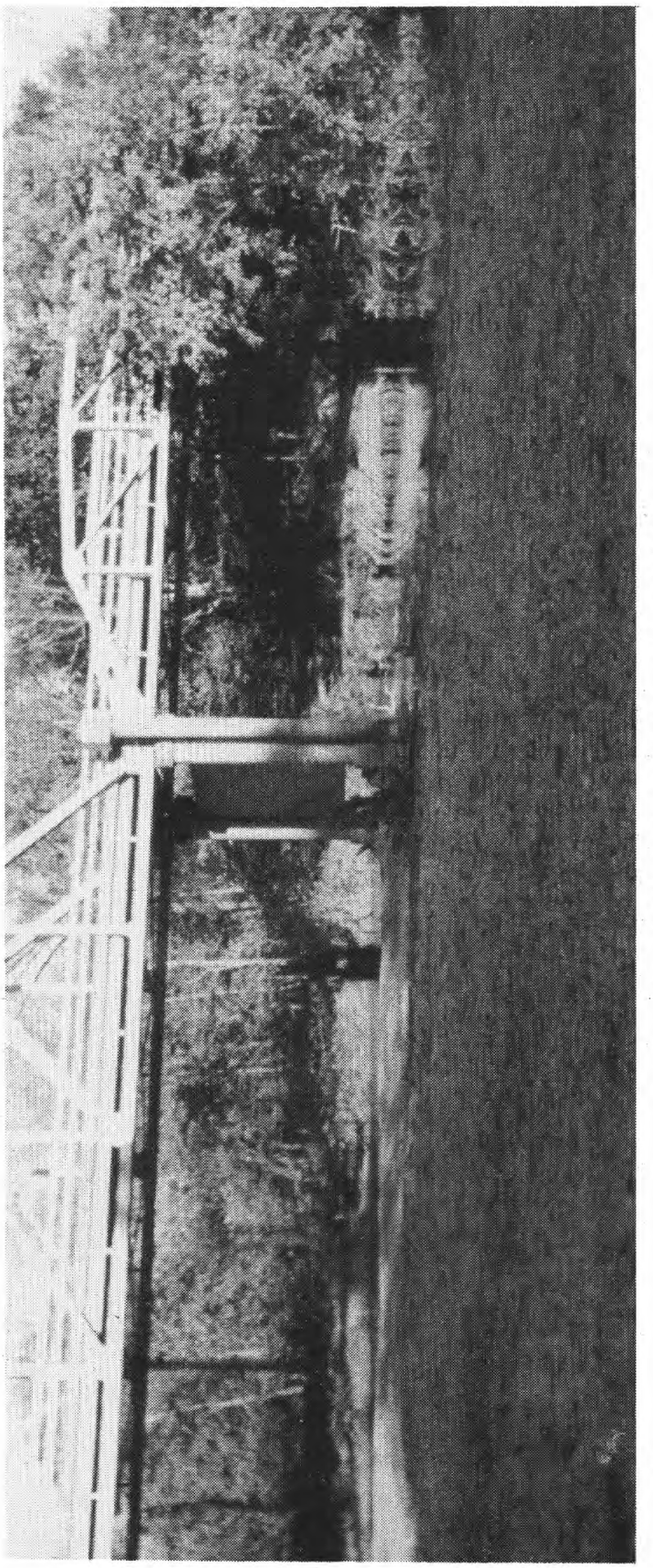
REMARKS.--Samples were collected monthly from May through September and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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									
27...	1000	1028	80020	16	809	7.8	22.0	21.5	743
JUN									
29...	0946	1028	80020	14	928	7.7	21.5	25.5	735
JUL									
27...	1015	1028	80020	6.1	1060	8.2	33.5	29.0	738
AUG									
18...	0930	1028	80020	6.5	1030	8.0	32.0	27.5	732
SEP									
10...	0945	1028	80020	6.7	778	7.9	27.5	24.0	735

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								
27...	7.2	84	211	0	173	<.010	.015	<.010
JUN								
29...	5.8	73	270	0	221	<.010	.018	<.010
JUL								
27...	6.3	85	215	0	176	<.010	.011	<.010
AUG								
18...	5.5	73	181	0	148	<.010	.014	<.010
SEP								
10...	5.2	64	149	0	122	<.010	E.009	<.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								
27...	.180	<.010	<.010	<.010	<.010	<.010	<.010	<.010
JUN								
29...	.156	<.010	<.010	<.010	<.010	<.010	<.010	<.010
JUL								
27...	.059	<.010	<.010	<.010	<.010	<.010	<.010	<.010
AUG								
18...	.042	<.010	<.010	<.010	<.010	<.010	<.010	<.010
SEP								
10...	.121	<.030	<.010	E.036	<.010	<.010	<.010	<.010



Baron Fork near Eldon Oct. 1994

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

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 1	1900	17,700	29.41	Apr 26	0500	7,760	24.83

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	6600	271	97	214	70	122	358	e140	230	33	19
2	70	6560	170	98	155	70	122	336	e122	e170	32	19
3	154	736	136	91	131	71	119	285	e118	143	34	15
4	77	464	816	88	115	74	136	506	e109	120	43	15
5	1100	405	472	89	101	74	118	1390	e103	104	38	16
6	1410	326	254	89	101	76	110	335	e100	96	39	17
7	215	201	322	88	142	68	101	190	e122	88	50	18
8	110	162	215	87	143	81	97	e155	e88	86	40	36
9	83	145	171	84	116	192	100	e140	e78	79	33	70
10	68	353	146	83	103	99	96	1260	e75	205	32	30
11	59	333	139	85	102	89	92	796	133	244	29	251
12	54	186	135	87	99	121	89	e300	126	154	31	222
13	52	149	130	84	86	1250	87	223	715	115	34	76
14	44	131	125	81	82	577	168	e150	240	98	29	48
15	42	123	119	79	84	514	226	e134	153	87	28	40
16	44	116	115	81	84	296	126	e120	131	77	25	33
17	72	110	113	78	78	215	110	185	119	70	24	31
18	523	103	112	74	76	177	100	342	108	64	20	38
19	138	100	113	72	78	191	93	201	112	60	24	40
20	84	92	111	70	76	273	94	173	167	56	24	36
21	66	88	108	68	77	207	91	e165	420	53	21	32
22	62	86	102	68	77	178	88	e164	240	51	19	29
23	57	86	100	69	78	190	79	163	703	49	16	29
24	50	86	102	72	79	231	71	182	1750	48	21	28
25	50	83	99	73	75	175	1350	e160	1290	46	15	27
26	50	82	99	67	75	157	5180	240	570	43	15	50
27	46	83	102	65	75	143	1530	e170	280	41	20	39
28	65	78	102	70	74	137	593	e147	204	39	22	34
29	238	81	100	66	---	132	468	e165	165	37	20	31
30	198	308	97	429	---	128	393	e205	319	34	18	35
31	434	---	99	380	---	124	---	e160	---	33	19	---
TOTAL	5741	18456	5295	3112	2776	6380	12149	9500	9000	2820	848	1404
MEAN	185	615	171	100	99.1	206	405	306	300	91.0	27.4	46.8
MAX	1410	6600	816	429	214	1250	5180	1390	1750	244	50	251
MIN	26	78	97	65	74	68	71	120	75	33	15	15
AC-FT	11390	36610	10500	6170	5510	12650	24100	18840	17850	5590	1680	2780

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1999, BY WATER YEAR (WY)

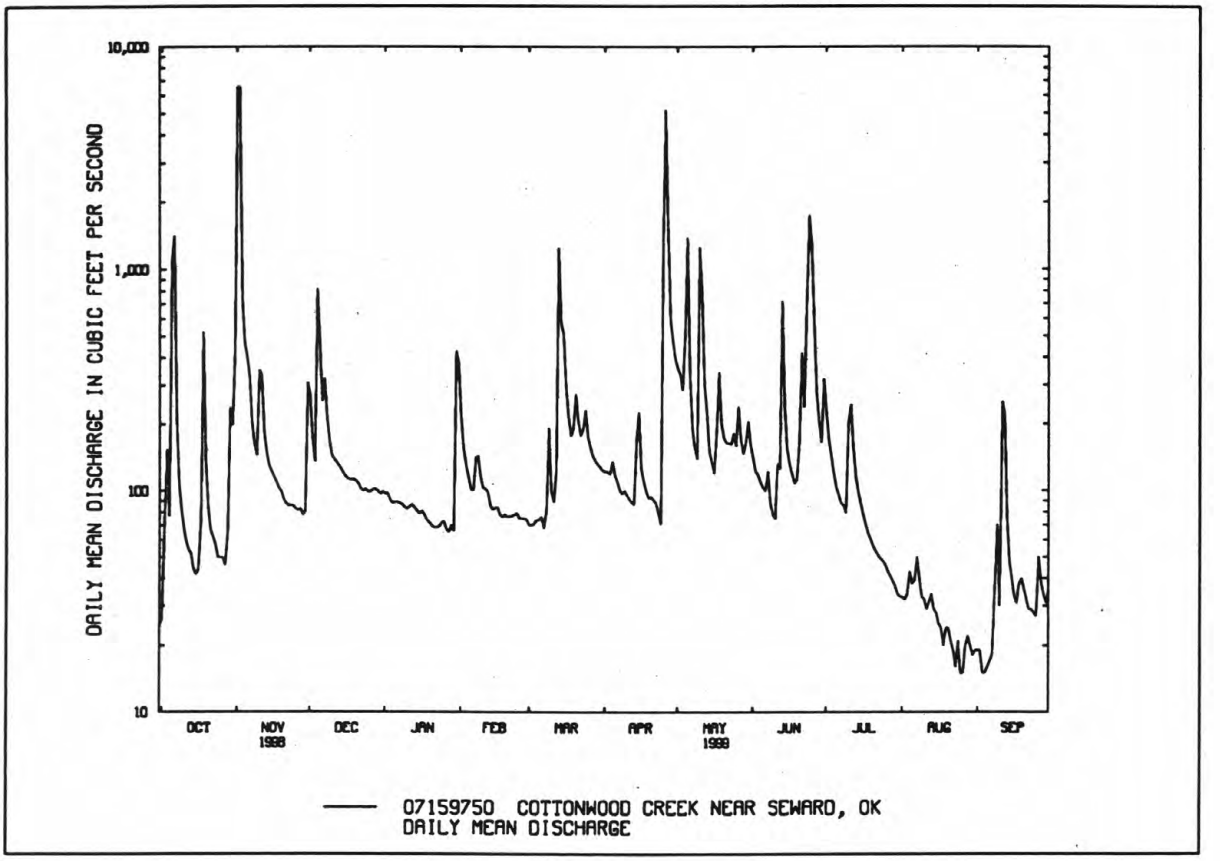
MEAN	90.0	201	119	95.1	122	251	225	481	414	98.4	74.7	106
MAX	267	1218	570	265	336	1591	803	2267	2909	467	246	546
(WY)	1975	1975	1992	1975	1975	1990	1990	1993	1995	1975	1996	1973
MIN	12.0	15.2	17.6	17.6	22.8	19.8	22.1	42.5	24.9	18.2	8.58	17.4
(WY)	1977	1977	1977	1978	1977	1977	1978	1981	1976	1976	1976	1980

e Estimated

07159750 COTTONWOOD CREEK NEAR SEWARD, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1973 - 1999	
ANNUAL TOTAL	84776.5		77481			
ANNUAL MEAN	232		212		179	
HIGHEST ANNUAL MEAN					438	1993
LOWEST ANNUAL MEAN					42.9	1981
HIGHEST DAILY MEAN	9160	Mar 17	6600	Nov 1	29300	May 9 1993
LOWEST DAILY MEAN	9.5	Sep 12	15	Aug 25	[a]6.1	Aug 15 1976
ANNUAL SEVEN-DAY MINIMUM	11	Sep 7	17	Sep 1	6.7	Aug 11 1976
INSTANTANEOUS PEAK FLOW			17700	Nov 1	[b]43500	Jun 9 1995
INSTANTANEOUS PEAK STAGE			29.41	Nov 1	[c]34.47	Jun 9 1995
ANNUAL RUNOFF (AC-FT)	168200		153700		129500	
10 PERCENT EXCEEDS	324		335		330	
50 PERCENT EXCEEDS	103		99		57	
90 PERCENT EXCEEDS	26		32		19	

[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.

EXTREMES 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)
Oct 5	1100	19,900	8.89	Apr 26	0600	50,000	12.32
Nov 2	1200	68,900	14.12	Jun 11	1030	33,700	10.75
Mar 13	1700	21,600	9.18	Jun 24	1500	26,500	9.84
Apr 15	2200	32,700	10.82	Jul 11	0730	21,500	9.19

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	163	33900	3050	1320	7780	e810	1650	6870	1440	3840	e490	e250
2	188	64900	2470	1310	6670	e840	1590	5310	1300	5740	e470	e240
3	1540	37300	2130	e1360	4010	731	1550	4390	1300	12000	e515	e230
4	6500	19300	4260	e1420	3020	e710	1730	4210	1610	6700	e540	e225
5	12200	12900	8080	e1380	2440	e690	8780	9100	2270	4470	699	e220
6	7850	10200	4340	e1300	2000	e680	5440	4950	4710	3550	1700	e225
7	3690	7910	9080	e1310	1870	e660	6160	3910	2400	2980	e3000	e240
8	1810	6300	8440	e1330	1880	e780	5710	3290	1760	2580	e2600	e340
9	1170	5250	4300	e1410	2070	e930	3130	2840	1430	2340	e1800	e240
10	875	5720	3060	e1290	2290	e1080	2570	5020	7210	4940	e1150	e260
11	678	7650	2560	e1170	1820	e1200	2160	7620	27200	18300	e960	e390
12	568	5120	e2190	1240	1630	e1600	1800	3750	11100	10500	e870	e760
13	493	4020	e2050	1220	1490	13800	1560	3200	9590	7440	1100	e450
14	432	3480	e1960	1290	1370	14400	1610	2700	11000	4600	1000	e490
15	380	3190	1890	1230	1250	9560	16600	2350	7990	2980	e760	e1350
16	364	2990	e1760	1200	1180	6470	22600	2110	5350	e1900	e630	e1390
17	405	2830	e1700	1150	1210	6070	13000	2020	3780	e1390	e590	e800
18	1070	2670	e1620	1120	1950	6240	8090	2450	3210	e1200	e520	e650
19	739	2540	e1630	1100	1410	4230	5390	3430	2880	e1090	e490	e580
20	1090	2420	e1580	1060	1180	8500	e4100	4400	2870	e990	e460	e530
21	e800	2310	e1590	1010	e1040	6960	e3500	2690	5400	e920	e420	e500
22	e550	2210	e1500	986	e980	4570	3030	2230	4310	e850	e400	484
23	e455	2140	e1400	953	e930	3510	14000	2050	7190	e800	e380	e550
24	e420	2070	e1510	937	e890	3090	7310	1810	23200	e760	e350	e510
25	e395	2030	e1610	929	e860	2730	23200	1650	16900	e730	e330	e470
26	e380	1960	e1500	905	e820	2400	44900	1600	12900	e700	e310	e440
27	e375	1930	e1450	857	e880	2150	29300	1570	10200	e660	e330	e415
28	e370	1850	e1410	850	e790	1970	18100	1440	7110	e630	e300	e390
29	e520	1860	1390	862	---	1850	13200	1550	4840	e590	e280	e380
30	e600	3500	1360	1430	---	1740	9410	1600	4190	e560	e270	e370
31	e1200	---	1360	5520	---	1630	---	1500	---	e520	e260	---
TOTAL	48270	262450	84230	40449	55710	112581	281170	103610	206640	107250	23974	14369
MEAN	1557	8748	2717	1305	1990	3632	9372	3342	6888	3460	773	479
MAX	12200	64900	9080	5520	7780	14400	44900	9100	27200	18300	3000	1390
MIN	163	1850	1360	850	790	660	1550	1440	1300	520	260	220
AC-FT	95740	520600	167100	80230	110500	223300	557700	205500	409900	212700	47550	28500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1999, BY WATER YEAR (WY)

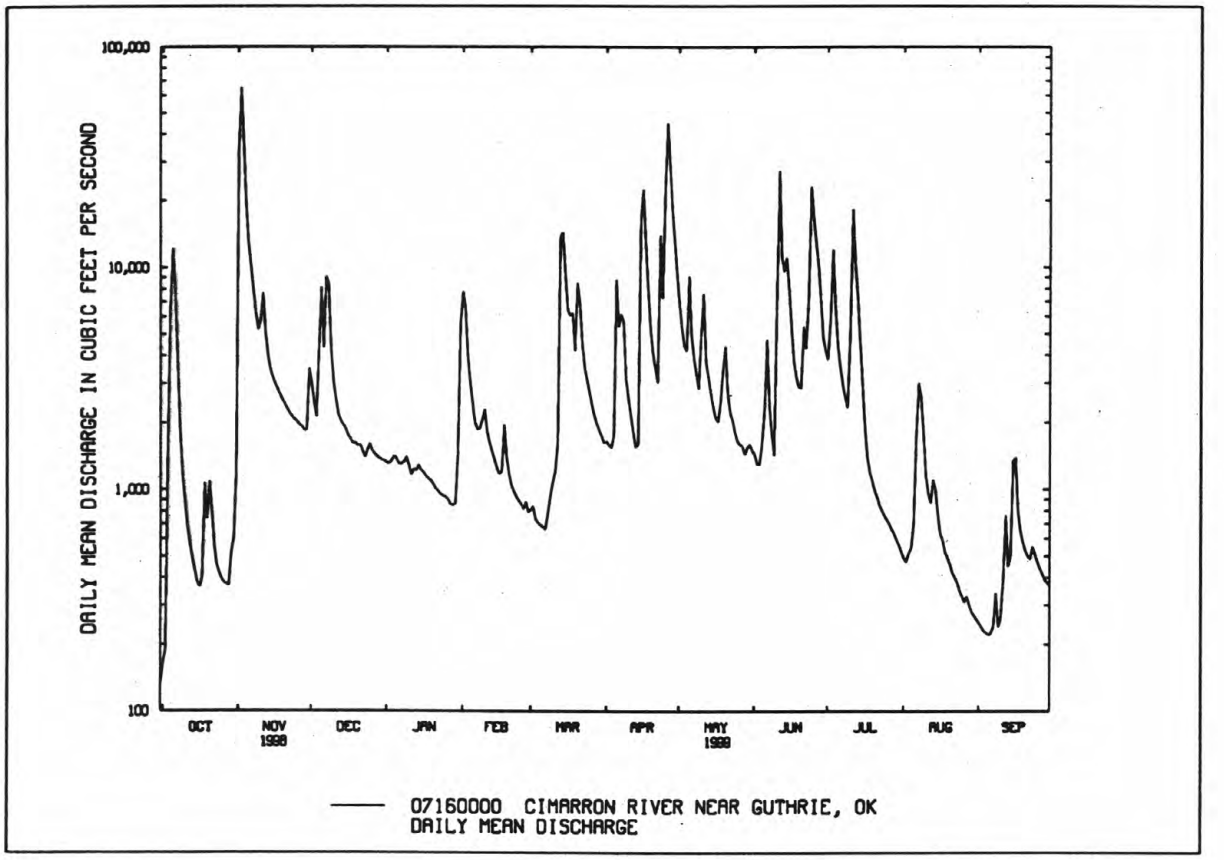
MEAN	1092	880	534	481	672	1174	1604	2575	2232	906	666	901
MAX	13800	8748	2874	2266	4063	6603	9372	20630	14860	4220	4182	3988
(WY)	1987	1999	1993	1993	1987	1998	1999	1993	1995	1950	1995	1989
MIN	.79	.70	1.39	6.38	21.7	24.7	66.5	63.0	58.6	9.58	26.1	8.03
(WY)	1953	1955	1955	1940	1957	1955	1956	1971	1953	1954	1943	1954

e Estimated

07160000 CIMARRON RIVER NEAR GUTHRIE, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1938 - 1999	
ANNUAL TOTAL	891451		1340703			
ANNUAL MEAN	2442		3673		1139	
HIGHEST ANNUAL MEAN					3901	1987
LOWEST ANNUAL MEAN					192	1953
HIGHEST DAILY MEAN	64900	Nov 2	64900	Nov 2	112000	May 17 1957
LOWEST DAILY MEAN	82	Sep 12	163	Oct 1	[a].30	Oct 20 1939
ANNUAL SEVEN-DAY MINIMUM	89	Sep 7	233	Sep 1	.39	Oct 19 1939
INSTANTANEOUS PEAK FLOW			68900	Nov 2	158000	May 17 1957
INSTANTANEOUS PEAK STAGE			14.12	Nov 2	18.58	May 17 1957
ANNUAL RUNOFF (AC-FT)	1768000		2659000		825300	
10 PERCENT EXCEEDS	4320		8230		2230	
50 PERCENT EXCEEDS	1280		1620		342	
90 PERCENT EXCEEDS	114		427		56	

[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 1/4 NW 1/4 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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

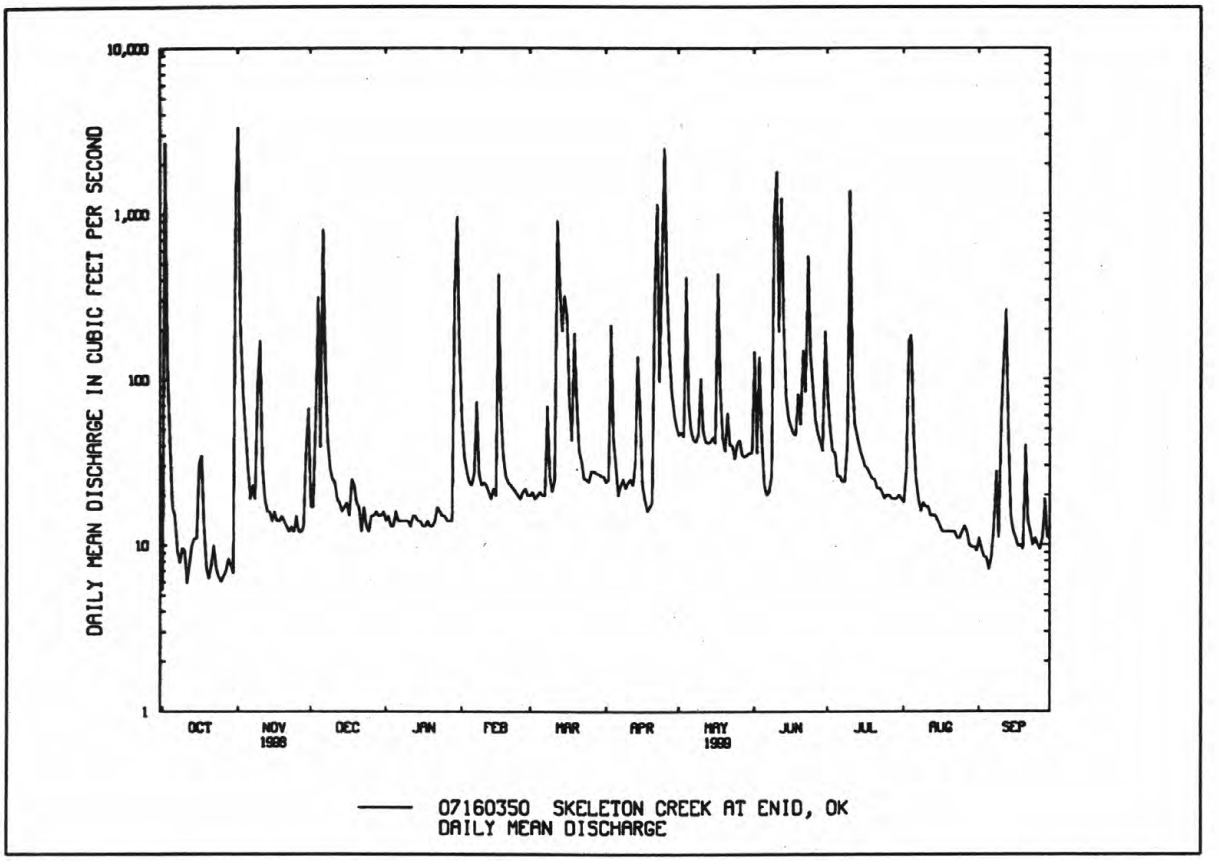
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	3350	17	14	57	20	24	46	148	83	18	11
2	2710	204	17	15	34	21	25	48	36	51	28	9.5
3	129	84	58	13	28	19	214	45	137	37	171	8.4
4	43	50	317	13	24	20	44	415	43	36	185	8.4
5	17	30	39	16	23	21	30	72	23	26	46	7.1
6	15	19	813	14	27	20	20	49	20	26	25	8.4
7	9.2	23	127	14	74	20	23	43	21	24	19	13
8	7.8	19	43	14	27	69	25	42	26	24	16	28
9	9.6	96	29	14	23	26	22	46	997	41	18	11
10	9.3	173	25	14	24	21	24	101	1810	1380	17	58
11	5.9	30	24	13	23	25	25	49	194	97	17	134
12	7.6	19	19	15	21	914	23	42	1240	53	15	263
13	10	16	18	15	19	369	31	41	211	45	15	43
14	11	16	16	14	22	197	138	42	80	38	15	15
15	11	14	17	14	20	322	67	45	59	34	14	12
16	31	16	18	13	438	242	23	41	52	30	13	11
17	35	14	15	13	67	71	19	436	47	29	12	9.8
18	13	14	25	14	34	43	16	89	46	27	12	10
19	7.3	15	23	13	26	191	17	44	82	25	12	9.4
20	6.3	14	18	13	24	75	18	37	53	25	12	40
21	7.5	13	17	14	23	37	319	63	150	22	12	14
22	10	12	12	17	22	32	1160	40	84	22	12	12
23	7.3	13	17	16	21	25	97	40	557	21	11	10
24	6.5	12	13	15	20	25	500	33	139	19	11	11
25	6.0	15	12	15	19	24	2520	41	90	20	12	10
26	6.5	12	15	14	21	28	375	43	58	20	13	9.4
27	7.0	12	15	14	22	28	149	35	47	19	12	11
28	8.3	13	16	14	20	27	86	34	42	19	10	19
29	7.6	38	15	354	---	27	63	35	37	19	9.7	11
30	6.8	67	15	963	---	26	52	36	195	20	9.7	11
31	1330	---	16	153	---	26	---	36	---	19	9.2	---
TOTAL	4496.9	4423	1841	1867	1203	3011	6149	2209	6724	2351	801.6	828.4
MEAN	145	147	59.4	60.2	43.0	97.1	205	71.3	224	75.8	25.9	27.6
MAX	2710	3350	813	963	438	914	2520	436	1810	1380	185	263
MIN	5.4	12	12	13	19	19	16	33	20	19	9.2	7.1
AC-FT	8920	8770	3650	3700	2390	5970	12200	4380	13340	4660	1590	1640

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1999, BY WATER YEAR (WY)

MEAN	70.9	68.6	46.8	39.4	57.5	81.1	104	45.6	75.9	59.2	25.0	46.3
MAX	145	147	66.2	60.2	101	200	205	71.3	224	120	45.0	71.4
(WY)	1999	1999	1998	1999	1997	1998	1999	1999	1999	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 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1996 - 1999	
ANNUAL TOTAL	25144.6		35904.9			
ANNUAL MEAN	68.9		98.4		67.5	
HIGHEST ANNUAL MEAN					98.4	1999
LOWEST ANNUAL MEAN					49.4	1998
HIGHEST DAILY MEAN	3350	Nov 1	3350	Nov 1	3350	Nov 1 1998
LOWEST DAILY MEAN	4.3	Sep 20	5.4	Oct 1	4.3	Sep 20 1998
ANNUAL SEVEN-DAY MINIMUM	5.1	Aug 18	7.0	Oct 24	5.1	Aug 18 1998
INSTANTANEOUS PEAK FLOW			8180	Nov 1	8180	Nov 1 1998
INSTANTANEOUS PEAK STAGE			14.70	Nov 1	14.70	Nov 1 1998
ANNUAL RUNOFF (AC-FT)	49870		71220		48890	
10 PERCENT EXCEEDS	87		151		79	
50 PERCENT EXCEEDS	18		23		15	
90 PERCENT EXCEEDS	6.0		11		7.2	



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 September 1999 (discontinued).

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.

EXTREMES 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)
Oct 5	1130	32,200	17.84	Apr 23	2030	19,500	15.50
Nov 2	1700	87,900	22.87	Apr 26	1730	70,000	22.10
Dec 8	0830	18,500	15.28	May 4	1600	20,100	15.99
Feb 1	0700	62,900	21.17	Jun 11	1800	44,400	19.48
Feb 10	1400	19,800	15.57	Jun 24	1830	43,900	19.43
Mar 14	0400	26,400	16.93	Jun 30	2200	24,200	16.70
Apr 16	0830	25,900	16.83	Jul 11	2130	20,800	16.12

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2170	30400	5590	2560	23400	1950	3400	9480	3300	16000	898	510
2	1560	74000	4900	2600	9760	1970	3310	7640	5820	8070	869	497
3	2960	55000	4030	2440	9540	1860	3310	6560	3200	7680	883	486
4	6480	23200	4450	2170	e8460	1790	3220	11400	2090	10100	962	475
5	24200	16800	8450	2420	e7580	1810	4280	14100	2170	5520	3120	469
6	18700	13500	9920	2350	e6760	1750	9560	10900	2860	4170	3740	463
7	8160	11100	8020	2610	e5970	1730	6930	6660	4700	3340	2650	465
8	4340	9460	16500	2480	e5180	1950	7880	5530	2760	2830	3120	675
9	2580	8310	9050	2870	e4490	2150	6860	4610	2110	2500	2470	2680
10	1900	8810	6120	2470	3830	2300	4840	5720	2710	2790	2140	1060
11	1540	12200	4820	2300	3980	e2250	4170	8500	36400	11300	1660	1600
12	1310	9670	4170	2560	3300	4000	3700	7690	20700	15000	1380	2300
13	1140	6960	3800	2400	3020	13600	3340	5010	19000	8520	1190	1730
14	1030	5800	3560	2240	2790	23300	3300	4340	17800	6160	1310	1500
15	934	5130	3390	2330	2600	16200	4470	3730	12500	4220	1410	1110
16	867	4730	3240	2310	2500	14900	23200	3310	7730	3200	1090	1490
17	1030	4430	3090	2290	2390	11100	17300	3200	5730	2610	948	1670
18	1590	4190	3030	2250	2970	9550	11200	3940	4400	2180	864	1190
19	2770	3980	3030	2230	3460	8240	8530	5800	4180	1910	807	968
20	1620	3790	2940	2200	2940	8310	7020	4870	3500	1720	757	867
21	1590	3620	2970	2170	2510	11700	6170	5210	3870	1590	730	777
22	1360	3450	2770	2180	2290	8580	6700	4180	5840	1490	698	717
23	1040	3360	2690	2110	2240	6970	15300	3980	5940	1400	676	696
24	889	3250	2800	2110	2130	5840	13900	2960	23500	1330	652	727
25	802	3190	2980	2090	2090	5340	37900	2600	24400	1270	627	762
26	748	3100	2730	2070	2040	4810	62700	2340	15900	1200	609	694
27	716	3020	2690	2060	2050	4410	42400	2210	12000	1150	591	668
28	722	2960	2580	2010	1970	4140	23900	2140	9560	1090	578	655
29	781	2930	2680	2010	---	3890	16900	1990	6590	1050	564	620
30	1080	4240	2590	3180	---	3700	12600	2090	12900	990	544	590
31	1240	---	2560	10100	---	3530	---	2200	---	946	528	---
TOTAL	97849	344580	142140	80170	132240	193620	378290	164890	284160	133326	39065	29111
MEAN	3156	11490	4585	2586	4723	6246	12610	5319	9472	4301	1260	970
MAX	24200	74000	16500	10100	23400	23300	62700	14100	36400	16000	3740	2680
MIN	716	2930	2560	2010	1970	1730	3220	1990	2090	946	528	463
AC-FT	194100	683500	281900	159000	262300	384000	750300	327100	563600	264500	77490	57740

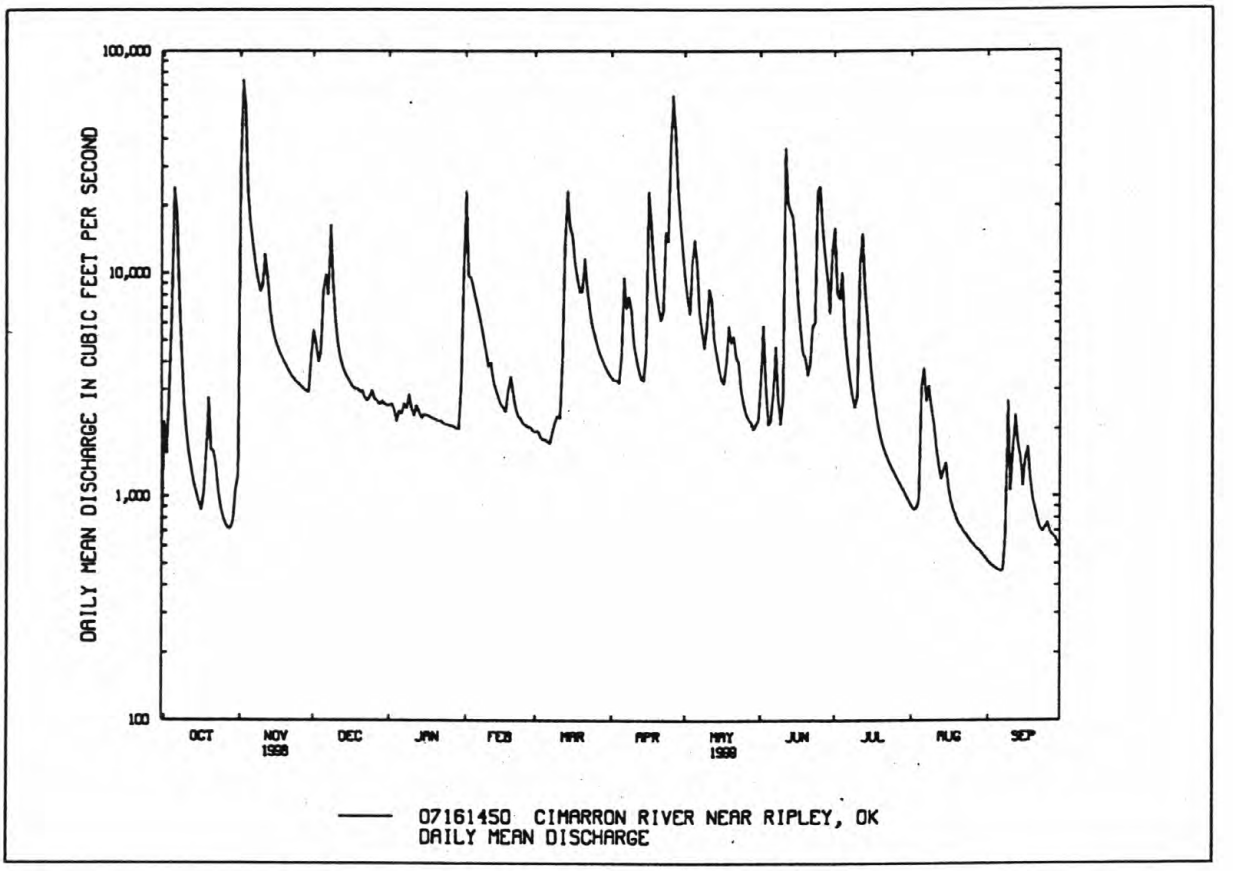
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1999, BY WATER YEAR (WY)

MEAN	974	2245	1850	1465	1602	3549	4296	4809	4469	1540	1645	1582
MAX	3156	11490	4585	3541	4723	9824	12610	26790	18300	4301	5520	4554
(WY)	1999	1999	1999	1993	1999	1990	1999	1993	1995	1999	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 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1988 - 1999	
ANNUAL TOTAL	1260859		2019441			
ANNUAL MEAN	3454		5533		2502	
HIGHEST ANNUAL MEAN					5533	1999
LOWEST ANNUAL MEAN					437	1991
HIGHEST DAILY MEAN	74000	Nov 2	74000	Nov 2	137000	May 10 1993
LOWEST DAILY MEAN	125	Sep 10	463	Sep 6	84	Oct 23 1991
ANNUAL SEVEN-DAY MINIMUM	133	Sep 6	481	Sep 1	87	Oct 19 1991
INSTANTANEOUS PEAK FLOW			87900	Nov 2	141000	May 10 1993
INSTANTANEOUS PEAK STAGE			22.87	Nov 2	28.36	May 10 1993
INSTANTANEOUS LOW FLOW			463	Sep 6		
ANNUAL RUNOFF (AC-FT)	2501000		4006000		1813000	
10 PERCENT EXCEEDS	7020		12300		5370	
50 PERCENT EXCEEDS	1600		2970		867	
90 PERCENT EXCEEDS	257		841		262	



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.--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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	956	1780	17500	6740	1120	7580	19600	43300	46400	35400	16500	3300
2	3470	20500	9430	6580	19500	8470	4260	42900	46000	37000	16500	1910
3	11400	80600	9280	6540	27900	8540	689	40800	46000	44800	16100	2160
4	11400	103000	7520	6880	31000	8800	281	32000	45900	47200	12600	1930
5	17000	99500	5900	7100	35900	8750	1130	2470	45400	48400	10800	833
6	13300	97300	7590	7120	35500	8720	9970	25100	44800	48000	9090	970
7	30200	95000	6980	7150	35800	7060	20700	34600	41900	47400	9120	2930
8	37900	93000	6260	6810	33100	6460	20100	30300	37800	47000	9110	2550
9	38600	92500	8720	3970	24700	9210	20300	30200	37100	46400	11200	2330
10	38700	88100	8370	3800	19300	8870	20600	28200	36600	46000	14900	2820
11	38400	77400	e13000	5280	15100	5860	20700	24900	35700	45900	14900	2820
12	37700	76600	e24600	5710	15300	6790	19700	25300	35800	45800	14700	3050
13	34000	75400	e24500	5760	15500	7050	13700	23900	38000	48100	12500	4640
14	22800	73600	e24400	7280	15300	6450	13800	20700	40800	47700	4380	5220
15	20200	72300	e24300	7580	15200	10900	13300	20400	40600	47000	3540	7800
16	14400	66400	24200	6550	13600	28400	17300	20400	41300	46200	5650	8100
17	12400	54700	21100	4060	4630	44000	e27800	22000	39800	45300	6790	7670
18	11900	47600	13000	7740	6500	44100	e28600	20900	38700	44300	7480	6970
19	13100	37800	9320	5950	8480	44300	e28800	21900	38600	39800	6900	6360
20	22400	30100	9220	3750	8540	43700	e28900	28800	39300	26400	4160	6880
21	22100	30200	9120	5380	8240	42400	e25100	34900	42500	36000	2850	4710
22	22000	29900	9130	5650	8760	37800	e26300	45400	49500	35200	725	4770
23	20100	28100	9150	2130	7890	4520	30000	47000	48300	32500	2420	5830
24	15500	25300	1880	370	7200	37000	34600	44700	45000	29900	3910	6950
25	15300	24700	167	2380	8000	41900	41200	46800	46700	29400	4940	4470
26	14300	24500	475	3080	9050	34400	30800	55900	48800	25900	5170	4340
27	7890	23700	e99	4110	7340	21900	13800	57900	48600	19800	5080	6360
28	6370	23200	e65	6120	7220	21100	49500	49100	48300	19600	4560	11700
29	8690	22200	4620	6980	---	21600	54200	48200	46700	19400	4700	11300
30	2960	21100	6740	3080	---	25400	43700	47400	44700	18200	4490	6990
31	863	---	6780	968	---	24000	---	47100	---	16600	8320	---
TOTAL	566299	1636080	323416	162598	445670	636030	679430	1063470	1285600	1166600	254085	148663
MEAN	18270	54540	10430	5245	15920	20520	22650	34310	42850	37630	8196	4955
MAX	38700	103000	24600	7740	35900	44300	54200	57900	49500	48400	16500	11700
MIN	863	1780	65	370	1120	4520	281	2470	35700	16600	725	833
AC-FT	1123000	3245000	641500	322500	884000	1262000	1348000	2109000	2550000	2314000	504000	294900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1999, BY WATER YEAR (WY)

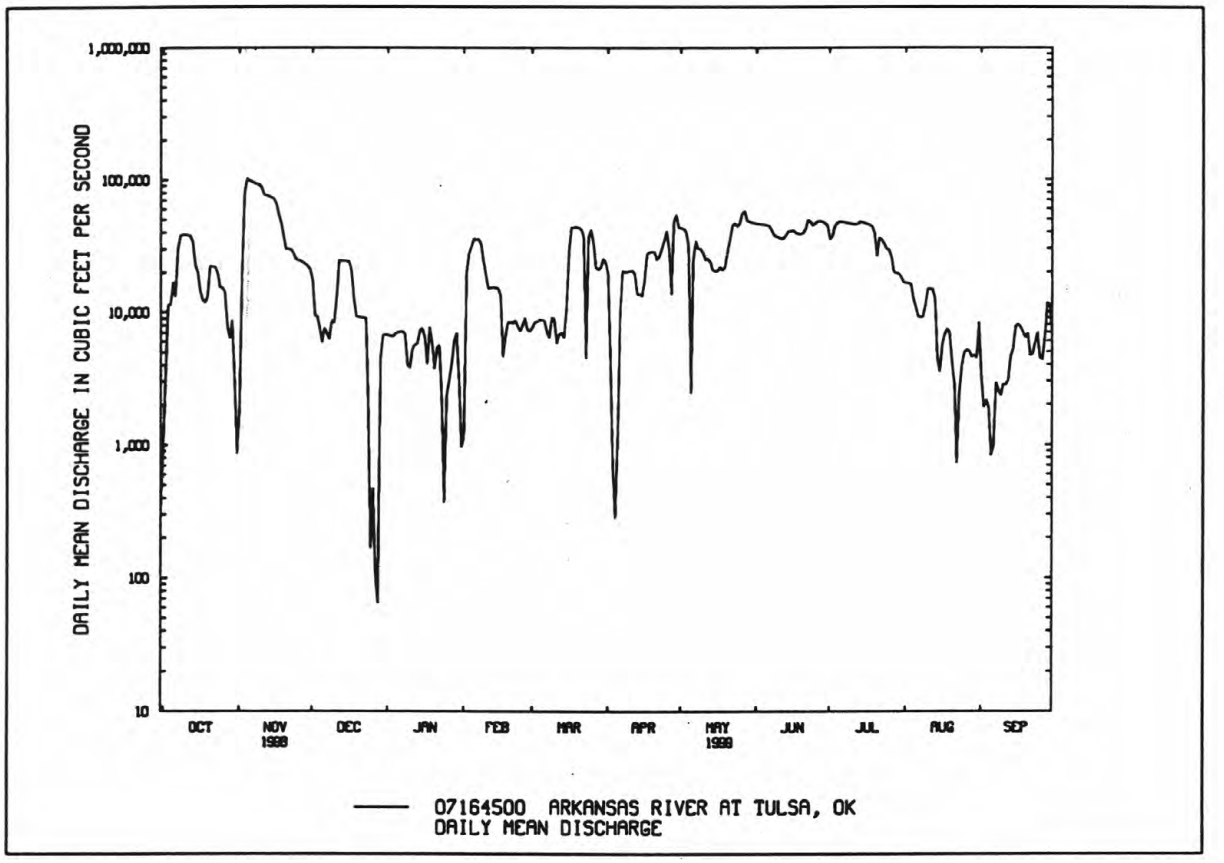
MEAN	7731	8072	5036	5306	5787	10790	12590	14540	15200	9674	5928	5635
MAX	72720	54540	16830	19850	22500	42890	44460	81400	69820	37630	32970	23280
(WY)	1987	1999	1993	1998	1993	1987	1973	1993	1995	1999	1995	1989
MIN	491	457	582	483	494	490	557	881	2595	1314	1129	893
(WY)	1965	1983	1983	1967	1967	1977	1981	1967	1966	1991	1980	1998

e Estimated

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1965 - 1999	
ANNUAL TOTAL	5995108		8367941			
ANNUAL MEAN	16420		22930		[a]8865	
HIGHEST ANNUAL MEAN					22930	1999
LOWEST ANNUAL MEAN					1813	1991
HIGHEST DAILY MEAN	103000	Nov 4	103000	Nov 4	261000	Oct 5 1986
LOWEST DAILY MEAN	65	Dec 28	65	Dec 28	[b]33	Feb 25 1977
ANNUAL SEVEN-DAY MINIMUM	529	Sep 10	1900	Sep 2	277	Oct 20 1982
INSTANTANEOUS PEAK FLOW			106000	Nov 4	307000	Oct 5 1986
INSTANTANEOUS PEAK STAGE			14.70	Nov 4	25.21	Oct 5 1986
ANNUAL RUNOFF (AC-FT)	11890000		16600000		6422000	
10 PERCENT EXCEEDS	37500		47000		22900	
50 PERCENT EXCEEDS	11400		17500		4280	
90 PERCENT EXCEEDS	924		3510		692	

[a]Prior to regulation 1926-64, 6,554 ft^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.
WATER TEMPERATURE: March 1977 to July 1985, October 1987 to current year.

INSTRUMENTATION.--Water temperature monitor provides continuous readings.

REMARKS.--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.--
WATER TEMPERATURE: Maximum, 33.0°C, Aug. 9; minimum, 0.5°C, Jan. 3, 9.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	27.0	22.0	24.0	18.5	17.5	18.0	13.5	12.0	13.0	5.0	4.0	4.5
2	24.5	20.0	22.0	18.0	16.5	17.0	14.5	12.0	13.0	4.5	2.5	3.5
3	26.0	24.5	25.0	18.0	17.5	18.0	15.0	13.5	14.0	2.5	.5	1.5
4	26.5	24.5	25.5	17.5	15.0	16.0	15.0	14.0	14.5	3.5	1.5	2.5
5	25.5	19.5	22.0	15.0	13.5	14.0	15.5	13.5	14.5	4.0	2.0	3.0
6	23.5	22.0	22.5	13.5	12.5	13.0	15.0	13.0	14.5	5.0	3.0	4.0
7	23.0	22.0	22.5	12.5	12.0	12.0	13.0	12.0	12.5	4.0	2.5	3.0
8	22.5	21.5	22.0	12.0	11.5	12.0	13.5	11.5	12.5	3.0	1.5	2.5
9	22.0	20.5	21.0	12.5	11.5	12.0	13.5	11.5	12.5	2.5	.5	1.5
10	21.5	20.5	21.0	12.0	11.5	12.0	13.0	12.0	12.5	3.0	1.5	2.0
11	21.5	20.0	20.5	12.0	11.5	11.5	13.0	12.0	12.5	4.0	1.5	3.0
12	21.5	20.0	20.5	12.0	11.5	11.5	12.5	12.0	12.5	4.5	3.0	4.0
13	21.5	19.5	20.5	11.5	11.0	11.5	12.5	11.5	12.0	4.0	1.5	2.5
14	21.5	20.0	20.5	11.5	11.0	11.5	12.0	11.0	11.5	3.5	1.5	2.0
15	21.5	19.5	20.0	12.0	11.0	11.5	11.5	10.5	11.0	3.5	1.5	2.5
16	21.5	19.5	20.5	12.0	11.5	11.5	11.0	10.0	10.5	3.5	2.0	3.0
17	21.0	20.0	20.5	12.0	11.0	11.5	10.5	9.5	10.0	4.5	2.5	3.5
18	21.0	19.0	20.0	12.5	11.5	12.0	10.0	9.0	9.5	4.0	2.0	3.0
19	21.0	18.5	19.5	12.0	11.0	11.5	10.0	8.5	9.0	4.5	2.5	3.5
20	19.5	19.0	19.5	12.5	11.0	11.5	9.0	8.5	8.5	5.0	2.5	3.5
21	20.5	19.0	19.5	12.0	11.0	11.5	8.5	6.0	7.5	6.0	4.0	5.0
22	20.0	18.5	19.0	12.5	11.0	11.5	7.0	5.0	6.0	4.5	3.0	4.0
23	20.0	18.0	19.0	12.5	11.5	12.0	7.0	6.0	6.5	5.5	3.0	4.0
24	19.5	18.0	19.0	12.5	11.0	12.0	6.5	4.5	5.5	7.0	4.5	5.5
25	20.0	17.5	19.0	12.5	11.5	12.0	5.0	3.5	4.0	6.5	4.0	5.5
26	20.0	18.0	19.0	12.5	11.0	11.5	5.5	3.5	4.5	7.0	3.5	5.0
27	20.5	18.0	19.0	13.0	11.0	12.0	7.0	5.0	6.0	8.5	6.0	7.0
28	19.5	18.5	19.0	13.0	12.0	12.5	7.5	5.0	6.0	6.5	5.0	5.5
29	20.5	18.5	19.0	13.5	12.0	13.0	6.5	5.0	6.0	5.0	4.5	4.5
30	18.5	17.0	17.5	13.5	12.5	13.0	6.5	4.0	5.0	6.5	4.5	5.5
31	18.5	17.5	18.0	---	---	---	5.5	3.5	4.5	7.0	6.5	6.5
MONTH	27.0	17.0	20.5	18.5	11.0	12.7	15.5	3.5	9.7	8.5	.5	3.8

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.0	6.5	7.0	12.0	9.0	10.5	14.0	11.5	12.5	18.0	16.0	17.0
2	7.0	5.0	5.5	10.5	9.5	10.0	15.5	13.0	14.0	17.5	16.0	16.5
3	7.0	5.0	6.0	11.5	8.0	9.5	17.0	15.5	16.0	18.5	16.5	17.0
4	7.0	5.5	6.0	11.5	8.5	10.0	19.0	15.0	16.5	18.5	17.0	18.0
5	7.0	5.5	6.0	12.5	10.5	11.5	19.5	16.0	18.0	21.5	17.0	19.0
6	7.0	6.5	6.5	11.0	9.5	10.0	16.5	12.5	14.5	19.0	17.0	18.0
7	7.0	6.5	6.5	9.5	7.5	8.5	15.5	13.0	14.0	19.0	16.5	18.0
8	8.0	6.0	7.0	10.5	8.0	9.0	16.5	14.5	15.0	20.0	17.0	18.5
9	8.0	7.0	7.5	12.0	8.5	10.0	17.5	14.0	15.5	20.0	17.5	18.5
10	10.0	7.0	8.5	10.5	8.5	9.5	18.0	14.5	16.0	19.5	17.5	18.5
11	9.5	7.0	8.5	11.5	8.5	10.0	18.5	15.0	16.5	19.5	18.0	18.5
12	8.5	6.5	7.5	10.5	7.0	8.5	18.5	15.5	17.0	20.0	18.0	19.0
13	9.0	7.0	7.5	7.5	5.5	7.0	17.5	16.0	16.5	21.5	18.0	19.5
14	9.5	7.0	8.0	10.5	5.5	8.0	16.5	16.0	16.0	21.0	18.0	19.5
15	10.0	7.5	8.5	11.5	7.0	9.0	16.5	14.0	15.5	21.0	19.0	20.0
16	10.0	8.5	9.0	11.0	8.5	9.5	16.0	14.0	15.0	20.5	19.5	20.0
17	10.0	7.5	9.0	10.0	9.0	9.5	16.5	14.5	15.5	20.0	19.0	19.5
18	9.5	8.5	9.0	9.0	8.0	8.5	17.5	15.0	16.0	22.5	19.0	20.5
19	9.5	8.0	8.5	8.5	7.5	8.0	17.5	15.0	16.0	22.5	19.0	20.5
20	10.5	8.0	9.0	8.5	7.5	8.0	17.5	15.0	16.0	21.5	19.5	20.5
21	9.5	8.0	8.5	9.5	7.5	8.5	16.5	15.0	16.0	22.0	19.5	20.5
22	8.5	7.0	7.5	10.5	7.5	9.0	17.5	15.0	16.0	22.0	20.0	21.0
23	10.0	7.5	8.5	9.5	8.5	9.0	16.0	15.0	15.0	22.5	20.0	21.0
24	11.5	7.5	9.5	9.5	8.0	9.0	16.0	15.0	15.5	23.0	20.5	21.5
25	11.5	8.5	10.0	10.5	8.5	9.5	16.0	15.0	15.5	22.0	21.5	21.5
26	12.5	9.5	11.0	11.0	8.5	9.5	17.0	16.0	16.5	23.0	21.5	22.0
27	13.0	10.0	11.0	10.0	9.0	9.5	20.5	16.5	18.0	23.0	21.5	22.0
28	11.5	8.5	10.0	10.5	9.5	10.0	18.0	16.5	17.0	23.5	21.5	22.5
29	---	---	---	12.5	9.5	11.0	17.5	16.5	17.0	23.0	22.0	22.5
30	---	---	---	13.0	10.0	11.5	18.0	16.5	17.0	23.5	22.0	22.5
31	---	---	---	13.0	11.0	12.0	---	---	---	24.0	22.0	22.5
MONTH	13.0	5.0	8.1	13.0	5.5	9.5	20.5	11.5	15.9	24.0	16.0	19.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	24.5	22.5	23.0	25.5	24.5	25.0	32.0	29.5	30.5	29.5	28.5	29.0
2	24.5	22.5	23.5	27.0	25.0	25.5	32.0	29.0	30.5	29.0	28.0	28.5
3	25.0	23.0	24.0	27.0	25.0	26.0	31.5	29.0	30.5	28.5	28.0	28.0
4	25.0	23.0	24.0	27.5	25.5	26.0	31.0	29.5	30.0	28.5	28.0	28.5
5	25.5	23.5	24.5	28.0	26.0	26.5	32.0	29.5	30.5	28.5	27.5	28.0
6	24.5	24.0	24.5	28.0	26.0	27.0	32.5	29.0	30.5	28.0	27.5	27.5
7	26.0	24.0	25.0	28.0	26.5	27.0	32.0	29.0	30.5	28.5	28.0	28.0
8	27.0	24.5	25.5	28.5	26.5	27.5	32.5	29.5	31.0	28.5	28.0	28.0
9	27.0	25.0	26.0	29.0	27.0	27.5	33.0	29.0	31.0	28.0	27.5	27.5
10	25.5	25.0	25.5	28.0	27.0	27.5	32.5	30.0	31.0	27.5	27.0	27.5
11	27.0	24.5	25.5	28.5	27.0	27.5	32.5	29.5	31.0	27.0	25.5	26.0
12	27.0	25.0	26.0	28.5	27.0	27.5	32.0	29.5	30.5	25.5	25.0	25.5
13	27.0	25.5	26.5	29.0	27.0	28.0	31.0	29.5	30.0	25.5	25.0	25.5
14	26.5	25.5	26.0	29.0	27.0	28.0	30.5	29.0	29.5	26.0	25.0	25.5
15	27.0	25.0	26.0	29.0	27.5	28.0	30.5	28.5	29.5	26.0	25.5	25.5
16	25.5	24.5	25.0	28.5	27.0	27.5	30.5	29.0	30.0	26.0	25.0	25.5
17	26.0	24.5	25.0	29.0	27.0	28.0	30.5	29.0	29.5	25.0	24.5	25.0
18	25.5	24.5	24.5	29.0	27.0	28.0	30.5	29.0	29.5	25.5	24.5	25.0
19	24.5	24.0	24.0	29.5	27.5	28.5	30.5	29.5	30.0	24.5	24.5	24.5
20	25.0	24.0	24.5	30.0	27.5	28.5	30.0	29.0	29.5	24.5	24.0	24.0
21	25.0	23.5	24.0	30.0	27.5	28.5	29.5	29.0	29.0	24.0	23.5	24.0
22	24.0	23.0	23.5	30.0	27.5	29.0	29.0	28.5	28.5	24.0	23.5	23.5
23	24.0	22.5	23.0	30.5	28.0	29.0	29.0	28.5	28.5	24.0	23.5	24.0
24	23.5	22.5	23.0	31.0	28.5	29.5	30.0	28.5	29.5	24.0	23.5	23.5
25	24.0	22.5	23.0	31.0	28.5	29.5	31.0	28.5	29.5	24.0	23.5	24.0
26	25.0	23.0	24.0	31.5	29.0	30.0	30.5	28.0	29.0	23.5	22.5	23.0
27	25.5	23.5	24.5	32.0	29.0	30.0	30.0	28.5	29.0	23.5	22.5	23.0
28	25.5	24.0	24.5	32.0	29.0	30.0	30.5	28.5	29.5	22.5	21.0	21.5
29	25.0	24.0	24.5	32.0	29.0	30.5	30.5	28.5	29.5	21.5	20.0	21.0
30	25.5	23.0	24.5	32.0	29.0	30.5	30.0	29.0	29.5	22.0	21.5	21.5
31	---	---	---	32.0	28.5	30.5	29.5	28.5	29.0	---	---	---
MONTH	27.0	22.5	24.6	32.0	24.5	28.1	33.0	28.0	29.9	29.5	20.0	25.4
YEAR	33.0	.5	17.4									

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 fair. 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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	180	2.9	16	9.7	3.5	2.0	4.2	39	13	3.7	1.4
2	121	e20	2.7	5.8	6.4	3.5	2.0	4.5	10	7.9	2.9	1.8
3	4.5	4.0	19	4.5	5.8	3.5	23	4.3	11	5.4	2.7	1.7
4	3.0	3.2	141	e3.5	4.5	4.0	2.2	410	10	4.2	4.8	6.7
5	1220	2.0	4.9	e2.5	4.2	4.2	4.1	14	10	4.0	5.7	21
6	6.9	2.0	14	1.5	162	3.7	2.2	6.4	46	5.5	4.5	1.4
7	2.4	40	2.9	2.4	82	4.1	2.4	5.7	19	184	3.0	46
8	2.0	4.4	2.6	4.3	9.1	185	6.1	4.9	27	9.8	2.4	32
9	2.0	58	2.7	6.7	6.1	12	3.6	4.3	14	4.4	4.5	1.1
10	1.9	36	2.4	5.1	6.0	3.7	2.5	64	141	3.0	2.6	313
11	2.0	3.9	2.0	4.8	14	1.8	2.4	30	23	2.9	2.8	134
12	1.5	3.5	2.0	2.2	4.5	125	3.4	75	13	3.6	2.7	53
13	1.6	2.9	2.0	1.9	4.2	44	23	5.8	33	4.0	2.5	3.3
14	2.1	2.7	1.7	4.9	4.2	70	171	5.7	16	4.5	2.2	2.5
15	1.8	2.4	1.8	3.3	4.3	19	15	6.2	20	4.2	2.2	2.4
16	1.8	2.4	1.8	3.0	3.9	11	4.6	5.7	278	4.2	2.5	1.7
17	138	2.2	1.7	2.9	3.8	5.4	4.1	471	8.0	4.4	.76	1.6
18	5.0	2.7	49	3.1	4.2	2.2	4.2	13	5.6	6.7	.95	2.0
19	1.9	3.0	11	2.9	4.0	5.6	4.2	7.4	273	5.7	1.2	8.7
20	3.4	2.4	3.9	2.9	3.5	4.5	4.7	7.3	15	4.8	1.8	276
21	1.9	2.6	5.9	2.9	3.3	2.3	5.3	353	7.4	3.5	2.3	3.3
22	1.4	3.2	17	25	3.6	2.4	63	387	16	3.5	1.6	2.4
23	1.2	3.4	9.5	77	3.9	1.7	2.7	345	272	3.5	1.6	2.0
24	1.6	3.5	5.5	7.9	3.6	1.6	113	21	183	3.5	1.2	1.6
25	2.3	3.4	5.1	4.5	3.8	1.4	767	161	20	5.3	1.1	306
26	1.6	2.4	4.0	4.2	4.3	1.3	852	24	11	4.3	1.4	14
27	1.9	2.7	2.1	4.4	3.8	4.8	31	13	7.0	4.2	4.8	19
28	16	3.5	2.1	3.1	3.5	2.3	8.6	10	12	5.6	1.1	37
29	3.2	102	1.6	39	---	1.7	4.7	9.7	4.2	4.2	1.1	4.7
30	21	28	4.5	408	---	1.8	4.4	10	318	4.0	1.1	2.3
31	3.9	---	2.8	23	---	1.8	---	141	---	3.5	1.4	---
TOTAL	1655.8	532.4	332.1	683.2	376.2	538.8	2138.4	2624.1	1862.2	331.3	75.11	1303.6
MEAN	53.4	17.7	10.7	22.0	13.4	17.4	71.3	84.6	62.1	10.7	2.42	43.5
MAX	1220	180	141	408	162	185	852	471	318	184	5.7	313
MIN	1.2	2.0	1.6	1.5	3.3	1.3	2.0	4.2	4.2	2.9	.76	1.1
AC-FT	3280	1060	659	1360	746	1070	4240	5200	3690	657	149	2590

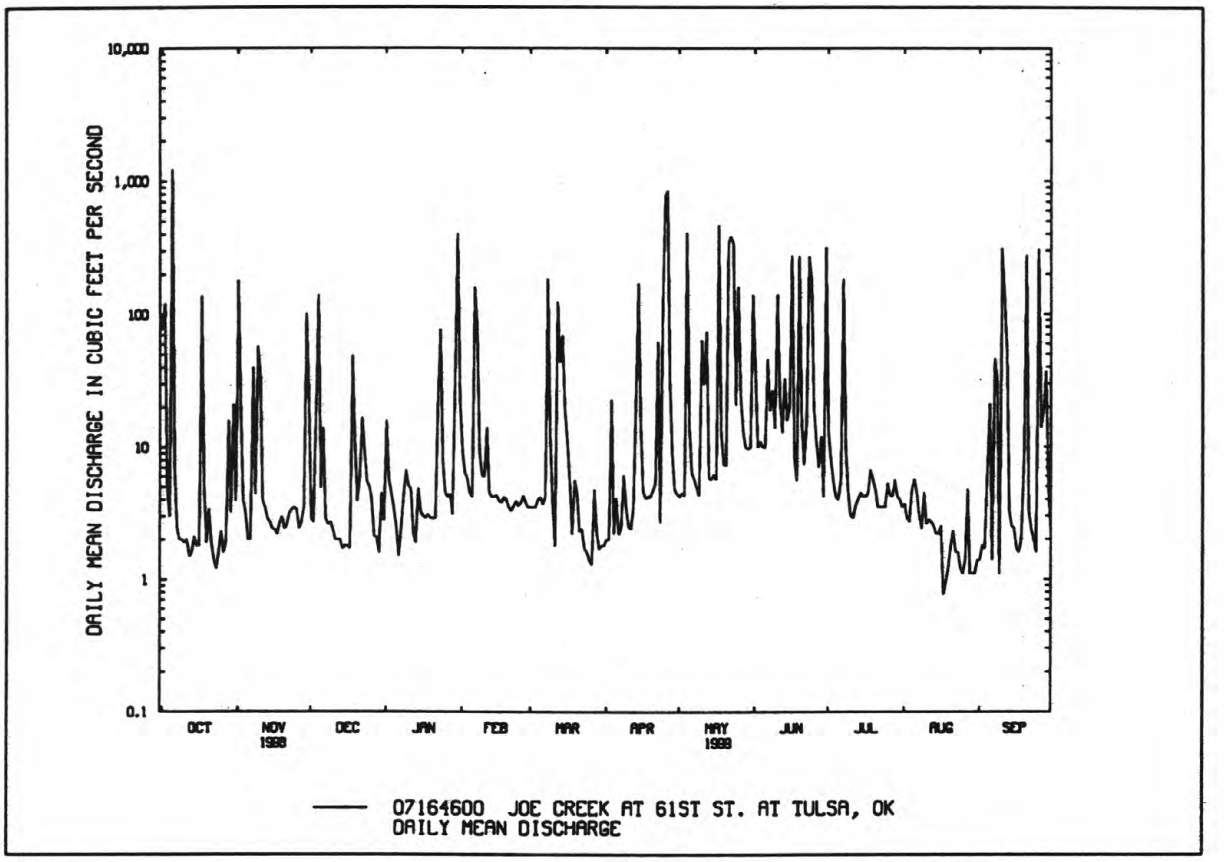
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1999, BY WATER YEAR (WY)

MEAN	17.0	21.2	14.9	11.7	14.9	24.3	33.9	40.2	30.9	15.8	13.4	22.5
MAX	53.4	54.1	45.3	24.1	37.2	65.6	71.3	107	86.9	44.6	35.2	43.5
(WY)	1999	1997	1993	1998	1997	1998	1999	1995	1995	1994	1997	1999
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 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1988 - 1999	
ANNUAL TOTAL	8389.98		12453.21			
ANNUAL MEAN	23.0		34.1		22.3	
HIGHEST ANNUAL MEAN					35.2	1995
LOWEST ANNUAL MEAN					9.49	1996
HIGHEST DAILY MEAN	1220	Oct 5	1220	Oct 5	1220	Oct 5 1998
LOWEST DAILY MEAN	.46	Sep 29	.76	Aug 17	.28	Jul 4 1996
ANNUAL SEVEN-DAY MINIMUM	.66	Sep 23	1.4	Aug 28	.59	Jun 25 1996
INSTANTANEOUS PEAK FLOW			8270	Oct 5	11100	Jun 9 1995
INSTANTANEOUS PEAK STAGE			7.98	Oct 5	9.72	Jun 9 1995
ANNUAL RUNOFF (AC-FT)	16640		24700		16190	
10 PERCENT EXCEEDS	37		72		40	
50 PERCENT EXCEEDS	2.0		4.2		3.0	
90 PERCENT EXCEEDS	.83		1.8		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. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

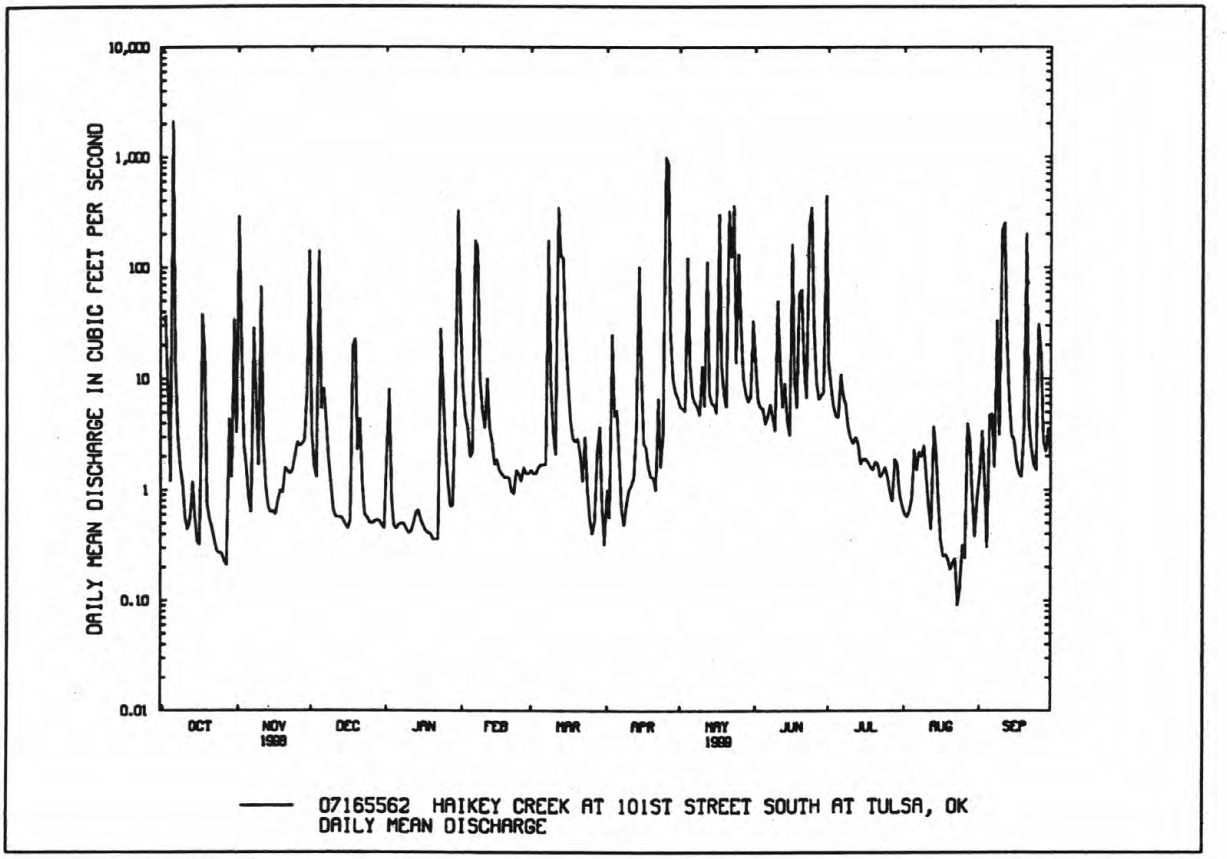
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	291	3.4	2.4	8.9	1.5	1.0	5.6	14	14	.61	1.4
2	37	23	1.6	8.2	4.7	1.4	.56	5.4	6.4	8.7	.57	3.4
3	6.9	2.6	1.3	.84	3.7	1.4	25	5.1	5.5	5.6	.64	1.2
4	1.2	1.6	142	.47	2.0	1.6	4.6	124	5.4	4.6	.82	.30
5	2150	.83	5.4	.45	2.2	1.7	5.2	13	3.9	4.5	2.3	4.7
6	14	.63	8.3	.49	177	1.7	1.8	7.0	4.6	11	1.5	4.8
7	3.0	29	4.2	.50	154	1.7	.65	6.1	5.9	7.0	2.2	1.6
8	1.6	7.1	1.9	.50	10	177	.48	5.6	4.5	5.9	2.0	33
9	1.1	1.7	1.1	.45	5.1	9.8	.74	4.7	3.4	3.6	2.5	3.1
10	.55	68	.66	.41	3.6	3.2	1.0	13	50	2.9	1.3	217
11	.44	2.8	.57	.42	10	2.1	1.1	5.7	14	2.6	.69	254
12	.54	1.1	.57	.50	3.5	352	1.3	114	5.5	3.0	.44	24
13	1.2	.71	.57	.63	2.7	130	3.9	7.4	9.1	2.6	3.7	6.6
14	.57	.63	.54	.66	1.7	122	102	6.0	4.1	1.7	2.2	3.1
15	.34	.65	.49	.54	1.9	25	11	5.8	3.1	1.9	.79	2.8
16	.32	.60	.45	.47	1.5	9.7	2.6	4.9	163	1.9	.35	1.8
17	38	.80	.52	.43	1.4	4.3	2.4	307	9.3	1.8	.25	1.4
18	17	1.0	20	.41	1.3	2.9	1.6	13	5.4	1.6	.26	1.3
19	.76	.94	23	.40	1.3	2.7	1.3	7.2	59	1.5	.24	3.4
20	.55	1.6	2.3	.36	1.3	2.9	1.3	5.6	63	1.8	.19	203
21	.46	1.5	4.4	.36	.98	2.1	1.0	326	12	1.7	.22	4.4
22	.36	1.4	1.1	.36	.92	1.2	6.7	125	6.7	1.3	.24	2.4
23	.28	1.5	.59	28	1.5	3.0	1.6	364	249	1.4	.09	1.7
24	.27	2.0	.57	7.9	1.4	1.0	3.1	14	349	1.6	.13	1.5
25	.27	2.7	.51	2.4	1.2	.55	1000	133	30	1.3	.32	31
26	.23	2.5	.50	1.2	1.6	.40	879	30	9.7	.96	.24	17
27	.21	2.6	.52	.71	1.4	.52	25	10	6.5	.78	4.0	2.7
28	4.4	2.8	.54	.72	1.4	2.4	10	7.3	7.1	1.9	2.8	2.2
29	1.3	7.7	.53	7.2	---	3.7	7.6	6.2	7.5	1.7	.86	3.6
30	34	143	.48	334	---	.69	6.7	6.9	448	.91	.38	2.0
31	3.3	---	.45	43	---	.32	---	33	---	.72	.83	---
TOTAL	2354.15	603.99	229.06	445.38	408.20	870.48	2110.23	1721.5	1564.6	102.47	33.66	840.40
MEAN	75.9	20.1	7.39	14.4	14.6	28.1	70.3	55.5	52.2	3.31	1.09	28.0
MAX	2150	291	142	334	177	352	1000	364	448	14	4.0	254
MIN	.21	.60	.45	.36	.92	.32	.48	4.7	3.1	.72	.09	.30
AC-FT	4670	1200	454	883	810	1730	4190	3410	3100	203	67	1670

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1999, BY WATER YEAR (WY)

MEAN	21.3	25.1	20.2	14.0	17.5	34.3	38.6	34.3	34.8	19.6	12.0	21.7
MAX	75.9	68.2	62.3	41.9	38.7	120	82.3	67.3	97.2	72.3	49.6	54.3
(WY)	1999	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 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1989 - 1999	
ANNUAL TOTAL	9595.44		11284.12			
ANNUAL MEAN	26.3		30.9		24.5	
HIGHEST ANNUAL MEAN					33.8	1995
LOWEST ANNUAL MEAN					11.0	1991
HIGHEST DAILY MEAN	2150	Oct 5	2150	Oct 5	2150	Oct 5 1998
LOWEST DAILY MEAN	.00	Aug 19	.09	Aug 23	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 19	.20	Aug 18	.00	Oct 12 1988
INSTANTANEOUS PEAK FLOW			6910	Oct 5	6910	Oct 5 1998
INSTANTANEOUS PEAK STAGE			17.52	Oct 5	17.52	Oct 5 1998
ANNUAL RUNOFF (AC-FT)	19030		22380		17710	
10 PERCENT EXCEEDS	32		34		39	
50 PERCENT EXCEEDS	2.4		2.2		2.5	
90 PERCENT EXCEEDS	.13		.45		.00	



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.--No estimated daily discharge. Records fair. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

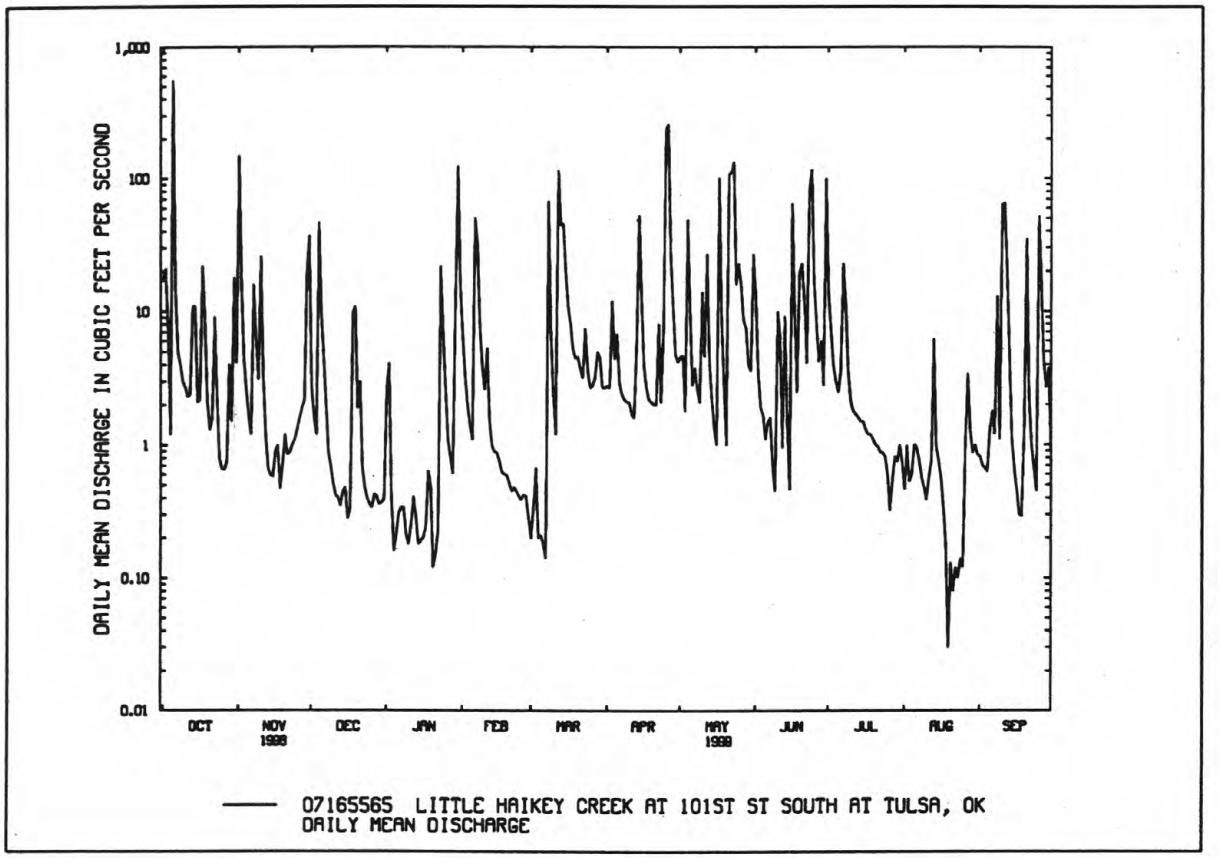
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	149	2.7	2.6	6.7	.20	2.8	4.6	13	14	.46	.82
2	21	17	1.6	4.1	3.3	.34	2.7	4.7	3.5	7.3	.99	.70
3	7.3	4.5	1.2	.41	2.0	.67	12	1.8	1.9	4.0	.53	.67
4	1.2	2.6	47	.16	1.4	.20	4.4	49	1.7	3.0	.60	.63
5	559	1.6	10	.21	1.1	.21	6.8	10	1.1	2.5	1.0	1.3
6	15	1.2	4.5	.31	51	.18	2.9	2.8	1.5	3.5	.96	1.8
7	5.0	16	2.0	.34	32	.14	2.4	3.8	1.6	23	.77	1.2
8	4.0	6.2	.88	.34	8.1	67	2.2	2.6	.66	11	.58	13
9	3.0	3.1	.69	.21	3.8	7.4	2.1	2.1	.45	3.5	.48	1.1
10	2.7	26	.52	.18	2.6	2.3	2.1	14	10	2.1	.39	64
11	2.3	3.3	.42	.25	5.3	1.2	1.7	4.6	6.4	1.8	.56	65
12	2.4	1.2	.40	.41	1.5	116	1.6	27	.95	1.7	.76	20
13	11	.67	.35	.29	.98	45	5.6	4.3	9.2	1.6	6.2	4.7
14	11	.59	.45	.18	.89	46	53	2.2	1.4	1.5	.99	1.1
15	2.1	.58	.48	.19	.88	20	13	1.3	.46	1.5	.76	.66
16	2.2	.90	.28	.20	.75	11	3.9	1.0	65	1.3	.57	.46
17	22	1.0	.33	.24	.63	8.1	2.7	102	10	1.2	.34	.30
18	8.6	.47	9.7	.64	.60	5.2	2.2	9.7	2.5	1.2	.18	.29
19	2.1	.70	11	.51	.60	4.5	2.1	2.8	20	1.1	.03	1.3
20	1.3	1.2	1.9	.12	.52	4.6	2.0	1.0	23	1.0	.13	35
21	1.6	.85	3.0	.15	.45	3.7	2.0	108	12	.97	.08	2.3
22	9.1	.88	.67	.22	.48	3.2	8.1	112	4.1	.88	.12	1.0
23	2.3	1.0	.48	22	.45	7.5	2.1	134	85	.87	.10	.66
24	.79	1.1	.40	7.2	.41	3.7	7.3	16	117	.81	.14	.45
25	.66	1.3	.36	2.7	.39	2.7	239	23	17	.60	.12	52
26	.65	1.6	.34	1.1	.42	2.8	258	16	8.3	.32	1.1	16
27	.74	1.9	.43	.80	.41	3.2	27	8.6	4.2	.53	3.4	4.2
28	4.0	2.2	.41	.61	.28	5.0	11	7.5	6.0	.82	1.3	2.7
29	1.5	21	.36	11	---	4.6	4.7	4.0	2.8	.75	.87	3.8
30	18	37	.37	125	---	2.7	4.2	3.6	100	1.0	1.0	.84
31	4.1	---	.39	17	---	2.7	---	27	---	.75	.84	---
TOTAL	743.64	306.64	103.61	199.67	127.94	382.04	691.6	711.0	530.72	96.10	26.35	297.98
MEAN	24.0	10.2	3.34	6.44	4.57	12.3	23.1	22.9	17.7	3.10	.85	9.93
MAX	559	149	47	125	51	116	258	134	117	23	6.2	65
MIN	.65	.47	.28	.12	.28	.14	1.6	1.0	.45	.32	.03	.29
AC-FT	1480	608	206	396	254	758	1370	1410	1050	191	52	591

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1999, BY WATER YEAR (WY)

MEAN	6.02	8.95	7.10	3.85	4.88	11.1	11.1	12.9	10.0	5.38	3.87	6.79
MAX	24.0	32.9	19.9	13.1	11.5	28.3	23.1	45.2	42.1	17.4	15.4	15.2
(WY)	1999	1995	1993	1998	1997	1990	1999	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

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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1988 - 1999	
ANNUAL TOTAL	3325.52		4217.29			
ANNUAL MEAN	9.11		11.6		7.67	
HIGHEST ANNUAL MEAN					15.7	1995
LOWEST ANNUAL MEAN					2.73	1991
HIGHEST DAILY MEAN	559	Oct 5	559	Oct 5	559	Oct 5 1998
LOWEST DAILY MEAN	.00	Jul 27	.03	Aug 19	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 16	.10	Aug 19	.00	Sep 5 1988
INSTANTANEOUS PEAK FLOW			2310	Oct 5	2310	Oct 5 1998
INSTANTANEOUS PEAK STAGE			17.27	Oct 5	17.27	Oct 5 1998
ANNUAL RUNOFF (AC-FT)	6600		8360		5560	
10 PERCENT EXCEEDS	17		21		15	
50 PERCENT EXCEEDS	1.4		1.9		.87	
90 PERCENT EXCEEDS	.02		.34		.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.--No estimated daily discharge. Records fair. Except for 858 mi^2 intervening area, flow regulated by Keystone Lake (station 07164200) 55.1 mi upstream. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

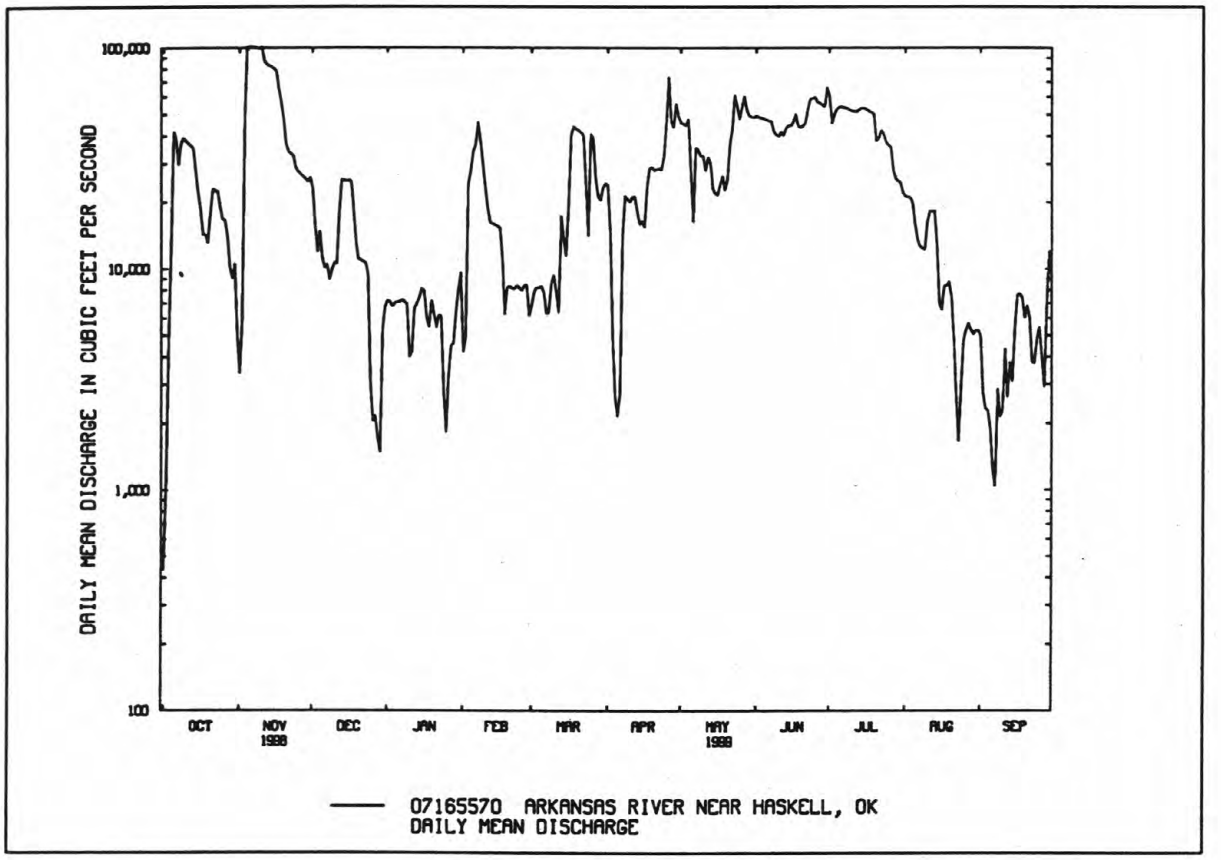
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	437	3380	23300	7210	4230	6800	24100	45800	49400	60300	21300	5000
2	1070	5830	15800	7140	4940	7900	14800	45500	48500	45700	21200	2730
3	4500	47800	12000	6770	24500	8280	5010	44600	48200	50300	21100	2330
4	12400	101000	14900	7030	28000	8280	2640	47800	47900	53000	19800	2290
5	42000	101000	11200	7130	34100	8390	2170	27400	47300	54300	15800	1890
6	38900	101000	10100	7110	36600	7850	2750	16400	46900	54500	13500	1210
7	29700	101000	10500	7310	46200	6300	14000	35600	46500	53600	12600	1040
8	37200	100000	8980	7080	38300	6400	21500	34700	41900	53600	12400	2860
9	39300	99000	9910	6960	29700	8630	20800	32600	40500	52600	12200	2150
10	38100	101000	10700	4010	23300	9430	20200	32600	39800	52000	16300	2280
11	37000	87500	10600	4240	18700	7890	21300	27900	42000	51800	18300	4350
12	36100	84100	18200	6690	16300	6420	21400	32200	40200	51400	18300	2620
13	35300	83000	25500	7000	16100	17500	18300	30600	43400	52600	18300	3780
14	27500	81900	25200	7480	15900	13700	16000	23200	44700	53500	12800	3090
15	21900	80700	25100	8210	15700	11500	16600	22000	44600	53400	6950	5300
16	18500	78700	25300	8000	15400	20200	15500	21700	46400	52900	6560	7650
17	14300	64900	24900	6040	11200	40600	23700	24300	50200	51800	8360	7700
18	14300	56700	18200	5480	6290	44200	28700	26400	44500	50900	8390	7440
19	13100	47500	13200	7230	8270	43000	29100	22800	43600	50600	8740	6020
20	17700	36800	11100	6360	8400	42600	28100	25400	44700	38000	7530	6800
21	23100	33900	11000	5450	8230	41500	28300	36700	45600	39100	4910	6100
22	22800	33400	10800	6240	8160	40500	28600	42700	52100	42500	2680	3780
23	22500	32600	10700	6180	8470	24300	28200	61100	58700	41000	1670	3750
24	19000	28800	9480	2790	8260	14200	32400	55100	59200	37500	2850	4880
25	16800	27600	3160	1840	8000	40900	46200	47800	59800	36300	4790	5430
26	16600	26900	2060	3300	8470	39300	73800	53700	56800	35800	5270	3980
27	14000	26400	2180	4540	8520	25900	46400	60400	56400	28100	5680	2920
28	10100	25600	1730	4630	6180	21400	43800	52500	55200	25500	5320	6910
29	9070	24900	1490	6400	---	20600	56000	49400	54200	25000	5070	12000
30	10500	26000	5340	8210	---	23400	49200	48800	66200	24600	5270	9150
31	4960	---	6760	9660	---	24500	---	48700	---	22100	5280	---
TOTAL	648737	1748910	389390	193720	466420	642370	779570	1176400	1465400	1394300	329220	137430
MEAN	20930	58300	12560	6249	16660	20720	25990	37950	48850	44980	10620	4581
MAX	42000	101000	25500	9660	46200	44200	73800	61100	66200	60300	21300	12000
MIN	437	3380	1490	1840	4230	6300	2170	16400	39800	22100	1670	1040
AC-FT	1287000	3469000	772400	384200	925100	1274000	1546000	2333000	2907000	2766000	653000	272600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1999, BY WATER YEAR (WY)

MEAN	9698	9852	6312	6789	7795	14340	15660	18270	18640	11240	6975	5920
MAX	75500	58300	19930	23470	25540	50990	46910	85550	78480	44980	32540	23690
(WY)	1987	1999	1993	1998	1993	1987	1973	1993	1995	1999	1995	1989
MIN	576	646	802	567	549	722	638	2472	5074	1671	1171	870
(WY)	1979	1981	1981	1981	1977	1977	1977	1981	1988	1991	1984	1998

07165570 ARKANSAS RIVER NEAR HASKELL, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1973 - 1999	
ANNUAL TOTAL	6713393		9371867			
ANNUAL MEAN	18390		25680		10960	
HIGHEST ANNUAL MEAN					25680	1999
LOWEST ANNUAL MEAN					2097	1981
HIGHEST DAILY MEAN	101000	Nov 4	101000	Nov 4	243000	Oct 5 1986
LOWEST DAILY MEAN	306	Sep 29	437	Oct 1	87	Sep 13 1988
ANNUAL SEVEN-DAY MINIMUM	494	Sep 25	1960	Sep 4	369	Feb 25 1977
INSTANTANEOUS PEAK FLOW			107000	Nov 4	259000	Oct 5 1986
INSTANTANEOUS PEAK STAGE			16.39	Nov 4	22.82	Oct 5 1986
ANNUAL RUNOFF (AC-FT)	13320000		18590000		7943000	
10 PERCENT EXCEEDS	38400		53200		27400	
50 PERCENT EXCEEDS	13500		20600		5950	
90 PERCENT EXCEEDS	1280		4310		865	



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(revised) 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 City Lake in Kansas. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7650	1240	10400	1850	4940	1060	1030	4910	18300	15100	145	32
2	10200	17300	10800	1930	4030	989	1010	4710	18100	27300	117	32
3	18500	20400	9850	1420	4520	966	996	4420	11100	14400	113	34
4	14500	20600	9930	1130	5260	1110	966	17700	10100	10300	269	36
5	25200	19900	9230	1210	5640	1100	995	22400	7140	10100	400	39
6	38200	20300	8970	1190	4960	954	1150	20000	6110	9770	514	40
7	25200	18800	15500	891	9650	622	1740	13000	7990	7640	603	39
8	8170	18100	13500	e725	9160	2280	1620	7710	6550	5320	601	46
9	10000	14800	10400	e690	6960	10500	1510	7750	6070	3150	582	44
10	12000	19600	8570	e662	5880	6230	1360	7200	5140	2260	577	49
11	12800	21500	8130	e635	5720	3700	1110	6740	2910	3950	564	79
12	12800	20500	7260	623	6250	4100	1040	16800	1720	2710	554	113
13	12600	19100	6860	657	6420	6430	1020	18300	2900	3610	526	130
14	12300	16100	6660	862	4070	7660	5730	8710	3810	4210	433	161
15	12100	13900	6430	929	2790	11600	19300	6980	2700	4410	370	163
16	11200	12700	5410	922	3400	13900	18600	6220	5340	4490	297	131
17	11300	11900	3560	910	5170	8980	14400	8530	6560	4410	273	106
18	17700	11600	2360	880	4060	5850	11700	13700	5030	4260	222	89
19	12100	11500	2240	865	3400	4870	11700	11000	11300	4060	166	91
20	9510	11800	2160	1410	3380	6280	11400	6840	27100	3040	137	122
21	7220	11500	1870	1710	2880	5680	11100	11100	29100	1780	113	120
22	6350	11000	1390	1840	2400	3810	9600	9530	7320	852	101	146
23	6100	10400	1140	2140	2250	4180	10400	11000	5250	783	96	157
24	5880	9970	1020	2110	2390	5070	8410	9680	9190	767	93	150
25	4160	9510	980	1870	2150	5350	20500	8040	22400	711	78	128
26	3050	8990	1310	1730	1560	5280	31000	9440	18500	536	66	141
27	2960	8920	1370	1080	1380	3020	24500	9820	10200	378	56	188
28	2880	8860	1360	668	1310	1780	15000	9850	9500	300	46	235
29	2410	8750	1580	1500	---	1190	6680	10700	10100	271	40	795
30	1390	9480	1710	2450	---	1100	4370	10200	9750	248	35	4540
31	807	---	1880	6100	---	1060	---	12600	---	195	33	---
TOTAL	337237	419020	173830	43589	121980	136701	249937	325580	297280	151311	8220	8176
MEAN	10880	13970	5607	1406	4356	4410	8331	10500	9909	4881	265	273
MAX	38200	21500	15500	6100	9650	13900	31000	22400	29100	27300	603	4540
MIN	807	1240	980	623	1310	622	966	4420	1720	195	33	32
AC-FT	668900	831100	344800	86460	241900	271100	495800	645800	589700	300100	16300	16220

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1999, BY WATER YEAR (WY)

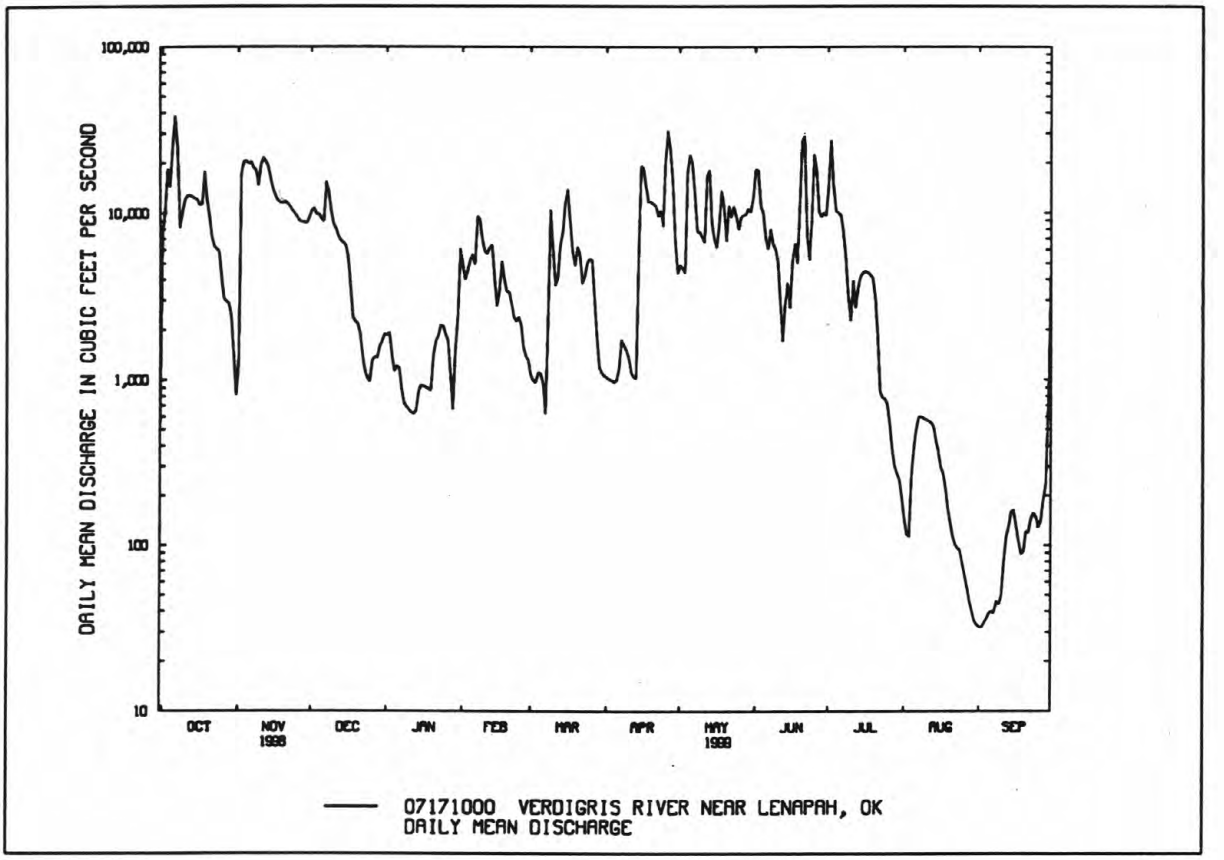
MEAN	2434	3176	2114	1741	2264	4295	4305	4364	5081	2298	861	1079
MAX	27970	15440	11000	7998	8983	17130	16300	12540	19160	13920	5364	5614
(WY)	1987	1975	1993	1973	1985	1973	1988	1994	1995	1976	1985	1989
MIN	15.5	20.0	29.2	17.6	20.0	19.7	30.2	366	84.3	17.9	16.1	9.99
(WY)	1981	1981	1967	1981	1981	1981	1981	1992	1972	1980	1983	1980

e Estimated

07171000 VERDIGRIS RIVER NEAR LENAPAH, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1967 - 1999	
ANNUAL TOTAL	1588704		2272861			
ANNUAL MEAN	4353		6227		[a]2832	
HIGHEST ANNUAL MEAN					6227	1999
LOWEST ANNUAL MEAN					301	1996
HIGHEST DAILY MEAN	38200	Oct 6	38200	Oct 6	76200	Oct 5 1986
LOWEST DAILY MEAN	18	Sep 12	32	Sep 1,2	[b]5.5	Sep 30 1980
ANNUAL SEVEN-DAY MINIMUM	25	Sep 6	34	Aug 30	5.7	Sep 26 1980
INSTANTANEOUS PEAK FLOW			39600	Oct 6	[c]81500	Oct 5 1986
INSTANTANEOUS PEAK STAGE			32.52	Oct 6	[d]38.60	Jul 4 1976
ANNUAL RUNOFF (AC-FT)	3151000		4508000		2052000	
10 PERCENT EXCEEDS	12400		15000		8900	
50 PERCENT EXCEEDS	1340		4260		660	
90 PERCENT EXCEEDS	73		146		39	

[a]Prior to regulation, water years 1939-59, 2,084 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 September 199 (discontinued).

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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e28	2730	1020	461	672	411	660	4860	1880	5730	35	34
2	122	3460	930	443	2980	603	567	4790	2850	5370	41	34
3	429	2930	975	360	3880	630	569	4720	4830	5700	86	37
4	2850	2880	1870	416	3860	621	575	e6550	5520	5740	98	34
5	3980	5450	1970	795	3820	519	577	3270	5440	5680	64	32
6	952	6260	2480	784	3780	239	501	882	5610	5620	40	34
7	2270	6360	2890	439	4340	194	562	575	5700	5540	327	33
8	5350	6430	3810	409	4070	671	562	273	6060	5470	406	35
9	6040	6250	4910	395	3980	1230	412	125	6560	5530	412	33
10	6090	6480	4550	409	3940	1590	375	98	6580	5460	400	61
11	6050	6320	3640	392	3900	1690	376	87	6540	5280	398	77
12	6050	6070	2160	108	3720	2300	379	543	6470	5200	391	50
13	6010	5760	2000	26	2490	3810	381	3040	6420	5370	120	39
14	5990	5270	1900	23	2320	3400	678	3910	6420	5510	37	31
15	5880	5240	1040	22	2290	3720	1360	3920	6570	5840	36	30
16	5740	5200	405	23	2420	5680	4680	3890	6700	5580	36	30
17	5820	5130	319	24	2480	6500	5960	4060	6690	5480	37	30
18	4220	4970	336	24	3620	6490	6040	951	6630	5420	35	31
19	4300	3190	569	24	3790	6270	5950	2950	7730	5360	43	34
20	4700	971	526	324	2710	5250	5720	4800	7760	5380	42	51
21	4720	708	444	905	2530	e5100	4730	5220	2150	5380	44	38
22	4770	720	394	919	2420	5130	4270	3200	951	5350	45	32
23	5610	760	397	285	1730	5070	3720	6270	5040	5180	41	32
24	6010	716	948	192	1580	5010	1940	5530	5470	4320	41	32
25	6040	774	999	193	739	5050	e3650	5490	2360	3420	51	40
26	6030	768	995	90	559	4810	e4110	5430	3020	3160	39	33
27	6020	777	996	27	408	2830	2660	5370	4850	1600	48	44
28	5940	802	991	22	407	2460	1400	5240	5580	658	54	68
29	5430	819	1030	39	---	2440	3540	4780	5580	92	34	44
30	2770	1160	1130	757	---	2260	4920	4710	5480	33	33	35
31	2540	---	1020	1890	---	1510	---	5230	---	33	33	---
TOTAL	138751	105355	47644	11220	75435	93488	71824	110764	159441	139486	3547	1168
MEAN	4476	3512	1537	362	2694	3016	2394	3573	5315	4500	114	38.9
MAX	6090	6480	4910	1890	4340	6500	6040	6550	7760	5840	412	77
MIN	28	708	319	22	407	194	375	87	951	33	33	30
AC-FT	275200	209000	94500	22250	149600	185400	142500	219700	316300	276700	7040	2320

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1999, BY WATER YEAR (WY)

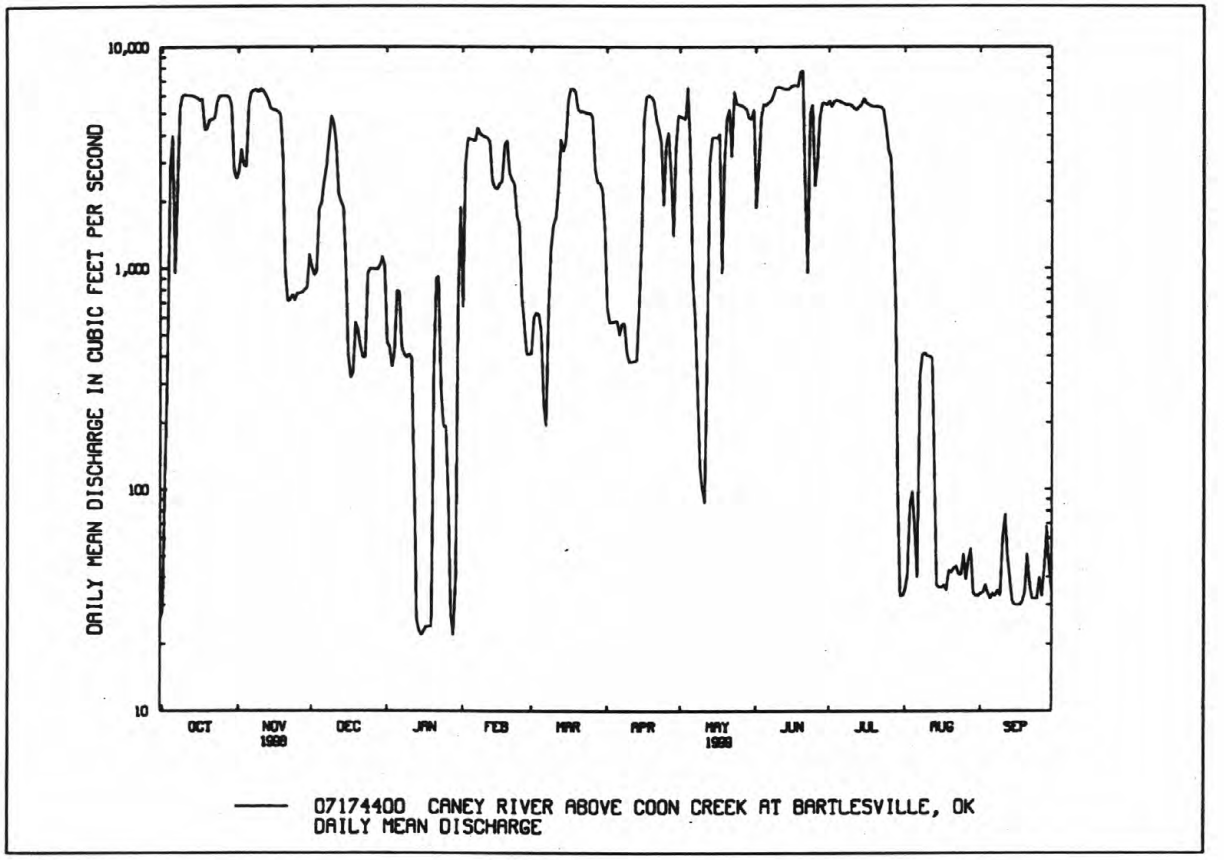
MEAN	1658	1198	989	937	839	1853	1842	2024	2422	1415	222	357
MAX	14800	3512	2663	4075	2721	4606	5185	5054	5315	6486	1448	2635
(WY)	1987	1999	1987	1993	1987	1990	1988	1993	1999	1995	1995	1989
MIN	13.2	30.7	27.7	27.4	24.7	23.2	46.2	31.1	46.5	29.4	22.5	12.8
(WY)	1988	1996	1991	1991	1996	1996	1996	1996	1996	1988	1988	1987

e Estimated

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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1986 - 1999	
ANNUAL TOTAL	670628		958123			
ANNUAL MEAN	1837		2625		1315	
HIGHEST ANNUAL MEAN					2888	1987
LOWEST ANNUAL MEAN					43.7	1996
HIGHEST DAILY MEAN	7630	Mar 23	7760	Jun 20	64900	Oct 5 1986
LOWEST DAILY MEAN	24	Sep 17	22	Jan 15,28	5.7	Feb 1 1997
ANNUAL SEVEN-DAY MINIMUM	28	Sep 25	24	Jan 13	6.1	Jan 31 1997
INSTANTANEOUS PEAK FLOW			9420	Jun 19	94500	Oct 4 1986
INSTANTANEOUS PEAK STAGE			[a]13.55	Apr 25	27.70	Oct 4 1986
ANNUAL RUNOFF (AC-FT)	1330000		1900000		952900	
10 PERCENT EXCEEDS	6040		5970		4620	
50 PERCENT EXCEEDS	444		2150		189	
90 PERCENT EXCEEDS	33		36		25	

[a]Backwater from Coon and Sand Creeks.



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 September 1999 (discontinued). 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 fair. 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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	2500	1580	808	5960	405	1140	3990	8460	8340	110	59
2	78	6440	1040	613	2390	416	635	3710	3080	10700	113	61
3	1700	4680	828	637	3620	522	611	3530	3050	8520	114	59
4	1340	2730	989	537	3800	524	584	8750	4540	6680	175	66
5	7440	3230	1550	674	3630	507	627	13900	5010	6090	228	64
6	6850	5240	1620	800	3560	425	597	10200	4800	5810	181	56
7	1760	5920	4380	618	5680	266	537	2800	5430	5600	149	56
8	3100	6740	3260	436	6440	879	539	1290	5580	5420	285	59
9	5400	6820	3880	442	4590	3380	493	745	6000	5300	333	54
10	5980	7230	4520	532	4020	1970	387	474	6600	5370	345	51
11	5970	7800	4190	462	3810	e1620	358	360	6800	5470	336	131
12	5890	6540	2820	376	3720	2150	347	1320	6620	5120	353	180
13	5810	6010	1790	205	3030	8570	342	1720	6450	4870	305	206
14	5740	5560	1690	142	2090	8160	387	2850	6340	5090	186	141
15	5680	5080	1380	130	2000	7000	1180	3250	6290	5390	106	89
16	5620	4950	761	126	1980	8810	2410	3220	7560	5680	e88	76
17	5950	4850	406	125	2460	8750	4900	4750	9160	5340	e82	70
18	8610	4760	398	124	2650	7850	5830	3880	7870	5170	e69	62
19	5400	4090	696	122	3470	7170	5860	1360	7950	5030	61	61
20	4310	2060	1420	119	3110	7100	5730	3040	12600	4940	60	71
21	4260	734	873	393	2250	7780	5170	5900	13200	4900	64	90
22	4130	637	635	735	2120	6160	4920	6070	7700	4910	64	74
23	4350	622	515	653	1860	5350	4730	6440	5520	4830	63	62
24	5240	609	544	336	1440	5120	3060	11100	10000	4400	65	57
25	5460	612	885	274	1190	4980	7200	7800	11000	3370	64	59
26	5410	606	886	245	680	4950	19400	5600	5720	2650	63	105
27	5290	571	877	186	522	3980	21000	5020	3920	2160	80	115
28	5200	570	887	131	411	2290	11400	4790	5050	952	79	141
29	5060	574	879	955	---	2110	4420	4390	5800	423	82	126
30	3780	824	935	3070	---	2060	3590	3950	7560	187	71	103
31	1940	---	963	9150	---	1720	---	6480	---	122	61	---
TOTAL	142816	109589	48077	24156	82483	122974	118384	142679	205660	148834	4435	2604
MEAN	4607	3653	1551	779	2946	3967	3946	4603	6855	4801	143	86.8
MAX	8610	7800	4520	9150	6440	8810	21000	13900	13200	10700	353	206
MIN	68	570	398	119	411	266	342	360	3050	122	60	51
AC-FT	283300	217400	95360	47910	163600	243900	234800	283000	407900	295200	8800	5170

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1999, BY WATER YEAR (WY)

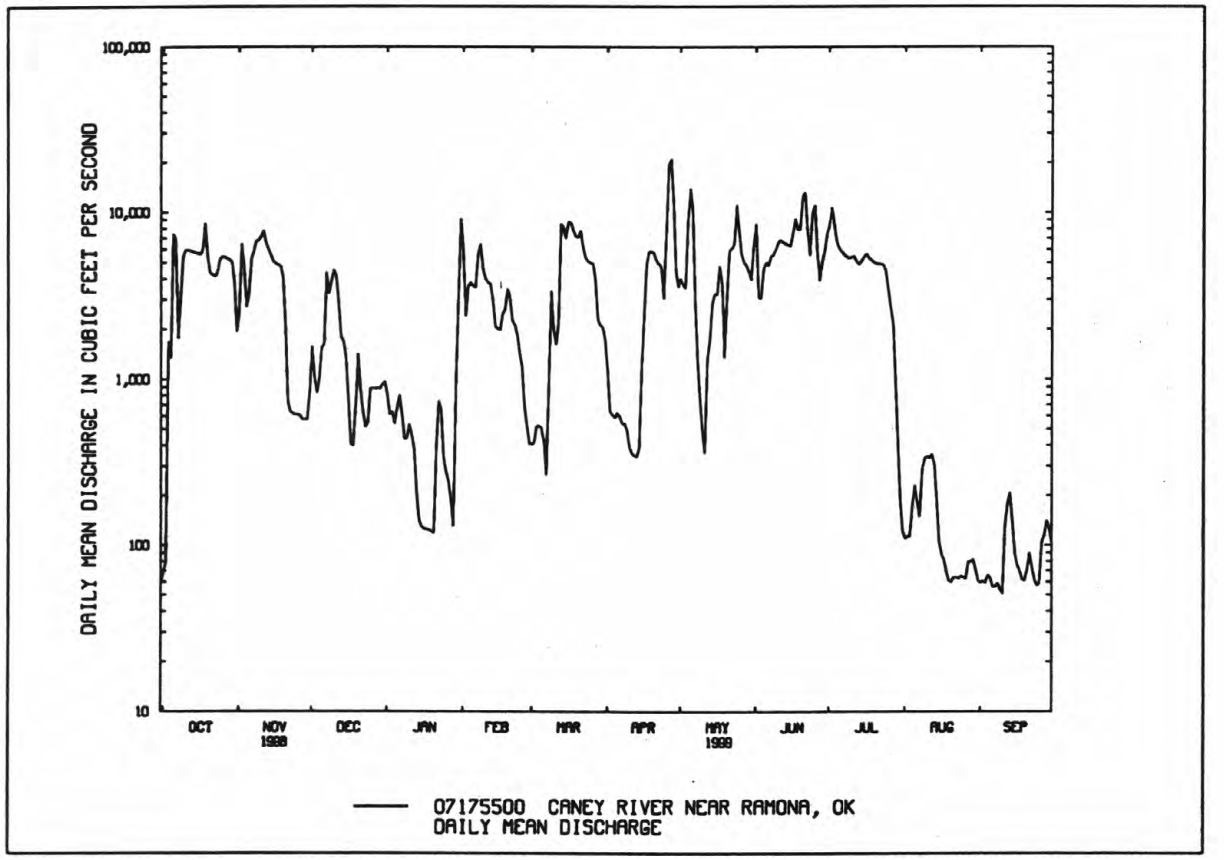
MEAN	1990	1626	1399	1204	1312	2982	3060	2885	3149	1602	314	584
MAX	19540	4390	3596	5204	4208	7228	6989	8547	9766	8233	2021	3178
(WY)	1987	1987	1993	1993	1987	1990	1988	1993	1995	1995	1995	1989
MIN	35.4	50.1	65.5	48.2	43.9	41.4	114	62.7	70.1	30.2	34.9	48.7
(WY)	1993	1996	1996	1996	1996	1996	1996	1996	1988	1984	1984	1984

e Estimated

07175500 CANEY RIVER NEAR RAMONA, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1984 - 1999	
ANNUAL TOTAL	816911		1152691			
ANNUAL MEAN	2238		3158		[a]1843	
HIGHEST ANNUAL MEAN					3887	1987
LOWEST ANNUAL MEAN					107	1996
HIGHEST DAILY MEAN	13000	Mar 18	21000	Apr 27	71700	Oct 5 1986
LOWEST DAILY MEAN	36	Sep 8	51	Sep 10	[b]13	Sep 16 1984
ANNUAL SEVEN-DAY MINIMUM	39	Sep 5	58	Sep 4	16	Jul 31 1984
INSTANTANEOUS PEAK FLOW			27500	Apr 26	85600	Oct 5 1986
INSTANTANEOUS PEAK STAGE			28.58	Apr 26	31.16	Oct 5 1986
ANNUAL RUNOFF (AC-FT)	1620000		2286000		1335000	
10 PERCENT EXCEEDS	6810		7040		5700	
50 PERCENT EXCEEDS	690		2160		390	
90 PERCENT EXCEEDS	49		86		45	

[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 1/4 NW 1/4 sec.15, T.21 N., R.15 E., Rogers County, Hydrologic Unit 11070105, on left bank on downstream side of bridge on State Highway 20, 2.3 mi downstream from Caney River, 4.5 mi west of Claremore, 12.4 mi upstream from Bird Creek, and at mile 76.0.

DRAINAGE AREA.--6,534 mi^2.

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 538.62 ft above sea level. Prior to Feb. 24, 1939, and May 17 to Aug. 24, 1967, non-recording gage at same site and datum.

REMARKS.--No estimated daily discharge. Records good. 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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	17100	11600	1170	11400	5960	8110	11200	14200	21400	190	78
2	83	20900	11600	930	7010	5040	8510	11100	17500	22500	135	77
3	220	21800	11200	885	8680	3660	13300	10700	22600	21600	107	80
4	1810	18500	10400	735	9420	3110	13300	18200	27100	19500	101	80
5	9080	15800	9640	1620	9380	2020	13200	21000	29300	18400	139	81
6	9890	9430	9860	3470	9260	1370	10900	16800	29100	18000	203	82
7	8010	10900	12800	3560	12000	1070	6220	10200	28900	17800	176	80
8	12300	11700	19300	3320	13200	1140	2790	7490	29300	17600	125	79
9	14800	13600	18400	3110	11300	3360	2230	15200	28900	17400	211	72
10	16300	18100	19300	3160	9930	5670	1950	15600	27700	17300	302	78
11	16500	19000	17400	3220	9620	7340	1740	11900	22300	17400	328	93
12	16500	20300	13800	2160	9450	8310	1590	10500	19900	17300	305	226
13	18500	22500	12300	601	9180	16100	1470	11200	19700	17000	295	285
14	21000	23300	11800	436	8080	16900	1420	21100	19500	17000	290	278
15	20900	22700	9900	330	7640	15200	4100	24300	17300	17100	180	193
16	20800	22300	7170	303	7550	17400	12200	23900	12700	17400	103	115
17	20800	22200	6700	293	7700	20600	14600	23900	14600	17300	81	85
18	23500	20600	5250	282	8060	20100	16600	19000	14600	17100	69	77
19	22900	15900	3660	280	8670	16600	16300	15900	13900	16900	72	79
20	19700	14400	4280	280	9060	11600	13700	20400	19900	16800	5130	87
21	19200	12500	4220	1200	8150	12200	13400	21400	-23000	16700	15500	85
22	19100	11900	3800	3330	7750	11300	12500	21600	27900	16600	15500	108
23	18900	11900	4590	3590	7630	9530	12900	29300	25100	16600	14300	102
24	19600	11900	9840	3520	7140	10400	11600	30500	25300	16400	5890	82
25	20300	13500	15600	3180	6880	12100	16200	30100	23200	15400	153	83
26	16600	15600	15700	3060	6470	12000	22000	27600	21300	10200	94	131
27	9710	15500	15600	3160	6130	11700	23200	26000	16600	3380	94	353
28	9570	15500	15500	3040	6030	9730	22700	25600	16600	1990	90	832
29	9460	15500	13100	2470	---	8910	15600	25300	18900	948	85	297
30	13600	14600	4670	5500	---	8820	8020	24700	21000	594	86	208
31	17600	---	1550	12400	---	8680	---	21200	---	316	87	---
TOTAL	447301	499430	330530	74595	242770	297920	322350	602890	647900	461928	60421	4586
MEAN	14430	16650	10660	2406	8670	9610	10740	19450	21600	14900	1949	153
MAX	23500	23300	19300	12400	13200	20600	23200	30500	29300	22500	15500	832
MIN	68	9430	1550	280	6030	1070	1420	7490	12700	316	69	72
AC-FT	887200	990600	655600	148000	481500	590900	639400	1196000	1285000	916200	119800	9100

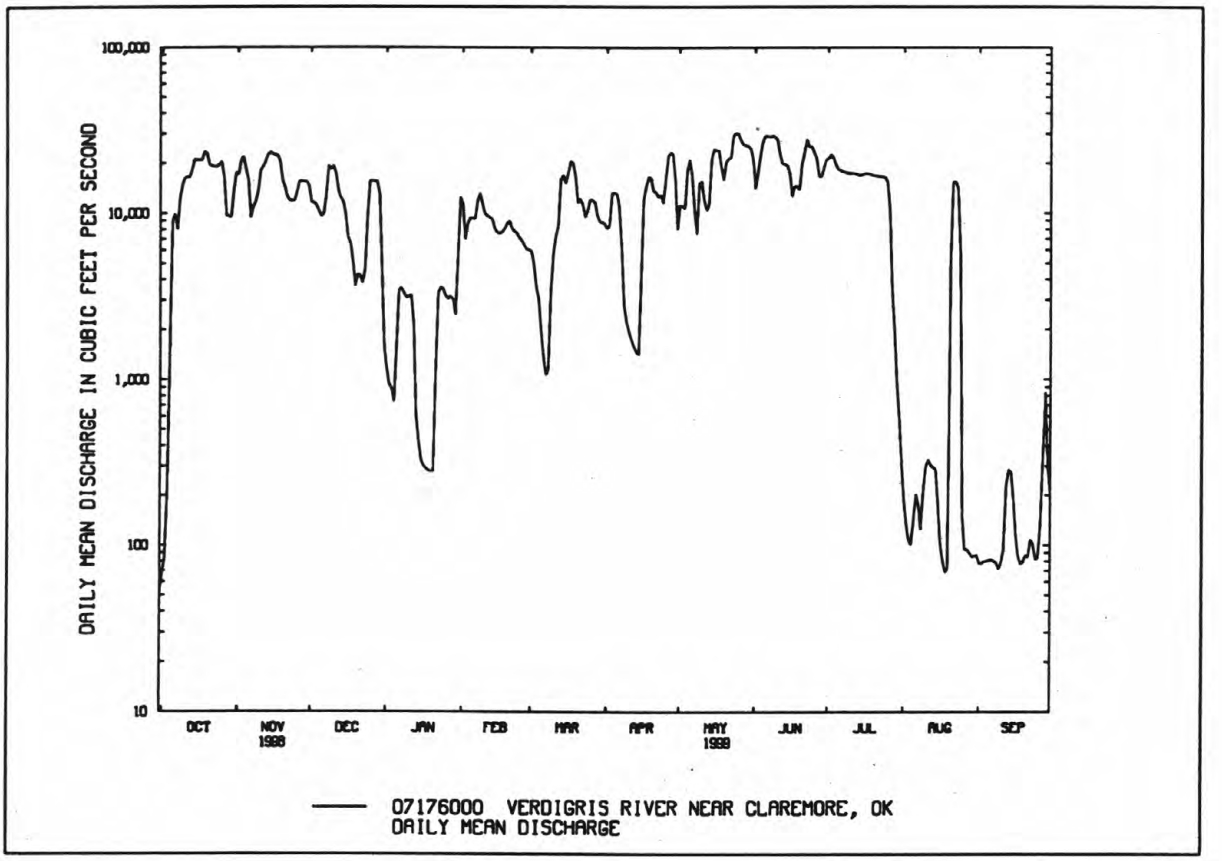
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1999, BY WATER YEAR (WY)

MEAN	3505	4766	3904	3463	3369	6692	8017	7312	7987	4523	1270	1331
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

07176000 VERDIGRIS RIVER NEAR CLAREMORE, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1965 - 1999	
ANNUAL TOTAL	2722135		3992621			
ANNUAL MEAN	7458		10940		[a]4679	
HIGHEST ANNUAL MEAN					10940	1999
LOWEST ANNUAL MEAN					234	1996
HIGHEST DAILY MEAN	23500	Oct 18	30500	May 24	77700	Oct 13 1986
LOWEST DAILY MEAN	29	Sep 9	68	Oct 1	[b]3.4	Aug 9 1997
ANNUAL SEVEN-DAY MINIMUM	34	Sep 6	79	Sep 4	8.6	Jul 12 1966
INSTANTANEOUS PEAK FLOW			30900	May 24	[c]78400	Oct 12 1986
INSTANTANEOUS PEAK STAGE			24.10	May 24	[d]44.99	Oct 12 1986
ANNUAL RUNOFF (AC-FT)	5399000		7919000		3390000	
10 PERCENT EXCEEDS	19600		21900		14300	
50 PERCENT EXCEEDS	2210		11200		1110	
90 PERCENT EXCEEDS	64		129		65	

[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 September 1999 (discontinued), 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 (capacity 17,000 acre-ft). Flow regulated since March 1977 by Birch Lake (capacity 19,200 acre-ft), 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	1850	424	72	1060	39	69	798	1440	3890	17	20
2	1520	2800	190	147	724	40	71	729	781	2240	21	19
3	1010	690	141	131	877	55	77	827	426	974	23	19
4	772	588	310	81	760	54	124	9360	360	705	29	19
5	7450	458	289	63	683	56	118	2480	314	589	38	19
6	893	375	870	57	694	57	109	1020	280	484	43	20
7	621	419	1520	61	2330	56	90	907	726	316	39	19
8	514	1170	621	68	1270	743	79	677	870	293	34	60
9	468	588	445	119	853	960	74	580	214	276	30	53
10	443	2150	361	126	509	527	68	538	544	326	27	31
11	424	874	299	122	275	361	63	533	321	520	25	47
12	412	529	209	119	260	1880	58	541	141	325	24	3010
13	402	386	189	69	160	3770	59	598	228	276	25	712
14	325	242	175	62	111	2240	149	738	126	255	22	192
15	66	210	155	58	93	2500	418	718	215	240	22	95
16	48	186	85	57	99	2750	205	705	2150	216	21	60
17	1410	165	75	58	322	1490	104	857	839	135	21	40
18	1370	146	75	59	162	1130	71	393	311	126	21	30
19	262	92	466	59	119	781	59	683	2410	122	20	28
20	148	79	424	57	102	1020	51	682	2140	111	18	37
21	230	81	221	57	81	945	45	621	911	44	21	42
22	218	77	153	61	66	452	1150	1670	554	26	22	57
23	206	71	111	60	55	432	330	6450	3090	24	24	45
24	200	64	e80	57	47	354	127	1490	2770	22	24	38
25	195	62	e68	56	46	295	14900	1250	2750	21	22	43
26	191	58	70	52	43	115	6590	1030	1150	19	22	63
27	189	56	72	52	43	86	3260	909	667	17	23	94
28	178	55	74	52	41	80	1240	839	545	16	21	149
29	60	58	79	1040	---	80	1100	793	483	15	19	121
30	58	470	75	4460	---	75	900	758	2220	14	19	75
31	61	---	70	6250	---	68	---	2430	---	14	20	---
TOTAL	20381	15049	8396	13842	11885	23491	31758	42604	29976	12651	757	5257
MEAN	657	502	271	447	424	758	1059	1374	999	408	24.4	175
MAX	7450	2800	1520	6250	2330	3770	14900	9360	3090	3890	43	3010
MIN	37	55	68	52	41	39	45	393	126	14	17	19
AC-FT	40430	29850	16650	27460	23570	46590	62990	84510	59460	25090	1500	10430

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1999, BY WATER YEAR (WY)

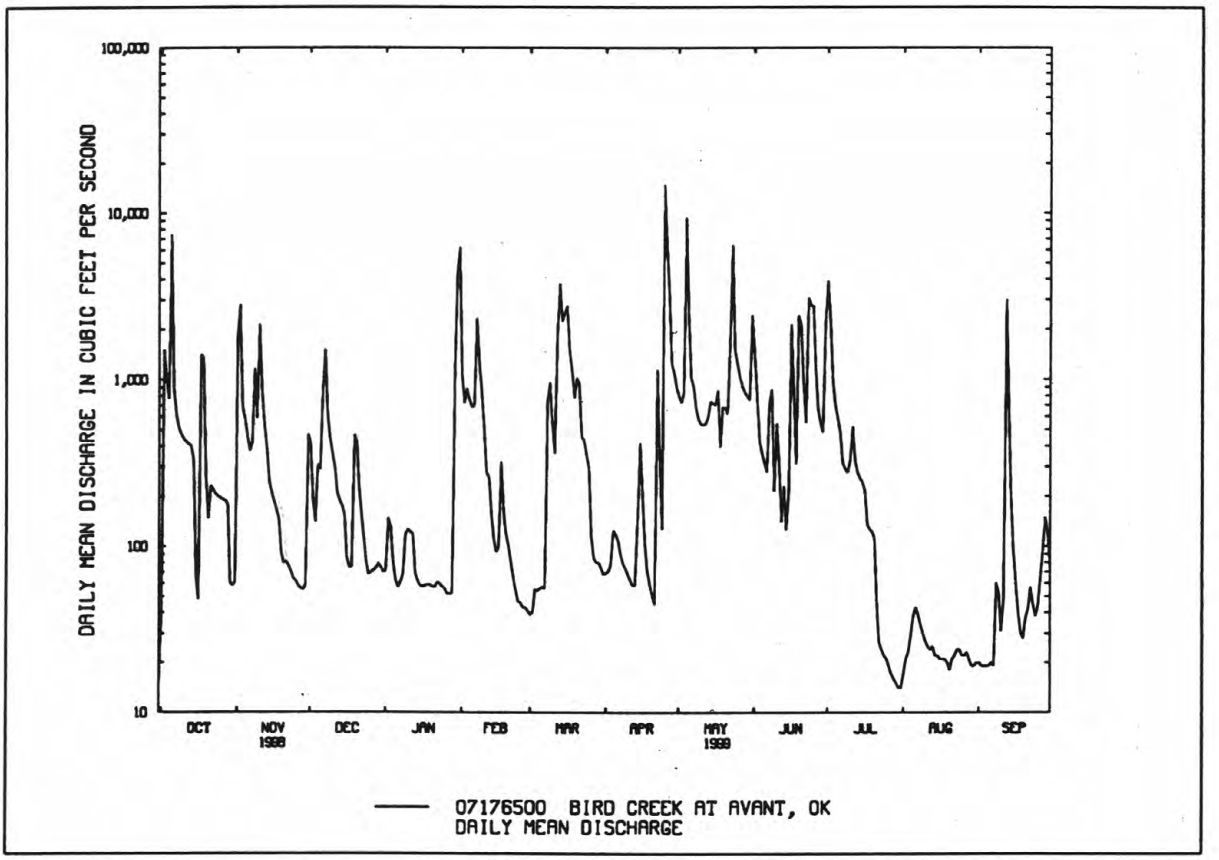
MEAN	188	288	205	169	334	548	570	630	589	182	71.3	167
MAX	1940	1319	753	749	1376	2264	1214	2177	2642	1174	400	1059
(WY)	1987	1986	1993	1993	1985	1990	1988	1993	1995	1995	1989	1986
MIN	3.94	4.19	5.63	3.61	4.87	12.5	6.95	12.4	22.0	10.3	6.07	5.20
(WY)	1980	1981	1979	1981	1981	1996	1981	1996	1988	1984	1985	1982

e Estimated

07176500 BIRD CREEK AT AVANT, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1978 - 1999	
ANNUAL TOTAL	156127		216047			
ANNUAL MEAN	428		592		[a]328	
HIGHEST ANNUAL MEAN					673	1995
LOWEST ANNUAL MEAN					43.9	1981
HIGHEST DAILY MEAN	14100	Apr 27	14900	Apr 25	25900	May 9 1993
LOWEST DAILY MEAN	14	Sep 10,11,20,21,29	14	Jul 30,31	[b].05	Aug 8 1984
ANNUAL SEVEN-DAY MINIMUM	15	Sep 6	16	Jul 26	.29	Aug 3 1984
INSTANTANEOUS PEAK FLOW			25800	Apr 25	[c]27900	Jun 10 1985
INSTANTANEOUS PEAK STAGE			26.03	Apr 25	[d]30.70	Jun 10 1985
ANNUAL RUNOFF (AC-FT)	309700		428500		237300	
10 PERCENT EXCEEDS	929		1390		736	
50 PERCENT EXCEEDS	79		155		47	
90 PERCENT EXCEEDS	19		24		6.8	

[a]Prior to regulation, water years 1946-76, 200 ft^3/s.
[b]No flow at times most years 1946-76.
[c]Maximum discharge for period of record, 32,400 ft^3/s, gage height 31.40 ft, Oct. 2, 1959.
[d]Maximum gage height for period of record, 32.03 ft, Mar. 11, 1974.



07177500 BIRD CREEK NEAR SPERRY, OK

LOCATION.--Lat 36°16'42", long 95°57'14", in NW 1/4 NW 1/4 sec.29, T.21 N., R.13 E., Tulsa County, Hydrologic Unit 11070107, near downstream side of right abutment of county road bridge, 1.5 mi upstream from Delaware Creek, 2.4 mi downstream from Hominy Creek, 2.5 mi southeast of Sperry, and at mile 25.0.

DRAINAGE AREA.--905 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1921: 1943.

GAGE.--Water-stage recorder. Datum of gage is 579.43 ft above sea level.

REMARKS.--Records good. Flow slightly regulated since 1958 by Bluestem Lake (capacity 17,000 acre-ft) and Birch Lake (capacity 19,200 acre-ft). Flow regulated since August 20, 1989 by Skiatook Lake (capacity 322,300 acre-ft) when conservation pool was first reached. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

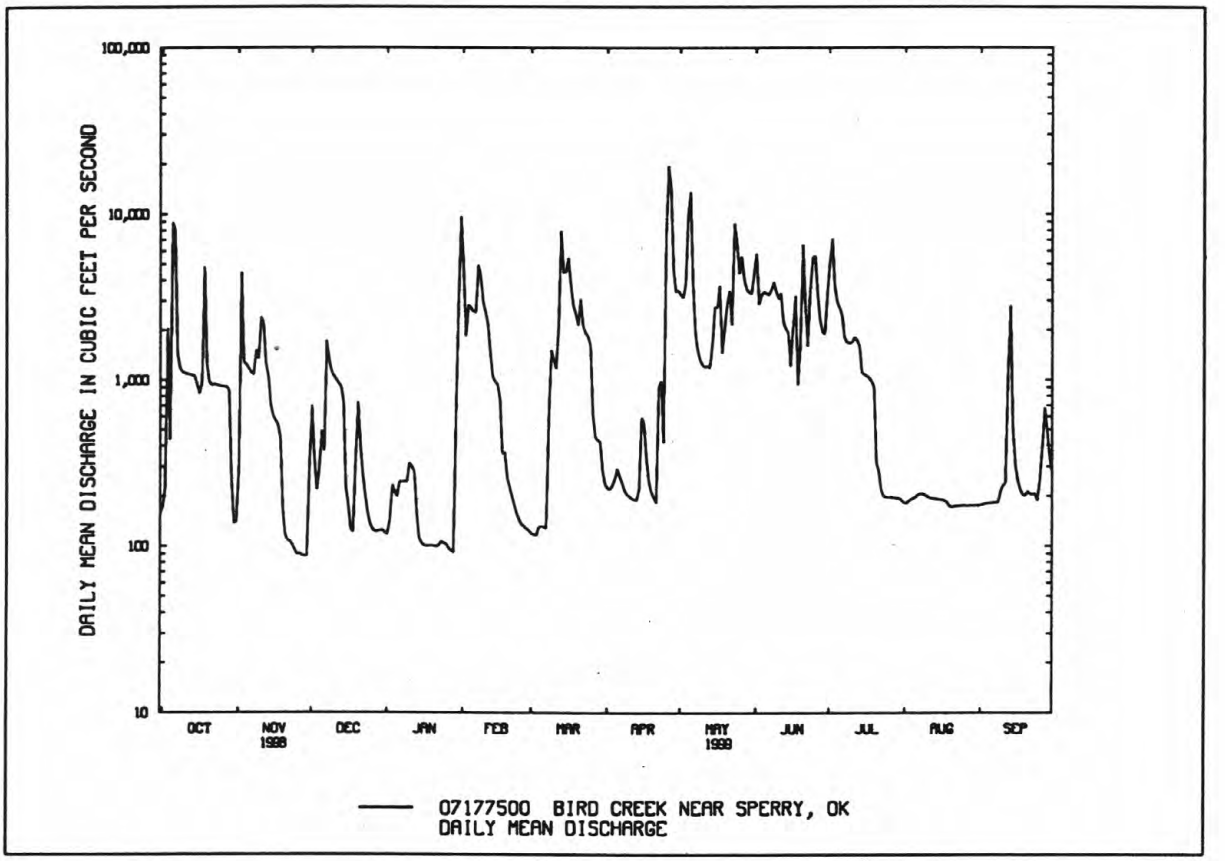
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	171	287	696	118	4840	119	223	3270	5780	5250	181	178
2	220	4460	342	143	1850	117	219	3150	2860	7100	184	178
3	2050	1280	218	232	2820	116	233	3780	3260	3630	190	181
4	438	1240	286	212	2730	131	253	10000	3390	2960	194	181
5	8930	1170	491	e200	2590	131	291	13700	3340	2720	196	182
6	8090	1110	374	245	2560	131	263	3890	3270	2450	204	182
7	1440	1080	1710	243	4910	128	240	1920	3500	1790	207	183
8	1180	1510	1320	245	4320	583	216	1510	3880	1690	207	184
9	1120	1340	1130	245	2990	1520	205	1310	3420	1660	203	213
10	1100	2380	1060	315	2590	1330	199	1230	3100	1680	199	232
11	1090	2230	1010	300	2190	1180	194	1200	3320	1810	195	239
12	1080	1250	953	282	1470	2150	191	1220	2250	1740	194	1130
13	1070	1060	911	161	1050	7910	190	1190	2040	1610	194	2760
14	1060	699	753	112	976	4470	220	1650	1930	1110	192	526
15	932	607	227	105	943	4510	591	2750	1210	1080	191	309
16	825	567	178	101	771	5440	551	2740	2100	e1060	190	247
17	958	534	127	100	359	3680	334	3680	3200	e1030	189	219
18	4780	445	122	101	364	2820	244	1460	930	e980	e185	204
19	1250	170	344	101	260	2490	212	2020	1640	900	175	201
20	967	117	729	101	226	2150	197	2870	6530	317	171	213
21	924	108	398	99	200	3060	183	3460	2870	281	173	205
22	947	107	265	101	176	2110	908	2170	1610	218	175	205
23	930	102	199	107	156	1920	987	8830	3480	199	175	207
24	921	95	156	105	144	1840	419	6840	5510	197	175	188
25	915	89	136	103	135	1640	7540	4410	5590	196	176	247
26	912	90	126	98	132	627	19500	5550	3300	197	175	389
27	909	88	122	94	127	452	14600	4060	2300	196	175	675
28	869	87	123	92	124	434	4640	3500	1940	195	177	491
29	259	87	124	675	---	424	3410	3380	1900	194	175	342
30	138	322	125	3090	---	284	3470	3320	3330	193	177	273
31	140	---	120	9660	---	236	---	4450	---	184	175	---
TOTAL	46615	24711	14875	17886	42003	54133	60923	114510	92780	44817	5769	11164
MEAN	1504	824	480	577	1500	1746	2031	3694	3093	1446	186	372
MAX	8930	4460	1710	9660	4910	7910	19500	13700	6530	7100	207	2760
MIN	138	87	120	92	124	116	183	1190	930	184	171	178
AC-FT	92460	49010	29500	35480	83310	107400	120800	227100	184000	88890	11440	22140
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1999, BY WATER YEAR (WY)												
MEAN	308	554	465	559	645	1380	1578	1776	1562	812	327	286
MAX	1504	1649	1168	2208	1500	4949	2891	4824	4890	3421	1148	689
(WY)	1999	1995	1993	1998	1999	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 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1990 - 1999	
ANNUAL TOTAL	387006		530186			
ANNUAL MEAN	1060		1453		[a]854	
HIGHEST ANNUAL MEAN					1669	1995
LOWEST ANNUAL MEAN					168	1996
HIGHEST DAILY MEAN	17300	Apr 28	19500	Apr 26	27500	May 10 1993
LOWEST DAILY MEAN	87	Nov 28	87	Nov 28,29	[b]23	Jul 22 1996
ANNUAL SEVEN-DAY MINIMUM	91	Nov 23	91	Nov 23	34	Oct 19 1995
INSTANTANEOUS PEAK FLOW			21500	Apr 26	[c]30600	May 10 1993
INSTANTANEOUS PEAK STAGE			28.89	Apr 26	[d]29.88	May 10 1993
ANNUAL RUNOFF (AC-FT)	767600		1052000		618900	
10 PERCENT EXCEEDS	3610		3550		2600	
50 PERCENT EXCEEDS	208		526		172	
90 PERCENT EXCEEDS	124		126		69	

[a]Prior to regulation, water years 1939-84, 484 ft^3/s.
[b]No flow at times in 1939, 1954-57, 1964-66, 1970.
[c]Maximum discharge for period of record, 90,000 ft^3/s, Oct.3, 1959, from rating curve extended.
[d]Maximum gage height for period of record, 32.60 ft, Oct. 3, 1959.



07177500 BIRD CREEK NEAR SPERRY, OK--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1987 to current year.
pH: April 1987 to current year.
WATER TEMPERATURE: April 1987 to current year.
DISSOLVED OXYGEN: April 1987 to current year.

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

REMARKS.--Interruptions in record were due to malfunction of the recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, greater than 2,000 microsiemens, Nov. 1, 1992 and Mar. 31, 1996; minimum, 80 microsiemens, Aug. 20, 1989.
pH: Maximum, 8.6 units, Aug. 27, 1988, Mar. 5, 1991, Apr. 12, 13, 1999; 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, 523 microsiemens, Jan. 25; minimum, 83 microsiemens, Oct. 5.
pH: Maximum recorded (more than 20 percent missing record), 8.6 units, Apr. 12, 13; minimum recorded, 6.6 units, Oct. 3, 5.
WATER TEMPERATURE: Maximum, 33.0° C, July 29; minimum 0.0° C, Dec. 25, 26, Jan. 3.
DISSOLVED OXYGEN: Maximum recorded (more than 20 percent missing record), 11.8 mg/L, Apr. 18; minimum recorded, 3.2 mg/L, June 23.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	276	269	272	328	274	290	453	316	368	442	438	440
2	322	272	281	324	183	249	389	354	374	464	442	453
3	299	257	276	203	172	180	396	388	392	488	464	473
4	261	226	237	207	203	205	464	393	413	505	488	496
5	226	83	124	216	207	212	422	384	394	---	---	---
6	157	103	118	223	216	220	408	374	387	---	---	---
7	195	157	187	227	222	223	446	255	358	338	326	335
8	209	195	203	235	217	224	255	200	212	334	329	331
9	210	208	209	250	235	245	252	230	248	337	298	319
10	211	208	210	270	234	245	251	244	246	368	337	355
11	211	208	210	262	216	232	244	239	242	360	336	346
12	---	---	---	243	230	240	239	230	233	347	337	340
13	---	---	---	242	238	240	230	228	229	409	344	386
14	212	209	211	243	234	237	238	227	230	408	350	379
15	223	209	215	243	232	234	264	238	250	353	344	348
16	228	223	225	238	234	236	279	264	272	371	353	362
17	240	221	228	245	238	241	295	279	286	379	370	375
18	232	131	164	256	244	247	311	295	302	389	379	384
19	268	188	212	278	256	270	386	311	335	395	389	392
20	230	221	224	292	278	285	345	290	313	399	393	396
21	234	230	232	308	291	299	341	312	332	415	398	403
22	237	231	233	323	308	316	346	337	341	474	415	447
23	245	237	242	331	323	327	355	346	349	506	474	489
24	244	238	240	337	331	334	369	355	361	517	505	510
25	239	238	238	344	336	339	374	364	370	523	513	518
26	239	238	238	361	344	350	381	371	375	518	513	515
27	239	237	238	381	361	371	395	381	387	513	508	510
28	239	237	238	399	381	390	414	395	404	510	505	508
29	239	230	235	411	399	405	427	414	421	509	184	444
30	272	237	254	515	382	424	433	426	429	357	203	289
31	285	270	276	---	---	---	438	431	434	203	119	146
MONTH	---	---	---	515	172	277	464	200	332	---	---	---

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	183	138	154	521	513	515	381	377	379	---	---	---
2	213	183	203	518	509	513	391	381	385	---	---	---
3	222	213	217	509	502	505	426	388	397	---	---	---
4	215	213	214	502	481	490	431	399	413	---	---	---
5	215	214	215	---	---	---	423	409	418	---	---	---
6	226	213	215	---	---	---	418	402	411	---	---	---
7	242	198	216	---	---	---	412	404	409	---	---	---
8	252	204	228	---	---	---	416	410	413	---	---	---
9	233	228	231	377	269	320	423	415	419	---	---	---
10	233	222	227	341	262	287	426	420	424	---	---	---
11	223	220	221	263	251	258	427	420	422	---	---	---
12	228	222	224	301	217	251	425	396	417	---	---	---
13	244	228	236	217	148	180	402	395	399	---	---	---
14	235	233	234	213	188	196	435	398	406	---	---	---
15	237	234	236	200	178	187	435	410	420	---	---	---
16	273	236	243	214	188	201	418	398	405	---	---	---
17	337	273	318	233	214	228	413	401	410	---	---	---
18	354	326	336	228	224	226	413	409	411	---	---	---
19	387	354	371	231	226	230	418	410	414	233	207	215
20	407	387	396	248	231	238	429	418	423	242	205	223
21	425	407	415	262	244	253	433	429	432	216	161	189
22	444	425	434	249	243	245	461	188	390	213	177	202
23	460	444	453	254	248	251	328	239	297	269	127	181
24	463	458	461	255	244	251	296	281	292	182	127	146
25	464	462	463	254	237	241	---	---	---	198	177	193
26	463	459	460	304	254	279	---	---	---	195	168	188
27	486	462	472	277	270	274	---	---	---	196	194	195
28	514	486	501	283	277	280	---	---	---	196	194	195
29	---	---	---	283	280	281	---	---	---	195	194	194
30	---	---	---	---	---	---	---	---	---	195	193	194
31	---	---	---	---	---	---	---	---	---	200	155	189
MONTH	514	138	307	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	216	155	188	191	118	166	254	247	250	254	252	253
2	213	204	209	189	118	148	257	242	249	254	253	254
3	206	204	205	203	189	198	256	242	250	256	253	255
4	207	204	205	203	198	201	263	250	255	257	255	256
5	206	204	205	200	192	196	262	250	255	259	255	257
6	205	203	204	193	191	192	269	253	260	259	257	259
7	207	200	204	192	189	190	276	258	266	260	256	259
8	214	198	205	192	190	191	274	256	265	265	256	261
9	216	210	213	193	190	192	267	253	260	296	259	269
10	237	207	211	195	189	192	264	248	256	296	271	284
11	243	192	206	193	184	189	262	246	256	350	264	283
12	199	193	197	189	183	185	261	247	254	341	153	271
13	201	199	200	195	189	192	262	246	253	223	124	194
14	210	200	203	203	195	200	257	237	248	210	193	199
15	214	207	210	199	193	196	256	240	248	218	205	212
16	244	142	208	---	---	---	256	236	247	---	---	---
17	164	137	154	---	---	---	255	236	248	---	---	---
18	208	162	187	---	---	---	---	---	---	233	229	232
19	216	173	200	---	---	---	---	---	---	238	233	235
20	174	141	153	---	---	---	239	237	238	273	235	244
21	182	141	165	---	---	---	242	236	238	250	242	245
22	197	180	189	---	---	---	245	240	242	253	245	249
23	211	158	185	---	---	---	247	244	246	248	244	246
24	211	157	191	---	---	---	249	246	247	244	241	243
25	182	159	169	---	---	---	250	247	248	334	227	242
26	202	182	195	---	---	---	250	248	249	334	229	249
27	200	198	199	253	249	250	251	249	250	248	149	218
28	202	199	201	254	250	251	252	250	251	213	158	183
29	201	198	200	255	249	252	252	251	252	255	213	227
30	216	168	193	258	251	253	253	251	252	256	237	245
31	---	---	---	256	250	252	253	251	252	---	---	---
MONTH	244	137	195	---	---	---	---	---	---	---	---	---

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.5	7.4	7.4	---	---	---	---	---	---	---	---	---
2	7.5	7.4	7.5	---	---	---	---	---	---	---	---	---
3	7.5	6.6	7.0	---	---	---	---	---	---	---	---	---
4	6.9	6.8	6.9	---	---	---	---	---	---	---	---	---
5	7.2	6.6	6.9	---	---	---	---	---	---	---	---	---
6	7.7	7.0	7.4	---	---	---	---	---	---	---	---	---
7	7.8	7.7	7.7	---	---	---	---	---	---	7.7	7.6	7.6
8	7.7	7.7	7.7	---	---	---	---	---	---	7.6	7.6	7.6
9	7.7	7.7	7.7	---	---	---	---	---	---	7.7	7.6	7.6
10	---	---	---	---	---	---	---	---	---	7.7	7.6	7.7
11	---	---	---	---	---	---	---	---	---	7.8	7.7	7.7
12	---	---	---	---	---	---	---	---	---	7.8	7.7	7.7
13	---	---	---	---	---	---	---	---	---	7.8	7.7	7.8
14	7.9	7.9	7.9	---	---	---	---	---	---	7.8	7.7	7.7
15	7.9	7.9	7.9	---	---	---	---	---	---	7.7	7.6	7.7
16	7.9	7.9	7.9	---	---	---	---	---	---	7.7	7.6	7.7
17	7.9	7.8	7.9	---	---	---	---	---	---	7.7	7.6	7.7
18	8.0	7.5	7.9	---	---	---	---	---	---	7.7	7.6	7.7
19	8.1	8.0	8.0	---	---	---	---	---	---	7.8	7.6	7.7
20	8.0	7.9	8.0	---	---	---	---	---	---	7.8	7.7	7.8
21	---	---	---	---	---	---	---	---	---	7.9	7.7	7.8
22	---	---	---	---	---	---	---	---	---	7.9	7.7	7.8
23	---	---	---	---	---	---	---	---	---	7.9	7.8	7.9
24	---	---	---	---	---	---	---	---	---	8.0	7.9	8.0
25	---	---	---	---	---	---	---	---	---	8.1	7.9	8.0
26	---	---	---	---	---	---	---	---	---	8.1	7.9	8.0
27	---	---	---	---	---	---	---	---	---	8.1	7.9	8.1
28	---	---	---	---	---	---	---	---	---	8.2	7.9	8.1
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	8.0	7.9	7.9	---	---	---
2	---	---	---	---	---	---	8.0	7.9	7.9	---	---	---
3	---	---	---	---	---	---	7.9	7.8	7.9	---	---	---
4	---	---	---	---	---	---	8.0	7.8	7.9	---	---	---
5	---	---	---	---	---	---	8.1	7.8	7.9	---	---	---
6	---	---	---	---	---	---	8.2	7.9	8.0	---	---	---
7	---	---	---	---	---	---	8.2	7.9	8.0	---	---	---
8	---	---	---	8.2	7.8	8.1	8.2	7.8	8.0	---	---	---
9	---	---	---	7.9	7.8	7.9	8.3	7.8	8.1	---	---	---
10	---	---	---	7.9	7.8	7.9	8.4	7.8	8.1	---	---	---
11	---	---	---	7.9	7.9	7.9	8.4	7.9	8.1	---	---	---
12	---	---	---	7.9	7.7	7.8	8.6	7.9	8.2	---	---	---
13	---	---	---	7.7	7.6	7.6	8.6	8.2	8.2	---	---	---
14	---	---	---	7.8	7.7	7.8	8.2	8.0	8.1	---	---	---
15	---	---	---	7.8	7.7	7.7	8.3	8.0	8.1	---	---	---
16	---	---	---	7.8	7.7	7.8	8.4	8.2	8.2	---	---	---
17	---	---	---	7.8	7.8	7.8	8.4	8.2	8.2	---	---	---
18	---	---	---	7.8	7.8	7.8	8.4	8.1	8.2	---	---	---
19	---	---	---	7.8	7.8	7.8	8.4	8.0	8.2	7.3	7.1	7.2
20	---	---	---	7.8	7.8	7.8	8.3	7.9	8.1	7.4	7.3	7.3
21	---	---	---	7.9	7.8	7.9	8.2	7.9	8.0	7.6	7.3	7.4
22	---	---	---	7.9	7.8	7.9	8.0	7.2	7.8	7.6	7.4	7.5
23	---	---	---	7.9	7.9	7.9	7.7	7.5	7.7	7.7	7.3	7.4
24	---	---	---	7.9	7.9	7.9	7.7	7.6	7.7	7.6	7.2	7.4
25	---	---	---	7.9	7.8	7.9	7.6	7.2	7.3	7.6	7.5	7.6
26	---	---	---	7.8	7.8	7.8	---	---	---	7.6	7.5	7.5
27	---	---	---	7.8	7.8	7.8	---	---	---	7.6	7.5	7.6
28	---	---	---	7.8	7.8	7.8	---	---	---	7.6	7.5	7.6
29	---	---	---	7.9	7.8	7.8	---	---	---	7.6	7.5	7.6
30	---	---	---	---	---	---	---	---	---	7.6	7.5	7.6
31	---	---	---	---	---	---	---	---	---	7.6	7.4	7.5
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.6	7.4	7.5	7.6	7.4	7.6	7.7	7.5	7.6	7.9	7.7	7.8
2	7.6	7.6	7.6	7.6	7.4	7.6	7.8	7.4	7.6	7.9	7.7	7.8
3	7.6	7.5	7.5	7.6	7.6	7.6	7.7	7.4	7.6	7.9	7.7	7.8
4	7.5	7.5	7.5	7.6	7.6	7.6	7.7	7.5	7.6	7.9	7.7	7.8
5	7.6	7.5	7.5	7.6	7.5	7.6	7.8	7.5	7.6	7.9	7.7	7.8
6	7.6	7.5	7.6	7.6	7.5	7.6	7.8	7.6	7.7	7.9	7.7	7.8
7	7.6	7.5	7.5	7.6	7.6	7.6	7.8	7.6	7.7	7.9	7.7	7.8
8	7.6	7.5	7.6	7.6	7.6	7.6	7.8	7.6	7.7	7.9	7.7	7.8
9	7.6	7.6	7.6	7.6	7.5	7.6	7.8	7.7	7.7	8.0	7.7	7.8
10	7.6	7.6	7.6	7.5	7.3	7.4	7.8	7.6	7.7	7.9	7.8	7.8
11	7.7	7.5	7.6	7.3	7.2	7.3	7.8	7.6	7.7	7.8	7.8	7.8
12	7.5	7.5	7.5	7.2	7.2	7.2	7.8	7.6	7.7	7.8	7.4	7.8
13	7.5	7.5	7.5	7.2	7.0	7.2	7.8	7.6	7.7	7.7	7.3	7.6
14	7.6	7.5	7.6	7.3	7.0	7.0	7.8	7.7	7.7	7.7	7.7	7.7
15	7.6	7.6	7.6	7.3	7.2	7.2	7.8	7.7	7.7	7.7	7.7	7.7
16	7.7	7.3	7.6	---	---	---	7.8	7.7	7.7	---	---	---
17	7.4	7.3	7.4	---	---	---	7.8	7.7	7.7	---	---	---
18	7.6	7.4	7.5	---	---	---	---	---	---	7.6	7.6	7.6
19	7.5	7.4	7.5	---	---	---	---	---	---	7.6	7.6	7.6
20	7.5	7.5	7.5	---	---	---	7.8	7.7	7.7	7.6	7.6	7.6
21	7.6	7.5	7.6	---	---	---	7.8	7.7	7.7	7.7	7.6	7.7
22	7.7	7.6	7.7	---	---	---	7.8	7.7	7.7	7.7	7.7	7.7
23	7.7	7.4	7.6	---	---	---	7.8	7.7	7.8	7.8	7.7	7.7
24	7.7	7.4	7.5	---	---	---	7.9	7.7	7.8	7.8	7.7	7.7
25	7.7	7.3	7.4	---	---	---	7.9	7.7	7.8	7.8	7.6	7.7
26	7.4	7.3	7.3	---	---	---	7.9	7.7	7.8	7.6	7.5	7.6
27	7.4	7.3	7.4	7.7	7.5	7.6	7.9	7.7	7.8	7.6	7.3	7.5
28	7.4	7.4	7.4	7.7	7.5	7.6	7.9	7.7	7.8	7.6	7.3	7.4
29	7.4	7.4	7.4	7.7	7.5	7.6	7.9	7.7	7.8	7.7	7.6	7.6
30	7.6	7.4	7.4	7.7	7.5	7.6	7.9	7.7	7.8	7.7	7.7	7.7
31	---	---	---	7.7	7.5	7.6	7.9	7.7	7.8	---	---	---
MAX	7.7	7.6	7.7	---	---	---	---	---	---	---	---	---
MIN	7.4	7.3	7.3	---	---	---	---	---	---	---	---	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	27.0	23.5	25.0	18.5	17.0	18.0	15.5	14.0	14.5	2.0	1.5	2.0
2	23.5	22.5	22.5	17.0	15.5	16.0	14.5	13.5	14.0	2.0	1.0	1.5
3	22.5	20.0	21.5	15.5	15.0	15.0	15.5	14.0	14.5	1.0	.0	.0
4	21.5	20.0	20.5	15.5	15.0	15.0	16.0	15.0	15.5	---	---	---
5	22.0	20.5	21.0	15.0	15.0	15.0	15.5	15.0	15.5	---	---	---
6	20.5	19.0	19.5	15.0	14.5	15.0	16.0	15.0	15.5	---	---	---
7	19.0	16.5	17.0	15.0	14.5	15.0	15.0	12.0	14.0	3.0	1.0	2.5
8	17.0	16.0	16.5	14.5	13.5	14.0	12.5	12.0	12.0	3.0	2.0	2.5
9	17.0	16.0	16.5	14.5	14.0	14.0	12.0	11.5	11.5	2.5	1.5	2.0
10	17.0	16.0	16.5	14.5	12.5	13.5	12.0	11.5	11.5	2.5	1.0	1.5
11	17.5	16.0	17.0	13.0	12.5	13.0	11.5	11.0	11.5	3.5	1.5	2.5
12	---	---	---	13.5	13.0	13.5	12.0	11.5	11.5	4.5	2.5	3.5
13	---	---	---	14.0	13.5	13.5	11.5	11.0	11.5	4.0	1.5	2.5
14	17.5	16.5	17.0	14.0	13.0	13.5	11.5	10.0	11.0	2.5	1.5	2.0
15	17.5	16.5	17.0	14.0	13.0	13.5	10.0	7.5	8.5	2.5	2.0	2.5
16	17.0	16.0	16.5	14.0	13.5	13.5	8.0	7.0	7.5	3.0	2.5	3.0
17	18.0	16.5	16.5	14.0	13.0	13.5	8.0	6.5	7.0	4.0	3.0	3.5
18	19.5	18.0	19.0	15.0	14.0	14.5	7.5	7.0	7.5	4.0	3.5	4.0
19	18.0	16.0	17.0	14.5	12.5	13.0	7.5	7.0	7.5	5.0	4.0	4.5
20	16.5	14.5	16.0	12.5	11.5	11.5	7.0	6.0	6.5	5.5	5.0	5.5
21	16.0	15.5	16.0	12.0	11.0	11.0	6.0	4.0	5.0	7.0	5.5	6.5
22	16.0	15.0	15.5	11.0	10.0	10.5	4.0	2.0	2.5	8.0	6.5	7.5
23	15.5	14.5	15.5	11.5	11.0	11.0	2.0	1.5	1.5	6.5	6.0	6.5
24	15.5	14.5	15.5	11.5	11.0	11.0	1.5	.5	1.0	6.5	6.0	6.5
25	16.5	15.0	15.5	13.0	11.5	12.0	1.0	.0	.5	7.0	6.0	6.5
26	17.0	15.5	16.5	12.5	11.5	12.0	1.0	.0	.5	6.0	5.5	6.0
27	17.5	16.0	17.0	12.0	11.5	12.0	1.5	.5	1.0	8.0	6.0	7.5
28	17.5	16.5	17.0	13.5	12.0	13.0	1.5	1.5	1.5	9.0	8.0	8.5
29	19.5	17.5	18.5	15.0	13.5	14.5	2.5	1.5	2.0	8.0	5.0	7.5
30	19.0	17.5	18.0	16.0	14.5	15.5	2.5	1.5	2.0	6.5	5.0	6.0
31	18.5	17.5	18.0	---	---	---	2.0	1.5	2.0	6.5	5.5	6.0
MONTH	---	---	---	18.5	10.0	13.5	16.0	.0	8.0	---	---	---

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	6.5	6.0	6.0	14.0	13.0	13.5	17.0	15.0	16.0	---	---	---
2	6.5	6.0	6.0	14.5	12.5	13.5	18.0	16.5	17.5	---	---	---
3	6.5	6.0	6.5	12.5	11.0	11.5	18.5	18.0	18.0	---	---	---
4	6.5	6.0	6.5	12.0	10.5	11.0	19.5	17.0	18.0	---	---	---
5	7.0	6.0	6.5	12.5	11.5	12.0	19.5	18.0	18.5	---	---	---
6	7.5	7.0	7.0	12.5	11.0	11.5	20.0	17.0	18.5	---	---	---
7	8.5	7.5	8.0	11.0	9.5	10.0	20.0	17.5	18.5	19.0	17.0	18.0
8	8.0	7.5	8.0	10.0	8.0	9.5	20.5	18.5	19.5	18.0	16.5	17.5
9	8.5	7.5	8.0	9.0	8.0	8.5	21.0	18.0	19.5	18.5	17.0	18.0
10	9.0	7.5	8.0	9.5	8.5	9.0	21.0	18.5	19.5	18.5	17.5	18.0
11	9.5	8.0	9.0	9.5	8.5	9.0	20.5	18.0	19.5	18.0	17.0	17.5
12	8.5	7.5	8.0	9.5	6.5	8.5	20.5	18.5	19.0	18.0	17.0	17.5
13	8.0	7.0	8.0	6.5	4.5	5.0	20.0	18.0	19.0	18.5	16.5	17.5
14	8.0	7.0	7.5	5.0	3.5	4.0	18.0	17.0	17.5	---	---	---
15	9.0	7.5	8.0	7.0	4.5	5.5	17.0	15.0	16.0	---	---	---
16	9.0	8.0	8.5	9.0	7.0	8.0	15.5	14.5	15.0	---	---	---
17	11.0	9.0	9.5	10.0	9.0	9.5	15.0	13.5	14.0	---	---	---
18	10.0	9.5	9.5	10.0	9.0	9.5	16.5	13.0	14.5	---	---	---
19	10.0	9.0	9.5	9.0	9.0	9.0	18.5	14.5	16.0	20.5	16.5	17.5
20	9.5	8.0	9.0	9.5	9.0	9.0	20.5	16.5	18.0	18.0	17.0	17.5
21	9.5	8.5	9.0	10.5	9.0	9.5	20.5	19.0	19.5	21.0	17.0	18.5
22	9.0	7.5	8.0	10.5	9.0	10.0	20.5	17.5	19.5	21.0	18.5	19.5
23	8.5	6.5	7.5	10.5	9.5	10.0	19.0	17.5	18.0	20.5	18.5	20.0
24	8.5	6.5	7.5	10.0	9.5	9.5	17.5	16.5	16.5	21.5	20.0	20.5
25	10.5	8.0	9.0	10.5	9.0	10.0	16.5	15.0	15.5	21.5	19.0	19.5
26	12.5	10.5	11.5	12.0	10.0	11.0	---	---	---	19.5	18.5	19.0
27	13.5	12.5	13.0	11.0	10.5	10.5	---	---	---	19.0	18.0	18.5
28	13.5	12.5	13.0	11.0	10.0	10.5	---	---	---	19.0	18.0	18.5
29	---	---	---	13.0	10.5	11.5	---	---	---	19.0	18.0	18.5
30	---	---	---	12.5	12.0	12.0	---	---	---	19.0	18.5	18.5
31	---	---	---	---	---	---	---	---	---	21.0	18.5	19.5
MONTH	13.5	6.0	8.4	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.0	20.5	21.0	24.0	22.0	23.0	32.5	30.5	31.5	29.0	27.0	28.0
2	21.5	20.0	21.0	26.0	23.5	24.5	32.0	30.0	31.0	29.0	27.5	28.0
3	20.0	19.0	19.5	23.5	22.5	23.0	31.0	29.0	30.0	29.0	27.0	28.0
4	20.0	19.0	19.5	23.0	22.0	22.5	30.5	28.5	29.5	29.0	27.5	28.0
5	20.0	19.0	19.5	23.0	22.0	22.5	30.5	28.0	29.0	28.5	27.5	28.0
6	19.5	19.0	19.5	23.5	22.0	22.5	31.0	28.5	29.5	29.0	27.0	27.5
7	20.5	18.5	19.5	23.0	22.5	23.0	31.5	29.0	30.0	28.5	27.0	28.0
8	21.5	19.5	20.0	23.5	22.0	22.5	32.0	30.0	31.0	28.5	26.5	27.5
9	20.5	19.5	20.0	24.0	22.5	23.0	31.5	29.5	30.5	27.5	25.5	26.5
10	21.0	19.0	19.5	23.0	22.0	22.5	31.5	29.0	30.0	26.5	24.0	25.0
11	22.0	20.0	21.0	23.5	22.0	22.5	32.0	29.5	30.5	24.5	23.5	24.0
12	20.5	19.5	20.0	22.5	21.5	22.0	32.0	29.5	31.0	24.5	21.5	23.5
13	20.0	19.5	19.5	23.0	21.5	22.0	32.0	29.5	30.5	22.5	21.0	21.5
14	21.0	19.5	20.0	24.0	22.5	23.0	30.5	28.0	29.0	23.5	21.5	22.0
15	21.0	19.5	20.5	24.5	23.0	24.0	29.5	27.0	28.0	23.5	22.0	22.5
16	23.0	20.5	21.0	---	---	---	29.5	27.0	28.5	---	---	---
17	22.0	20.5	21.0	---	---	---	---	---	---	---	---	---
18	22.5	20.5	22.0	---	---	---	---	---	---	23.0	22.0	22.5
19	20.5	19.0	19.5	---	---	---	---	---	---	23.0	22.0	22.5
20	21.0	19.5	20.0	---	---	---	30.0	27.0	28.0	23.0	21.5	22.0
21	22.5	21.0	21.5	31.5	30.5	30.5	29.0	26.0	27.5	21.5	20.0	21.0
22	22.5	21.0	21.5	---	---	---	29.0	27.0	28.0	21.5	19.5	20.5
23	23.5	21.0	22.0	---	---	---	29.5	28.0	28.5	21.5	19.5	20.5
24	23.5	22.0	23.0	---	---	---	29.5	27.5	28.5	22.5	20.0	21.0
25	22.5	22.0	22.0	---	---	---	29.0	26.5	28.0	22.5	20.5	21.5
26	22.5	21.0	22.0	---	---	---	29.5	27.0	28.0	21.0	20.0	20.5
27	23.0	21.5	22.5	32.5	30.5	31.5	29.5	27.5	28.5	21.0	20.0	21.0
28	22.5	22.0	22.5	32.5	30.5	31.5	30.0	28.0	29.0	20.0	19.0	19.5
29	22.5	21.5	22.0	33.0	30.5	31.5	30.0	28.0	29.0	19.5	18.0	18.5
30	24.5	21.5	22.5	32.5	30.5	31.5	29.5	27.5	28.5	20.0	17.5	18.5
31	---	---	---	32.5	30.0	31.5	29.0	27.0	28.0	---	---	---
MONTH	24.5	18.5	20.8	---	---	---	---	---	---	---	---	---

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.4	6.1	7.3	7.9	6.9	7.3	9.1	7.7	8.7	11.3	10.9	11.0
2	8.7	8.1	8.4	8.0	7.5	7.7	9.2	8.8	9.0	11.3	10.6	11.0
3	8.4	4.2	6.3	8.6	8.0	8.4	9.0	8.6	8.8	11.3	8.9	10.0
4	7.3	6.9	7.2	8.8	8.5	8.7	9.5	8.2	8.8	10.4	9.2	9.9
5	7.9	4.7	6.4	8.9	8.7	8.8	9.2	8.5	8.8	---	---	---
6	7.3	5.7	6.3	8.9	8.7	8.8	9.0	8.6	8.8	---	---	---
7	8.2	7.3	8.0	8.9	8.8	8.9	9.3	8.7	8.9	11.0	10.6	10.8
8	8.3	7.9	8.1	9.1	8.8	9.0	9.6	9.1	9.5	11.0	10.6	10.8
9	8.1	7.9	8.0	9.1	8.8	8.9	9.9	9.4	9.7	11.4	10.2	10.8
10	---	---	---	8.9	8.3	8.7	9.9	9.7	9.8	11.5	10.5	11.2
11	---	---	---	9.2	8.6	8.9	9.9	9.7	9.8	11.4	10.8	11.1
12	---	---	---	9.2	9.0	9.1	9.8	9.5	9.7	11.1	10.6	10.9
13	---	---	---	9.1	8.7	8.9	9.8	9.5	9.6	11.4	10.4	10.8
14	9.1	8.8	8.9	8.7	8.5	8.6	9.8	9.5	9.7	11.4	10.2	11.1
15	9.1	8.8	8.9	8.5	8.4	8.5	10.1	9.6	9.8	11.5	10.8	11.2
16	9.1	8.8	8.9	8.4	7.8	8.2	10.0	9.6	9.9	11.5	10.7	11.1
17	9.0	8.6	8.8	8.5	8.2	8.4	10.0	9.6	9.8	11.6	10.6	11.1
18	8.9	7.1	7.9	8.5	8.1	8.3	10.0	9.6	9.8	11.3	10.6	10.9
19	8.6	8.4	8.5	8.1	7.9	8.0	10.0	9.6	9.8	11.4	10.3	10.8
20	8.4	8.1	8.3	8.1	7.8	8.0	10.3	9.9	10.2	11.0	10.2	10.6
21	8.2	7.9	8.0	8.5	7.8	8.1	10.6	9.9	10.2	11.1	9.9	10.5
22	8.5	7.9	8.2	8.5	8.0	8.3	11.1	9.8	10.6	10.8	9.3	10.0
23	8.7	8.3	8.5	8.5	8.2	8.3	11.4	10.2	10.9	10.2	9.3	9.8
24	8.6	8.5	8.6	8.3	8.1	8.2	11.5	10.1	11.1	10.8	9.9	10.3
25	8.5	8.2	8.4	8.3	8.0	8.1	11.4	8.8	10.6	11.1	10.1	10.5
26	8.3	8.0	8.2	8.1	7.8	8.0	11.4	9.3	10.8	11.2	9.6	10.6
27	8.3	7.9	8.1	8.2	7.8	8.1	11.5	10.7	11.2	11.4	10.1	10.8
28	8.2	7.7	8.0	8.3	7.9	8.1	11.3	10.4	11.0	11.2	9.8	10.4
29	8.1	6.8	7.5	8.2	7.6	7.9	11.2	10.5	10.9	10.7	9.4	10.0
30	7.4	6.6	7.0	9.0	7.6	8.0	11.1	9.8	10.7	10.2	9.6	10.0
31	7.4	6.8	7.1	---	---	---	11.2	9.9	10.7	9.9	9.6	9.7
MONTH	---	---	---	9.2	6.9	8.4	11.5	7.7	9.9	---	---	---

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

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.5	7.5	8.0	8.5	6.5	7.8	---	---	---	7.4	6.2	6.8
2	9.8	8.5	9.0	8.0	6.2	6.5	---	---	---	7.1	6.1	6.6
3	10.2	9.8	10.1	8.9	8.0	8.7	---	---	---	7.0	6.1	6.5
4	10.2	9.9	10.1	---	---	---	---	---	---	6.8	6.0	6.4
5	10.0	9.9	10.0	---	---	---	---	---	---	---	---	---
6	10.1	9.3	10.0	---	---	---	---	---	---	---	---	---
7	10.1	9.6	9.9	---	---	---	---	---	---	---	---	---
8	9.9	9.4	9.7	---	---	---	---	---	---	---	---	---
9	9.9	9.6	9.8	---	---	---	---	---	---	---	---	---
10	10.0	8.8	9.8	---	---	---	---	---	---	---	---	---
11	9.4	8.3	8.9	---	---	---	---	---	---	---	---	---
12	9.6	9.4	9.5	---	---	---	---	---	---	---	---	---
13	9.6	9.5	9.6	---	---	---	---	---	---	---	---	---
14	9.6	8.7	9.3	---	---	---	---	---	---	---	---	---
15	9.2	8.9	9.1	---	---	---	---	---	---	---	---	---
16	9.0	6.1	8.4	---	---	---	---	---	---	---	---	---
17	7.9	6.7	7.4	---	---	---	---	---	---	---	---	---
18	8.8	7.8	8.0	---	---	---	---	---	---	8.8	8.6	8.7
19	9.1	7.5	8.8	---	---	---	---	---	---	8.9	8.6	8.7
20	8.3	6.6	8.0	---	---	---	8.4	7.5	7.9	8.9	8.6	8.8
21	8.0	7.7	7.8	---	---	---	8.4	7.6	7.9	9.6	8.9	9.3
22	8.8	7.9	8.6	---	---	---	8.1	7.3	7.7	9.8	9.3	9.5
23	8.8	3.2	6.6	---	---	---	7.9	7.0	7.5	9.9	9.3	9.6
24	7.9	7.0	7.4	---	---	---	7.9	6.9	7.4	9.8	9.2	9.5
25	8.2	7.7	7.8	---	---	---	8.0	7.0	7.4	9.5	8.9	9.0
26	8.8	8.2	8.7	---	---	---	7.8	6.9	7.3	9.0	8.8	8.9
27	9.1	8.8	8.9	---	---	---	7.7	6.7	7.2	8.9	8.3	8.7
28	9.2	8.9	9.1	---	---	---	7.6	6.5	7.0	9.2	8.3	8.8
29	9.4	9.1	9.3	---	---	---	7.6	6.4	6.9	9.9	9.2	9.6
30	9.3	7.5	8.6	---	---	---	7.5	6.4	6.9	10.0	9.7	9.9
31	---	---	---	---	---	---	7.5	6.4	6.9	---	---	---
MONTH	10.2	3.2	8.9	---	---	---	---	---	---	---	---	---

Flowing well at Sulphur

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.--No estimated daily discharge. Records fair. U.S. Geological Survey satellite telemeter at station.

EXTREMES 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)
Oct 5	0645	3,670	12.24	May 22	1945	1,820	9.85
Apr 26	1300	2,560	10.94	Jun 23	0730	1,050	8.47
May 4	1245	4,580	13.19				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

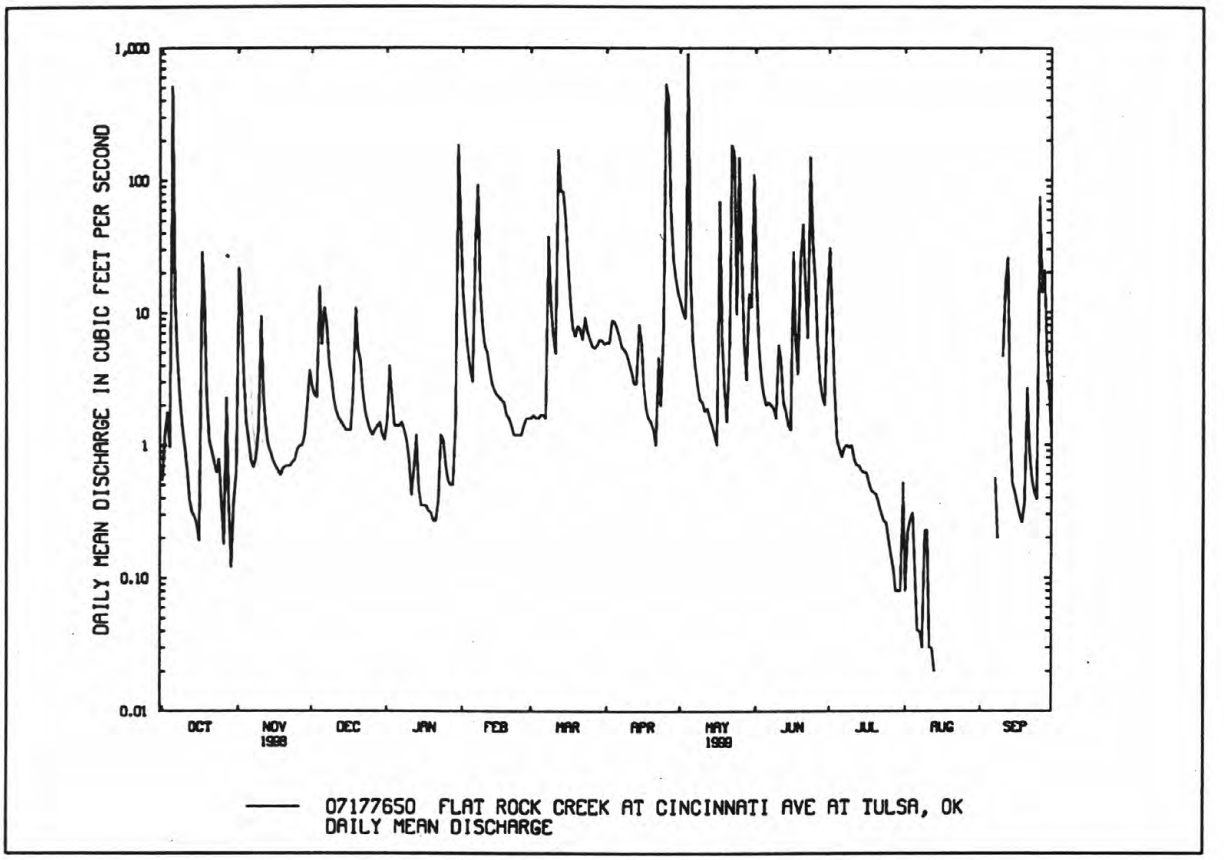
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	22	2.8	1.5	14	1.6	6.0	12	18	31	.08	.00
2	1.2	11	2.4	4.0	8.1	1.7	5.9	10	5.6	9.3	.22	.00
3	1.8	3.3	2.3	2.3	5.2	1.6	8.8	9.1	3.3	2.6	.28	.00
4	.96	1.5	16	1.4	3.7	1.6	8.6	905	2.4	1.1	.31	.00
5	516	1.1	5.8	1.4	3.0	1.7	7.7	19	2.0	.94	.11	.00
6	13	.76	11	1.4	35	1.7	6.7	6.0	2.1	.81	.04	.00
7	4.7	.68	8.3	1.5	94	1.6	5.5	4.0	2.0	.96	.04	.56
8	2.3	.81	4.2	1.3	15	38	5.3	2.8	1.9	1.0	.03	.20
9	1.4	1.3	3.2	1.1	8.0	12	4.9	2.2	1.6	.96	.23	.00
10	.98	9.6	2.2	.78	5.6	6.7	4.2	2.1	5.7	1.0	.23	4.6
11	.65	2.4	1.8	.42	5.0	4.9	3.6	1.8	4.3	.79	.03	17
12	.38	1.4	1.6	.65	3.7	171	2.9	1.9	2.1	.70	.03	26
13	.31	1.0	1.5	1.2	2.9	84	2.9	1.6	1.8	.70	.02	1.4
14	.29	.89	1.4	.47	2.6	83	8.2	1.4	1.4	.64	.00	.51
15	.25	.77	1.3	.35	2.4	51	6.2	1.2	1.3	.62	.00	.44
16	.19	.70	1.3	.35	2.3	23	2.8	1.0	29	.62	.00	.36
17	29	.65	1.3	.35	2.2	12	1.9	70	6.3	.52	.00	.30
18	12	.59	2.6	.32	2.1	7.6	1.6	6.6	3.4	.45	.00	.26
19	2.3	.67	11	.31	1.7	6.7	1.5	2.7	26	.44	.00	.36
20	1.1	.70	5.2	.27	1.6	8.0	1.3	1.5	47	.42	.00	2.7
21	.91	.70	4.4	.27	1.4	7.5	1.0	4.2	15	.36	.00	.88
22	.75	.70	2.5	.38	1.2	6.3	4.6	187	6.4	.31	.00	.55
23	.62	.75	1.8	1.2	1.2	9.3	2.0	158	151	.27	.00	.44
24	.79	.78	1.5	1.1	1.2	7.3	7.4	9.8	34	.26	.00	.39
25	.36	.94	1.3	.72	1.2	6.4	537	150	17	.20	.00	76
26	.18	1.0	1.2	.54	1.4	5.6	425	25	5.9	.15	.00	14
27	2.3	1.0	1.3	.50	1.6	5.4	58	5.8	3.1	.12	.00	21
28	.36	1.2	1.4	.50	1.6	5.7	25	3.1	2.3	.08	.00	4.7
29	.12	2.0	1.5	1.5	---	6.3	18	14	2.0	.08	.00	2.4
30	.38	3.7	1.2	187	---	6.2	14	11	14	.08	.00	1.1
31	.62	---	1.1	46	---	5.8	---	112	---	.52	.00	---
TOTAL	596.75	74.59	106.4	261.08	228.9	591.2	1188.5	1741.8	417.9	58.00	1.65	176.15
MEAN	19.2	2.49	3.43	8.42	8.18	19.1	39.6	56.2	13.9	1.87	.053	5.87
MAX	516	22	16	187	94	171	537	905	151	31	.31	76
MIN	.12	.59	1.1	.27	1.2	1.6	1.0	1.0	1.3	.08	.00	.00
AC-FT	1180	148	211	518	454	1170	2360	3450	829	115	3.3	349

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1999, BY WATER YEAR (WY)

MEAN	2.97	7.76	6.53	5.95	6.08	16.8	15.1	14.9	9.30	1.74	2.82	1.74
MAX	19.2	31.1	23.0	33.0	15.5	47.8	39.6	58.4	55.7	8.28	17.7	6.54
(WY)	1999	1997	1988	1998	1997	1988	1999	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

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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1988 - 1999	
ANNUAL TOTAL	4304.52		5442.92			
ANNUAL MEAN	11.8		14.9		7.53	
HIGHEST ANNUAL MEAN					15.3	1995
LOWEST ANNUAL MEAN					.56	1996
HIGHEST DAILY MEAN	650	Apr 27	905	May 4	905	May 4 1999
LOWEST DAILY MEAN	.00	Aug 16	.00	at times	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 31	.00	Aug 14	.00	May 13 1988
INSTANTANEOUS PEAK FLOW			4580	May 4	4580	May 4 1999
INSTANTANEOUS PEAK STAGE			13.19	May 4	13.19	May 4 1999
ANNUAL RUNOFF (AC-FT)	8540		10800		5460	
10 PERCENT EXCEEDS	12		17		9.0	
50 PERCENT EXCEEDS	1.4		1.6		.63	
90 PERCENT EXCEEDS	.14		.12		.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 fair. 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:

EXTREMES 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)
Oct 5	0620	5,000	14.04	May 23	0420	1,670	10.69
Apr 26	1245	3,540	12.82	Jun 16	0950	1,010	9.57
May 4	1255	2,850	12.14	Sep 10	1505	1,270	10.06
May 17	0955	1,970	11.11				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	53	3.0	7.3	11	3.2	4.6	3.9	12	22	1.6	3.3
2	49	5.1	2.0	3.8	8.0	3.2	4.1	3.2	5.9	5.0	3.1	2.3
3	8.5	3.0	2.2	1.9	5.2	3.0	12	2.8	5.5	3.8	5.9	.68
4	3.6	2.4	49	1.9	3.5	3.2	3.8	381	4.7	3.3	5.8	14
5	782	1.7	3.8	1.9	3.4	3.5	4.5	29	3.7	3.2	2.0	22
6	7.3	1.5	11	1.8	48	3.1	3.6	9.7	12	4.9	1.7	3.3
7	4.1	11	3.0	1.8	43	3.1	3.3	6.3	5.1	7.0	3.6	33
8	2.5	3.5	2.1	2.2	7.7	73	3.2	5.1	6.0	4.5	1.4	21
9	1.8	11	2.2	2.2	5.6	8.8	3.1	4.2	3.5	5.8	1.9	3.5
10	1.2	23	2.4	3.0	5.0	7.2	3.0	16	e12	5.1	4.4	116
11	.99	4.5	2.1	2.1	15	6.5	3.1	3.7	e7.4	3.4	4.6	51
12	1.1	2.7	1.8	2.0	4.3	123	3.4	21	3.1	2.9	4.6	38
13	1.3	1.8	1.7	1.5	4.5	50	7.8	3.1	2.9	5.0	3.4	4.8
14	1.3	1.8	1.7	1.6	3.8	63	57	3.2	3.1	5.3	4.1	3.3
15	1.3	1.6	1.6	2.0	3.8	24	7.2	2.4	3.3	5.3	1.6	2.5
16	1.0	1.8	1.6	1.8	3.4	15	3.4	2.5	64	5.9	1.7	2.5
17	79	1.7	2.0	1.9	3.4	11	3.1	171	5.3	5.0	2.7	2.4
18	5.0	1.6	16	1.8	3.5	9.0	3.0	12	4.2	3.0	3.9	2.0
19	1.9	1.5	7.2	1.8	3.2	10	2.6	7.8	50	3.2	4.3	6.2
20	3.4	1.6	3.3	1.7	3.0	9.8	2.3	6.6	56	4.9	3.2	49
21	2.0	1.9	4.4	1.8	2.8	7.0	2.4	43	8.1	5.0	5.1	4.2
22	1.5	1.8	1.7	13	2.7	8.5	29	89	8.3	4.9	1.9	3.5
23	1.9	1.9	1.8	19	2.9	12	4.4	155	22	4.9	1.4	2.8
24	1.3	1.8	1.9	2.8	2.8	6.1	36	16	30	4.8	3.8	2.7
25	.83	1.9	2.5	2.1	2.9	5.6	371	63	7.4	2.4	2.1	100
26	2.1	2.4	3.1	2.0	3.1	5.4	404	16	5.3	2.2	3.2	10
27	6.7	1.5	4.3	1.9	3.2	6.7	37	8.7	4.5	3.0	2.6	8.0
28	12	1.5	2.4	1.6	3.1	5.6	12	6.7	5.1	e2.8	1.3	20
29	2.4	35	2.2	15	---	5.3	6.8	5.4	4.2	e2.5	.98	6.5
30	9.8	21	1.9	166	---	4.9	4.8	4.8	24	2.3	.96	2.9
31	2.3	---	1.9	24	---	5.0	---	45	---	2.1	.83	---
TOTAL	1040.12	206.5	147.8	295.2	211.8	504.7	1045.5	1147.1	388.6	145.4	89.67	541.38
MEAN	33.6	6.88	4.77	9.52	7.56	16.3	34.8	37.0	13.0	4.69	2.89	18.0
MAX	782	53	49	166	48	123	404	381	64	22	5.9	116
MIN	.83	1.5	1.6	1.5	2.7	3.0	2.3	2.4	2.9	2.1	.83	.68
AC-FT	2060	410	293	586	420	1000	2070	2280	771	288	178	1070

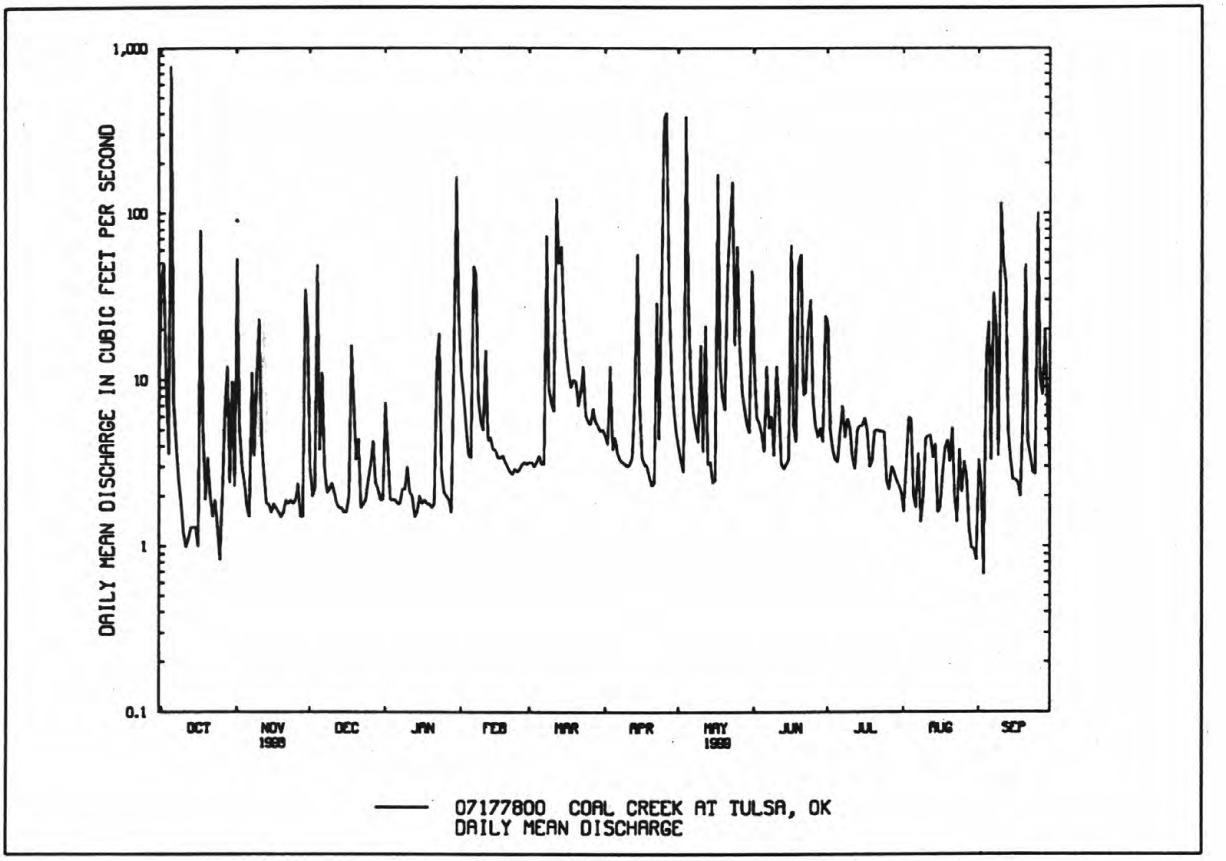
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1999, BY WATER YEAR (WY)

MEAN	7.60	9.20	7.62	5.94	5.94	12.8	13.2	14.5	10.7	7.33	5.41	7.27
MAX	33.6	24.9	20.3	13.3	12.2	33.2	34.8	46.3	42.1	24.8	18.7	18.0
(WY)	1999	1995	1993	1998	1990	1990	1999	1995	1995	1994	1997	1999
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 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1988 - 1999	
ANNUAL TOTAL	4418.74		5763.77			
ANNUAL MEAN	12.1		15.8		9.04	
HIGHEST ANNUAL MEAN					15.8	1999
LOWEST ANNUAL MEAN					3.60	1996
HIGHEST DAILY MEAN	782	Oct 5	782	Oct 5	782	Oct 5 1998
LOWEST DAILY MEAN	.10	Sep 8	.68	Sep 3	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.21	Aug 30	1.2	Oct 10	.00	Jul 30 1991
INSTANTANEOUS PEAK FLOW			5000	Oct 5	5190	Jun 23 1995
INSTANTANEOUS PEAK STAGE			14.04	Oct 5	14.18	Jun 23 1995
ANNUAL RUNOFF (AC-FT)	8760		11430		6550	
10 PERCENT EXCEEDS	19		29		17	
50 PERCENT EXCEEDS	2.8		3.6		2.1	
90 PERCENT EXCEEDS	.65		1.7		.27	



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 good. Flow slightly regulated since 1958 by Bluestem Lake (capacity 17,000 acre-ft) and since March 1977 by Birch Lake (capacity 19,200 acre-ft). Flow regulated since August 20, 1989 by Skiatook Lake (capacity 322,300 acre-ft) when conservation pool was first reached. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	233	435	729	157	6870	152	273	3220	6050	4750	175	170
2	347	3700	484	169	1970	146	264	3130	3210	8130	173	170
3	1940	1750	302	227	2660	137	278	3070	3190	3710	173	171
4	662	1380	456	218	2670	141	290	10500	3290	3060	173	174
5	12000	1340	644	198	2570	144	325	16400	3250	2880	176	188
6	12900	1240	570	246	2550	144	323	9820	3200	2730	178	184
7	2590	1190	1820	290	4880	144	297	2600	3270	2130	181	183
8	1400	1500	1640	285	4220	526	266	2040	3530	1990	181	280
9	1250	1630	1300	262	2930	1940	237	1770	3360	1950	181	199
10	1180	2100	1170	322	2650	1600	223	1660	3090	1940	181	383
11	1160	2500	1100	320	2380	1410	211	1600	3330	2000	179	677
12	1130	1530	1040	305	1790	2530	205	1630	2550	2030	177	837
13	1110	1280	979	219	1240	9390	200	1600	2300	1930	174	3120
14	1100	816	915	152	1070	5530	344	1760	2270	1420	170	702
15	1030	684	333	133	1040	4350	511	2860	1520	1260	169	359
16	865	639	238	129	939	5060	680	2900	1970	1240	169	270
17	972	602	186	126	364	3660	419	5380	3560	1210	167	223
18	4380	564	172	124	427	2900	293	2590	1100	1140	166	206
19	1730	272	279	124	308	2650	250	2040	1600	1090	165	204
20	1130	187	769	124	266	2330	224	2900	6990	393	168	320
21	1020	164	541	124	238	2950	212	3820	4130	297	172	291
22	1030	162	347	124	215	2390	711	2620	1960	230	171	230
23	1030	162	264	163	201	2150	1400	10200	3650	205	172	221
24	1020	155	216	156	189	2090	528	9700	6040	205	171	211
25	1010	149	186	142	179	1990	e5000	4670	5390	207	172	503
26	1000	145	172	138	171	863	18400	6780	3520	200	172	912
27	1000	139	169	138	162	516	24300	4010	2620	191	172	775
28	990	134	167	138	155	489	14200	3450	2230	183	174	1000
29	460	134	166	401	---	474	5220	3320	2140	181	173	485
30	196	325	166	3810	---	370	3430	3290	2920	178	174	356
31	188	---	163	10400	---	288	---	4180	---	177	174	---
TOTAL	58053	27008	17683	19864	45304	59454	79514	135510	97230	49237	5373	14004
MEAN	1873	900	570	641	1618	1918	2650	4371	3241	1588	173	467
MAX	12900	3700	1820	10400	6870	9390	24300	16400	6990	8130	181	3120
MIN	188	134	163	124	155	137	200	1600	1100	177	165	170
AC-FT	115100	53570	35070	39400	89860	117900	157700	268800	192900	97660	10660	27780

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1999, BY WATER YEAR (WY)

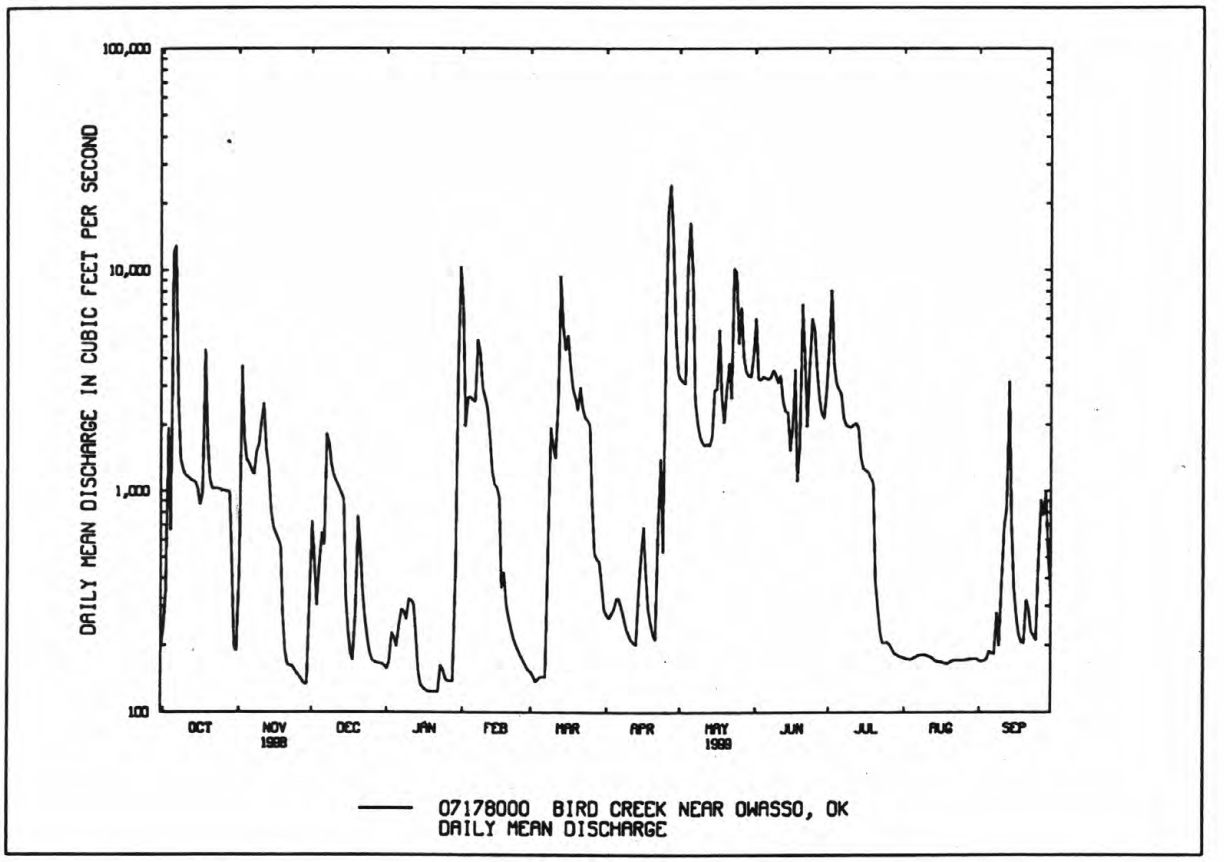
MEAN	394	706	593	640	725	1613	1890	2070	1742	878	355	340
MAX	1873	2362	1561	2464	1618	5861	3589	5565	5579	3195	1255	747
(WY)	1999	1995	1993	1998	1999	1990	1994	1995	1995	1995	1997	1996
MIN	131	74.0	85.7	86.1	83.9	91.9	240	160	223	181	173	165
(WY)	1993	1996	1990	1996	1996	1991	1996	1996	1998	1991	1999	1992

e Estimated

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1990 - 1999	
ANNUAL TOTAL	442911		608234			
ANNUAL MEAN	1213		1666		996	
HIGHEST ANNUAL MEAN					1906	1995
LOWEST ANNUAL MEAN					202	1996
HIGHEST DAILY MEAN	16600	Apr 28	24300	Apr 27	27700	May 11 1993
LOWEST DAILY MEAN	134	Nov 28	124	Jan 18-22	[a]45	Nov 6 1993
ANNUAL SEVEN-DAY MINIMUM	145	Nov 23	125	Jan 16	58	Jan 1 1994
INSTANTANEOUS PEAK FLOW			25100	Apr 27	29200	May 11 1993
INSTANTANEOUS PEAK STAGE			25.59	Apr 27	26.94	May 11 1993
ANNUAL RUNOFF (AC-FT)	878500		1206000		721300	
10 PERCENT EXCEEDS	3360		3700		2860	
50 PERCENT EXCEEDS	279		644		205	
90 PERCENT EXCEEDS	173		166		89	

[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, 610 microsiemens, Jan. 25; minimum, 95 microsiemens, Apr. 26.
pH: Maximum, 8.5 units, Apr. 19, 20; minimum, 6.5 units, Oct. 3.
WATER TEMPERATURE: Maximum, 33.5°C, July 28, 29, 30; minimum, 0.0°C, Jan. 3, 4, 5, 6.
DISSOLVED OXYGEN: Maximum recorded (greater than 20 percent missing record), 13.3 mg/L, Mar. 14; minimum recorded, 4.2 mg/L, Jan. 28.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	303	278	284	348	240	310	504	347	414	440	428	433
2	303	265	284	357	226	292	451	375	398	444	433	440
3	348	213	273	235	192	203	407	374	388	497	444	475
4	422	289	368	211	184	204	417	368	390	478	473	476
5	394	121	204	222	209	214	533	384	464	512	476	485
6	---	---	---	232	221	227	418	396	403	515	459	492
7	---	---	---	240	232	234	439	318	397	496	410	465
8	202	186	191	244	219	236	318	208	243	410	339	352
9	207	201	204	249	217	237	255	213	236	349	331	344
10	208	203	206	277	243	253	256	249	253	348	325	339
11	210	204	207	277	221	250	249	245	246	375	337	364
12	210	204	207	244	229	237	246	237	242	383	367	374
13	209	205	207	245	242	244	238	235	236	380	369	375
14	210	206	208	250	243	247	235	232	234	391	369	381
15	214	203	208	258	245	250	249	234	240	438	391	411
16	226	214	221	256	249	253	273	249	261	467	438	457
17	279	216	225	260	256	258	288	273	279	466	429	448
18	292	149	183	268	260	264	298	288	293	429	421	424
19	218	177	196	282	267	272	406	298	327	440	427	433
20	227	218	223	302	282	291	396	315	347	448	439	443
21	242	227	236	322	302	313	357	315	337	454	448	451
22	242	237	239	334	321	328	355	334	346	459	453	456
23	251	239	244	340	331	335	354	350	352	472	454	462
24	252	247	250	353	340	345	357	350	354	574	453	487
25	247	243	246	364	353	357	366	357	362	610	572	592
26	247	244	246	372	339	366	381	365	373	576	563	567
27	247	244	245	374	370	372	394	381	388	589	576	584
28	248	243	245	380	356	374	405	392	399	588	565	575
29	273	247	257	399	380	388	411	405	408	579	515	559
30	277	271	275	434	381	398	420	406	413	515	212	316
31	307	275	283	---	---	---	429	420	424	---	---	---
MONTH	---	---	---	434	184	285	533	208	337	---	---	---

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	486-	476	481	389	355	376	222	219	220
2	---	---	---	---	---	---	401	389	396	222	219	220
3	222	214	216	---	---	---	406	399	403	220	213	219
4	222	215	217	---	---	---	448	405	421	250	102	171
5	217	215	216	552	532	540	461	417	441	127	113	119
6	243	215	217	548	514	529	448	427	435	---	---	---
7	288	204	230	515	499	507	427	420	423	---	---	---
8	248	199	223	499	370	468	424	419	420	---	---	---
9	234	227	231	566	281	380	445	424	439	---	---	---
10	234	226	231	340	281	303	444	440	442	---	---	---
11	230	224	226	285	262	269	447	441	443	---	---	---
12	235	229	231	316	224	263	450	445	447	---	---	---
13	252	229	241	224	152	175	451	444	447	---	---	---
14	246	243	244	234	169	204	468	404	441	---	---	---
15	246	244	245	222	176	187	499	397	452	---	---	---
16	248	246	247	204	178	189	480	450	462	---	---	---
17	294	248	265	222	204	216	462	425	438	---	---	---
18	348	294	336	219	213	215	436	430	433	---	---	---
19	365	344	350	218	213	216	437	433	435	---	---	---
20	395	365	380	235	217	225	437	432	434	---	---	---
21	415	395	405	251	228	239	440	435	437	---	---	---
22	431	415	421	244	236	239	460	423	441	239	190	216
23	445	431	437	250	237	244	423	202	299	250	134	188
24	465	445	456	247	244	245	341	329	335	168	110	145
25	481	465	476	246	235	238	370	111	247	---	---	---
26	476	474	475	284	237	264	111	95	101	196	139	172
27	503	474	490	323	284	303	136	105	118	200	196	198
28	484	478	481	301	295	298	183	136	160	202	195	199
29	---	---	---	303	300	302	223	183	208	198	192	196
30	---	---	---	316	300	306	220	216	219	---	---	---
31	---	---	---	355	316	328	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	499	95	373	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	321	318	319	300	286	291
2	---	---	---	---	---	---	319	312	315	286	283	284
3	---	---	---	---	---	---	316	311	313	283	282	283
4	---	---	---	---	---	---	319	315	317	282	277	281
5	---	---	---	---	---	---	320	311	316	289	275	281
6	---	---	---	---	---	---	329	319	324	297	280	291
7	---	---	---	194	191	193	325	319	321	298	280	289
8	---	---	---	194	191	193	332	322	328	305	270	286
9	---	---	---	197	192	195	332	325	327	302	259	275
10	---	---	---	197	194	196	328	324	326	304	249	283
11	---	---	---	202	187	197	325	322	324	285	200	239
12	---	---	---	195	188	192	322	318	320	405	276	312
13	---	---	---	202	193	199	320	318	319	---	---	---
14	---	---	---	218	199	210	318	315	315	241	222	234
15	---	---	---	212	207	210	317	314	316	231	220	223
16	---	---	---	210	205	208	314	309	312	---	---	---
17	---	---	---	206	202	205	309	307	308	---	---	---
18	217	191	197	205	199	203	309	306	307	247	238	242
19	269	201	229	210	157	196	308	306	307	249	244	246
20	---	---	---	244	209	226	308	300	303	283	238	253
21	---	---	---	295	244	269	306	298	301	283	248	262
22	---	---	---	292	273	278	306	298	300	346	274	308
23	---	---	---	294	283	290	305	298	301	277	262	266
24	---	---	---	358	294	312	299	297	298	266	264	265
25	---	---	---	316	296	299	300	297	299	270	222	259
26	---	---	---	303	289	296	301	297	299	322	213	262
27	---	---	---	307	299	304	298	294	295	276	233	263
28	---	---	---	309	304	305	296	294	295	236	168	183
29	213	180	198	313	308	310	295	293	294	243	177	216
30	243	209	226	314	311	313	294	291	292	266	234	244
31	---	---	---	319	314	315	291	288	290	---	---	---
MONTH	---	---	---	---	---	---	332	288	310	---	---	---

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.2	7.0	7.2	7.4-	7.2	7.2	7.7	7.2	7.6	7.8	7.7	7.8
2	7.2	7.0	7.0	7.4	6.8	7.0	7.6	7.6	7.6	7.8	7.7	7.8
3	7.4	6.5	7.0	7.0	6.9	6.9	7.7	7.6	7.6	7.9	7.8	7.8
4	7.1	7.0	7.0	6.9	6.9	6.9	7.7	7.6	7.6	8.0	7.9	7.9
5	---	---	---	7.0	6.9	7.0	7.7	7.6	7.6	8.0	7.9	7.9
6	---	---	---	7.1	7.0	7.0	7.7	7.6	7.7	8.0	7.9	7.9
7	---	---	---	7.1	7.0	7.1	7.7	7.6	7.7	8.0	7.9	7.9
8	---	---	---	7.2	7.1	7.2	7.7	7.4	7.5	7.9	7.8	7.9
9	---	---	---	7.3	7.1	7.2	7.7	7.5	7.5	8.0	7.8	7.9
10	---	---	---	7.3	7.1	7.2	7.7	7.5	7.6	7.9	7.9	7.9
11	---	---	---	7.3	7.2	7.2	7.8	7.6	7.7	8.0	7.9	7.9
12	---	---	---	7.3	7.2	7.3	7.7	7.6	7.7	8.0	7.9	7.9
13	---	---	---	7.3	7.2	7.3	7.6	7.6	7.6	8.0	7.9	7.9
14	---	---	---	7.2	7.2	7.2	7.7	7.5	7.6	8.1	7.9	7.9
15	---	---	---	7.3	7.2	7.3	7.7	7.5	7.7	8.1	7.9	8.0
16	---	---	---	7.2	7.2	7.2	7.7	7.6	7.6	8.1	7.9	7.9
17	---	---	---	7.2	7.2	7.2	7.7	7.6	7.6	7.9	7.8	7.8
18	---	---	---	7.2	7.2	7.2	7.6	7.6	7.6	7.9	7.7	7.8
19	---	---	---	7.2	7.1	7.2	7.6	7.6	7.6	7.9	7.7	7.8
20	---	---	---	7.1	7.1	7.1	7.7	7.6	7.6	7.9	7.7	7.8
21	---	---	---	7.2	7.1	7.2	7.8	7.7	7.8	8.0	7.7	7.8
22	7.2	7.2	7.2	7.2	7.2	7.2	7.8	7.8	7.8	7.8	7.7	7.8
23	7.2	7.2	7.2	7.3	7.2	7.2	7.8	7.8	7.8	7.9	7.7	7.8
24	7.3	7.2	7.2	7.3	7.2	7.2	7.8	7.8	7.8	8.0	7.8	7.8
25	7.2	7.2	7.2	7.4	7.3	7.3	7.8	7.7	7.7	7.9	7.8	7.9
26	7.3	7.2	7.2	7.4	7.3	7.4	7.7	7.7	7.7	8.1	7.9	7.9
27	7.3	7.2	7.3	7.4	7.3	7.4	7.7	7.6	7.7	8.1	7.9	7.9
28	7.3	7.2	7.3	7.4	7.3	7.4	7.7	7.7	7.7	8.0	7.8	7.9
29	7.3	7.2	7.3	7.5	7.3	7.4	7.8	7.7	7.7	8.0	7.9	8.0
30	7.3	7.2	7.3	7.5	7.2	7.4	7.8	7.8	7.8	8.1	7.7	7.9
31	7.3	7.2	7.2	---	---	---	7.8	7.8	7.8	---	---	---
MAX	---	---	---	7.5	7.3	7.4	7.8	7.8	7.8	---	---	---
MIN	---	---	---	6.9	6.8	6.9	7.6	7.2	7.5	---	---	---

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	8.2	7.9	8.1	8.1	7.9	8.0	7.7	7.7	7.7
2	---	---	---	---	---	---	8.0	7.9	7.9	7.7	7.7	7.7
3	---	---	---	---	---	---	8.0	7.9	7.9	7.7	7.7	7.7
4	7.6	7.6	7.6	---	---	---	8.0	7.8	7.9	7.7	7.2	7.4
5	7.6	7.6	7.6	8.1	8.0	8.1	8.1	7.8	7.9	7.3	7.2	7.2
6	7.6	7.6	7.6	8.1	8.0	8.0	8.2	7.9	8.0	7.2	7.1	7.1
7	7.6	7.5	7.5	8.1	8.0	8.0	8.2	8.0	8.0	---	---	---
8	7.6	7.5	7.6	8.0	7.8	8.0	8.1	7.9	8.0	---	---	---
9	7.6	7.6	7.6	7.9	7.7	7.8	8.3	7.9	8.0	---	---	---
10	7.7	7.6	7.6	7.9	7.8	7.8	8.4	7.9	8.0	---	---	---
11	7.6	7.6	7.6	7.9	7.8	7.9	8.4	7.9	8.1	---	---	---
12	7.6	7.6	7.6	7.9	7.6	7.8	8.4	7.9	8.1	---	---	---
13	7.6	7.6	7.6	7.6	7.5	7.6	8.1	7.9	8.0	---	---	---
14	7.6	7.6	7.6	7.7	7.6	7.7	8.0	7.8	7.9	---	---	---
15	7.7	7.6	7.6	7.7	7.7	7.7	8.0	7.6	7.8	---	---	---
16	7.7	7.6	7.7	7.8	7.7	7.7	8.1	8.0	8.1	---	---	---
17	7.7	7.5	7.6	7.8	7.8	7.8	8.2	8.0	8.1	---	---	---
18	7.7	7.5	7.7	7.8	7.8	7.8	8.3	8.0	8.1	---	---	---
19	7.8	7.7	7.7	7.8	7.8	7.8	8.5	8.0	8.1	---	---	---
20	7.8	7.7	7.8	7.8	7.8	7.8	8.5	8.0	8.1	---	---	---
21	7.9	7.7	7.8	7.9	7.8	7.8	8.3	8.0	8.0	7.5	7.2	7.4
22	7.9	7.8	7.8	7.9	7.9	7.9	8.1	7.7	7.9	7.7	7.2	7.3
23	8.0	7.8	7.8	7.9	7.9	7.9	7.8	7.4	7.7	7.7	7.3	7.4
24	8.0	7.8	7.9	7.9	7.9	7.9	7.8	7.7	7.7	7.5	7.2	7.3
25	8.0	7.8	7.9	7.9	7.9	7.9	7.8	7.2	7.6	7.6	7.3	7.5
26	8.0	7.8	7.9	7.9	7.8	7.9	7.2	7.0	7.1	7.5	7.3	7.4
27	8.1	7.8	7.9	7.8	7.8	7.8	7.3	7.1	7.2	7.6	7.5	7.5
28	8.2	7.9	8.0	7.8	7.8	7.8	7.3	7.2	7.3	7.6	7.5	7.6
29	---	---	---	7.9	7.8	7.8	7.5	7.3	7.4	7.6	7.4	7.6
30	---	---	---	8.0	7.8	7.9	7.7	7.5	7.6	---	---	---
31	---	---	---	7.9	7.8	7.9	---	---	---	---	---	---
MAX	---	---	---	---	---	---	8.5	8.0	8.1	---	---	---
MIN	---	---	---	---	---	---	7.2	7.0	7.1	---	---	---

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	27.0	24.5	25.5	18.5	17.5	18.0	16.0	14.5	15.0	2.0	2.0	2.0
2	24.5	22.0	23.0	17.5	15.5	16.5	15.0	14.0	14.5	2.0	1.0	1.5
3	23.0	21.0	21.5	15.5	15.0	15.5	15.5	14.5	15.0	1.0	.0	.5
4	21.5	20.5	21.0	15.0	14.5	15.0	16.0	15.0	15.5	.5	.0	.0
5	21.5	20.5	21.0	14.5	14.5	14.5	16.0	15.0	15.5	.5	.0	.0
6	---	---	---	14.5	14.0	14.5	16.0	15.0	15.5	1.0	.0	.5
7	---	---	---	14.5	14.0	14.5	15.0	13.0	14.0	1.0	.5	.5
8	17.0	16.5	17.0	14.5	13.5	14.0	13.0	11.5	12.0	1.5	.5	1.0
9	17.0	16.5	16.5	14.0	13.5	14.0	11.5	11.0	11.5	2.0	1.0	1.5
10	17.0	16.5	17.0	14.0	12.5	13.5	11.5	11.0	11.5	2.0	1.0	1.5
11	17.5	16.5	17.0	12.5	12.0	12.5	11.0	11.0	11.0	2.5	1.5	2.0
12	17.5	17.0	17.5	13.0	12.5	13.0	11.0	11.0	11.0	4.0	2.5	3.0
13	17.0	16.5	17.0	13.5	13.0	13.5	11.0	10.5	11.0	4.0	3.0	3.5
14	17.5	16.5	17.0	13.5	13.0	13.5	11.0	10.5	11.0	4.0	2.5	3.0
15	18.0	17.0	17.5	13.5	13.0	13.5	11.0	10.0	10.5	3.5	2.5	3.0
16	17.5	17.0	17.0	14.0	13.0	13.5	10.0	8.5	9.5	3.5	2.5	3.0
17	18.0	17.0	17.5	14.0	13.0	13.5	8.5	7.5	8.0	4.5	3.0	3.5
18	19.5	17.0	18.5	14.5	13.5	14.0	8.0	7.5	7.5	5.0	3.5	4.0
19	18.0	16.5	17.0	14.5	13.5	14.0	8.0	7.5	7.5	6.0	4.0	4.5
20	16.5	15.5	16.0	13.5	12.5	13.0	7.5	6.5	7.0	6.0	4.0	5.0
21	16.0	15.5	16.0	12.5	11.5	12.0	6.5	4.5	5.5	7.5	5.5	6.5
22	16.0	15.5	15.5	12.0	11.0	11.5	4.5	3.0	3.5	6.5	5.5	6.5
23	15.5	15.0	15.5	12.5	11.0	11.5	3.0	2.0	2.5	7.0	5.5	6.0
24	15.5	15.0	15.5	12.0	11.0	11.5	2.0	1.5	2.0	7.0	6.0	6.5
25	16.0	15.0	15.5	13.0	12.0	12.5	2.0	1.0	1.5	6.5	6.0	6.0
26	17.0	16.0	16.5	12.5	11.5	12.0	2.0	.5	1.0	7.5	5.5	6.0
27	17.5	16.5	17.0	13.0	11.5	12.0	2.0	1.0	1.5	8.5	7.0	7.5
28	17.5	17.0	17.5	14.0	12.5	13.5	2.5	1.5	2.0	8.0	7.5	8.0
29	19.0	17.5	18.0	15.0	13.5	14.5	3.0	2.0	2.5	7.5	7.5	7.5
30	18.0	18.0	18.0	16.0	14.5	15.5	3.0	1.5	2.0	7.5	5.0	6.0
31	18.5	17.5	18.0	---	---	---	2.5	1.5	2.0	---	---	---
MONTH	---	---	---	18.5	11.0	13.7	16.0	.5	8.4	---	---	---

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	14.5-	12.0	13.0	16.0	14.5	15.5	16.0	15.0	15.5
2	---	---	---	---	---	---	17.0	16.0	16.5	16.0	15.0	15.5
3	6.5	6.0	6.5	---	---	---	17.5	17.0	17.5	16.0	15.5	15.5
4	6.5	6.0	6.5	---	---	---	18.5	17.0	17.5	18.0	16.0	17.0
5	7.0	6.0	6.5	13.0	12.0	12.5	19.0	18.0	18.5	18.5	17.5	18.0
6	7.5	7.0	7.0	12.0	11.0	11.5	19.5	17.5	18.5	19.0	18.5	18.5
7	8.5	7.5	8.5	11.0	10.0	10.5	19.5	18.0	18.5	---	---	---
8	8.0	7.5	8.0	10.5	8.0	9.5	20.5	19.0	19.5	---	---	---
9	8.5	7.5	8.0	9.0	8.0	8.5	21.0	18.5	19.5	---	---	---
10	9.0	8.0	8.5	9.0	8.5	9.0	21.5	19.0	20.0	---	---	---
11	9.5	8.5	9.0	9.0	8.5	9.0	21.0	18.5	20.0	---	---	---
12	8.5	8.0	8.0	9.5	7.0	8.5	20.5	18.5	19.5	---	---	---
13	8.0	7.5	7.5	7.0	4.0	5.5	20.0	18.5	19.0	---	---	---
14	8.0	7.5	7.5	5.0	3.5	4.0	19.0	17.0	18.0	---	---	---
15	8.5	7.5	8.0	6.0	5.0	5.5	17.0	15.0	16.0	---	---	---
16	9.0	8.5	9.0	8.5	6.0	7.5	15.5	14.5	15.0	---	---	---
17	9.5	8.0	8.5	10.0	8.5	9.5	15.0	14.0	14.5	---	---	---
18	10.0	9.0	9.5	10.0	9.5	9.5	16.0	13.5	14.5	---	---	---
19	9.5	9.0	9.0	9.5	9.0	9.0	17.5	15.0	16.0	---	---	---
20	10.0	9.0	9.0	9.0	9.0	9.0	20.0	16.0	17.5	---	---	---
21	9.5	8.0	8.5	10.0	9.0	9.5	20.0	18.0	19.0	19.5	17.5	18.0
22	8.0	7.5	8.0	10.5	9.5	10.0	21.0	19.0	19.5	21.0	19.0	20.5
23	8.5	7.0	7.5	10.5	10.0	10.0	20.0	17.5	18.0	20.5	19.0	20.0
24	9.0	7.0	8.0	10.0	9.5	10.0	17.5	16.5	17.0	21.0	20.0	20.5
25	10.0	8.0	9.0	10.5	9.5	10.0	16.5	15.0	15.5	21.5	19.5	20.0
26	11.5	9.5	10.5	11.5	10.0	10.5	15.5	15.0	15.0	20.0	19.0	19.0
27	13.5	11.5	12.0	11.5	11.0	11.0	17.0	15.5	16.0	19.0	18.5	19.0
28	14.0	11.5	12.5	11.0	10.5	11.0	17.5	17.0	17.0	19.0	18.5	19.0
29	---	---	---	12.5	10.5	11.5	17.5	15.5	16.0	19.0	18.5	19.0
30	---	---	---	14.5	12.0	13.0	16.0	15.0	15.5	---	---	---
31	---	---	---	15.0	13.5	14.0	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	21.5	13.5	17.3	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	24.0	23.0	23.5	33.0	31.0	32.0	29.5	27.5	28.5
2	---	---	---	25.5	24.0	24.5	33.0	31.0	32.0	29.0	27.5	28.5
3	---	---	---	25.5	23.5	24.0	32.0	31.0	31.5	29.0	27.5	28.5
4	---	---	---	23.5	22.5	23.0	31.5	30.0	30.5	29.5	27.5	28.5
5	---	---	---	23.5	22.5	23.0	31.0	29.0	30.0	28.5	27.5	28.0
6	---	---	---	23.5	22.5	23.0	31.0	29.0	30.0	29.0	27.0	28.0
7	---	---	---	24.0	23.0	23.5	31.5	29.5	30.5	29.5	27.5	28.0
8	---	---	---	24.0	22.5	23.0	32.5	30.0	31.0	28.5	26.5	27.5
9	---	---	---	24.0	23.0	23.5	32.5	30.0	31.0	28.0	25.5	26.5
10	---	---	---	24.0	23.0	23.5	32.5	30.5	31.5	27.0	24.5	25.5
11	---	---	---	23.5	22.0	22.5	32.5	30.5	31.5	24.5	21.5	22.0
12	---	---	---	23.5	22.5	22.5	32.5	30.0	31.0	23.5	22.5	23.0
13	---	---	---	23.0	21.5	22.5	32.0	30.0	31.0	23.5	20.5	22.0
14	---	---	---	24.0	22.5	23.5	31.0	29.0	30.0	22.5	21.5	22.0
15	---	---	---	25.0	24.0	24.5	30.5	28.5	29.5	23.0	21.5	22.5
16	---	---	---	24.5	24.0	24.5	30.5	28.0	29.0	---	---	---
17	22.5	20.5	21.0	24.5	24.0	24.0	30.5	28.0	29.0	---	---	---
18	22.5	21.5	22.0	25.0	24.0	24.5	30.5	27.5	29.0	22.5	22.0	22.5
19	22.0	19.5	21.0	25.0	24.0	24.5	30.0	28.5	29.0	23.0	21.5	22.0
20	20.5	19.5	20.0	27.0	25.0	26.0	29.5	28.0	29.0	22.0	21.0	22.0
21	22.5	20.0	21.5	29.5	27.0	28.0	29.5	27.5	28.5	21.5	20.0	20.5
22	22.5	22.0	22.0	31.5	29.5	30.5	29.0	27.5	28.5	21.0	19.5	20.0
23	23.0	21.5	22.0	32.0	30.0	31.0	29.5	27.5	28.5	21.0	19.0	20.0
24	23.5	22.5	23.0	32.5	30.0	31.0	30.0	27.5	28.5	21.5	19.5	20.5
25	23.0	22.0	22.5	32.5	30.5	31.5	30.0	27.5	28.5	21.0	20.0	20.5
26	22.5	21.5	22.0	33.0	30.5	31.5	30.0	28.0	29.0	20.5	19.5	20.0
27	23.5	22.5	23.0	33.0	31.0	32.0	30.0	27.5	29.0	21.0	20.5	20.5
28	23.0	23.0	23.0	33.5	31.0	32.0	30.5	28.0	29.5	20.5	19.0	19.5
29	23.0	22.0	22.5	33.5	31.0	32.0	30.5	28.5	29.5	19.0	18.0	18.5
30	24.5	22.0	22.5	33.5	31.0	32.0	30.5	28.5	29.5	19.0	17.5	18.5
31	---	---	---	33.0	31.0	32.0	30.0	28.5	29.0	---	---	---
MONTH	---	---	---	33.5	21.5	26.4	33.0	27.5	29.9	---	---	---

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

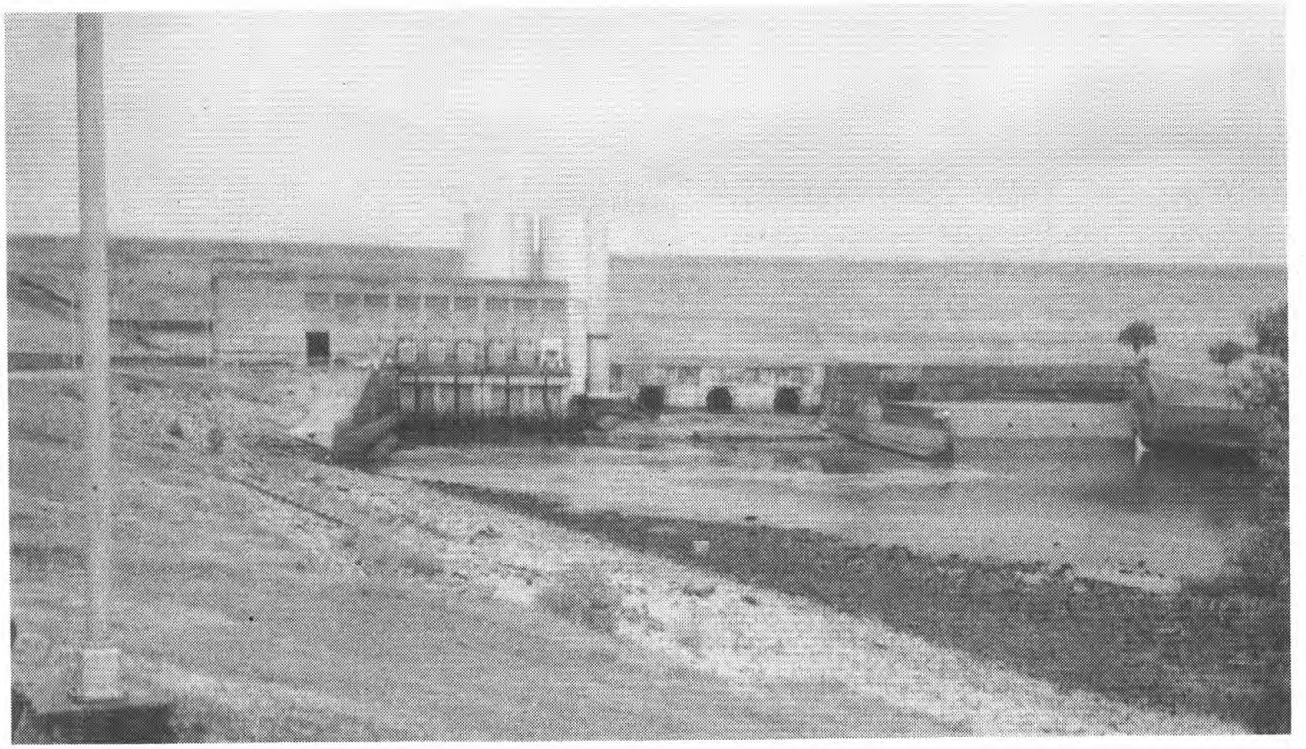
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.5	5.7	6.0	7.0-	6.1	6.5	7.7	6.4	7.3	---	---	---
2	7.1	5.8	6.3	9.1	6.6	8.0	7.8	6.9	7.6	---	---	---
3	7.6	4.8	6.3	8.8	8.0	8.4	7.6	6.9	7.4	---	---	---
4	7.3	6.5	6.9	9.2	8.5	8.9	7.3	6.1	6.9	---	---	---
5	8.3	6.2	6.9	9.4	8.9	9.2	7.2	6:3	6.9	---	---	---
6	---	---	---	9.5	9.1	9.3	7.6	6.6	7.1	---	---	---
7	---	---	---	9.5	9.0	9.3	8.6	7.6	8.1	---	---	---
8	8.6	7.3	8.0	9.9	9.3	9.5	9.5	8.6	9.1	---	---	---
9	8.7	7.4	8.3	9.8	9.4	9.7	9.9	9.3	9.6	---	---	---
10	8.6	7.4	8.2	10.0	9.1	9.5	9.9	9.5	9.8	---	---	---
11	8.8	7.4	8.3	10.1	9.9	10.0	10.2	9.5	9.9	---	---	---
12	8.9	7.9	8.5	10.1	9.8	10.0	10.2	9.7	10.0	---	---	---
13	9.0	8.3	8.7	10.0	9.6	9.8	10.2	9.6	10.0	---	---	---
14	9.0	8.2	8.8	9.7	9.0	9.5	10.2	9.4	10.1	---	---	---
15	8.8	8.1	8.6	9.5	8.5	9.2	10.2	9.3	9.9	---	---	---
16	8.8	8.6	8.7	9.3	8.5	9.0	---	---	---	---	---	---
17	8.7	8.2	8.6	8.9	8.6	8.8	---	---	---	---	---	---
18	8.8	6.6	7.5	8.9	7.3	8.5	---	---	---	---	---	---
19	8.5	8.0	8.3	8.3	7.6	8.1	---	---	---	---	---	---
20	8.6	8.2	8.4	8.2	7.0	7.8	---	---	---	---	---	---
21	8.9	8.2	8.6	8.5	7.1	8.1	---	---	---	---	---	---
22	9.0	8.2	8.7	8.7	7.4	8.3	---	---	---	11.8	10.3	10.9
23	9.1	8.2	8.9	8.6	7.1	8.2	---	---	---	11.4	9.8	10.7
24	9.0	8.1	8.7	8.5	7.5	8.3	---	---	---	11.4	9.1	10.2
25	8.9	8.5	8.7	8.3	7.2	7.9	---	---	---	11.5	9.0	10.3
26	8.6	7.5	8.2	8.4	7.1	7.9	---	---	---	12.1	10.3	11.1
27	8.2	7.3	7.9	8.4	7.5	8.2	---	---	---	11.2	8.0	10.2
28	8.0	7.6	7.9	8.2	7.3	7.8	---	---	---	9.8	4.2	7.1
29	7.9	6.2	7.3	8.1	6.9	7.5	---	---	---	10.0	7.9	9.1
30	7.2	6.2	6.9	7.5	6.2	7.0	---	---	---	12.8	10.0	11.9
31	6.9	6.3	6.7	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	10.1	6.1	8.6	---	---	---	---	---	---

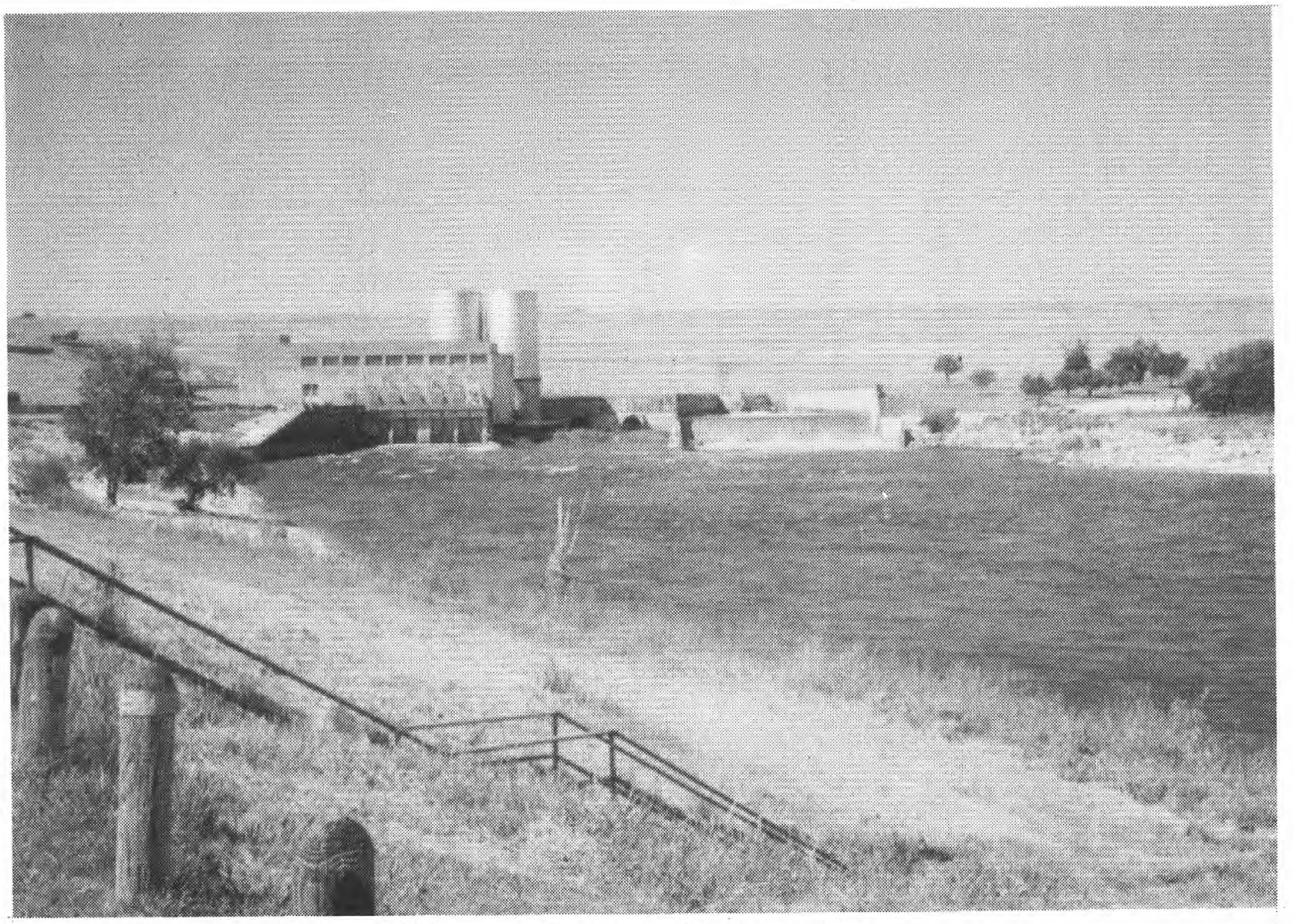
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	10.5	9.3	9.8	10.7	10.5	10.6
2	---	---	---	---	---	---	9.9	8.8	9.4	10.7	10.5	10.6
3	---	---	---	---	---	---	9.3	8.5	8.8	10.7	10.6	10.6
4	10.9	10.7	10.8	---	---	---	9.6	8.0	8.7	10.6	7.6	8.7
5	10.9	10.8	10.9	12.0	10.9	11.4	9.4	8.3	8.7	7.6	6.1	6.9
6	10.8	10.4	10.6	12.1	10.8	11.3	9.9	8.1	8.9	6.1	5.5	5.7
7	10.4	9.6	9.9	12.2	10.8	11.4	9.8	8.3	8.9	---	---	---
8	10.2	10.0	10.1	11.4	10.1	11.0	9.6	8.0	8.7	---	---	---
9	10.3	10.2	10.3	11.4	10.8	11.1	10.3	7.7	8.8	---	---	---
10	10.4	10.1	10.3	11.5	11.1	11.3	10.6	7.7	8.8	---	---	---
11	---	---	---	11.8	11.5	11.6	10.9	7.7	9.0	---	---	---
12	---	---	---	11.6	11.4	11.5	11.0	7.8	9.1	---	---	---
13	---	---	---	12.4	11.5	12.0	9.4	7.6	8.3	---	---	---
14	---	---	---	13.3	12.4	12.7	8.1	7.3	7.6	---	---	---
15	---	---	---	12.8	12.4	12.6	8.8	6.2	7.7	---	---	---
16	---	---	---	12.4	11.7	12.0	9.7	8.8	9.3	---	---	---
17	---	---	---	11.7	11.3	11.5	10.5	9.4	9.8	---	---	---
18	---	---	---	11.6	11.3	11.5	11.8	9.6	10.5	---	---	---
19	---	---	---	11.8	11.5	11.6	12.5	9.8	10.8	---	---	---
20	---	---	---	11.8	11.6	11.7	12.0	9.3	10.4	---	---	---
21	---	---	---	11.7	11.4	11.5	10.5	8.5	9.4	10.3	8.6	9.8
22	---	---	---	11.6	11.3	11.5	9.2	7.1	8.3	9.1	7.8	8.4
23	---	---	---	11.4	11.2	11.3	7.9	6.5	7.6	---	---	---
24	---	---	---	11.6	11.3	11.5	8.6	7.9	8.2	---	---	---
25	---	---	---	11.7	11.4	11.6	9.0	8.4	8.6	---	---	---
26	---	---	---	11.5	10.7	11.2	8.4	7.7	7.9	---	---	---
27	---	---	---	10.7	10.5	10.6	7.7	7.2	7.5	---	---	---
28	---	---	---	10.8	10.5	10.6	7.2	6.4	6.6	---	---	---
29	---	---	---	11.0	10.6	10.8	9.7	7.0	8.4	---	---	---
30	---	---	---	10.9	10.2	10.6	10.6	9.7	10.4	---	---	---
31	---	---	---	10.5	9.6	10.1	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	12.5	6.2	8.8	---	---	---

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	9.0-	7.8	8.7	6.7	5.6	6.0	---	---	---
2	---	---	---	7.9	6.8	7.1	6.9	5.2	6.0	---	---	---
3	---	---	---	9.0	7.8	8.7	6.7	5.7	6.1	---	---	---
4	---	---	---	9.3	9.0	9.1	6.4	5.7	6.0	---	---	---
5	---	---	---	9.4	9.2	9.3	6.7	5.7	6.1	---	---	---
6	---	---	---	9.4	9.2	9.3	6.6	5.6	6.0	---	---	---
7	---	---	---	9.2	9.0	9.1	6.6	5.5	5.9	---	---	---
8	---	---	---	9.3	9.2	9.3	6.0	5.1	5.6	---	---	---
9	---	---	---	9.2	9.1	9.2	6.2	4.9	5.5	---	---	---
10	---	---	---	9.3	9.1	9.2	5.8	4.7	5.2	---	---	---
11	---	---	---	9.4	9.2	9.3	6.0	5.0	5.5	---	---	---
12	---	---	---	9.4	9.2	9.3	6.0	5.1	5.5	---	---	---
13	---	---	---	9.4	9.3	9.4	5.9	5.1	5.4	---	---	---
14	---	---	---	9.3	8.6	8.9	5.9	5.0	5.4	---	---	---
15	---	---	---	8.6	8.5	8.5	5.8	5.0	5.3	---	---	---
16	---	---	---	8.6	8.3	8.5	5.8	5.0	5.3	---	---	---
17	8.1	7.5	7.9	8.6	8.4	8.5	5.8	4.9	5.2	---	---	---
18	7.7	7.3	7.5	8.5	8.4	8.4	---	---	---	9.2	8.7	9.0
19	9.1	7.6	8.3	8.4	8.3	8.3	---	---	---	9.7	9.1	9.3
20	9.2	8.1	8.4	8.3	7.4	7.9	8.0	4.3	6.4	10.3	9.3	9.6
21	8.9	7.8	8.2	7.4	6.8	7.2	7.3	6.2	6.7	10.2	8.6	9.5
22	8.5	7.8	8.2	7.2	6.5	6.8	6.5	5.6	6.1	10.8	9.8	10.2
23	9.0	7.6	8.4	7.1	6.2	6.6	---	---	---	---	---	---
24	8.7	7.7	8.4	7.2	6.1	6.5	---	---	---	---	---	---
25	8.8	8.1	8.6	7.1	6.1	6.5	---	---	---	---	---	---
26	8.9	8.4	8.7	7.2	5.9	6.5	---	---	---	---	---	---
27	8.9	8.7	8.8	7.2	5.9	6.5	---	---	---	---	---	---
28	9.1	8.7	8.8	7.3	5.9	6.5	---	---	---	---	---	---
29	9.3	8.9	9.1	7.1	5.8	6.3	---	---	---	---	---	---
30	9.2	8.1	8.9	6.8	5.7	6.1	---	---	---	---	---	---
31	---	---	---	6.8	5.7	6.1	---	---	---	---	---	---
MONTH	---	---	---	9.4	5.7	8.0	---	---	---	---	---	---





Denison Dam near Denison, Tx

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.--Records fair. Flow slightly regulated since 1958 by Bluestem Lake (capacity 17,000 acre-ft) and since March 1977 by Birch Lake (capacity 19,200 acre-ft). Flow regulated since August 20, 1989 by Skiatook Lake (capacity 322,300 acre-ft) when conservation pool was first reached. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	703	2050	982	227	8900	194	371	4450	7430	6000	244	246
2	694	5290	683	342	2740	172	358	4240	4200	9370	241	246
3	2020	2960	427	353	3620	169	439	4140	3950	5010	e238	245
4	838	1860	1400	320	3640	166	434	11800	4120	3840	236	250
5	13300	1760	968	287	3450	174	467	17700	4050	3500	281	419
6	14900	1600	762	355	3530	180	440	12100	4010	3290	283	310
7	4300	1610	2020	435	7050	182	387	3360	4080	2580	287	269
8	1890	1970	2150	421	6130	1430	347	2370	4500	2410	276	714
9	1630	2180	1610	389	4170	2620	307	1990	4290	2330	270	302
10	1520	3110	1430	473	3630	2030	282	1950	3860	2320	273	900
11	1460	3630	1340	480	3170	1740	258	1800	4310	2420	264	1760
12	1420	2010	1270	468	2390	3630	244	2270	3070	2470	258	1160
13	1400	1660	1180	344	1640	11100	243	1840	2760	2310	256	4070
14	1390	1070	1110	250	1370	7860	951	1920	2800	1720	253	956
15	1300	890	469	219	1300	6360	783	3270	1830	1480	248	522
16	1060	836	314	208	1220	6830	870	3360	2670	1450	244	395
17	1380	792	242	200	547	5300	555	6780	4830	1400	246	341
18	5890	752	233	198	618	3940	394	3930	1450	1320	248	311
19	2500	407	645	197	439	3490	331	2350	2550	1270	245	319
20	1450	269	1010	179	375	3100	302	3480	8330	541	262	1030
21	1250	227	778	147	306	3970	283	5470	5780	405	258	475
22	1280	215	499	147	304	3150	860	3330	2570	330	258	358
23	1260	208	380	645	274	2810	1930	11700	5070	282	258	335
24	1220	199	307	494	261	2690	736	11400	7680	e295	253	317
25	1210	194	254	318	240	2570	9870	5820	6880	e310	254	975
26	1190	183	233	238	236	1190	19500	8440	4740	324	253	1640
27	1180	169	233	219	222	693	23300	5300	3160	287	254	978
28	1210	166	234	208	198	661	16200	4450	2630	269	261	1360
29	698	168	225	537	---	644	7150	4180	2510	266	251	797
30	327	1030	220	5230	---	517	4900	4120	3620	255	250	527
31	322	---	208	11700	---	393	---	5350	---	253	249	---
TOTAL	72192	39465	23816	26228	61970	79955	93492	164660	123730	60307	7952	22527
MEAN	2329	1316	768	846	2213	2579	3116	5312	4124	1945	257	751
MAX	14900	5290	2150	11700	8900	11100	23300	17700	8330	9370	287	4070
MIN	322	166	208	147	198	166	243	1800	1450	253	236	245
AC-FT	143200	78280	47240	52020	122900	158600	185400	326600	245400	119600	15770	44680

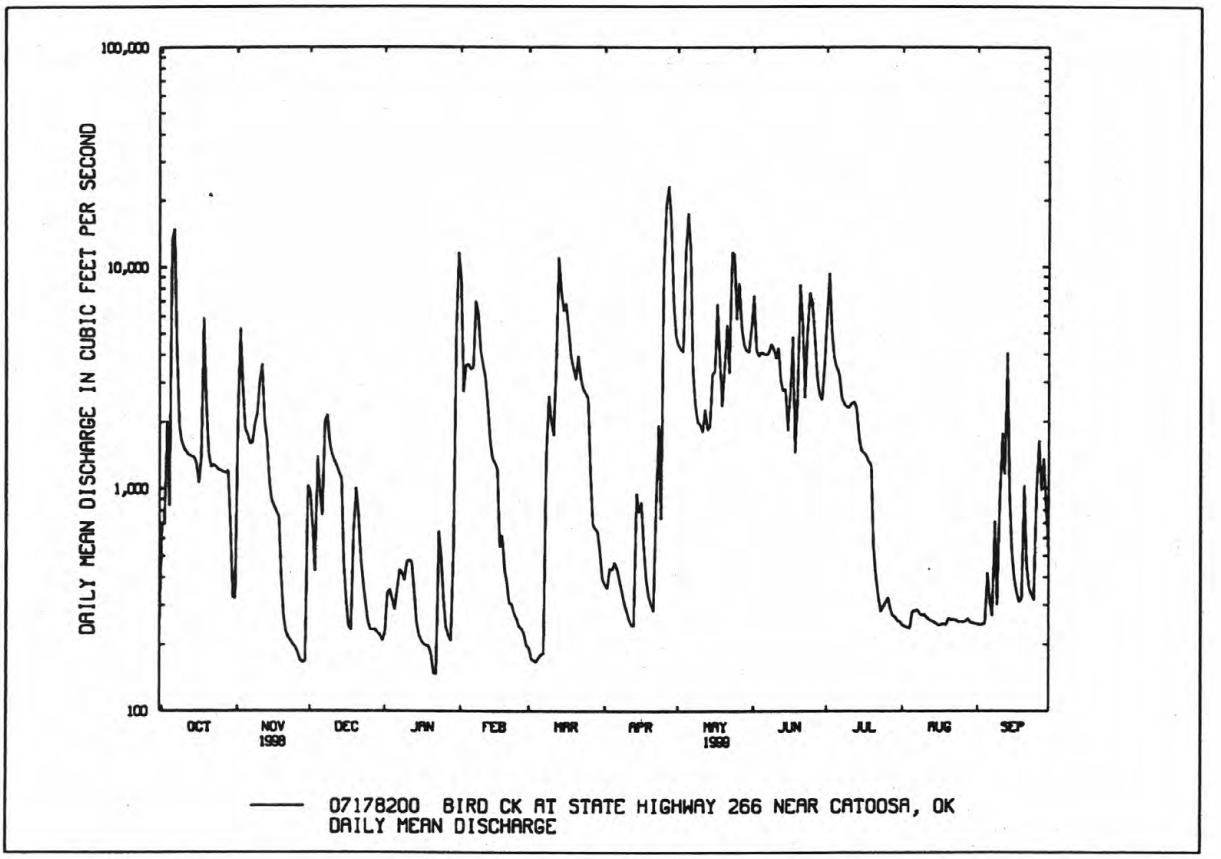
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1999, BY WATER YEAR (WY)

MEAN	549	899	749	804	951	1876	2149	2349	1990	1019	455	489
MAX	2329	2603	1854	2881	2213	6393	3646	5724	5658	3195	1596	917
(WY)	1999	1995	1993	1998	1999	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

e Estimated

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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1990 - 1999	
ANNUAL TOTAL	541236		776294			
ANNUAL MEAN	1483		2127		1190	
HIGHEST ANNUAL MEAN					2127	1999
LOWEST ANNUAL MEAN					278	1996
HIGHEST DAILY MEAN	17700	Apr 28	23300	Apr 27	25900	May 11 1993
LOWEST DAILY MEAN	166	Nov 28	147	Jan 21,22	62	Nov 6 1993
ANNUAL SEVEN-DAY MINIMUM	184	Nov 23	177	Mar 1	73	Oct 22 1992
INSTANTANEOUS PEAK FLOW			23700	Apr 27	27400	May 11 1993
INSTANTANEOUS PEAK STAGE			31.11	Apr 27	33.22	May 11 1993
INSTANTANEOUS LOW FLOW			73	Mar 4	62	Nov 6 1993
ANNUAL RUNOFF (AC-FT)	1074000		1540000		861900	
10 PERCENT EXCEEDS	4070		5250		3330	
50 PERCENT EXCEEDS	445		975		310	
90 PERCENT EXCEEDS	209		235		147	



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

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: August 1988 to current year.
pH: August 1988 to current year.
WATER TEMPERATURE: August 1988 to current year.
DISSOLVED OXYGEN: August 1988 to current year.

INSTRUMENTATION.--Water-quality monitor since August 1988.

REMARKS.--Interruptions in record were due to malfunction of the recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD:--
SPECIFIC CONDUCTANCE: Maximum, 1,420 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, 15.2 mg/l, Jan. 10, 1999; minimum, 1.9 mg/l, July 24, 1996.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 630 microsiemens, Mar. 8; minimum, 103 microsiemens, Oct. 6.
pH: Maximum, 8.1 units, Apr. 19, 20, Sept. 10, 11; minimum, 6.9 units, Oct. 5, 6.
WATER TEMPERATURE: Maximum, 32.0°C, July 29, 30; minimum, 1.5°C, Jan. 4.
DISSOLVED OXYGEN: Maximum recorded (more than 20 percent missing record), 15.2 mg/L, Jan. 10; minimum recorded, 3.8 mg/L, Aug. 13.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	475	245	296	---	---	---	434	329	378	477	458	469
2	342	241	299	---	---	---	419	329	375	567	467	521
3	309	265	286	---	---	---	410	370	387	528	449	482
4	323	297	311	---	---	---	413	246	332	494	479	487
5	323	109	168	---	---	---	458	352	402	499	481	489
6	142	103	123	---	---	---	429	382	394	516	483	505
7	219	142	187	299	215	237	404	341	384	483	444	456
8	246	210	230	243	205	223	341	220	261	480	375	417
9	250	159	226	241	203	223	265	223	241	387	363	377
10	250	230	241	313	222	243	268	254	263	387	353	370
11	247	232	242	242	218	231	268	248	259	389	354	369
12	247	234	241	242	217	228	263	243	255	399	372	384
13	247	233	242	247	232	242	262	241	252	410	383	391
14	248	232	241	273	247	258	254	236	249	438	410	421
15	250	231	241	280	254	267	321	251	283	439	417	429
16	257	242	253	280	254	269	348	307	325	446	430	439
17	---	---	---	280	260	270	368	343	355	465	438	453
18	---	---	---	285	262	274	400	368	381	454	417	439
19	---	---	---	341	279	302	496	326	371	442	420	435
20	248	223	238	383	332	350	382	323	348	441	432	437
21	269	247	260	387	351	373	369	317	341	490	441	476
22	262	244	253	407	367	386	383	349	362	521	486	511
23	252	235	247	403	374	392	403	381	388	563	454	523
24	256	237	249	401	384	393	406	386	398	461	418	433
25	253	234	246	418	395	409	409	398	403	543	461	504
26	250	233	244	442	401	423	427	409	420	553	530	542
27	252	237	245	443	405	426	444	427	438	572	553	559
28	281	234	253	438	410	427	453	421	441	583	572	578
29	304	261	276	439	409	427	455	426	436	612	508	574
30	340	291	328	424	232	323	464	449	457	508	226	313
31	---	---	---	---	---	---	468	456	462	289	135	184
MONTH	---	---	---	---	---	---	496	220	356	612	135	451

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

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	221	159	185	557	537	544	481	438	456	---	---	---
2	---	---	---	582	549	568	496	463	481	---	---	---
3	---	---	---	598	582	593	525	465	495	---	---	---
4	---	---	---	607	598	603	510	473	489	247	114	194
5	---	---	---	616	598	609	493	471	481	133	116	125
6	---	---	---	618	601	611	511	487	501	203	123	153
7	264	217	256	610	577	596	504	478	495	264	203	239
8	262	220	234	630	308	470	509	483	497	284	264	275
9	---	---	---	555	303	396	533	503	513	287	272	281
10	271	223	263	352	307	323	535	505	523	340	273	296
11	278	218	257	311	291	299	534	507	522	293	273	285
12	282	239	267	375	231	291	532	509	524	320	272	286
13	310	250	287	231	174	190	531	508	523	288	274	284
14	314	273	303	262	179	229	537	290	425	289	263	281
15	316	299	309	260	198	213	495	384	440	263	230	238
16	319	304	313	219	196	206	507	470	480	240	230	235
17	401	319	360	246	219	236	485	463	472	271	183	228
18	430	369	397	244	236	239	478	450	464	286	202	235
19	446	423	435	245	235	240	538	475	511	303	251	272
20	479	442	456	269	245	256	543	472	521	280	250	266
21	492	471	481	274	244	258	544	499	523	316	198	225
22	512	490	498	270	260	265	547	414	494	284	198	225
23	531	505	515	278	266	272	472	255	337	242	159	186
24	548	523	531	281	266	273	421	310	380	203	139	164
25	557	536	546	275	261	268	402	181	292	262	188	219
26	564	549	558	352	269	308	---	---	---	224	161	192
27	567	549	559	401	346	368	---	---	---	232	223	227
28	572	539	558	388	358	374	---	---	---	232	221	227
29	---	---	---	385	354	376	---	---	---	224	215	221
30	---	---	---	412	362	386	---	---	---	220	194	214
31	---	---	---	439	403	422	---	---	---	---	---	---
MONTH	---	---	---	630	174	364	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	219	175	200	358	332	348	344	320	331
2	---	---	---	191	128	153	354	342	350	346	322	338
3	---	---	---	206	188	199	350	338	345	339	313	331
4	---	---	---	212	204	207	355	304	328	334	308	326
5	---	---	---	212	202	208	351	309	337	356	317	337
6	---	---	---	212	204	208	360	345	353	317	267	285
7	---	---	---	219	208	215	366	349	359	326	312	320
8	---	---	---	229	214	220	357	329	349	323	221	260
9	---	---	---	218	209	215	350	336	344	323	278	304
10	261	235	242	---	---	---	360	341	349	326	169	290
11	304	225	252	---	---	---	363	341	354	229	162	194
12	233	218	227	---	---	---	366	339	354	311	229	277
13	237	226	232	---	---	---	361	317	348	339	137	214
14	243	228	234	---	---	---	360	330	348	255	227	245
15	260	238	251	---	---	---	351	329	343	270	242	261
16	330	226	253	---	---	---	345	296	331	289	264	275
17	268	166	193	---	---	---	351	306	339	308	280	293
18	242	208	227	---	---	---	343	319	335	317	290	303
19	301	204	242	---	---	---	342	303	332	326	297	313
20	247	162	190	---	---	---	357	316	343	410	184	277
21	222	170	189	---	---	---	350	331	344	321	265	299
22	241	218	227	---	---	---	353	335	346	399	321	349
23	351	172	223	349	334	342	351	325	340	399	330	358
24	249	172	204	360	329	345	344	324	337	358	330	346
25	217	171	190	390	330	358	344	325	337	416	204	346
26	225	175	209	361	341	349	345	327	340	356	204	267
27	233	222	228	363	338	351	344	321	336	356	290	326
28	242	223	234	364	345	356	343	325	336	303	212	242
29	243	214	231	369	349	359	340	313	329	325	249	290
30	335	219	245	366	342	356	330	312	324	326	298	310
31	---	---	---	363	337	352	331	314	325	---	---	---
MONTH	---	---	---	---	---	---	366	296	341	416	137	297

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

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.6	7.5	7.6	---	---	---	7.8	7.4	7.6	7.7	7.7	7.7
2	7.6	7.5	7.5	---	---	---	7.7	7.6	7.7	7.9	7.7	7.8
3	7.5	7.2	7.4	---	---	---	7.7	7.7	7.7	7.8	7.7	7.8
4	7.5	7.4	7.5	---	---	---	7.8	7.6	7.7	7.8	7.8	7.8
5	7.8	6.9	7.5	---	---	---	7.8	7.6	7.7	7.8	7.8	7.8
6	7.0	6.9	6.9	---	---	---	7.8	7.7	7.7	7.9	7.8	7.8
7	7.4	7.0	7.3	7.8	7.6	7.6	7.7	7.7	7.7	7.9	7.8	7.9
8	7.5	7.4	7.4	7.7	7.7	7.7	7.7	7.6	7.6	7.8	7.8	7.8
9	7.6	7.5	7.6	7.7	7.7	7.7	7.7	7.6	7.6	7.8	7.8	7.8
10	7.6	7.6	7.6	7.8	7.6	7.7	7.8	7.7	7.7	7.8	7.8	7.8
11	7.6	7.6	7.6	7.7	7.6	7.7	7.8	7.7	7.7	7.9	7.7	7.8
12	7.7	7.6	7.7	7.7	7.6	7.7	7.8	7.7	7.7	7.9	7.8	7.8
13	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.9	7.8	7.8
14	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.6	7.7	7.9	7.7	7.8
15	7.8	7.7	7.8	7.7	7.7	7.7	7.7	7.6	7.6	7.8	7.7	7.7
16	7.8	7.8	7.8	7.7	7.7	7.7	7.6	7.6	7.6	7.7	7.7	7.7
17	---	---	---	7.7	7.7	7.7	7.6	7.6	7.6	7.7	7.6	7.7
18	---	---	---	7.7	7.7	7.7	7.6	7.6	7.6	7.7	7.6	7.7
19	---	---	---	7.7	7.6	7.6	7.8	7.6	7.7	7.7	7.6	7.6
20	7.6	7.5	7.6	7.7	7.6	7.6	7.7	7.6	7.7	7.7	7.6	7.6
21	7.7	7.5	7.6	7.6	7.6	7.6	7.8	7.7	7.8	7.6	7.5	7.6
22	7.5	7.3	7.4	7.6	7.6	7.6	7.8	7.8	7.8	7.6	7.5	7.5
23	7.4	7.2	7.3	7.6	7.6	7.6	7.8	7.8	7.8	7.8	7.5	7.8
24	7.4	7.3	7.4	7.6	7.6	7.6	7.8	7.8	7.8	7.8	7.7	7.7
25	7.4	7.4	7.4	7.7	7.6	7.6	7.8	7.7	7.8	7.8	7.7	7.7
26	7.4	7.3	7.4	7.6	7.6	7.6	7.8	7.7	7.8	7.8	7.7	7.7
27	7.3	7.3	7.3	7.6	7.5	7.6	7.8	7.7	7.7	7.8	7.7	7.8
28	7.3	7.3	7.3	7.6	7.5	7.5	7.7	7.7	7.7	7.8	7.8	7.8
29	7.3	7.3	7.3	7.6	7.5	7.6	7.7	7.7	7.7	7.9	7.7	7.7
30	7.3	7.3	7.3	7.8	7.6	7.6	7.7	7.7	7.7	7.9	7.7	7.8
31	---	---	---	---	---	---	7.7	7.7	7.7	7.7	7.2	7.4
MAX	---	---	---	---	---	---	7.8	7.8	7.8	7.9	7.8	7.9
MIN	---	---	---	---	---	---	7.6	7.4	7.6	7.6	7.2	7.4

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.6	7.4	7.4	7.8	7.7	7.8	7.9	7.7	7.8	---	---	---
2	7.5	7.4	7.5	7.9	7.7	7.8	7.9	7.8	7.8	---	---	---
3	7.5	7.5	7.5	7.9	7.8	7.9	7.8	7.7	7.8	---	---	---
4	7.6	7.5	7.5	7.9	7.8	7.9	7.9	7.7	7.8	7.4	7.0	7.3
5	7.5	7.5	7.5	7.9	7.8	7.8	7.9	7.7	7.8	7.0	7.0	7.0
6	7.7	7.5	7.5	7.9	7.8	7.8	8.0	7.7	7.8	7.0	6.9	6.9
7	7.7	7.4	7.5	7.9	7.8	7.9	8.0	7.8	7.9	7.3	7.0	7.1
8	7.6	7.4	7.5	7.9	7.7	7.8	8.0	7.7	7.8	7.4	7.3	7.3
9	7.6	7.5	7.6	7.8	7.6	7.7	8.0	7.7	7.8	7.4	7.3	7.4
10	7.6	7.6	7.6	7.8	7.7	7.7	8.0	7.7	7.8	7.4	7.4	7.4
11	7.6	7.6	7.6	7.8	7.7	7.8	8.0	7.7	7.8	7.4	7.3	7.4
12	7.6	7.6	7.6	7.9	7.7	7.8	7.9	7.7	7.8	7.5	7.4	7.5
13	7.6	7.6	7.6	7.7	7.5	7.5	7.9	7.6	7.7	7.5	7.4	7.5
14	7.6	7.6	7.6	7.6	7.5	7.6	7.7	7.6	7.7	7.5	7.4	7.5
15	7.6	7.6	7.6	7.6	7.6	7.6	7.8	7.5	7.6	7.5	7.3	7.4
16	7.6	7.6	7.6	7.7	7.6	7.6	7.9	7.7	7.8	7.4	7.3	7.4
17	7.6	7.6	7.6	7.7	7.7	7.7	8.0	7.8	7.8	7.7	7.2	7.4
18	7.7	7.5	7.6	7.7	7.7	7.7	8.0	7.8	7.8	7.4	7.2	7.2
19	7.6	7.5	7.6	7.7	7.7	7.7	8.1	7.8	7.9	7.4	7.3	7.4
20	7.6	7.5	7.6	7.7	7.7	7.7	8.1	7.7	7.9	7.5	7.4	7.5
21	7.7	7.6	7.6	7.8	7.7	7.7	7.9	7.6	7.7	7.9	7.4	7.5
22	7.7	7.6	7.6	7.8	7.8	7.8	7.6	7.4	7.5	7.7	7.4	7.4
23	7.7	7.6	7.7	7.8	7.8	7.8	7.4	7.0	7.2	7.8	7.3	7.5
24	7.7	7.6	7.7	7.8	7.8	7.8	7.3	7.2	7.3	7.4	7.3	7.4
25	7.7	7.6	7.7	7.8	7.8	7.8	7.4	7.2	7.3	7.7	7.4	7.6
26	7.7	7.6	7.7	7.8	7.7	7.8	---	---	---	7.6	7.4	7.5
27	7.8	7.6	7.7	7.8	7.7	7.7	---	---	---	7.7	7.6	7.7
28	7.8	7.7	7.8	7.8	7.7	7.7	---	---	---	7.7	7.7	7.7
29	---	---	---	7.8	7.7	7.7	---	---	---	7.7	7.7	7.7
30	---	---	---	7.8	7.7	7.8	---	---	---	7.7	7.7	7.7
31	---	---	---	7.8	7.7	7.8	---	---	---	---	---	---
MAX	7.8	7.7	7.8	7.9	7.8	7.9	---	---	---	---	---	---
MIN	7.5	7.4	7.4	7.6	7.5	7.5	---	---	---	---	---	---

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

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	27.0	22.0	24.5	---	---	---	16.0	15.0	15.5	5.0	4.0	4.5
2	23.0	21.0	22.5	---	---	---	15.5	14.5	15.0	5.0	3.5	4.0
3	23.0	21.5	22.0	---	---	---	16.5	15.0	15.5	3.5	2.0	2.5
4	22.5	21.0	21.5	---	---	---	16.5	16.0	16.5	2.5	1.5	2.0
5	22.5	20.0	21.0	---	---	---	16.5	16.0	16.0	3.0	2.0	2.5
6	20.5	19.5	20.0	---	---	---	16.5	15.5	16.5	3.5	2.5	3.0
7	19.5	17.5	18.5	14.5	13.5	14.5	15.5	13.5	14.5	3.0	2.5	3.0
8	18.0	17.0	17.5	15.0	14.0	14.5	13.5	11.5	12.5	3.0	2.0	2.5
9	18.0	17.0	17.5	14.5	14.0	14.0	12.0	11.0	11.5	3.5	2.5	2.5
10	18.0	17.0	17.5	14.5	13.0	14.0	12.0	11.5	11.5	3.5	2.5	3.0
11	18.5	17.0	17.5	13.0	12.5	12.5	11.5	11.0	11.0	4.5	3.0	3.5
12	18.5	17.5	18.0	13.0	12.5	13.0	11.5	11.0	11.0	5.5	4.0	4.5
13	18.0	17.0	17.5	14.0	13.0	13.5	11.5	10.5	11.0	5.5	4.0	5.0
14	18.5	17.0	17.5	14.0	13.5	14.0	11.5	10.5	11.0	5.5	4.5	5.0
15	18.5	17.5	18.0	14.5	13.0	13.5	11.5	10.5	11.0	6.0	5.0	5.5
16	18.5	17.5	18.0	14.5	13.5	14.0	11.5	10.5	11.0	6.0	5.5	6.0
17	---	---	---	14.5	13.5	14.0	10.5	9.0	10.0	6.5	5.5	6.0
18	---	---	---	15.0	14.0	14.5	10.0	9.0	9.5	7.0	6.0	6.5
19	---	---	---	15.0	14.5	14.5	10.0	8.5	9.0	7.5	6.5	7.0
20	17.0	16.0	16.5	14.5	13.5	14.0	8.5	7.5	8.0	8.0	7.0	7.5
21	17.0	16.0	16.5	14.0	12.5	13.5	7.5	5.5	6.5	9.5	7.0	8.5
22	16.5	15.5	16.0	13.5	12.5	13.0	5.5	4.5	4.5	10.0	7.5	9.5
23	16.5	15.5	16.0	13.5	13.0	13.5	5.0	4.0	4.5	8.0	5.5	6.5
24	16.5	15.5	16.0	13.5	13.0	13.5	4.5	3.0	4.0	8.0	6.0	6.5
25	17.0	15.5	16.0	14.5	13.5	14.0	4.0	3.0	3.5	8.0	7.5	7.5
26	17.5	16.0	17.0	14.0	13.0	13.5	4.0	3.5	4.0	8.5	7.5	8.0
27	18.5	17.0	17.5	14.0	13.0	13.5	4.5	4.0	4.5	10.5	8.5	9.5
28	18.5	17.5	18.0	15.5	13.5	15.0	5.0	4.0	5.0	10.5	9.5	10.5
29	19.5	18.0	18.5	16.5	15.0	16.0	5.5	4.5	5.0	10.0	8.0	9.5
30	19.0	18.5	18.5	17.0	16.0	16.5	5.5	4.0	5.0	8.0	6.0	7.0
31	---	---	---	---	---	---	5.0	4.0	4.5	7.0	6.0	6.5
MONTH	---	---	---	---	---	---	16.5	3.0	9.6	10.5	1.5	5.7

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.0	6.0	6.5	14.0	13.5	14.0	17.0	15.0	15.5	---	---	---
2	7.5	6.5	7.0	14.5	13.0	14.0	17.5	16.5	17.0	---	---	---
3	7.0	6.5	7.0	13.0	12.0	12.5	17.5	17.0	17.5	---	---	---
4	7.0	6.5	7.0	12.5	12.0	12.5	19.0	16.5	17.5	18.0	16.0	17.5
5	7.5	6.5	7.0	13.5	12.5	13.0	19.0	18.0	18.5	18.5	17.5	18.0
6	10.5	7.5	8.0	13.5	11.5	12.5	19.5	17.5	18.5	19.5	18.5	19.0
7	10.5	9.0	9.5	11.5	10.5	11.0	19.5	17.5	18.5	19.0	18.0	18.5
8	9.0	8.0	8.5	11.0	7.5	9.5	20.0	19.0	19.5	19.0	17.5	18.5
9	9.0	8.5	8.5	9.5	8.0	9.0	20.0	18.5	19.0	19.5	18.0	19.0
10	9.5	8.5	9.0	9.5	8.5	9.0	20.0	19.0	19.5	19.5	18.5	19.0
11	10.5	9.5	10.0	10.0	8.5	9.0	20.0	19.0	19.5	19.0	18.5	18.5
12	9.5	8.5	8.5	9.5	6.5	8.5	20.0	19.0	19.5	19.0	18.0	18.5
13	8.5	8.0	8.5	6.5	4.5	5.5	19.5	18.5	19.0	19.5	18.0	18.5
14	9.0	8.0	8.0	5.5	4.0	4.5	18.5	15.5	17.0	19.0	18.0	18.5
15	9.5	8.0	9.0	6.5	5.0	5.5	16.5	15.0	16.0	19.0	17.5	18.0
16	10.5	9.0	9.5	8.5	6.5	8.0	16.0	14.5	15.0	18.0	18.0	18.0
17	11.0	9.0	9.5	10.0	8.5	9.5	15.5	14.0	14.5	19.0	18.0	18.5
18	11.0	9.5	10.0	10.0	9.5	10.0	16.5	14.0	15.0	21.0	19.0	20.0
19	10.5	9.5	10.0	9.5	9.0	9.5	18.0	15.0	16.5	20.5	18.5	19.5
20	11.0	9.5	10.0	9.5	9.0	9.5	19.5	16.5	18.0	19.0	18.0	18.5
21	11.0	9.5	10.0	10.5	9.0	9.5	20.0	18.5	19.0	19.5	18.0	18.5
22	10.0	8.0	8.5	11.0	9.5	10.5	21.0	19.0	19.5	21.5	19.5	20.5
23	9.5	8.5	8.5	11.0	10.0	10.5	20.5	18.0	18.5	21.0	19.0	20.0
24	10.0	8.5	9.0	10.5	10.0	10.0	18.0	17.0	17.5	21.0	20.0	20.5
25	11.5	10.0	10.5	10.5	10.0	10.0	---	---	---	21.5	20.0	20.5
26	13.5	11.5	12.5	12.0	10.0	11.0	---	---	---	20.0	19.5	19.5
27	14.0	13.5	13.5	12.0	11.0	11.5	---	---	---	19.5	18.5	19.0
28	14.0	13.0	13.5	11.5	11.0	11.5	---	---	---	19.5	18.5	19.0
29	---	---	---	13.5	11.0	12.0	---	---	---	19.5	19.0	19.0
30	---	---	---	15.0	12.5	13.5	---	---	---	19.5	19.0	19.0
31	---	---	---	15.5	14.0	14.5	---	---	---	---	---	---
MONTH	14.0	6.0	9.2	15.5	4.0	10.4	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	24.5	23.0	23.5	31.5	31.0	31.5	29.0	28.0	28.5
2	---	---	---	25.5	23.5	24.5	---	---	---	28.5	28.0	28.0
3	---	---	---	25.5	24.0	24.5	31.5	30.5	31.0	28.5	27.5	28.0
4	---	---	---	24.0	23.0	23.5	30.5	30.0	30.5	28.5	28.0	28.5
5	---	---	---	24.0	23.0	23.5	30.0	29.0	29.5	28.5	27.0	27.5
6	---	---	---	24.0	23.0	23.5	30.0	29.0	29.5	28.0	26.5	27.5
7	---	---	---	24.0	23.5	24.0	30.5	29.5	30.0	28.5	28.0	28.0
8	---	---	---	24.0	23.0	23.5	31.0	30.0	30.5	28.5	25.5	26.5
9	---	---	---	24.5	23.5	24.0	31.0	30.0	30.5	27.0	26.0	26.5
10	20.5	20.0	20.0	---	---	---	31.5	30.5	31.0	26.5	22.0	25.0
11	22.5	19.5	21.5	---	---	---	31.5	30.5	31.0	22.5	21.0	22.0
12	21.5	21.0	21.0	---	---	---	31.5	30.5	31.0	23.0	22.5	22.5
13	21.0	20.5	20.5	---	---	---	31.0	30.0	30.5	23.5	21.0	22.0
14	21.0	20.0	20.5	---	---	---	30.0	29.0	29.5	23.0	21.5	22.0
15	21.5	20.5	21.0	---	---	---	29.0	28.5	29.0	23.0	22.0	22.5
16	21.5	20.5	21.0	---	---	---	29.5	28.5	29.0	23.0	22.0	22.5
17	22.5	20.5	21.5	---	---	---	29.0	28.0	28.5	23.5	22.0	22.5
18	22.5	21.0	22.0	---	---	---	29.0	28.0	28.5	23.5	22.5	22.5
19	22.0	20.0	21.0	---	---	---	29.5	28.5	29.0	22.5	22.0	22.5
20	20.5	19.5	20.0	---	---	---	29.0	27.5	28.0	23.0	20.5	21.5
21	22.5	20.5	21.5	---	---	---	28.5	27.5	28.0	21.0	20.0	20.5
22	23.0	22.0	22.5	---	---	---	28.5	28.0	28.5	21.0	19.5	20.5
23	23.0	22.0	22.5	31.0	29.0	30.0	28.5	28.0	28.5	21.0	19.5	20.0
24	23.5	22.5	23.5	31.0	29.5	30.5	28.5	28.0	28.0	22.0	20.0	20.5
25	23.0	22.0	22.5	31.5	30.0	31.0	28.5	27.5	28.0	22.0	20.0	21.0
26	23.0	22.0	22.5	31.5	30.0	31.0	29.0	28.0	28.5	21.0	19.5	20.0
27	23.5	23.0	23.0	31.5	30.5	31.0	29.0	28.0	28.5	21.5	20.5	21.0
28	23.5	23.5	23.5	31.5	30.5	31.0	29.5	28.5	29.0	21.0	19.5	20.0
29	23.5	22.5	23.0	32.0	31.0	31.5	29.5	29.0	29.5	19.5	18.0	18.5
30	24.5	22.5	23.0	32.0	31.0	31.5	29.5	29.0	29.0	19.5	18.0	18.5
31	---	---	---	31.5	30.5	31.0	29.0	28.5	29.0	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	29.0	18.0	23.2

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

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

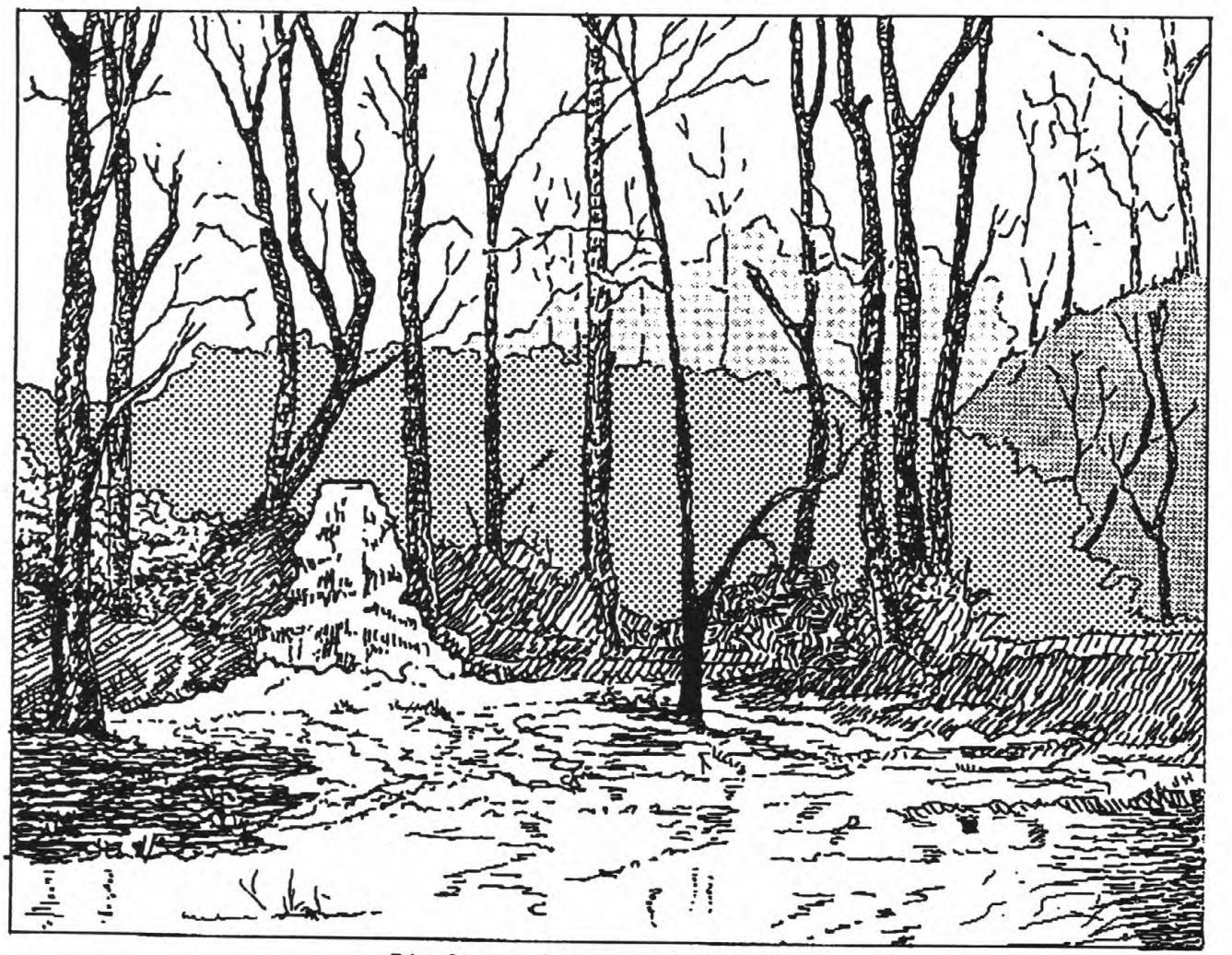
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.8	4.7	5.8	---	---	---	10.3	8.2	9.7	13.6	13.3	13.4
2	6.9	6.2	6.6	---	---	---	11.0	10.0	10.6	14.1	13.2	13.7
3	6.8	4.1	5.8	---	---	---	10.5	9.4	10.1	14.6	13.4	14.0
4	6.5	5.7	6.3	---	---	---	10.5	8.9	9.8	14.4	13.9	14.1
5	8.0	6.1	6.8	---	---	---	9.4	8.4	9.0	14.8	14.0	14.3
6	6.4	5.8	6.1	---	---	---	10.1	8.9	9.5	14.9	13.6	14.2
7	---	---	---	11.7	10.0	10.9	10.7	9.8	10.2	15.1	14.5	14.8
8	---	---	---	10.7	9.7	10.3	11.5	10.4	11.1	15.0	14.5	14.8
9	---	---	---	11.0	9.3	10.3	12.2	11.5	11.8	15.1	14.3	14.6
10	---	---	---	11.4	9.6	11.0	12.5	12.0	12.2	15.2	14.6	14.9
11	---	---	---	11.6	11.3	11.5	12.6	12.1	12.4	15.1	14.5	14.8
12	---	---	---	11.8	11.6	11.7	12.6	12.1	12.4	14.6	14.1	14.3
13	---	---	---	11.9	11.5	11.7	12.6	12.2	12.4	14.2	13.3	13.7
14	---	---	---	11.6	11.2	11.4	12.5	12.1	12.2	14.0	13.2	13.5
15	---	---	---	11.6	11.1	11.3	12.5	12.0	12.2	13.6	12.9	13.3
16	---	---	---	11.6	11.1	11.3	12.5	11.7	12.1	13.4	12.9	13.2
17	---	---	---	11.6	11.2	11.3	12.6	11.6	12.2	13.3	12.9	13.1
18	---	---	---	11.6	10.9	11.3	12.3	12.0	12.2	13.1	12.6	12.9
19	---	---	---	10.9	10.5	10.7	12.5	11.9	12.3	13.0	12.6	12.9
20	---	---	---	10.7	10.3	10.6	13.7	12.3	13.1	13.1	12.5	12.9
21	---	---	---	10.8	10.2	10.5	14.1	13.2	13.7	12.7	11.7	12.3
22	---	---	---	10.9	10.4	10.7	14.7	13.7	14.1	12.0	10.8	11.4
23	---	---	---	10.9	9.8	10.6	14.5	13.7	14.1	13.6	11.0	12.4
24	10.2	9.3	9.9	10.7	10.3	10.5	14.5	13.7	14.1	13.4	12.2	12.5
25	10.4	10.1	10.2	10.6	9.8	10.2	14.4	13.6	14.0	12.6	12.0	12.2
26	10.6	9.7	10.1	10.4	9.9	10.1	14.4	13.5	14.0	12.5	11.8	12.3
27	10.6	10.3	10.4	10.5	10.1	10.4	14.1	13.6	13.9	12.6	11.7	12.1
28	10.4	9.9	10.2	10.5	9.8	10.1	14.2	13.4	13.8	11.9	11.3	11.6
29	10.1	9.6	9.8	10.3	8.8	9.9	13.7	13.2	13.5	12.4	10.0	11.0
30	9.6	8.6	9.2	10.5	8.1	9.1	13.8	13.0	13.4	13.6	12.4	13.0
31	---	---	---	---	---	---	13.7	13.1	13.5	13.3	12.5	12.9
MONTH	---	---	---	---	---	---	14.7	8.2	12.2	15.2	10.0	13.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.3	12.6	12.9	---	---	---	9.8	9.0	9.5	---	---	---
2	13.8	13.1	13.5	---	---	---	9.6	8.6	9.1	---	---	---
3	14.2	13.8	14.1	---	---	---	9.1	8.1	8.5	---	---	---
4	14.3	14.1	14.2	---	---	---	9.5	8.1	8.7	10.8	7.9	9.1
5	14.3	14.2	14.3	---	---	---	9.4	8.0	8.7	7.9	6.6	7.3
6	14.2	12.4	13.9	11.9	10.3	11.0	10.0	7.9	8.9	6.6	5.7	6.0
7	12.8	12.4	12.6	12.4	11.0	11.7	9.8	8.0	8.9	9.2	6.3	7.8
8	13.2	12.8	13.1	12.4	10.9	11.6	9.6	7.6	8.5	9.6	9.0	9.2
9	13.5	13.2	13.4	11.5	10.7	11.2	9.8	7.5	8.5	9.6	9.2	9.4
10	13.4	13.2	13.4	11.6	11.2	11.4	9.8	7.5	8.6	10.5	8.7	9.2
11	13.2	12.7	12.9	11.8	11.6	11.7	9.8	7.7	8.7	13.5	9.1	9.5
12	13.2	12.9	13.1	12.1	11.4	11.7	9.8	7.9	8.7	11.7	8.5	9.4
13	13.2	12.7	13.0	12.6	11.9	12.2	9.6	7.3	8.1	9.9	9.4	9.6
14	12.9	12.7	12.8	13.2	12.5	12.8	8.1	6.4	7.7	9.9	9.3	9.6
15	12.8	12.2	12.5	12.8	12.5	12.7	8.7	7.1	7.9	10.2	9.7	10.0
16	12.2	11.9	12.0	12.5	11.8	12.0	9.5	8.5	9.0	10.3	9.9	10.1
17	11.9	11.4	11.7	11.8	11.3	11.5	10.2	8.9	9.4	10.3	8.3	9.4
18	11.4	10.8	11.1	11.6	11.3	11.5	10.6	8.8	9.6	8.4	7.7	8.0
19	10.9	10.6	10.8	11.9	11.6	11.7	10.8	8.9	9.8	10.0	8.1	8.9
20	11.0	10.5	10.8	11.7	11.6	11.7	10.8	8.6	9.6	10.6	9.8	10.0
21	10.9	10.4	10.7	11.7	11.4	11.5	10.2	8.0	8.8	11.8	8.6	9.8
22	10.8	10.3	10.6	11.5	11.3	11.4	9.2	6.5	7.6	9.1	7.9	8.4
23	10.5	10.0	10.3	11.3	11.1	11.2	7.8	6.5	7.4	9.3	6.9	8.1
24	10.2	9.8	10.0	11.4	11.3	11.3	8.1	7.8	7.9	7.3	6.8	7.0
25	---	---	---	11.5	11.3	11.4	8.7	8.1	8.4	9.4	6.9	8.5
26	---	---	---	11.4	10.7	11.1	---	---	---	9.6	8.5	9.1
27	---	---	---	10.7	10.4	10.5	---	---	---	10.3	9.6	10.0
28	---	---	---	10.7	10.4	10.5	---	---	---	10.1	9.8	10.0
29	---	---	---	10.8	10.4	10.6	---	---	---	10.2	9.8	10.0
30	---	---	---	10.6	10.2	10.4	---	---	---	10.1	9.8	9.9
31	---	---	---	10.2	9.5	9.8	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

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

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	8.2	6.8	7.5	6.5	5.6	6.1	7.8	6.6	7.1
2	---	---	---	7.4	6.5	6.7	6.4	5.8	6.1	7.0	5.9	6.4
3	---	---	---	9.2	6.6	8.2	---	---	---	6.9	5.9	6.4
4	---	---	---	9.5	9.2	9.4	7.2	5.9	6.3	7.4	5.5	6.4
5	---	---	---	9.6	9.5	9.6	7.8	7.1	7.3	7.4	5.4	6.6
6	---	---	---	9.7	9.6	9.6	7.8	6.8	7.2	7.0	5.7	6.3
7	---	---	---	9.6	9.2	9.4	7.4	6.5	6.9	7.7	6.4	6.9
8	---	---	---	9.5	9.3	9.4	6.9	6.0	6.4	7.9	5.3	6.1
9	---	---	---	9.3	9.1	9.2	6.4	5.6	6.0	---	---	---
10	11.4	10.3	10.8	---	---	---	6.5	3.9	5.3	---	---	---
11	11.6	10.0	10.7	---	---	---	5.7	4.6	5.0	---	---	---
12	12.2	11.1	11.6	---	---	---	5.6	4.0	4.6	---	---	---
13	12.4	12.0	12.2	---	---	---	6.3	3.8	4.8	6.6	5.3	6.0
14	12.5	12.2	12.3	---	---	---	6.4	5.5	5.9	5.6	5.3	5.5
15	12.3	11.7	12.0	---	---	---	6.9	5.7	6.2	5.5	5.2	5.4
16	12.1	10.5	11.6	---	---	---	7.5	6.1	6.6	5.5	5.3	5.4
17	---	---	---	---	---	---	7.5	5.8	6.7	6.1	5.5	5.6
18	---	---	---	---	---	---	7.9	7.0	7.4	6.2	5.7	5.9
19	---	---	---	---	---	---	8.2	7.1	7.6	6.3	5.9	6.1
20	---	---	---	---	---	---	8.3	7.0	7.5	7.0	5.9	6.4
21	---	---	---	---	---	---	7.9	6.4	7.0	6.8	6.2	6.4
22	---	---	---	---	---	---	7.6	6.7	7.1	6.9	6.6	6.7
23	---	---	---	---	---	---	7.7	6.9	7.2	7.3	6.8	7.0
24	---	---	---	---	---	---	7.4	6.3	6.8	7.3	6.9	7.1
25	---	---	---	---	---	---	7.8	6.8	7.3	8.2	7.1	7.7
26	---	---	---	---	---	---	7.6	6.4	6.9	8.1	7.7	7.9
27	---	---	---	6.4	5.6	6.0	7.2	6.4	6.9	8.0	7.7	7.9
28	---	---	---	6.2	5.2	5.7	7.7	6.7	7.2	8.1	7.5	7.8
29	---	---	---	6.0	5.1	5.6	7.9	7.0	7.5	8.6	8.1	8.4
30	8.4	6.8	8.1	6.1	5.2	5.6	8.0	6.9	7.5	8.9	8.6	8.7
31	---	---	---	6.3	5.4	5.7	7.9	6.7	7.3	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---



Discharge from airshaft site No. 4

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.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--74.9 mi^2.

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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	35	24	11	226	10	31	92	523	647	9.2	3.1
2	28	34	19	30	128	25	33	75	165	611	4.2	6.1
3	23	8.0	18	13	81	22	57	66	76	191	3.7	3.1
4	6.2	5.3	131	4.5	64	5.1	60	409	51	99	5.5	3.0
5	871	4.1	87	3.9	49	4.1	47	776	42	65	6.1	3.0
6	257	3.7	62	4.3	152	28	42	238	44	50	6.6	3.0
7	71	10	60	4.6	661	15	33	143	72	53	11	3.5
8	25	8.5	29	4.6	281	176	28	107	57	58	7.3	18
9	17	5.5	19	4.0	141	219	37	94	40	36	7.5	2.8
10	12	93	25	3.9	87	90	26	83	144	46	7.7	2.6
11	11	18	19	4.1	93	65	24	75	223	27	7.7	44
12	11	18	15	4.5	81	363	18	730	78	23	6.1	51
13	11	15	14	28	62	1090	18	283	50	21	6.2	9.5
14	10	e13	13	15	47	647	75	132	103	21	11	3.6
15	10	e11	13	4.0	42	469	89	94	46	17	7.2	e1.3
16	10	8.3	13	3.2	55	489	28	73	58	21	7.4	e1.5
17	30	8.5	13	2.9	29	269	25	464	64	23	7.7	e1.4
18	31	18	22	2.9	30	157	21	421	32	19	7.9	e1.2
19	13	31	59	2.6	34	99	23	144	197	20	6.3	e1.4
20	11	21	29	2.6	29	147	21	80	1310	18	4.0	32
21	11	13	45	2.7	38	141	20	305	1560	8.5	7.2	6.2
22	12	14	35	16	13	89	66	184	325	17	3.3	3.7
23	11	15	17	36	17	74	240	610	471	21	4.0	2.0
24	11	16	17	24	16	60	111	309	543	17	4.7	1.5
25	10	16	12	45	15	56	1110	137	505	16	3.4	7.2
26	11	16	13	24	18	37	1990	94	233	16	3.3	7.6
27	10	17	14	25	33	37	1680	68	134	17	15	3.4
28	5.9	17	13	50	13	39	413	50	108	17	4.1	6.2
29	3.4	20	9.0	68	---	41	197	43	93	16	3.4	16
30	8.8	91	8.8	335	---	36	130	35	232	15	2.3	3.6
31	5.7	---	7.2	654	---	32	---	570	---	17	1.9	---
TOTAL	1588.0	603.9	875.0	1433.3	2535	5031.2	6693	6984	7579	2243.5	192.9	252.5
MEAN	51.2	20.1	28.2	46.2	90.5	162	223	225	253	72.4	6.22	8.42
MAX	871	93	131	654	661	1090	1990	776	1560	647	15	51
MIN	3.4	3.7	7.2	2.6	13	4.1	18	35	32	8.5	1.9	1.2
AC-FT	3150	1200	1740	2840	5030	9980	13280	13850	15030	4450	383	501

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1999, BY WATER YEAR (WY)

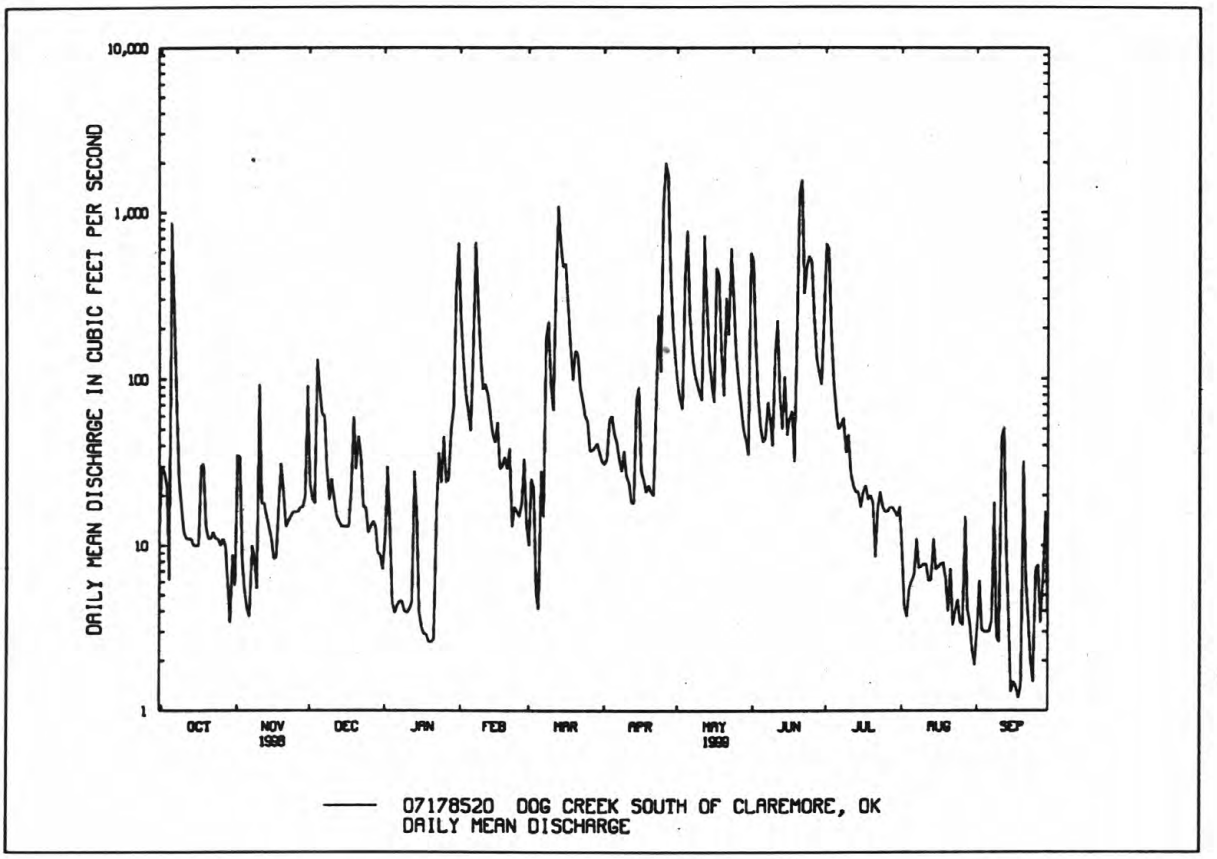
MEAN	32.2	17.5	37.5	61.6	55.3	210	138	133	129	44.8	6.20	10.1
MAX	51.2	20.1	46.8	77.0	90.5	258	223	225	253	72.4	6.22	12.0
(WY)	1999	1999	1998	1998	1999	1998	1999	1999	1999	1999	1999	1998
MIN	13.2	15.0	28.2	46.2	20.0	162	53.5	40.7	6.24	17.2	6.18	8.42
(WY)	1998	1998	1999	1999	1998	1999	1998	1998	1998	1998	1998	1999

e Estimated

07178520 DOG CREEK SOUTH OF CLAREMORE, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1997 - 1999	
ANNUAL TOTAL	18141.2		36011.3			
ANNUAL MEAN	49.7		98.7		73.1	
HIGHEST ANNUAL MEAN					98.7	1999
LOWEST ANNUAL MEAN					47.6	1998
HIGHEST DAILY MEAN	1150	Mar 17	1990	Apr 26	1990	Apr 26 1999
LOWEST DAILY MEAN	1.5	Jun 26	1.2	Sep 18	[a]1.2	Sep 12 1997
ANNUAL SEVEN-DAY MINIMUM	2.8	Jun 20	2.8	Sep 13	2.8	Jun 20 1998
INSTANTANEOUS PEAK FLOW			2280	Jun 20	2280	Jun 20 1999
INSTANTANEOUS PEAK STAGE			19.47	Jun 20	19.47	Jun 20 1999
ANNUAL RUNOFF (AC-FT)	35980		71430		52990	
10 PERCENT EXCEEDS	93		239		144	
50 PERCENT EXCEEDS	13		23		17	
90 PERCENT EXCEEDS	4.1		4.0		3.4	

[a]Also occurred Sept. 18, 1999.



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, -0.5°C, Jan. 3, 4, 1999.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 31.5°C, July 29; minimum, -0.5°C, Jan. 3, 4.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	25.0	21.0	23.0	18.5	17.5	18.0	15.5	13.5	14.0	4.0	2.5	3.0
2	21.0	20.0	20.5	17.5	16.0	16.5	14.5	13.0	14.0	4.0	1.0	2.5
3	22.0	20.5	21.5	16.0	15.0	15.5	16.0	14.5	15.5	1.0	-.5	.0
4	24.0	21.5	23.0	15.0	12.5	13.5	16.0	15.0	15.5	.5	-.5	.0
5	23.5	19.5	20.5	12.5	11.5	12.0	16.0	14.0	15.0	2.5	.0	1.0
6	22.0	21.0	21.5	12.0	10.0	11.0	16.0	14.0	15.5	5.0	2.0	3.0
7	21.0	19.5	20.0	11.5	11.0	11.5	14.0	11.5	12.5	4.0	3.5	4.0
8	20.0	18.0	19.0	12.0	11.0	11.5	11.5	9.5	10.5	3.5	1.5	3.0
9	19.5	17.5	18.0	14.0	12.0	12.5	9.5	8.0	8.5	1.5	.0	1.0
10	19.0	18.0	18.5	14.5	11.5	12.5	9.0	8.5	9.0	3.0	.0	1.5
11	19.5	18.0	18.5	11.5	10.0	11.0	---	---	---	5.0	1.5	3.0
12	20.5	19.0	19.5	11.0	10.5	10.5	---	---	---	8.0	4.0	6.0
13	19.0	17.5	18.0	12.0	11.0	11.5	8.5	7.0	7.5	7.0	2.0	4.0
14	19.5	17.5	18.5	---	---	---	8.5	7.0	7.5	3.0	2.0	2.5
15	20.5	19.0	19.5	---	---	---	---	---	---	5.5	2.0	4.0
16	21.0	19.5	20.0	---	---	---	---	---	---	7.0	4.5	5.5
17	21.5	20.0	21.0	14.0	12.0	13.0	---	---	---	8.5	5.5	7.0
18	20.0	17.5	18.5	14.5	13.0	13.5	8.5	7.5	8.0	8.0	6.0	7.0
19	17.5	16.5	17.0	14.0	11.5	13.5	8.5	7.5	8.0	9.0	5.5	7.5
20	17.0	16.0	16.5	11.5	10.0	10.5	7.5	6.5	7.0	9.5	6.0	8.0
21	17.5	16.0	16.5	11.0	10.0	10.5	6.5	3.5	5.0	12.5	8.5	10.5
22	16.5	15.0	15.5	11.5	10.0	10.5	3.5	1.5	2.0	11.0	7.0	9.5
23	15.5	14.0	15.0	13.0	11.0	12.0	2.5	2.0	2.0	7.0	5.0	5.5
24	15.5	14.0	14.5	13.0	11.5	12.0	2.5	1.5	2.0	6.5	4.5	5.5
25	16.5	14.5	15.5	14.0	12.5	13.0	2.5	1.0	1.5	6.5	5.5	6.0
26	18.0	15.5	17.0	13.0	11.5	12.0	3.0	1.5	2.0	7.5	5.0	6.0
27	19.0	17.5	18.0	13.0	11.0	12.0	4.5	2.5	3.5	10.5	7.5	9.0
28	19.5	18.5	18.5	15.5	12.0	14.0	5.0	4.0	4.0	10.5	7.5	9.0
29	21.0	18.5	19.5	16.5	15.0	16.0	5.5	3.5	4.5	7.5	6.5	7.0
30	19.0	17.0	17.5	16.5	15.0	15.5	4.0	2.5	3.0	7.5	6.5	7.0
31	18.5	17.0	17.5	---	---	---	3.5	2.0	2.5	7.0	6.5	6.5
MONTH	25.0	14.0	18.6	---	---	---	---	---	---	12.5	-.5	5.0

07178520 DOG CREEK SOUTH OF CLAREMORE, OK --Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.5	6.5	7.0	14.5	10.0	12.0	16.5	13.5	15.0	20.0	17.0	18.5
2	8.0	6.5	7.0	12.5	10.5	12.0	17.0	15.5	16.5	19.5	16.5	18.0
3	8.5	6.0	7.5	11.0	8.5	9.5	17.0	15.0	16.0	19.5	17.0	18.0
4	8.5	6.0	7.5	11.5	7.5	9.5	17.5	14.0	15.5	19.5	17.5	18.5
5	9.0	7.5	8.0	13.5	10.0	12.0	18.0	16.0	17.0	20.5	18.0	19.0
6	13.0	9.0	10.5	12.0	9.5	11.0	17.5	14.5	16.0	20.5	17.5	19.0
7	11.5	8.5	9.0	9.5	7.5	8.5	19.0	16.0	17.5	20.0	17.0	18.5
8	10.5	8.0	9.0	9.5	6.0	7.5	20.0	18.0	18.5	21.5	17.5	19.0
9	12.0	9.0	10.5	11.0	8.5	9.5	19.0	16.0	17.5	22.0	19.0	20.5
10	14.0	11.0	12.5	10.0	8.5	9.0	19.5	16.5	18.0	22.0	19.5	20.5
11	13.5	9.5	12.0	11.0	8.5	9.5	19.0	16.0	17.5	21.5	19.0	20.0
12	10.0	8.0	9.0	10.5	5.5	8.0	18.5	15.5	17.0	21.0	18.5	20.0
13	9.5	7.5	8.5	7.5	6.0	7.0	17.5	16.5	17.0	23.5	19.0	21.0
14	10.0	8.0	9.0	8.0	6.0	6.5	16.5	14.0	15.0	23.5	19.5	21.5
15	11.5	9.0	10.0	8.5	6.0	7.0	15.5	14.0	15.0	22.0	20.0	21.0
16	11.5	10.0	11.0	8.5	6.0	7.0	15.0	12.5	13.5	22.0	21.0	21.5
17	10.5	8.5	9.5	9.5	7.5	8.5	13.5	11.5	12.5	22.0	18.5	20.5
18	10.5	9.5	10.0	9.0	8.0	8.5	15.5	11.5	13.5	23.5	20.0	21.5
19	9.5	8.5	8.5	9.5	8.0	9.0	18.0	14.5	16.5	23.5	20.5	22.0
20	10.0	8.0	9.0	10.0	8.5	9.0	20.0	16.5	18.5	22.5	19.5	21.0
21	9.0	8.0	8.5	12.0	8.0	10.0	19.5	19.0	19.5	23.0	18.5	21.0
22	8.0	6.0	6.5	14.0	9.5	11.5	21.0	16.5	18.5	24.0	21.5	22.5
23	8.5	5.5	7.0	13.0	9.5	10.0	20.5	17.0	17.5	23.0	19.5	21.5
24	10.0	5.5	8.0	12.0	9.5	10.5	17.0	15.5	16.5	24.0	21.0	22.5
25	12.5	8.5	10.5	13.0	10.0	11.5	16.5	15.0	15.5	23.5	21.0	22.0
26	14.5	12.0	13.5	12.5	9.5	11.0	16.5	16.0	16.5	22.5	20.5	21.5
27	15.0	12.5	14.0	11.5	10.5	11.0	17.0	15.5	16.5	23.0	20.5	21.5
28	13.5	10.0	12.0	11.0	10.0	10.5	18.0	16.5	17.0	23.0	21.0	22.0
29	---	---	---	15.0	11.0	13.0	18.0	16.0	17.0	23.0	21.5	22.5
30	---	---	---	16.5	12.5	14.5	19.5	16.5	18.0	23.5	22.0	22.5
31	---	---	---	15.5	14.0	14.5	---	---	---	24.0	19.0	22.0
MONTH	15.0	5.5	9.5	16.5	5.5	10.0	21.0	11.5	16.5	24.0	16.5	20.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	24.0	22.5	23.5	25.0	23.5	24.5	30.5	28.0	29.0	27.5	24.0	25.5
2	26.5	23.0	24.5	26.5	25.0	25.5	31.0	28.0	29.0	26.5	24.5	25.5
3	27.5	25.5	26.5	27.5	24.5	26.0	29.0	26.5	28.0	28.0	24.5	26.0
4	27.0	24.5	25.5	28.0	25.0	26.5	28.0	26.0	27.0	28.0	25.0	26.5
5	26.0	24.5	25.5	28.0	25.5	27.0	29.0	25.5	27.0	26.5	25.0	25.5
6	25.5	24.5	25.0	28.0	26.5	27.5	29.0	26.0	27.5	27.0	24.0	25.5
7	26.0	22.5	24.5	28.0	27.0	27.5	29.5	27.0	28.0	28.0	24.5	26.0
8	27.0	24.0	25.5	29.0	26.5	27.5	30.5	28.0	29.0	26.0	23.5	24.5
9	26.5	25.0	26.0	29.5	27.5	28.5	30.5	27.5	28.5	25.5	20.0	23.0
10	26.5	22.0	24.5	29.0	26.0	27.0	30.0	27.5	29.0	22.5	18.5	20.5
11	27.0	22.0	25.0	26.0	24.5	25.0	31.0	27.5	29.0	22.5	20.5	21.5
12	27.0	25.5	26.0	24.5	23.5	24.0	31.0	28.0	29.5	22.0	21.0	21.5
13	26.5	25.5	25.5	25.0	22.5	23.5	29.5	27.0	28.0	23.0	20.5	21.5
14	26.5	24.5	25.5	26.5	23.5	25.0	27.5	25.0	26.0	23.0	16.0	20.0
15	25.5	23.0	24.0	28.0	25.5	26.5	28.0	24.5	26.0	---	---	---
16	24.5	21.5	23.0	27.5	25.5	26.5	28.0	24.5	26.0	---	---	---
17	24.0	21.5	22.5	28.0	26.0	27.0	28.0	24.5	26.0	---	---	---
18	24.0	22.0	23.0	29.0	26.5	27.5	28.0	24.5	26.0	20.5	16.0	18.5
19	23.5	18.5	21.5	29.5	27.0	28.0	28.5	25.5	26.5	23.0	17.5	19.0
20	23.0	21.5	22.5	30.0	27.5	28.5	26.5	23.5	25.0	21.5	17.5	19.5
21	23.0	21.0	22.0	30.0	27.0	28.5	27.0	23.5	25.0	19.5	17.5	18.5
22	22.5	21.5	22.0	30.0	27.0	28.5	28.0	24.5	26.0	18.5	15.5	17.0
23	22.5	21.5	22.0	30.0	28.0	29.0	27.5	25.0	26.5	18.5	15.5	17.0
24	23.0	22.0	22.5	31.0	28.0	29.0	27.5	24.5	26.0	19.5	14.5	17.5
25	24.0	22.5	23.0	31.0	28.0	29.0	27.0	23.0	25.0	20.0	18.0	19.0
26	26.0	22.5	24.0	31.0	28.5	29.5	27.5	24.0	25.5	21.5	20.0	20.5
27	26.5	23.5	25.0	31.0	28.5	29.5	27.0	24.0	25.5	21.5	20.0	20.5
28	26.0	23.5	24.5	31.0	28.0	29.5	29.0	25.0	27.0	20.5	18.0	19.0
29	25.5	24.5	25.0	31.5	28.5	29.5	28.5	25.0	27.0	19.0	15.5	17.0
30	26.0	23.0	24.5	31.0	28.0	29.5	29.0	25.0	26.5	17.5	14.5	16.0
31	---	---	---	30.5	28.0	29.0	28.0	23.5	26.0	---	---	---
MONTH	27.5	18.5	24.1	31.5	22.5	27.4	31.0	23.0	27.0	---	---	---

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.--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.

EXTREMES 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)
Oct 7	1100	53,700	21.74	May 4	2200	39,400	20.23
Oct 19	0600	25,500	17.00	Jun 21	1330	24,800	16.77
Nov 9	1500	36,000	19.75	Jun 25	2200	28,800	18.10
Mar 9	2300	20,700	14.37	Jul 2	1900	25,500	17.09
Apr 16	1930	31,300	18.86				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9930	3520	16900	1500	12100	1670	1570	13600	16700	18300	e150	50
2	18500	17400	17300	2530	12800	1630	1400	14900	22300	24500	e130	49
3	21500	27000	19100	e2810	6740	1560	1150	15500	21100	18500	1460	44
4	24200	28500	18500	1940	6380	1700	1080	27300	17400	8390	976	45
5	33900	29100	15100	2600	8190	1690	1060	37100	11100	5900	579	59
6	45500	29700	10500	1540	8060	1490	1060	36100	10400	5040	e490	128
7	52900	31000	14400	1480	10500	1400	1490	33300	10800	4590	1060	91
8	44900	33400	20300	1490	11600	3520	4410	27900	11200	4700	1180	73
9	34500	34700	20300	1490	10300	16800	6350	17800	9830	5880	1080	67
10	17100	34200	13700	1450	6760	18100	7800	15800	9010	6680	694	64
11	9830	33100	9690	1220	5150	9650	7040	15600	8470	8890	330	80
12	11800	31400	8970	1590	5210	5080	3760	15400	8220	6100	223	82
13	11900	30400	8370	1890	6800	5490	2940	17000	9500	4100	169	77
14	11500	28800	6990	1820	5640	6040	8080	12700	7580	4110	118	73
15	11200	23600	6330	1950	4400	9890	26000	11500	5600	4860	100	70
16	10900	19200	6080	1900	4130	14800	30700	13000	5360	4650	1030	65
17	11100	17900	5830	1850	6720	9310	30700	16800	6470	4290	1150	63
18	22000	17300	5610	1850	6170	4850	24900	19500	5350	3780	1100	62
19	25100	17000	5470	1890	3450	3190	7810	20800	7710	2910	1060	555
20	23500	17600	5510	1890	3310	3880	9720	17100	14900	1800	843	1120
21	15400	17300	5040	1880	4440	4390	11900	12500	23500	910	478	984
22	11500	16800	4030	2140	4010	3110	14300	10900	12400	1240	274	986
23	11900	16700	3350	3210	3650	2440	17800	13000	4920	1770	177	948
24	12400	16400	2830	3690	3290	2060	13400	13100	9420	1210	132	826
25	11200	16000	2570	3420	2230	1780	21100	11900	26800	769	115	582
26	10400	15900	2320	2870	1600	1590	34500	11900	23200	e600	108	368
27	9890	16000	2140	2490	1610	1430	37900	12000	10200	443	96	237
28	9340	16100	2100	2300	1720	1680	36400	12000	8310	e350	84	188
29	8330	16000	2090	2400	---	1930	32600	12600	20300	e300	71	170
30	6150	16400	2060	3280	---	1720	22400	12800	24000	e250	61	8550
31	4000	---	1750	6300	---	1620	---	13200	---	e190	53	---
TOTAL	562270	668420	265230	70660	166960	145490	421320	534600	382050	156002	15571	16756
MEAN	18140	22280	8556	2279	5963	4693	14040	17250	12740	5032	502	559
MAX	52900	34700	20300	6300	12800	18100	37900	37100	26800	24500	1460	8550
MIN	4000	3520	1750	1220	1600	1400	1060	10900	4920	190	53	44
AC-FT	1115000	1326000	526100	140200	331200	288600	835700	1060000	757800	309400	30890	33240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1999, BY WATER YEAR (WY)

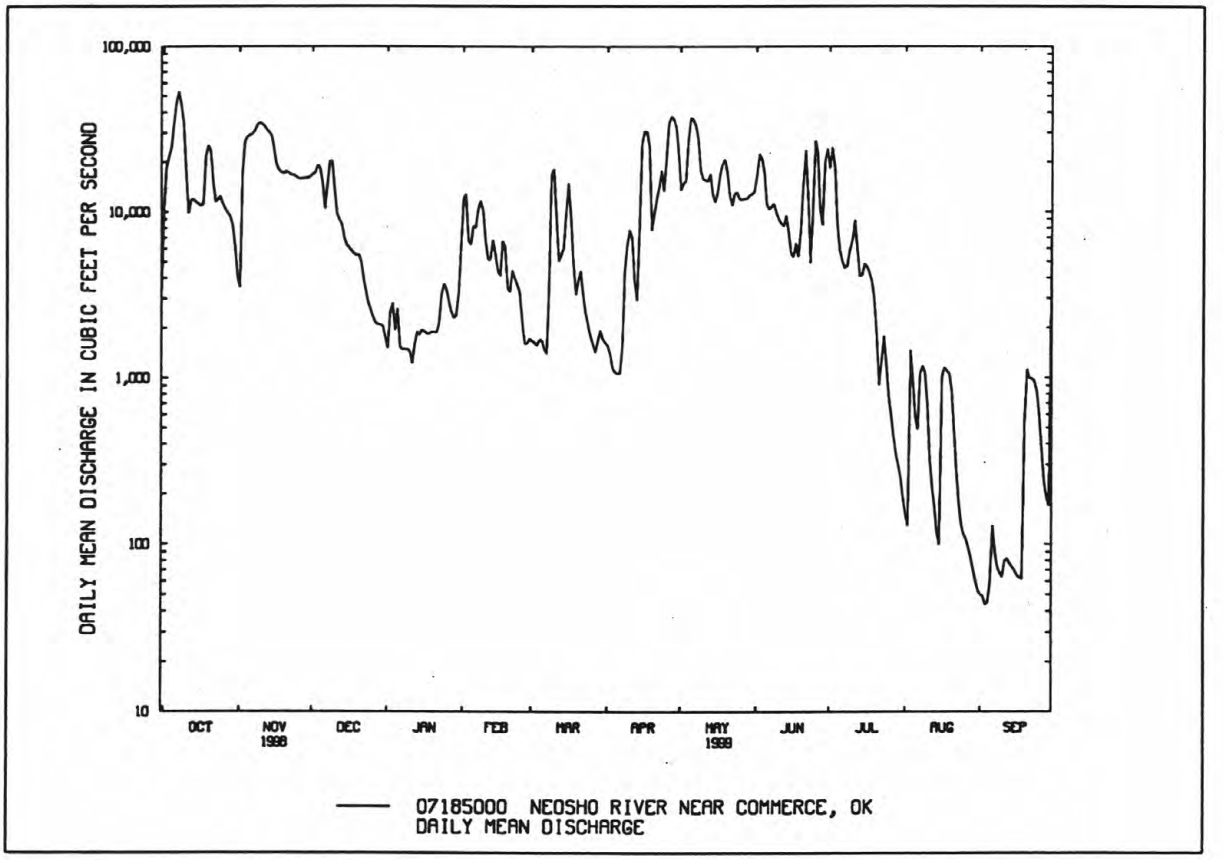
MEAN	3410	3470	2294	1969	2577	4410	5763	6157	6691	5030	1743	2753
MAX	33400	22280	17280	10090	13980	21630	23270	29560	27950	53350	11680	16930
(WY)	1987	1999	1993	1973	1985	1973	1945	1961	1995	1951	1993	1951
MIN	.000	1.60	6.33	8.60	24.9	11.9	62.6	395	290	21.1	.000	1.52
(WY)	1957	1940	1940	1957	1954	1956	1981	1956	1980	1954	1954	1953

e Estimated

07185000 NEOSHO RIVER NEAR COMMERCE, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1940 - 1999	
ANNUAL TOTAL	2864616		3405329			
ANNUAL MEAN	7848		9330		3856	
HIGHEST ANNUAL MEAN					11140	1993
LOWEST ANNUAL MEAN					246	1953
HIGHEST DAILY MEAN	52900	Oct 7	52900	Oct 7	251000	Jul 15 1951
LOWEST DAILY MEAN	106	Aug 30	44	Sep 3	[a].00	Aug 21 1953
ANNUAL SEVEN-DAY MINIMUM	118	Aug 27	52	Aug 30	.00	Sep 27 1953
INSTANTANEOUS PEAK FLOW			53700	Oct 7	[b]267000	Jul 15 1951
INSTANTANEOUS PEAK STAGE			21.74	Oct 7	[c]34.03	Jul 16 1951
ANNUAL RUNOFF (AC-FT)	5682000		6754000		2794000	
10 PERCENT EXCEEDS	20400		23500		11500	
50 PERCENT EXCEEDS	4560		5880		967	
90 PERCENT EXCEEDS	813		231		60	

[a]In 1953-54 and 1956.
[b]Computed by flood-routing method 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 fair. 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, 762.50 ft, Oct. 8; minimum gage height, 740.96 ft, Sept. 4.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	747.51	743.69	745.37	745.84	745.27	745.38	749.76	749.67	749.71	742.99	742.78	742.89
2	749.69	747.51	748.82	751.63	745.84	749.17	750.02	749.65	749.79	743.32	742.87	743.12
3	750.81	749.65	750.21	753.01	751.63	752.40	750.45	750.01	750.29	743.54	743.18	743.38
4	751.96	750.77	751.33	753.70	753.00	753.36	750.47	749.83	750.25	743.20	743.00	743.08
5	758.11	751.96	755.59	753.99	753.64	753.84	749.83	748.42	749.22	743.09	742.98	743.05
6	760.44	758.11	758.96	754.25	753.96	754.09	748.42	747.08	747.64	743.09	742.91	743.03
7	762.45	760.44	761.70	755.08	754.24	754.58	749.85	747.08	748.36	743.05	742.89	742.95
8	762.50	761.23	762.07	756.25	755.03	755.68	750.79	749.85	750.46	743.00	742.77	742.91
9	761.23	758.26	759.92	756.74	756.23	756.55	750.84	750.34	750.73	742.90	742.78	742.82
10	758.26	750.13	754.39	756.85	756.66	756.78	750.34	747.55	748.80	742.85	742.74	742.79
11	750.13	748.68	749.16	756.70	756.28	756.51	747.55	746.97	747.17	742.88	742.75	742.80
12	748.68	748.14	748.38	756.28	755.54	755.92	746.97	746.81	746.89	743.02	742.77	742.88
13	748.14	747.75	747.92	755.55	754.95	755.25	746.83	746.53	746.73	742.92	742.76	742.87
14	747.75	747.58	747.67	755.00	754.25	754.70	746.53	746.15	746.30	742.98	742.88	742.94
15	747.59	747.45	747.53	754.26	751.99	753.26	746.15	745.98	746.06	743.07	742.96	743.01
16	747.47	747.29	747.37	751.99	750.56	751.11	745.99	745.83	745.90	743.01	742.94	742.97
17	747.97	747.27	747.36	750.57	750.11	750.31	745.83	745.74	745.78	743.04	742.95	742.99
18	751.83	747.97	750.49	750.13	749.80	749.99	745.80	745.61	745.71	743.06	742.98	743.03
19	752.29	751.83	752.15	749.83	749.66	749.72	745.62	745.48	745.54	743.09	742.94	743.04
20	752.25	751.51	752.04	749.86	749.67	749.78	745.56	745.48	745.53	743.06	742.95	743.00
21	751.51	748.42	749.78	749.82	749.63	749.73	745.48	745.17	745.33	743.12	742.86	742.97
22	748.42	747.93	748.08	749.65	749.53	749.59	745.17	744.84	745.02	742.90	742.73	742.82
23	748.07	747.93	747.97	749.57	749.43	749.49	744.84	744.55	744.70	743.27	742.79	743.06
24	748.13	747.93	748.08	749.46	749.33	749.39	744.56	744.28	744.43	743.41	743.20	743.29
25	747.93	747.49	747.68	749.36	749.18	749.26	744.28	744.10	744.20	743.20	743.05	743.12
26	747.49	747.26	747.36	749.24	749.17	749.20	744.10	743.81	743.95	743.06	742.87	742.98
27	747.26	747.06	747.15	749.28	749.20	749.23	743.83	743.51	743.67	742.98	742.73	742.84
28	747.07	746.92	746.99	749.32	749.24	749.29	743.53	743.36	743.44	742.75	742.56	742.63
29	746.95	746.43	746.73	749.37	749.23	749.29	743.37	742.96	743.22	742.75	742.55	742.60
30	746.43	745.81	746.14	749.69	749.37	749.57	743.23	742.90	743.07	743.42	742.75	743.02
31	745.81	745.35	745.55	---	---	---	743.03	742.79	742.87	745.21	743.42	744.36
MONTH	762.50	743.69	750.32	756.85	745.27	751.75	750.84	742.79	746.48	745.21	742.55	743.01

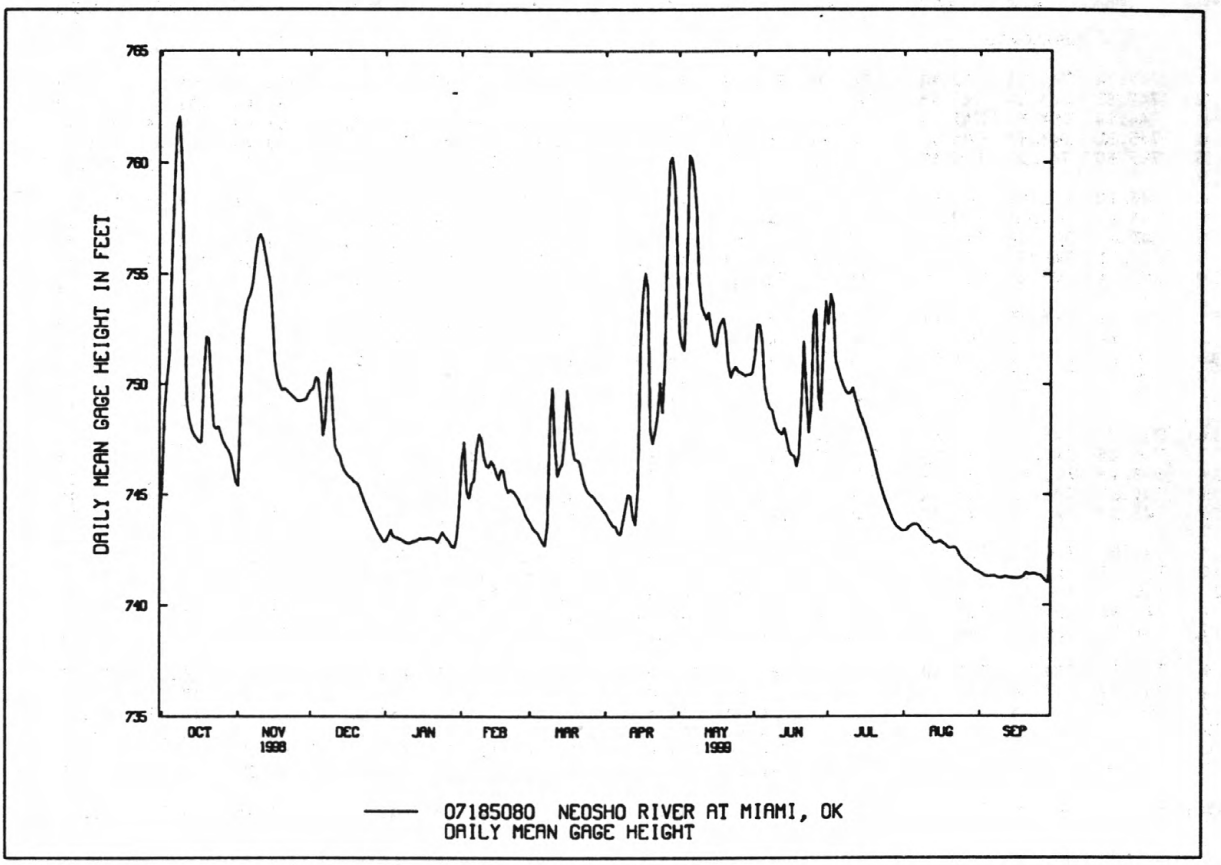
07185080 NEOSHO RIVER AT MIAMI, OK--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	747.74	745.21	746.61	743.79	743.59	743.70	744.25	743.97	744.14	753.51	751.84	752.27
2	747.85	746.14	747.36	743.63	743.28	743.47	744.03	743.78	743.91	751.84	751.65	751.77
3	746.14	744.65	745.13	743.45	743.26	743.33	743.91	743.54	743.73	751.65	751.46	751.52
4	745.20	744.63	744.80	743.45	743.13	743.26	743.69	743.45	743.56	759.49	751.48	754.70
5	745.60	745.20	745.48	743.19	742.79	743.04	743.90	743.19	743.52	760.56	759.49	760.34
6	746.08	745.48	745.59	742.98	742.69	742.81	743.37	743.14	743.22	760.26	759.93	760.17
7	747.74	746.08	747.05	742.76	742.60	742.67	743.42	743.06	743.18	759.93	758.72	759.40
8	747.80	747.62	747.71	745.56	742.61	743.58	744.19	743.29	743.80	758.72	756.45	757.82
9	747.78	747.04	747.50	750.23	745.56	748.41	744.75	744.16	744.40	756.45	753.68	754.72
10	747.04	746.45	746.68	750.30	748.71	749.82	745.13	744.75	745.00	753.68	753.39	753.52
11	746.49	746.05	746.28	748.71	746.16	747.22	745.14	744.40	744.91	753.39	753.09	753.25
12	746.34	746.12	746.21	746.16	745.62	745.82	744.40	743.67	743.93	753.09	752.87	752.95
13	746.58	746.33	746.49	746.42	745.91	746.19	743.74	743.50	743.63	753.40	753.03	753.27
14	746.53	746.10	746.33	746.47	746.27	746.36	749.79	743.51	745.21	753.03	752.05	752.50
15	746.13	745.78	745.98	749.04	746.47	747.53	752.96	749.79	751.79	752.05	751.75	751.85
16	745.82	745.49	745.66	750.04	749.04	749.75	754.79	752.96	753.97	751.76	751.62	751.72
17	746.45	745.70	746.11	749.87	747.70	748.66	755.16	754.79	755.04	753.04	751.56	752.48
18	746.45	745.63	746.09	747.70	746.93	747.30	755.11	751.68	754.36	753.01	752.74	752.83
19	745.63	745.17	745.34	746.93	746.34	746.57	751.68	746.95	747.88	753.05	752.88	752.99
20	745.19	745.01	745.09	746.80	746.30	746.56	747.55	747.05	747.29	753.01	751.03	752.31
21	745.26	745.09	745.20	746.78	746.18	746.47	748.06	747.54	747.84	751.03	750.73	750.87
22	745.19	745.04	745.13	746.18	745.68	745.97	749.71	748.05	748.62	750.82	749.97	750.31
23	745.20	744.88	744.98	745.68	745.34	745.46	750.40	749.51	750.08	751.21	749.94	750.62
24	744.91	744.65	744.83	745.34	745.07	745.19	749.51	747.89	748.70	751.21	750.53	750.80
25	744.71	744.45	744.55	745.11	744.97	745.04	755.38	747.77	750.99	750.69	750.48	750.59
26	744.51	744.20	744.40	745.03	744.89	744.96	759.14	755.38	757.26	750.65	750.47	750.55
27	744.27	743.83	744.06	744.93	744.72	744.87	760.31	759.14	760.06	750.49	750.41	750.46
28	744.06	743.78	743.87	744.83	744.64	744.69	760.36	759.94	760.25	750.42	750.35	750.38
29	---	---	---	744.64	744.45	744.57	759.94	758.18	759.17	750.48	750.38	750.44
30	---	---	---	744.49	744.26	744.42	758.18	753.51	756.15	750.47	750.41	750.44
31	---	---	---	744.31	744.14	744.25	---	---	---	750.81	750.38	750.55
MONTH	747.85	743.78	745.73	750.30	742.60	745.55	760.36	743.06	748.85	760.56	749.94	752.85

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	752.26	750.81	751.26	753.76	751.86	752.73	743.54	743.21	743.36	741.61	741.39	741.48
2	752.94	752.26	752.72	754.56	753.34	754.11	743.61	743.28	743.40	741.51	741.23	741.41
3	752.94	752.55	752.71	754.58	751.80	753.67	743.63	743.28	743.53	741.40	741.23	741.33
4	752.76	750.49	751.96	751.80	750.83	751.09	743.75	743.51	743.61	741.43	740.96	741.28
5	750.49	749.48	749.87	750.90	750.50	750.70	743.69	743.63	743.66	741.64	740.99	741.32
6	749.48	748.92	749.23	750.50	750.06	750.30	743.76	743.53	743.66	741.49	741.18	741.32
7	748.95	748.83	748.90	750.16	749.81	749.99	743.76	743.46	743.60	741.49	741.13	741.34
8	748.97	748.60	748.84	749.85	749.60	749.72	743.54	743.25	743.39	741.52	741.02	741.26
9	748.60	748.10	748.34	749.65	749.40	749.57	743.38	743.19	743.30	741.29	741.13	741.22
10	748.10	747.88	747.97	749.84	749.38	749.62	743.29	742.96	743.17	741.51	741.07	741.24
11	747.92	747.77	747.83	750.02	749.67	749.87	743.21	742.94	743.08	741.60	741.11	741.30
12	747.86	747.61	747.72	749.67	749.17	749.40	743.17	742.74	743.02	741.52	741.13	741.30
13	748.26	747.71	748.02	749.17	748.76	748.97	743.02	742.68	742.82	741.31	741.12	741.22
14	747.75	747.26	747.52	748.76	748.43	748.60	742.93	742.68	742.82	741.30	741.19	741.24
15	747.26	746.75	746.98	748.46	748.17	748.36	742.94	742.78	742.86	741.29	741.11	741.20
16	746.89	746.65	746.77	748.19	747.80	748.01	743.02	742.80	742.91	741.29	741.12	741.20
17	746.93	746.48	746.75	747.81	747.41	747.64	742.85	742.63	742.78	741.31	741.16	741.22
18	746.48	746.11	746.27	747.41	747.06	747.25	742.83	742.61	742.74	741.31	741.21	741.25
19	748.34	746.05	746.76	747.06	746.62	746.86	742.72	742.46	742.59	741.49	741.19	741.33
20	750.90	748.34	749.08	746.62	746.16	746.40	742.67	742.49	742.58	741.62	741.31	741.49
21	752.43	750.90	751.97	746.16	745.67	745.95	742.69	742.55	742.61	741.46	741.31	741.39
22	752.28	747.81	749.75	745.67	745.30	745.51	742.68	742.49	742.61	741.44	741.35	741.41
23	748.03	747.63	747.80	745.32	744.91	745.14	742.98	742.18	742.47	741.54	741.37	741.44
24	751.94	747.65	748.90	744.95	744.57	744.79	742.35	742.04	742.20	741.46	741.33	741.40
25	753.75	751.94	753.11	744.60	744.29	744.49	742.20	741.94	742.07	741.47	741.26	741.35
26	753.92	751.53	753.41	744.35	743.97	744.20	742.23	741.62	741.96	741.45	741.20	741.35
27	751.53	748.47	749.37	744.04	743.76	743.91	742.08	741.64	741.84	741.29	741.06	741.19
28	750.32	748.10	748.81	743.86	743.50	743.71	741.89	741.69	741.80	741.18	740.97	741.07
29	752.73	750.32	751.92	743.65	743.38	743.53	741.77	741.56	741.69	741.10	740.97	741.01
30	754.16	752.73	753.80	743.56	743.31	743.46	741.68	741.41	741.58	745.21	740.98	743.99
31	---	---	---	743.46	743.27	743.36	741.61	741.43	741.53	---	---	---
MONTH	754.16	746.05	749.48	754.58	743.27	747.77	743.76	741.41	742.75	745.21	740.96	741.39
YEAR	762.50	740.96	747.16									


765
760
755
750
745
740
735
DAILY MEAN GAGE HEIGHT IN FEET
OCT
NOV
1998
DEC
JAN
FEB
MAR
APR
MAY
1999
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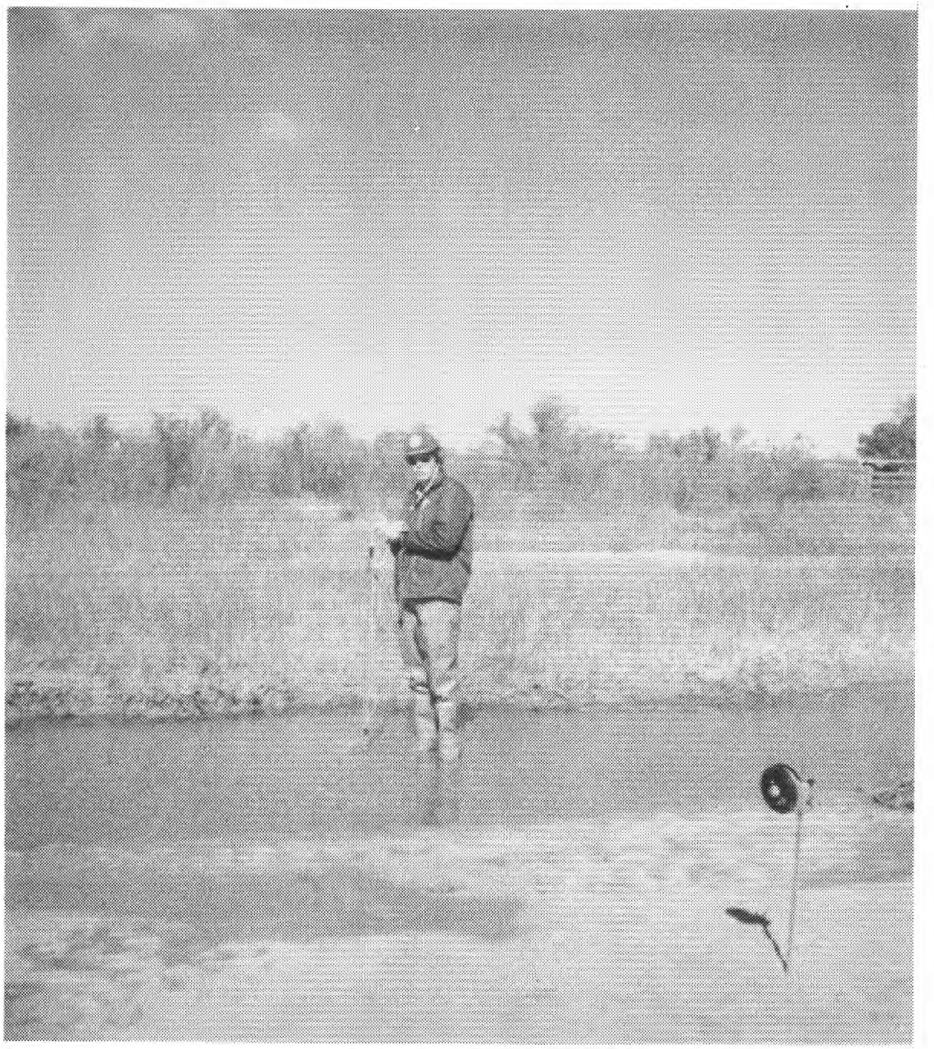
AUG
SEP
07185080 NEOSHO RIVER AT MIAMI, OK
DAILY MEAN GAGE HEIGHT



Wading measurement

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 18,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 7	1000	53,800	25.52	May 5	0100	57,200	26.24
Apr 15	0230	22,700	17.36	Jun 29	0330	28,500	19.14
Apr 27	0530	52,400	25.21	Jul 2	0400	30,400	19.71

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	757	1570	2010	737	6010	1200	2090	e7000	3110	16800	739	391
2	1960	6280	1740	1290	4250	1150	2010	e8000	5190	28000	741	375
3	1200	8310	1390	1520	3030	1120	2010	e9000	3280	17600	748	371
4	1180	5000	1190	1220	2490	1080	2280	28000	2310	8930	924	446
5	33700	2710	1090	1180	2160	1060	2340	53400	2010	5510	446	909
6	45300	1800	1050	1170	2020	1170	2160	45000	1850	3810	698	700
7	51900	1910	1420	1350	4920	1100	1990	25600	1660	3270	666	778
8	32600	5880	1730	2010	7850	3100	1820	11200	1480	2890	638	678
9	13400	4320	1340	1600	5700	13300	1710	5650	1620	2620	595	615
10	4600	4870	1120	1310	3910	9830	1620	4580	1580	2970	575	560
11	3300	5700	1040	1160	3310	5860	1520	4350	1550	2560	565	592
12	2770	3520	1000	1120	3700	3420	1430	4270	1530	2240	537	558
13	2400	2330	963	1250	3200	3630	1350	6680	2900	2070	618	524
14	2150	1930	921	1850	2700	4180	9980	5620	1850	1900	551	476
15	1960	1720	876	1890	2370	6190	21500	3870	1620	1760	512	448
16	1800	1560	834	1610	2150	11600	15700	3340	1830	1660	490	421
17	1730	1440	794	1490	e3900	13800	8330	6600	1750	1580	471	398
18	6510	1310	776	1510	3550	9780	4920	10600	1520	1490	448	383
19	7130	1220	1140	1600	2290	6550	3580	6690	1660	1390	425	451
20	2790	1400	1990	1530	2140	6010	3100	4390	2540	1310	412	517
21	1860	1590	1690	1410	1930	6220	2770	3320	2620	1070	400	457
22	1550	1400	1290	1380	1750	5090	3020	2950	2260	917	389	425
23	1380	1170	1060	1580	1610	4310	2980	3340	2660	1100	422	406
24	1260	1050	943	1820	1520	3830	2490	3320	10700	1050	870	386
25	1170	984	865	2050	1460	3440	17000	2940	6690	994	674	369
26	1100	930	822	1750	1400	3090	39200	2610	3850	951	547	360
27	1040	874	806	1450	1330	2820	50400	2320	2750	920	508	360
28	991	842	798	1290	1270	2630	41300	2150	10900	900	536	358
29	1100	824	784	1220	---	2460	22000	2040	23100	838	498	465
30	1440	1190	765	1350	---	2320	13000	2120	11700	812	449	455
31	1370	---	722	3910	---	2180	---	2390	---	747	417	---
TOTAL	233398	75634	34959	47607	83920	143520	285600	283340	120070	120659	17509	14632
MEAN	7529	2521	1128	1536	2997	4630	9520	9140	4002	3892	565	488
MAX	51900	8310	2010	3910	7850	13800	50400	53400	23100	28000	924	909
MIN	757	824	722	737	1270	1060	1350	2040	1480	747	389	358
AC-FT	462900	150000	69340	94430	166500	284700	566500	562000	238200	239300	34730	29020
CFSM	3.00	1.00	.45	.61	1.19	1.84	3.79	3.64	1.59	1.55	.23	.19
IN.	3.46	1.12	.52	.71	1.24	2.13	4.23	4.20	1.78	1.79	.26	.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1999, BY WATER YEAR (WY)

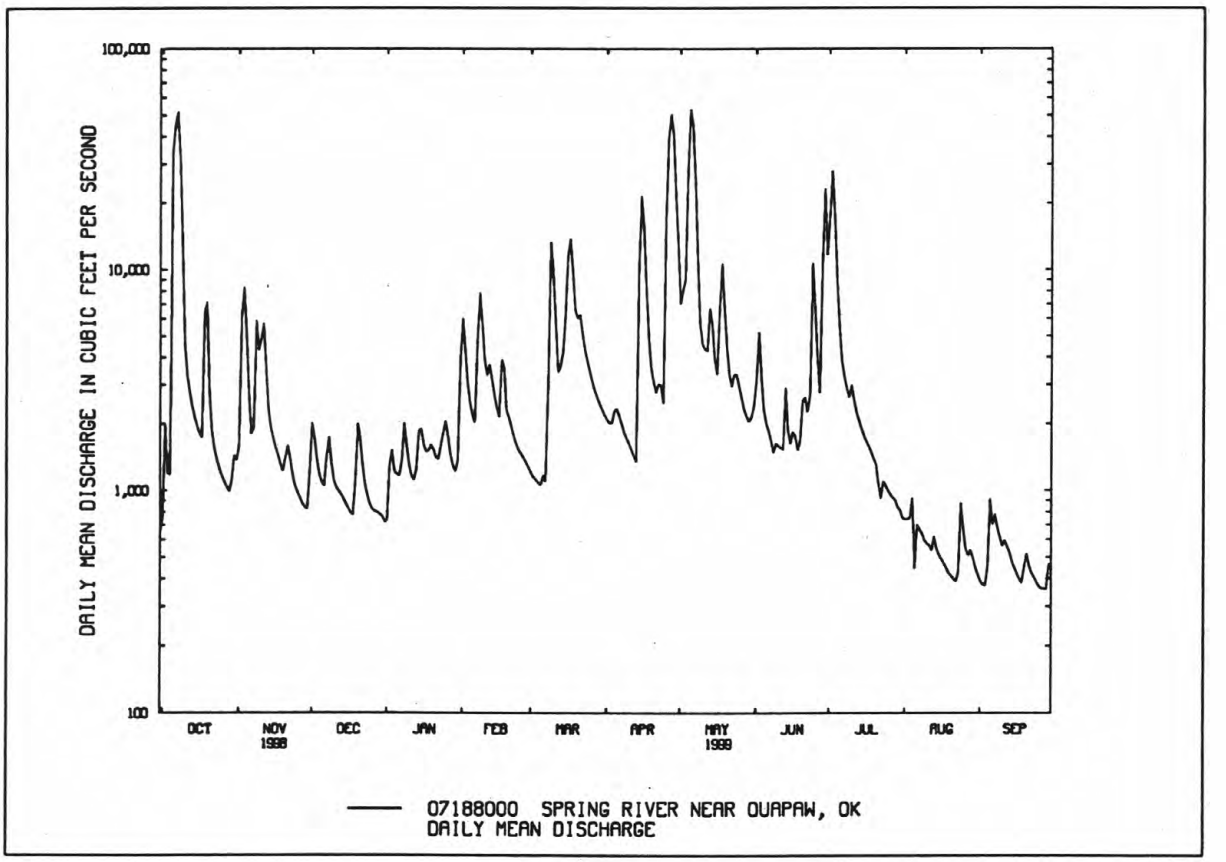
MEAN	1708	2363	1739	1578	2107	2982	3469	3653	2979	1786	796	1439
MAX	14880	14810	10720	6495	13300	12050	15100	26940	12780	10140	8622	18390
(WY)	1987	1986	1993	1973	1985	1973	1945	1943	1995	1976	1950	1993
MIN	75.8	111	116	116	129	123	169	481	233	34.3	29.3	76.0
(WY)	1957	1954	1964	1964	1954	1954	1954	1964	1954	1954	1954	1953

e Estimated

07188000 SPRING RIVER NEAR QUAPAW, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1940 - 1999	
ANNUAL TOTAL	974100		1460848			
ANNUAL MEAN	2669		4002		2214	
HIGHEST ANNUAL MEAN					6623	1993
LOWEST ANNUAL MEAN					191	1954
HIGHEST DAILY MEAN	51900	Oct 7	53400	May 5	210000	Sep 26 1993
LOWEST DAILY MEAN	211	Sep 10	358	Sep 28	5.8	Jul 8 1954
ANNUAL SEVEN-DAY MINIMUM	227	Sep 6	381	Sep 22	7.3	Sep 12 1954
INSTANTANEOUS PEAK FLOW			57200	May 5	230000	Sep 26 1993
INSTANTANEOUS PEAK STAGE			26.24	May 5	[a]46.60	Sep 26 1993
ANNUAL RUNOFF (AC-FT)	1932000		2898000		1604000	
ANNUAL RUNOFF (CFSM)	1.06		1.59		.88	
ANNUAL RUNOFF (INCHES)	14.44		21.65		11.98	
10 PERCENT EXCEEDS	5420		8120		4440	
50 PERCENT EXCEEDS	1390		1690		855	
90 PERCENT EXCEEDS	422		531		210	

[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 poor. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES 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)
Oct 6	0500	9,570	11.73	May 5	1515	17,900	15.95
Mar 17	1445	9,490	11.68	Jul 2	0930	14,200	14.17

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	107	582	279	1050	363	953	1820	863	8050	301	145
2	114	170	773	392	1080	352	887	1460	784	11600	294	141
3	112	295	720	450	965	341	878	1220	719	5380	287	140
4	109	366	657	e410	851	330	1170	2290	643	3370	287	138
5	2660	349	599	440	752	319	e1290	12900	576	2320	293	146
6	7880	309	558	758	731	325	1240	6040	529	1710	284	169
7	3620	281	540	706	2700	310	1250	3460	495	1340	276	182
8	2010	297	527	658	5410	e750	1220	2400	459	1080	270	201
9	1330	351	509	614	3360	e7000	1200	1730	427	895	263	197
10	974	474	486	564	2570	e5000	1160	1410	422	764	240	184
11	746	701	454	518	e1500	e3500	1120	1630	604	715	222	177
12	587	742	424	486	e1700	e2100	1080	1500	871	631	212	177
13	471	654	408	461	e1400	e2200	1050	1650	691	549	206	175
14	414	564	398	429	e1100	e2450	1120	1450	806	492	194	175
15	359	492	376	397	e900	3660	1850	1200	903	449	190	168
16	307	434	353	366	e750	4440	2580	1040	721	426	183	160
17	293	381	332	345	e1200	8270	2220	973	710	413	178	153
18	332	330	318	320	789	6480	1870	989	691	403	172	147
19	344	300	357	299	637	4160	1590	880	686	393	168	146
20	315	299	413	280	596	3870	1350	787	721	387	165	155
21	274	300	459	270	557	4360	1150	747	802	380	163	155
22	240	299	480	259	513	3690	1090	743	780	373	160	149
23	210	283	471	261	481	3020	2030	1010	1570	365	162	141
24	184	264	457	246	457	2510	1730	1250	2880	360	166	136
25	164	243	433	234	428	2100	1660	1110	5920	356	166	133
26	152	225	410	223	407	1780	3600	1180	3830	350	162	129
27	141	207	390	214	395	1530	7390	1170	2630	343	161	131
28	130	191	368	208	380	1350	4720	992	1870	339	160	128
29	121	180	343	216	---	1220	3100	860	1430	330	159	129
30	116	305	317	239	---	1100	2320	921	4330	319	153	128
31	108	---	291	416	---	1000	---	966	---	309	149	---
TOTAL	24936	10393	14203	11958	33659	79880	55868	57778	39363	45191	6446	4635
MEAN	804	346	458	386	1202	2577	1862	1864	1312	1458	208	154
MAX	7880	742	773	758	5410	8270	7390	12900	5920	11600	301	201
MIN	108	107	291	208	380	310	878	743	422	309	149	128
AC-FT	49460	20610	28170	23720	66760	158400	110800	114600	78080	89640	12790	9190
CFSM	.92	.40	.53	.44	1.38	2.96	2.14	2.14	1.50	1.67	.24	.18
IN.	1.06	.44	.61	.51	1.44	3.41	2.38	2.46	1.68	1.93	.27	.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1999, BY WATER YEAR (WY)

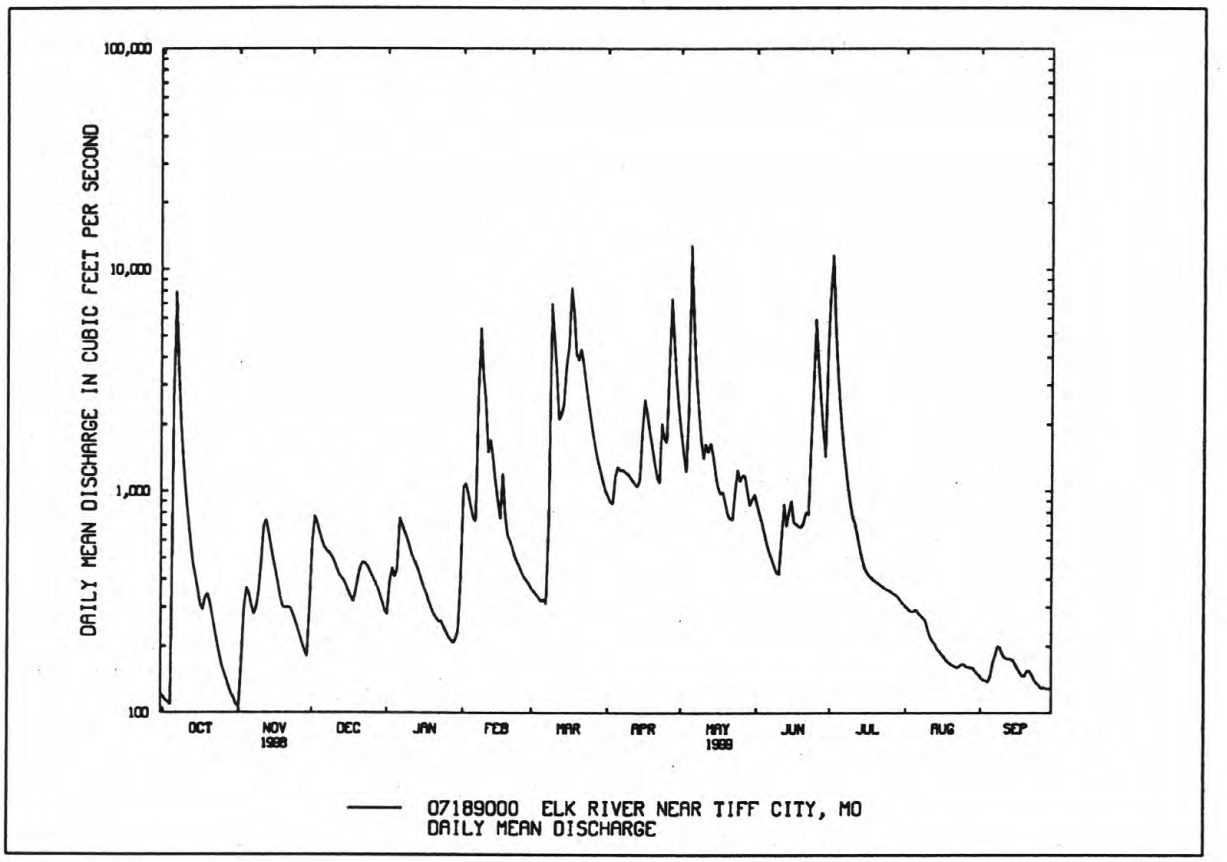
MEAN	429	745	781	701	876	1365	1636	1523	969	487	264	300
MAX	2938	4094	3651	2509	2971	5020	6119	8964	4245	2565	2418	2164
(WY)	1942	1975	1993	1985	1951	1945	1945	1943	1995	1976	1950	1993
MIN	25.7	49.8	58.5	55.9	70.7	75.7	145	227	78.6	14.3	12.0	30.9
(WY)	1957	1964	1964	1964	1954	1956	1956	1964	1954	1954	1954	1953

e Estimated

07189000 ELK RIVER NEAR TIFF CITY, MO--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1940 - 1999	
ANNUAL TOTAL	290679		384310			
ANNUAL MEAN	796		1053		839	
HIGHEST ANNUAL MEAN					1881	1993
LOWEST ANNUAL MEAN					135	1954
HIGHEST DAILY MEAN	9850	Mar 20	12900	May 5	68600	Apr 19 1941
LOWEST DAILY MEAN	54	Sep 9	107	Nov 1	5.1	Sep 5 1954
ANNUAL SEVEN-DAY MINIMUM	56	Sep 6	125	Oct 26	5.6	Sep 2 1954
INSTANTANEOUS PEAK FLOW			17900	May 5	[a]137000	Apr 19 1941
INSTANTANEOUS PEAK STAGE			15.95	May 5	[b]28.40	Apr 19 1941
ANNUAL RUNOFF (AC-FT)	576600		762300		607600	
ANNUAL RUNOFF (CFSM)	.91		1.21		.96	
ANNUAL RUNOFF (INCHES)	12.40		16.39		13.07	
10 PERCENT EXCEEDS	1610		2530		1770	
50 PERCENT EXCEEDS	424		471		345	
90 PERCENT EXCEEDS	110		161		87	

[a]From rating curve extended above 60,000 ft^3/s on basis of slope-area measurement of peak flow.
[b]From floodmark.



07189540 CAVE SPRINGS BRANCH NEAR SOUTH WEST CITY, MO

LOCATION.--Lat 36°32'52", 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 South West City, Mo, 4.7 mi upstream from Honey Springs, and at mile 4.7.

DRAINAGE AREA.--7.9 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water stage recorder. Datum of gage is 922.86 ft above sea level.

REMARKS.--No estimated daily discharge. Records fair. U.S. Geological Survey satellite telemeter at station.

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

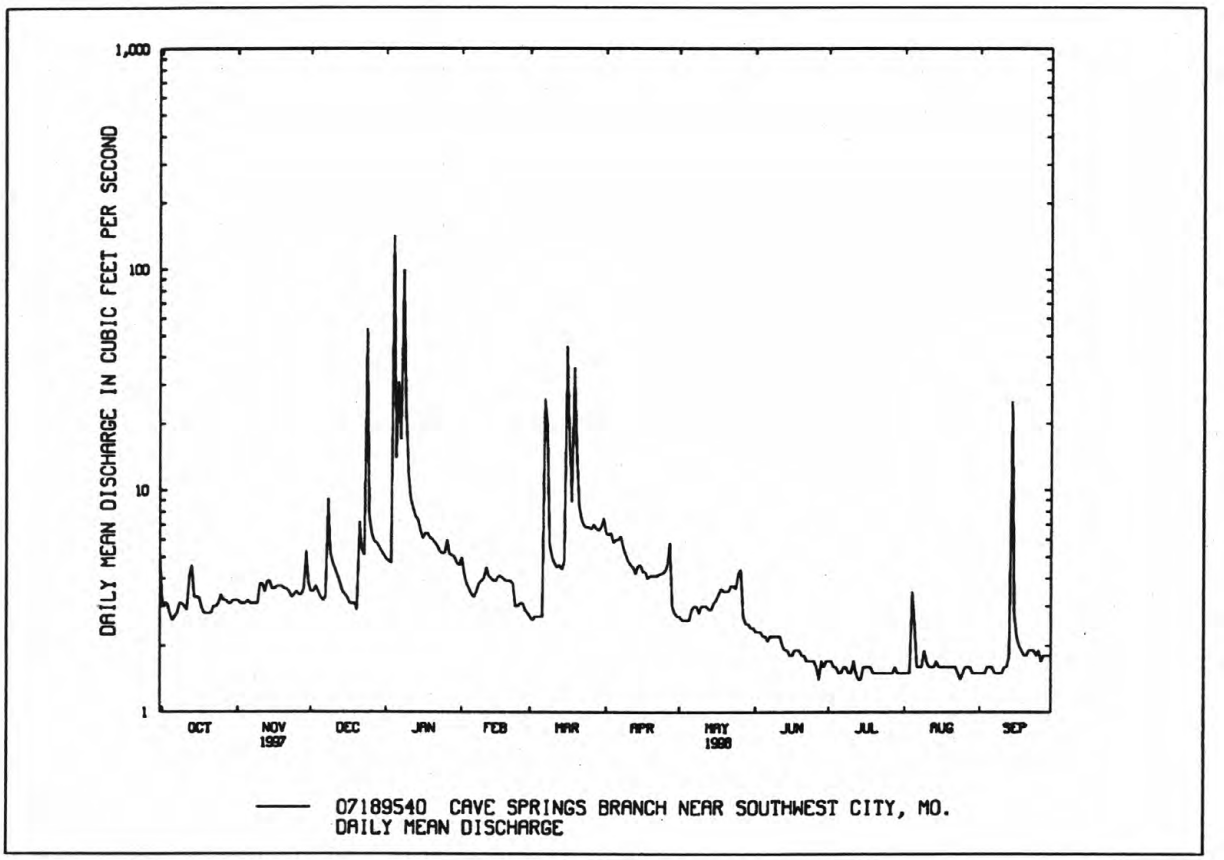
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	3.2	3.5	4.9	5.0	2.7	6.4	2.7	2.3	1.7	1.5	1.5
2	3.1	3.1	3.5	4.8	4.2	2.6	6.3	2.6	2.3	1.7	1.5	1.5
3	3.1	3.1	3.7	4.7	3.8	2.7	6.4	2.6	2.3	1.6	1.5	1.5
4	2.8	3.1	3.5	142	3.6	2.7	5.8	2.6	2.2	1.6	3.5	1.6
5	2.6	3.2	3.3	14	3.4	2.7	6.0	2.6	2.2	1.5	2.5	1.6
6	2.7	3.1	3.2	31	3.3	2.7	6.0	2.9	2.1	1.5	1.6	1.6
7	2.8	3.1	3.3	17	3.5	26	6.2	3.0	2.2	1.6	1.6	1.5
8	3.1	3.1	9.1	99	3.8	20	5.5	3.0	2.2	1.6	1.6	1.5
9	3.1	3.1	5.2	24	3.9	5.7	5.1	2.8	2.2	1.5	1.9	1.5
10	3.0	3.8	4.7	12	4.0	5.0	4.8	3.0	2.2	1.5	1.7	1.5
11	2.9	3.8	4.4	9.1	4.5	4.7	4.6	3.0	2.2	1.7	1.6	1.6
12	4.1	3.5	4.1	8.3	4.1	4.5	4.5	3.0	2.0	1.5	1.6	1.6
13	4.6	3.9	3.8	7.6	4.0	4.6	4.2	2.9	1.9	1.4	1.6	1.8
14	3.3	3.9	3.5	7.4	3.9	4.4	4.6	2.9	1.9	1.4	1.7	25
15	3.3	3.6	3.4	6.6	3.9	4.8	4.6	3.1	1.8	1.6	1.6	2.8
16	3.3	3.6	3.3	6.1	4.1	45	4.3	3.2	1.8	1.6	1.6	2.2
17	3.0	3.7	3.1	6.4	4.1	17	4.3	3.4	1.9	1.6	1.6	2.0
18	2.8	3.7	3.1	6.4	4.0	8.9	4.0	3.6	1.9	1.6	1.6	1.9
19	2.8	3.7	3.1	6.1	3.9	36	4.1	3.5	1.9	1.5	1.6	1.8
20	2.8	3.6	2.9	6.0	3.9	15	4.1	3.5	1.8	1.5	1.6	1.8
21	2.8	3.6	7.2	5.8	3.9	8.5	4.1	3.5	1.8	1.5	1.6	1.9
22	3.0	3.5	5.4	5.6	3.8	7.4	4.1	3.7	1.7	1.5	1.6	1.9
23	3.0	3.3	5.1	5.3	3.0	6.9	4.2	3.7	1.7	1.5	1.5	1.9
24	3.1	3.4	54	5.2	3.0	6.8	4.2	3.6	1.7	1.5	1.4	1.8
25	3.4	3.5	7.7	5.2	3.1	6.8	4.3	4.2	1.7	1.5	1.5	1.9
26	3.2	3.4	6.4	6.0	3.1	6.7	4.6	4.4	1.6	1.5	1.6	1.7
27	3.2	3.4	5.9	5.1	2.9	7.0	5.8	2.7	1.4	1.5	1.6	1.8
28	3.1	3.6	5.8	5.1	2.8	6.7	3.0	2.5	1.7	1.6	1.6	1.8
29	3.1	5.3	5.6	5.0	---	6.6	2.8	2.5	1.6	1.5	1.5	1.8
30	3.2	3.8	5.3	4.7	---	6.8	2.7	2.4	1.7	1.5	1.5	1.8
31	3.2	---	5.1	4.6	---	7.5	---	2.4	---	1.5	1.5	---
TOTAL	96.6	105.7	191.2	481.0	104.5	295.4	141.6	95.5	57.9	47.8	51.9	76.1
MEAN	3.12	3.52	6.17	15.5	3.73	9.53	4.72	3.08	1.93	1.54	1.67	2.54
MAX	4.6	5.3	54	142	5.0	45	6.4	4.4	2.3	1.7	3.5	25
MIN	2.6	3.1	2.9	4.6	2.8	2.6	2.7	2.4	1.4	1.4	1.4	1.5
AC-FT	192	210	379	954	207	586	281	189	115	95	103	151

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

MEAN	3.12	3.52	6.17	15.5	3.73	9.53	4.72	3.08	1.93	1.54	1.67	2.54
MAX	3.12	3.52	6.17	15.5	3.73	9.53	4.72	3.08	1.93	1.54	1.67	2.54
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998
MIN	3.12	3.52	6.17	15.5	3.73	9.53	4.72	3.08	1.93	1.54	1.67	2.54
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998

07189540 CAVE SPRINGS BRANCH NEAR SOUTH WEST CITY, MO--Continued

SUMMARY STATISTICS	FOR 1998 WATER YEAR	
ANNUAL TOTAL	1745.2	
ANNUAL MEAN	4.78	
HIGHEST DAILY MEAN	142	Jan 4
LOWEST DAILY MEAN	1.4	Jun 27
ANNUAL SEVEN-DAY MINIMUM	1.5	Jul 19
INSTANTANEOUS PEAK FLOW	539	Jan 4
INSTANTANEOUS PEAK STAGE	8.02	Jan 4
ANNUAL RUNOFF (AC-FT)	3460	
10 PERCENT EXCEEDS	6.4	
50 PERCENT EXCEEDS	3.1	
90 PERCENT EXCEEDS	1.6	



07189540 CAVE SPRINGS BRANCH NEAR SOUTH WEST CITY, MO--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

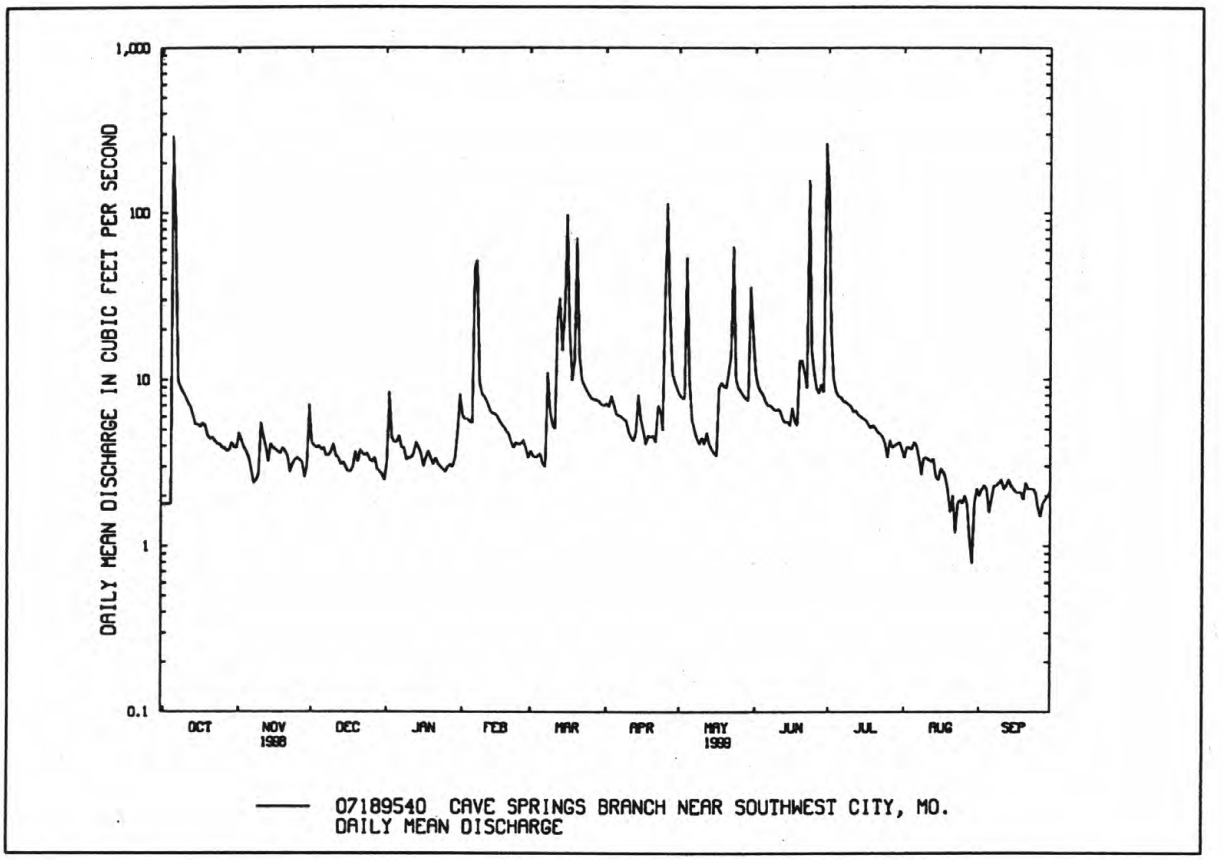
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	4.8	4.2	3.2	6.1	3.7	7.2	8.1	11	147	3.4	2.0
2	1.8	4.3	4.0	8.4	5.8	3.5	6.9	7.8	9.1	19	3.9	2.2
3	1.8	3.9	3.9	4.5	5.8	3.4	8.0	7.7	8.5	10	3.9	2.3
4	1.8	3.7	4.0	4.2	5.6	3.5	7.1	54	8.1	8.5	3.8	2.2
5	291	3.4	3.8	4.2	5.5	3.6	6.2	10	7.4	7.9	4.2	1.6
6	82	2.9	3.9	4.6	47	3.1	6.1	5.7	7.0	7.8	4.0	1.9
7	9.8	2.4	3.5	3.9	52	3.0	6.0	5.0	7.0	7.4	3.4	2.3
8	9.0	2.5	3.5	3.9	9.6	11	5.8	4.4	6.7	7.3	2.7	2.3
9	8.4	2.7	3.7	3.3	8.2	6.5	5.7	4.1	6.5	7.1	3.4	2.4
10	7.9	5.5	4.1	3.4	7.9	5.3	4.9	4.5	6.6	6.9	3.4	2.5
11	7.3	4.6	3.5	3.4	7.4	5.1	4.5	4.1	6.5	6.4	3.3	2.2
12	6.9	4.0	3.4	3.6	6.7	23	4.3	4.8	5.8	6.5	3.2	2.3
13	6.1	3.2	3.1	4.2	6.3	31	4.8	4.1	5.5	6.1	3.3	2.5
14	5.4	4.1	3.2	3.9	6.3	15	8.1	3.8	5.6	6.0	2.6	2.3
15	5.4	3.9	3.0	3.6	6.1	25	5.8	3.6	5.3	5.8	2.5	2.2
16	5.2	3.8	2.8	3.0	5.7	98	5.0	3.5	6.8	5.7	2.9	2.1
17	5.5	3.7	2.8	3.4	5.4	19	4.1	8.9	5.6	5.4	2.8	2.1
18	5.3	3.6	3.0	3.7	5.2	10	4.6	9.6	5.3	5.1	2.6	2.1
19	4.6	3.9	3.7	3.4	4.9	13	4.5	9.2	13	5.3	2.1	1.9
20	4.4	3.7	3.2	3.1	4.7	71	4.6	8.9	13	5.1	1.6	2.4
21	4.5	3.5	3.8	3.4	4.2	14	4.2	11	11	4.8	2.0	2.2
22	4.3	2.8	3.6	3.1	3.9	10	7.0	14	8.9	4.7	1.2	2.2
23	4.1	3.1	3.5	3.0	4.2	9.2	6.6	63	157	4.5	1.8	2.2
24	4.1	3.3	3.6	2.9	4.1	8.6	5.0	10	15	4.1	1.9	2.1
25	3.9	3.4	3.3	2.8	4.1	8.1	29	8.9	11	3.4	1.8	1.7
26	3.9	3.3	3.2	3.0	4.3	7.7	114	8.5	8.8	4.3	2.0	1.5
27	3.7	3.2	3.4	3.1	3.9	7.6	26	8.0	8.3	3.9	1.8	1.8
28	3.8	2.6	2.9	3.0	3.4	7.6	11	7.7	9.4	4.0	1.1	1.9
29	4.2	3.0	2.8	3.4	---	7.4	9.7	7.5	8.4	4.1	.79	2.0
30	3.9	7.1	2.7	4.9	---	7.1	8.8	36	263	4.2	1.8	2.1
31	3.9	---	2.5	8.2	---	7.0	---	19	---	3.8	2.2	---
TOTAL	515.7	109.9	105.6	119.7	244.3	451.0	335.5	365.4	651.1	332.1	81.39	63.5
MEAN	16.6	3.66	3.41	3.86	8.73	14.5	11.2	11.8	21.7	10.7	2.63	2.12
MAX	291	7.1	4.2	8.4	52	98	114	63	263	147	4.2	2.5
MIN	1.8	2.4	2.5	2.8	3.4	3.0	4.1	3.5	5.3	3.4	.79	1.5
AC-FT	1020	218	209	237	485	895	665	725	1290	659	161	126

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 1999, BY WATER YEAR (WY)

MEAN	9.88	3.59	4.79	9.69	6.23	12.0	7.89	7.81	11.8	6.13	2.15	2.33
MAX	16.6	3.66	6.17	15.5	8.73	14.5	11.2	11.8	21.7	10.7	2.63	2.54
(WY)	1999	1999	1998	1998	1999	1999	1999	1999	1999	1999	1999	1998
MIN	3.12	3.52	3.41	3.86	3.73	9.53	4.59	3.84	1.95	1.54	1.67	2.12
(WY)	1998	1998	1999	1999	1998	1998	1998	1998	1998	1998	1998	1999

07189540 CAVE SPRINGS BRANCH NEAR SOUTH WEST CITY, MO--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1998 - 1999	
ANNUAL TOTAL	2082.9		3375.19			
ANNUAL MEAN	5.71		9.25		7.04	
HIGHEST ANNUAL MEAN					9.25	1999
LOWEST ANNUAL MEAN					4.84	1998
HIGHEST DAILY MEAN	291	Oct 5	291	Oct 5	291	Oct 5 1998
LOWEST DAILY MEAN	1.4	Jun 27	.79	Aug 29	.79	Aug 29 1999
ANNUAL SEVEN-DAY MINIMUM	1.5	Jul 19	1.6	Aug 23	1.5	Jul 19 1998
INSTANTANEOUS PEAK FLOW			1360	Oct 5	1360	Oct 5 1998
INSTANTANEOUS PEAK STAGE			12.08	Oct 5	12.08	Oct 5 1998
INSTANTANEOUS LOW FLOW			.48	Aug 28		
ANNUAL RUNOFF (AC-FT)	4130		6690		5100	
10 PERCENT EXCEEDS	6.7		10		8.6	
50 PERCENT EXCEEDS	3.3		4.2		3.8	
90 PERCENT EXCEEDS	1.6		2.2		1.6	



07189540 CAVE SPRINGS BRANCH NEAR SOUTH WEST CITY, MO--Continued

WATER-QUALITY RECORDS

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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
DEC											
08...	1036	2.00	11.5	757	1028	1028	3.5	4.79	451	11.2	7.2
08...	1037	4.00	12.0	757	1028	1028	3.5	4.79	451	11.2	7.2
08...	1038	6.00	12.0	757	1028	1028	3.5	4.79	450	11.3	7.2
08...	1039	8.00	12.0	757	1028	1028	3.5	4.79	450	11.3	7.2
08...	1040	10.0	12.0	757	1028	1028	3.5	4.79	451	11.3	7.2
08...	1041	12.0	12.0	757	1028	1028	3.5	4.79	451	11.1	7.2
08...	1042	14.0	12.0	757	1028	1028	3.5	4.79	452	11.2	7.2
08...	1043	16.0	12.0	757	1028	1028	3.5	4.79	453	11.1	7.2
08...	1044	18.0	12.0	757	1028	1028	3.5	4.79	453	11.1	7.2
JUN											
15...	1235	2.00	22.5	752	1028	1028	5.6	4.96	1130	10.9	7.3
15...	1236	4.00	22.5	752	1028	1028	5.6	4.96	1130	10.7	7.3
15...	1237	6.00	22.5	752	1028	1028	5.6	4.96	1130	10.6	7.3
15...	1238	8.00	22.5	752	1028	1028	5.6	4.96	1130	10.6	7.3
15...	1239	10.0	22.5	752	1028	1028	5.6	4.96	1130	10.6	7.3
15...	1240	12.0	22.5	752	1028	1028	5.6	4.96	1130	10.6	7.3
15...	1241	14.0	22.5	752	1028	1028	5.6	4.96	1130	10.5	7.3
15...	1242	16.0	22.0	752	1028	1028	5.6	4.96	1130	10.3	7.4
15...	1243	18.0	22.0	752	1028	1028	5.6	4.96	1130	10.2	7.4

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...	1055	1028	80020	4.5	1640	7.5	16.5	18.5	756	10.0	108
NOV											
17...	0955	1028	80020	3.8	1630	7.3	15.0	14.5	751	9.4	94
DEC											
08...	1035	1028	80020	3.5	451	7.2	4.0	12.0	757	11.2	105
JAN											
07...	1000	1028	80020	3.8	625	7.4	-.5	9.5	755	9.9	88
FEB											
03...	0950	1028	80020	6.2	1100	7.4	12.5	11.5	740	10.4	98
MAR											
16...	1430	1028	80020	363	115	7.2	21.0	12.0	748	10.0	95
APR											
07...	1000	1028	80020	5.8	831	7.4	23.0	16.0	747	12.7	132
MAY											
04...	1430	1028	80020	24	310	6.7	24.5	17.0	729	6.1	66
JUN											
09...	0835	1028	1028	6.7	941	7.3	25.5	19.5	743	8.0	90
15...	1245	1028	80020	5.6	1130	7.3	27.0	22.5	752	10.6	124
JUL											
28...	1145	1028	80020	4.3	1180	7.2	35.5	25.5	753	10.4	128
AUG											
20...	1045	1028	80020	1.6	924	7.7	20.5	24.5	745	11.7	144
SEP											
14...	1428	1028	80020	2.3	1730	7.6	31.5	23.5	750	11.8	143

07189540 CAVE SPRINGS BRANCH NEAR SOUTH WEST CITY, MO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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...	280	140	270	148	0	121	71.2	320	.250	.82
NOV										
17...	180	K60	360	148	0	121	67.7	300	.435	1.4
DEC										
08...	K170	250	350	124	0	102	10.2	45	.010	.03
JAN										
07...	320	240	340	121	0	99	19.1	85	.116	.38
FEB										
03...	K64	K49	210	125	0	103	51.3	230	.406	1.3
MAR										
16...	K8600	4100	7300	35	0	29	.932	4.1	.032	.11
APR										
07...	230	210	180	134	0	110	4.27	19	.017	.06
MAY										
04...	K46000	24000	38000	72	0	59	2.27	10	.058	.19
JUN										
09...	200	K10	200	143	0	117	--	--	--	--
15...	45	160	200	162	0	133	3.94	17	.034	.11
JUL										
28...	--	--	220	116	0	95	3.99	18	.201	.66
AUG										
20...	2400	720	4100	163	0	134	5.69	25	.020	.07
SEP										
14...	100	K49	640	171	0	140	13.4	60	.693	2.3

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...	71.4	.120	.15	1.3	1.4	73	--	6.20	6.52	20
NOV										
17...	68.1	.234	.30	1.0	1.3	69	4.05	3.84	3.65	11
DEC										
08...	10.3	.037	.05	.38	.41	11	.668	.662	.572	1.8
JAN										
07...	19.2	.076	.10	.66	.73	20	.593	.667	.506	1.6
FEB										
03...	51.7	.164	.21	1.1	1.3	53	1.63	1.51	1.52	4.6
MAR										
16...	.964	.207	.27	2.3	2.5	3.4	1.66	.954	.885	2.7
APR										
07...	4.28	.027	.03	.55	.57	4.9	.401	.390	.357	1.1
MAY										
04...	2.33	.285	.37	1.4	1.7	4.0	.654	.505	.446	1.4
JUN										
09...	--	--	--	--	--	--	--	--	--	--
15...	3.98	.051	.07	.77	.82	4.8	.333	.314	.255	.78
JUL										
28...	4.19	.431	.56	.93	1.4	5.5	.212	.198	.169	.52
AUG										
20...	5.71	<.020	--	--	.75	6.5	.142	.132	.127	.39
SEP										
14...	14.1	.164	.21	.98	1.1	15	.161	.144	.131	.40

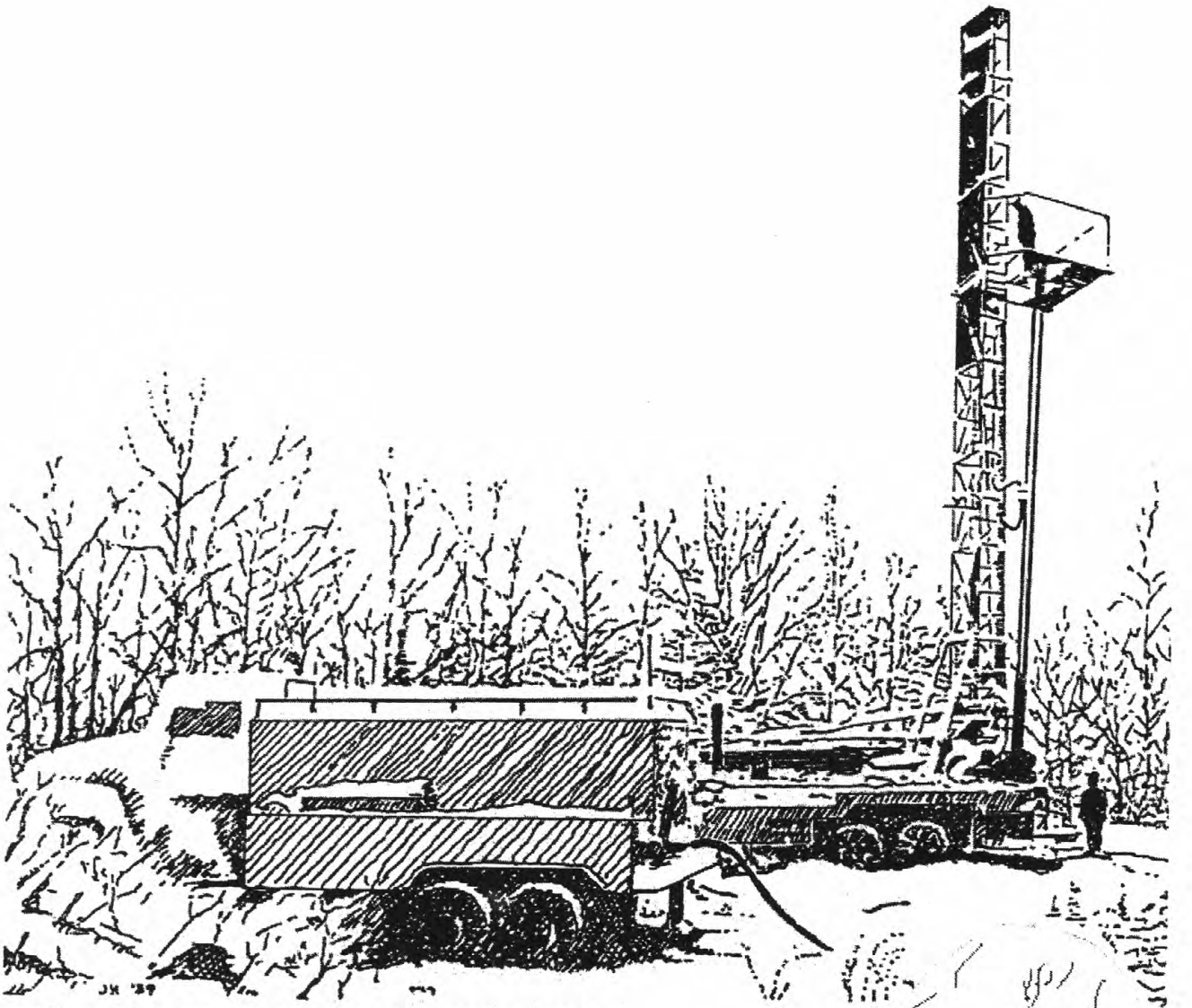
07189540 CAVE SPRINGS BRANCH NEAR SOUTH WEST CITY, MO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	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)
AUG 20...	1045	1028	80020	1.6	180	45	60	7.3	107

DATE	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)
AUG 20...	52	3	25	86	140	<.10	9.4	534

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)
AUG 20...	544	.73	2.31	1	E6.2	7.7	-31.3	-5.29



Cleaning and plugging wells, winter 1984

07189542 HONEY CREEK NEAR SOUTH WEST 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 downstream abutment of county road bridge, 0.4 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.

WATER-DISCHARGE RECORDS

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

GAGE.--Water stage recorder. Datum of gage is 789 ft above sea level from topographic map.

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

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

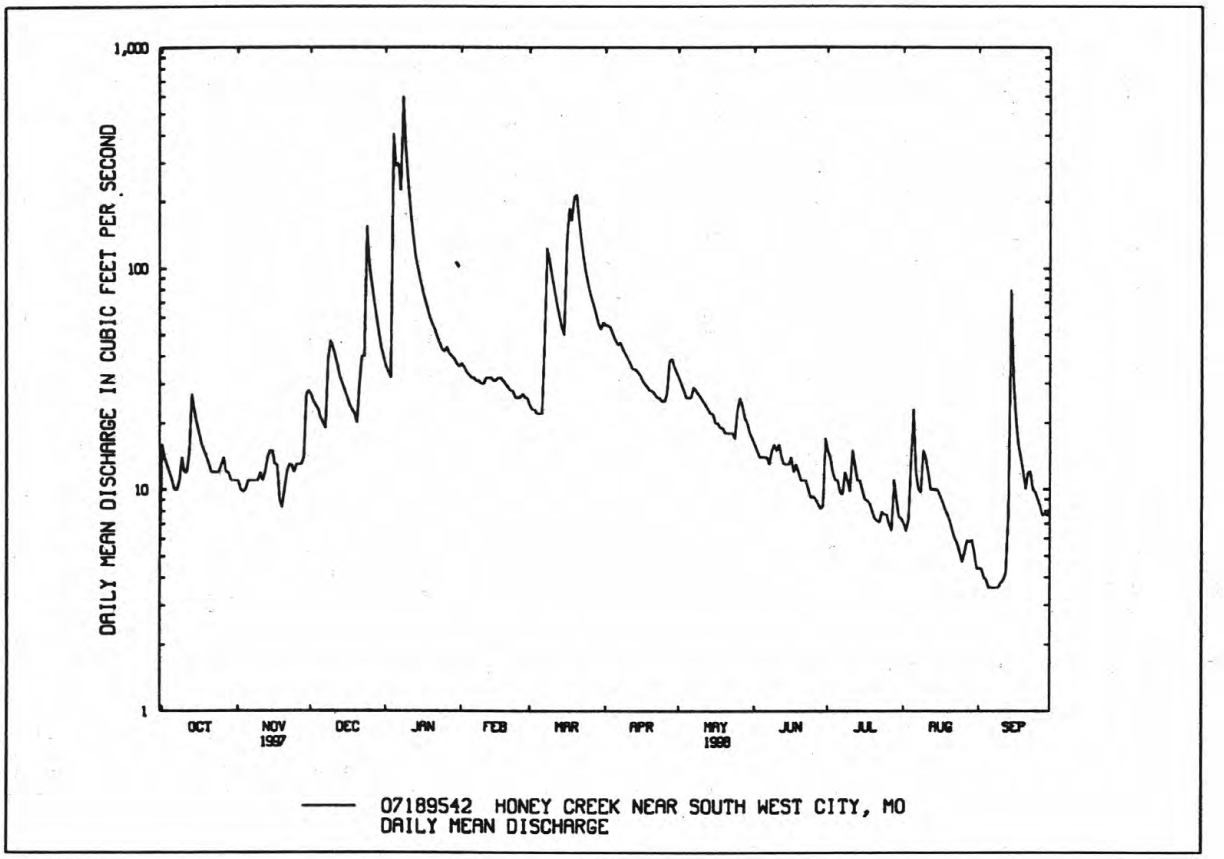
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	11	27	36	37	24	55	32	16	15	7.0	4.4
2	14	10	25	34	36	23	55	30	15	14	6.5	4.4
3	13	9.8	24	32	34	23	54	28	14	12	7.3	4.0
4	12	10	23	407	33	22	50	26	14	11	14	3.9
5	11	11	21	291	32	22	47	26	14	11	23	3.6
6	10	11	20	299	32	22	45	26	14	9.7	12	3.6
7	10	11	19	225	31	46	46	29	13	9.5	10	3.6
8	11	11	39	597	31	123	43	28	15	12	9.7	3.6
9	14	11	47	355	30	109	41	27	16	11	15	3.6
10	12	12	44	247	30	92	39	26	15	9.8	14	3.8
11	12	11	40	183	32	80	37	25	16	15	12	3.9
12	15	12	36	143	32	69	35	24	14	13	10	4.2
13	27	14	32	115	32	61	35	23	13	11	10	7.7
14	23	15	30	101	31	54	34	22	13	11	10	80
15	20	15	28	89	31	50	33	22	13	9.9	9.9	32
16	18	13	26	80	32	129	31	20	14	9.0	9.3	21
17	16	13	24	72	32	187	30	20	12	8.9	8.7	16
18	15	9.0	23	66	31	165	29	19	13	8.6	8.1	14
19	14	8.3	22	60	30	211	28	19	12	8.0	7.7	12
20	13	10	20	56	29	215	28	18	11	7.4	7.2	10
21	12	12	30	53	28	166	27	18	11	7.2	6.5	12
22	12	13	40	49	28	131	26	18	11	7.1	6.0	12
23	12	13	40	46	26	109	26	18	10	7.9	5.7	10
24	12	12	155	43	26	93	25	17	9.2	7.7	5.2	9.7
25	13	13	105	42	26	82	25	23	9.3	7.7	4.7	9.0
26	14	13	86	44	27	74	27	26	9.0	6.9	5.2	8.4
27	12	13	72	41	26	68	38	24	8.6	6.5	5.9	7.6
28	12	14	61	40	26	62	39	21	8.2	11	5.8	7.8
29	11	27	52	39	---	56	36	20	8.4	9.0	5.9	7.6
30	11	28	44	37	---	53	34	18	17	7.5	5.2	7.9
31	11	---	40	36	---	57	---	17	---	7.4	4.4	---
TOTAL	428	386.1	1295	3958	851	2678	1098	710	378.7	302.7	271.9	331.3
MEAN	13.8	12.9	41.8	128	30.4	86.4	36.6	22.9	12.6	9.76	8.77	11.0
MAX	27	28	155	597	37	215	55	32	17	15	23	80
MIN	10	8.3	19	32	26	22	25	17	8.2	6.5	4.4	3.6
AC-FT	849	766	2570	7850	1690	5310	2180	1410	751	600	539	657

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

MEAN	13.8	12.9	41.8	128	30.4	86.4	36.6	22.9	12.6	9.76	8.77	11.0
MAX	13.8	12.9	41.8	128	30.4	86.4	36.6	22.9	12.6	9.76	8.77	11.0
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998
MIN	13.8	12.9	41.8	128	30.4	86.4	36.6	22.9	12.6	9.76	8.77	11.0
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998

07189542 HONEY CREEK NEAR SOUTH WEST CITY, MO--Continued

SUMMARY STATISTICS	FOR 1998 WATER YEAR	
ANNUAL TOTAL	12688.7	
ANNUAL MEAN	34.8	
HIGHEST DAILY MEAN	597	Jan 8
LOWEST DAILY MEAN	3.6	Sep 5-9
ANNUAL SEVEN-DAY MINIMUM	3.7	Sep 4
INSTANTANEOUS PEAK FLOW	1060	Jan 4
INSTANTANEOUS PEAK STAGE	7.34	Jan 4
ANNUAL RUNOFF (AC-FT)	25170	
10 PERCENT EXCEEDS	67	
50 PERCENT EXCEEDS	19	
90 PERCENT EXCEEDS	7.7	



07189542 HONEY CREEK NEAR SOUTH WEST CITY, MO--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	27	39	27	39	25	51	92	83	826	24	13
2	8.5	33	38	37	41	24	49	76	74	482	23	13
3	8.6	29	37	36	41	23	52	66	63	286	24	13
4	8.4	28	35	36	39	23	54	270	58	207	24	12
5	648	26	34	36	37	23	57	288	53	164	24	13
6	372	25	33	36	53	22	54	188	49	135	23	13
7	183	25	33	33	245	21	49	147	46	119	22	14
8	136	25	31	32	159	39	47	120	43	107	20	16
9	106	26	33	29	124	52	44	100	40	94	20	15
10	87	43	31	28	100	49	41	91	39	86	20	15
11	73	43	29	28	84	45	37	81	38	78	19	16
12	64	41	e28	27	69	57	35	80	36	70	18	18
13	56	37	27	27	59	144	35	69	35	65	18	17
14	50	36	28	26	53	168	48	62	34	61	17	15
15	47	33	27	25	49	174	49	57	32	57	17	15
16	43	31	25	25	44	310	47	53	39	54	16	15
17	43	29	25	24	41	306	44	59	38	51	16	15
18	43	28	25	24	38	213	42	55	34	47	16	15
19	38	27	29	23	36	169	40	51	50	46	16	15
20	35	27	28	23	34	255	37	48	58	44	14	17
21	33	26	31	23	32	198	36	54	67	42	14	16
22	30	25	31	23	30	162	42	54	64	40	14	15
23	29	23	32	22	30	134	58	146	348	40	15	14
24	28	23	31	21	29	113	52	128	222	35	15	13
25	27	23	31	21	28	95	108	111	199	34	15	13
26	26	22	30	21	28	84	336	96	167	33	15	13
27	25	21	29	21	27	76	334	79	143	30	15	13
28	25	21	28	21	25	71	207	69	132	28	15	13
29	24	20	26	22	---	64	152	62	116	27	13	13
30	24	38	25	24	---	58	116	97	1320	26	13	16
31	24	---	24	36	---	54	---	91	---	24	13	---
TOTAL	2353.0	861	933	837	1614	3251	2353	3040	3720	3438	548	434
MEAN	75.9	28.7	30.1	27.0	57.6	105	78.4	98.1	124	111	17.7	14.5
MAX	648	43	39	37	245	310	336	288	1320	826	24	18
MIN	8.4	20	24	21	25	21	35	48	32	24	13	12
AC-FT	4670	1710	1850	1660	3200	6450	4670	6030	7380	6820	1090	861

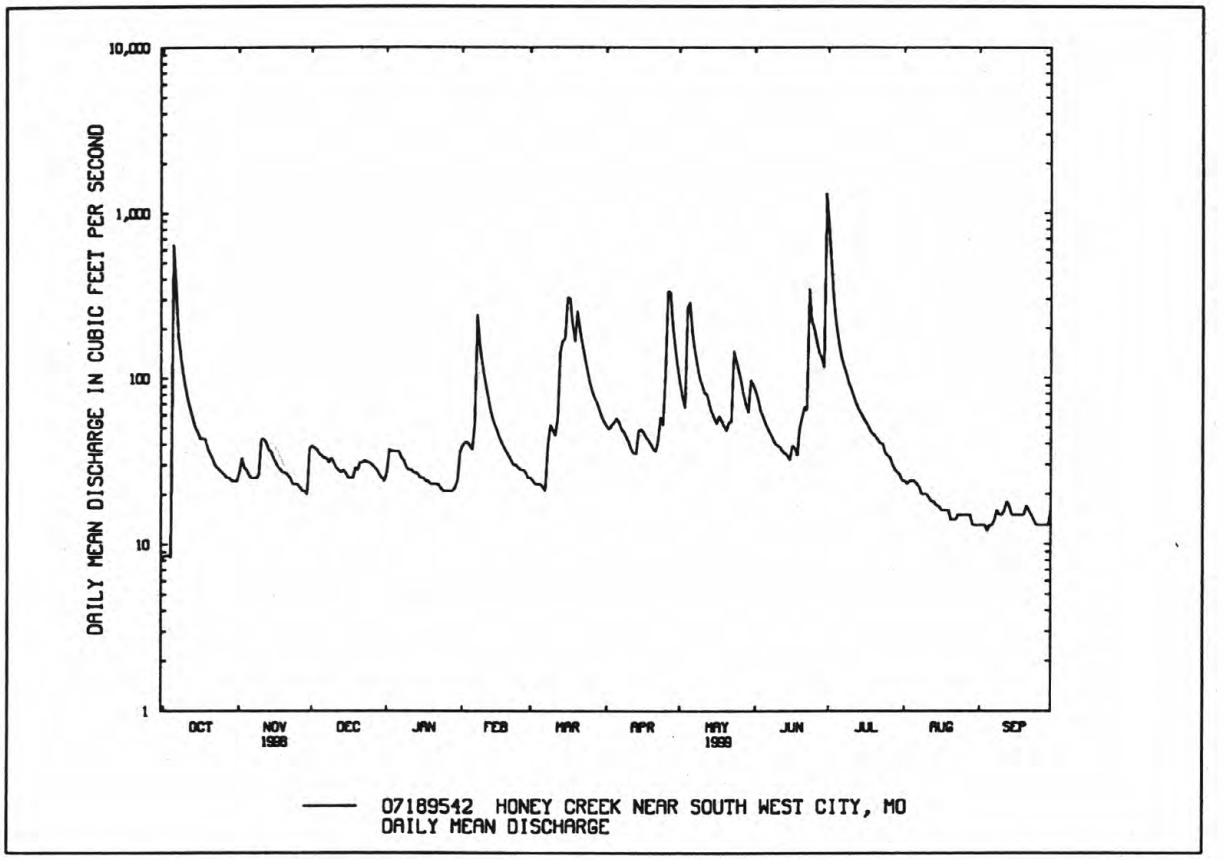
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 1999, BY WATER YEAR (WY)

MEAN	44.9	20.8	35.9	77.3	44.0	95.6	57.5	60.5	68.3	60.3	13.2	12.8
MAX	75.9	28.7	41.8	128	57.6	105	78.4	98.1	124	111	17.7	14.5
(WY)	1999	1999	1998	1998	1999	1999	1999	1999	1999	1999	1999	1999
MIN	13.8	12.9	30.1	27.0	30.4	86.4	36.6	22.9	12.6	9.76	8.77	11.0
(WY)	1998	1998	1999	1999	1998	1998	1998	1998	1998	1998	1998	1998

e Estimated

07189542 HONEY CREEK NEAR SOUTH WEST CITY, MO--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1998 - 1999	
ANNUAL TOTAL	14726.6		23382.0			
ANNUAL MEAN	40.3		64.1		49.4	
HIGHEST ANNUAL MEAN					64.1	1999
LOWEST ANNUAL MEAN					34.8	1998
HIGHEST DAILY MEAN	648	Oct 5	1320	Jun 30	1320	Jun 30 1999
LOWEST DAILY MEAN	3.6	Sep 5	8.4	Oct 4	3.6	Sep 5-9 1998
ANNUAL SEVEN-DAY MINIMUM	3.7	Sep 4	13	Aug 29	3.7	Sep 4 1998
INSTANTANEOUS PEAK FLOW			6140	Jun 30	6140	Jun 30 1999
INSTANTANEOUS PEAK STAGE			12.98	Jun 30	12.98	Jun 30 1999
ANNUAL RUNOFF (AC-FT)	29210		46380		35800	
10 PERCENT EXCEEDS	72		135		101	
50 PERCENT EXCEEDS	26		35		28	
90 PERCENT EXCEEDS	7.7		15		9.9	



07189542 HONEY CREEK NEAR SOUTH WEST CITY, MO--Continued

WATER-QUALITY RECORDS

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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
DEC											
08...	0916	3.00	11.5	759	1028	1028	28	5.14	425	9.8	7.7
08...	0917	7.00	11.5	759	1028	1028	28	5.14	426	9.7	7.7
08...	0918	11.0	11.5	759	1028	1028	28	5.14	426	9.7	7.7
08...	0919	15.0	11.5	759	1028	1028	28	5.14	425	9.7	7.7
08...	0920	19.0	11.5	759	1028	1028	28	5.14	426	9.6	7.7
08...	0921	23.0	11.5	759	1028	1028	28	5.14	425	9.6	7.7
08...	0922	27.0	11.5	759	1028	1028	28	5.14	426	9.6	7.7
08...	0923	31.0	11.5	759	1028	1028	28	5.14	426	9.6	7.7
JUL											
28...	1331	50.0	25.5	752	1028	80020	28	4.80	384	8.0	7.7
28...	1332	46.0	25.5	752	1028	80020	28	4.80	384	8.2	7.6
28...	1333	42.0	25.5	752	1028	80020	28	4.80	384	8.2	7.6
28...	1334	38.0	25.5	752	1028	80020	28	4.80	385	8.2	7.6
28...	1335	34.0	25.5	752	1028	80020	28	4.80	385	8.1	7.6
28...	1336	30.0	25.5	752	1028	80020	28	4.80	386	8.1	7.6
28...	1337	26.0	25.5	752	1028	80020	28	4.80	386	8.1	7.6
28...	1338	22.0	25.5	752	1028	80020	28	4.80	386	8.0	7.6
28...	1339	18.0	25.5	752	1028	80020	28	4.80	385	8.0	7.6
28...	1340	14.0	25.5	752	1028	80020	28	4.80	386	8.0	7.6
28...	1341	10.0	25.5	752	1028	80020	28	4.80	385	8.0	7.6
28...	1342	6.00	25.5	752	1028	80020	28	4.80	386	8.0	7.6
28...	1343	2.00	25.5	752	1028	80020	28	4.80	385	8.0	7.6

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...	0920	1028	80020	33	449	7.7	14.0	16.0	759	8.1	82
NOV											
17...	0805	1028	80020	29	474	8.0	5.0	12.5	754	8.3	79
DEC											
08...	0915	1028	80020	28	426	7.7	.5	11.5	759	9.7	90
JAN											
07...	0830	1028	80020	34	437	8.0	.0	7.0	758	10.8	89
FEB											
03...	0810	1028	80020	40	464	8.1	8.0	8.5	745	9.9	87
MAR											
16...	1615	1028	80020	485	199	7.5	22.0	13.0	749	9.8	95
APR											
07...	0805	1028	80020	49	325	7.6	16.5	14.0	751	8.9	88
MAY											
04...	1325	1028	80020	129	261	7.2	21.0	16.5	730	6.9	74
JUN											
09...	0730	1028	80020	41	375	7.7	23.5	20.0	746	6.9	78
JUL											
28...	1345	1028	80020	28	385	7.6	35.5	25.5	752	8.1	100
AUG											
18...	1745	1028	80020	15	458	7.8	41.0	25.5	746	6.8	85
SEP											
14...	1355	1028	80020	15	487	7.5	31.5	21.0	750	8.6	98

07189542 HONEY CREEK NEAR SOUTH WEST CITY, MO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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...	130	K57	150	143	0	117	--	--	<.010	--
NOV 17...	K60	K28	170	154	0	127	--	--	<.010	--
DEC 08...	280	220	120	149	0	122	--	--	<.010	--
JAN 07...	73	47	69	148	0	121	--	--	<.010	--
FEB 03...	67	44	88	150	0	123	--	--	<.010	--
MAR 16...	5600	6200	5800	64	0	52	2.72	12	.021	.07
APR 07...	230	180	100	129	0	106	--	--	<.010	--
MAY 04...	4600	3500	9400	110	0	90	2.88	13	.010	.03
JUN 09...	110	K14	140	138	0	113	--	--	<.010	--
JUL 28...	--	--	220	120	0	99	--	--	<.010	--
AUG 18...	140	K29	600	149	0	122	--	--	<.010	--
SEP 14...	K22	K17	170	161	0	132	--	--	<.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...	10.6	<.020	--	--	.27	11	.537	.484	.480	1.5
NOV 17...	10.0	.049	.06	.14	.19	10	.426	.393	.402	1.2
DEC 08...	8.58	.031	.04	--	<.10	--	.320	.358	.322	.99
JAN 07...	8.84	.021	.03	.22	.24	9.1	.252	.235	.210	.64
FEB 03...	10.5	.026	.03	.28	.30	11	.321	.290	.300	.92
MAR 16...	2.74	.126	.16	2.1	2.3	5.0	1.04	.511	.464	1.4
APR 07...	3.01	.051	.07	.16	.21	3.2	.166	.151	.128	.39
MAY 04...	2.88	.076	.10	.53	.61	3.5	.234	.179	.156	.48
JUN 09...	3.57	<.020	--	--	.25	3.8	--	.248	.195	.60
JUL 28...	2.65	<.020	--	--	.29	2.9	.142	.125	.127	.39
AUG 18...	2.38	<.020	--	--	.24	2.6	.150	.114	.146	.45
SEP 14...	2.84	.022	.03	.19	.22	3.1	--	.239	.216	.66

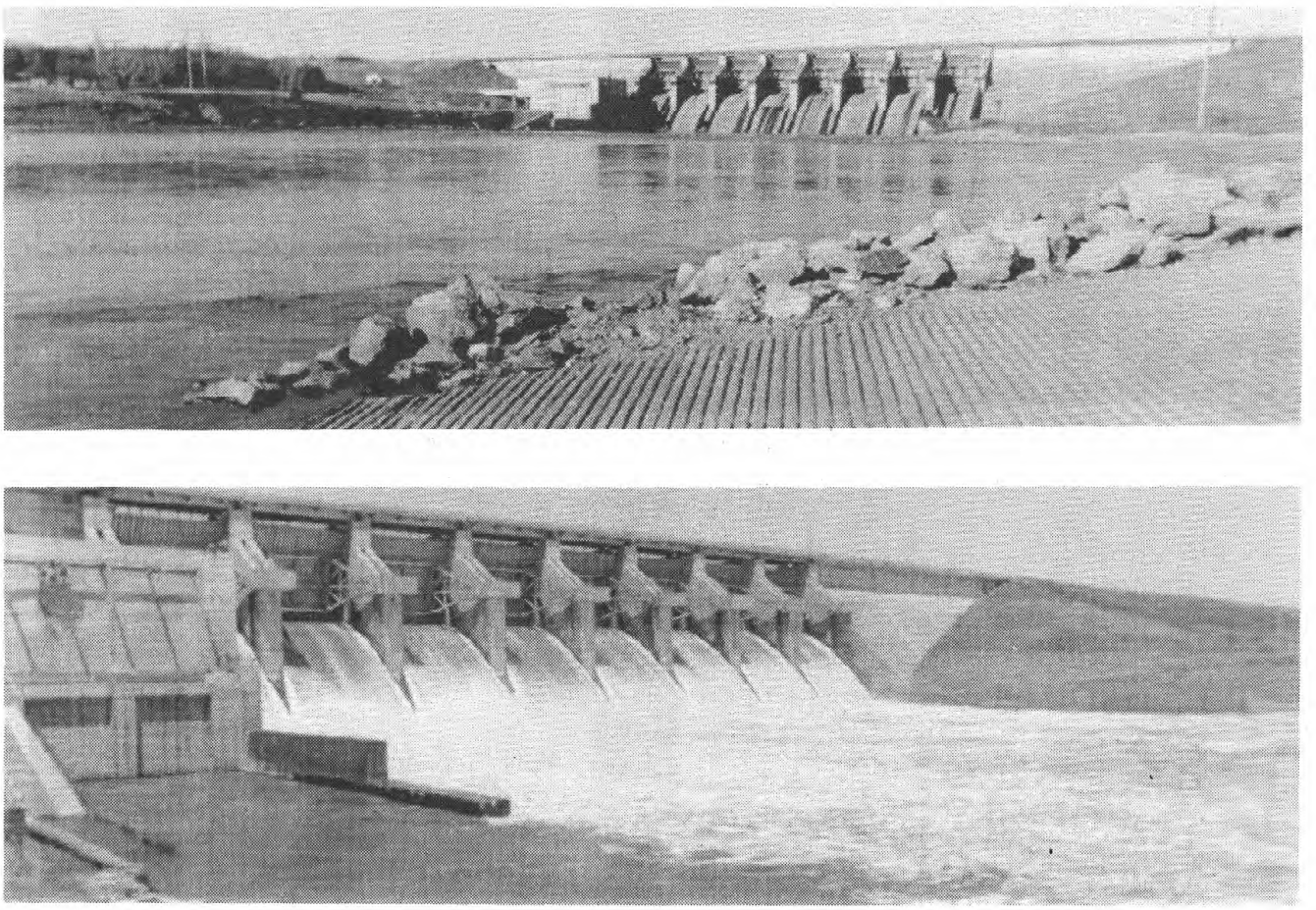
07189542 HONEY CREEK NEAR SOUTH WEST CITY, MO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	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)
AUG 18...	1745	1028	80020	15	140	22	53	2.8	31

DATE	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)
AUG 18...	31	1	7.1	26	44	<.10	11	267

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)
AUG 18...	261	.36	11.0	<1	<10	E2.9	-33.5	-5.69



Kaw Dam near Ponca City, OK October, 1995. Before and after gate openings.

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 Mr. 21, 1940; power-pool was first filled Apr. 19, 1941. Capacity between gage heights 682.0 ft, sill of powerhouse penstock, and 745.0 ft, maximum power pool is 1,492,000 acre-ft. Capacity between gage heights 745.0 ft and 755.0 ft is 525,200 acre-ft, and is reserved for flood control. Dead storage below gage height 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, 2,070,000 acre-ft, May 7, gage height, 752.82 ft; minimum, 1,489,000 acre-ft, Sept. 29, gage height, 740.88.

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

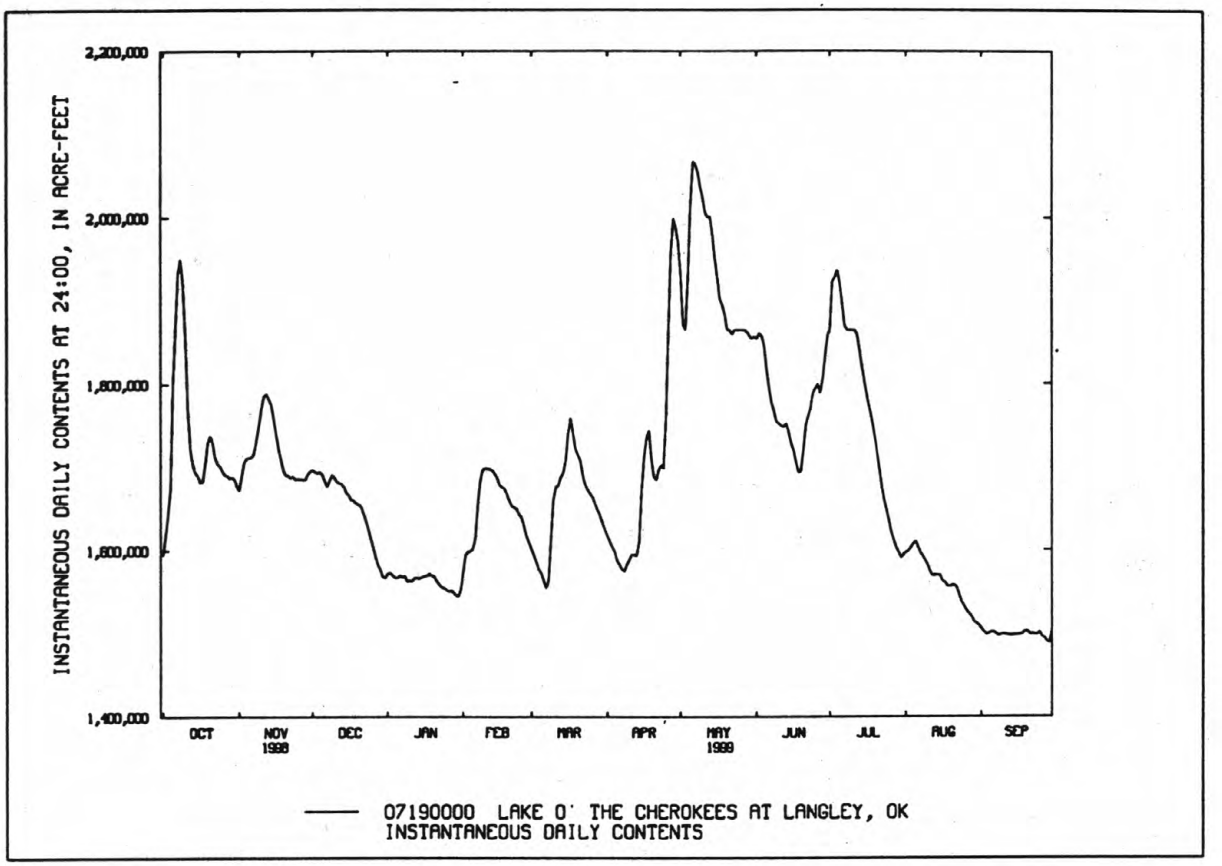
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1595000	1672000	1697000	1572000	1574000	1602000	1618000	1933000	1855000	1866000	1598000	1506000
2	1617000	1690000	1694000	1573000	1595000	1595000	1611000	1872000	1862000	1924000	1599000	1502000
3	1643000	1707000	1693000	1570000	1599000	1587000	1604000	1866000	1859000	1929000	1603000	1499000
4	1674000	1711000	1694000	1567000	1599000	1577000	1599000	1927000	1847000	1938000	1608000	1500000
5	1799000	1712000	1691000	1567000	1602000	1573000	1588000	2014000	1819000	1923000	1611000	1502000
6	1866000	1712000	1683000	1570000	1614000	1564000	1583000	2067000	1796000	1899000	1604000	1502000
7	1933000	1717000	1677000	1568000	1654000	1555000	1577000	2064000	1778000	1871000	1597000	1500000
8	1951000	1733000	1684000	1569000	1683000	1563000	1575000	2054000	1768000	1866000	1593000	1498000
9	1922000	1751000	1691000	1563000	1697000	1613000	1583000	2037000	1755000	1866000	1588000	1499000
10	1856000	1771000	1688000	1564000	1699000	1661000	1589000	2024000	1753000	1866000	1582000	1500000
11	1770000	1786000	1682000	1563000	1698000	1676000	1595000	2006000	1750000	1866000	1574000	1499000
12	1722000	1788000	1681000	1567000	1698000	1678000	1595000	2001000	1749000	1861000	1569000	1499000
13	1703000	1782000	1680000	1567000	1696000	1688000	1594000	2001000	1753000	1843000	1571000	1498000
14	1694000	1775000	1676000	1566000	1692000	1693000	1611000	1979000	1743000	1821000	1570000	1499000
15	1690000	1758000	1669000	1568000	1687000	1707000	1672000	1951000	1729000	1804000	1570000	1499000
16	1682000	1739000	1666000	1569000	1678000	1740000	1712000	1928000	1721000	1786000	1563000	1499000
17	1683000	1722000	1660000	1569000	1676000	1759000	1735000	1903000	1707000	1772000	1562000	1499000
18	1703000	1709000	1660000	1572000	1674000	1742000	1744000	1896000	1694000	1758000	1557000	1500000
19	1729000	1696000	1656000	1570000	1667000	1722000	1710000	1885000	1695000	1741000	1556000	1503000
20	1738000	1690000	1655000	1569000	1659000	1715000	1688000	1866000	1719000	1721000	1558000	1503000
21	1730000	1690000	1653000	1564000	1653000	1708000	1685000	1866000	1750000	1700000	1558000	1499000
22	1713000	1687000	1645000	1560000	1652000	1690000	1697000	1861000	1762000	1679000	1555000	1500000
23	1704000	1689000	1636000	1556000	1650000	1679000	1703000	1866000	1771000	1661000	1545000	1499000
24	1702000	1685000	1626000	1555000	1643000	1673000	1699000	1866000	1789000	1649000	1537000	1499000
25	1696000	1686000	1615000	1553000	1640000	1668000	1757000	1866000	1795000	1636000	1533000	1502000
26	1691000	1686000	1604000	1551000	1629000	1664000	1863000	1866000	1801000	1622000	1527000	1496000
27	1690000	1685000	1593000	1552000	1617000	1656000	1955000	1866000	1789000	1612000	1524000	1495000
28	1687000	1685000	1583000	1550000	1610000	1649000	1999000	1864000	1805000	1603000	1520000	1490000
29	1688000	1692000	1577000	1546000		1642000	1989000	1859000	1832000	1598000	1514000	1489000
30	1686000	1695000	1568000	1545000	---	1633000	1971000	1855000	1859000	1591000	1512000	1505000
31	1677000	---	1567000	1552000	---	1625000	---	1858000	---	1595000	1510000	---
MAX	1951000	1788000	1697000	1573000	1699000	1759000	1999000	2067000	1862000	1938000	1611000	1506000
MIN	1595000	1672000	1567000	1545000	1574000	1555000	1575000	1855000	1694000	1591000	1510000	1489000
(‡)	745.11	745.48	742.68	742.34	743.63	743.98	751.02	748.85	748.86	743.30	741.38	741.26
(‡‡)	+81000	+18000	-128000	-15000	+58000	+15000	+346000	-113000	+1000	-264000	-85000	-5000

CAL YR 1998 MAX 1999000 MIN 1487000 (‡‡) -135,000
WTR YR 1999 MAX 2067000 MIN 1489000 (‡‡) -91,000

(‡) 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.--No estimated daily discharge. 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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10200	10500	19000	3230	10000	8230	10300	38500	17700	44300	42	1600
2	10300	13300	20800	4750	11000	8190	10300	36100	21700	47300	107	2920
3	10300	25900	22600	7440	11000	8080	10300	24300	24300	45900	46	1570
4	10300	30400	21300	6470	11000	8230	10300	37100	27000	13600	50	984
5	33800	31700	19300	4970	10500	8180	10300	74100	26100	16800	64	223
6	63600	31700	19000	4410	10800	8180	9210	68300	24700	15600	4900	771
7	76400	31900	18600	5080	10900	8250	8550	71200	20600	13700	5210	2690
8	83600	32600	18500	5740	14700	9710	8400	52400	17700	13600	5050	3100
9	78500	33900	19100	6060	16100	10300	8820	30600	17700	12800	4130	45
10	65600	35500	19200	3670	14600	10900	7990	19800	14800	11700	4580	996
11	55400	37000	15100	4370	14000	13200	8380	22100	12000	11100	4510	1630
12	41100	37700	11400	3890	12600	15500	8080	17600	10400	11300	4050	4180
13	26500	37900	11400	3820	12600	16000	7830	18000	12600	14900	572	923
14	18700	37500	11300	4170	12600	16200	9630	23900	16100	16500	44	507
15	16500	36600	11300	4880	12400	17700	19300	24400	15900	16400	505	527
16	17100	33100	10400	4530	12300	23800	30400	23000	15800	16500	4110	811
17	16800	29400	10000	3810	12300	31500	32400	32200	16300	14700	3090	30
18	17200	27500	9980	3620	11900	33300	33700	30800	15000	13600	3840	25
19	19400	26500	9990	5350	11600	29200	33000	27800	14000	13900	2090	33
20	23000	23100	10000	5220	11400	24400	25200	26300	14200	13700	613	3160
21	23200	19900	9980	6820	11400	24000	19400	23400	13500	13500	451	2640
22	22400	20200	10100	7940	6480	23100	20400	22600	13700	13300	2540	979
23	19100	20100	10000	7870	9420	19600	23100	14500	14000	13100	6220	1710
24	16000	19900	10000	7590	9620	14900	23200	10900	20100	10100	4570	1550
25	15900	18800	10100	7320	6780	11300	24700	11100	37100	9240	3710	200
26	14600	17900	10100	6620	10300	11300	46100	13700	33100	9430	4430	3660
27	12700	18000	9990	5980	10300	11300	68100	13300	22600	7730	1790	2180
28	11800	17800	8710	6380	9160	11200	74200	13300	16300	6400	2680	4000
29	10700	17900	8520	7000	---	11200	73800	13600	29600	3780	3830	908
30	10600	18400	8140	7410	---	10900	52900	13700	41700	4200	2120	25
31	10600	---	4840	10100	---	10200	---	13700	---	221	1440	---
TOTAL	861900	792600	408750	176510	317760	468050	728290	862300	596300	468901	81384	44577
MEAN	27800	26420	13190	5694	11350	15100	24280	27820	19880	15130	2625	1486
MAX	83600	37900	22600	10100	16100	33300	74200	74100	41700	47300	6220	4180
MIN	10200	10500	4840	3230	6480	8080	7830	10900	10400	221	42	25
AC-FT	1710000	1572000	810800	350100	630300	928400	1445000	1710000	1183000	930100	161400	88420

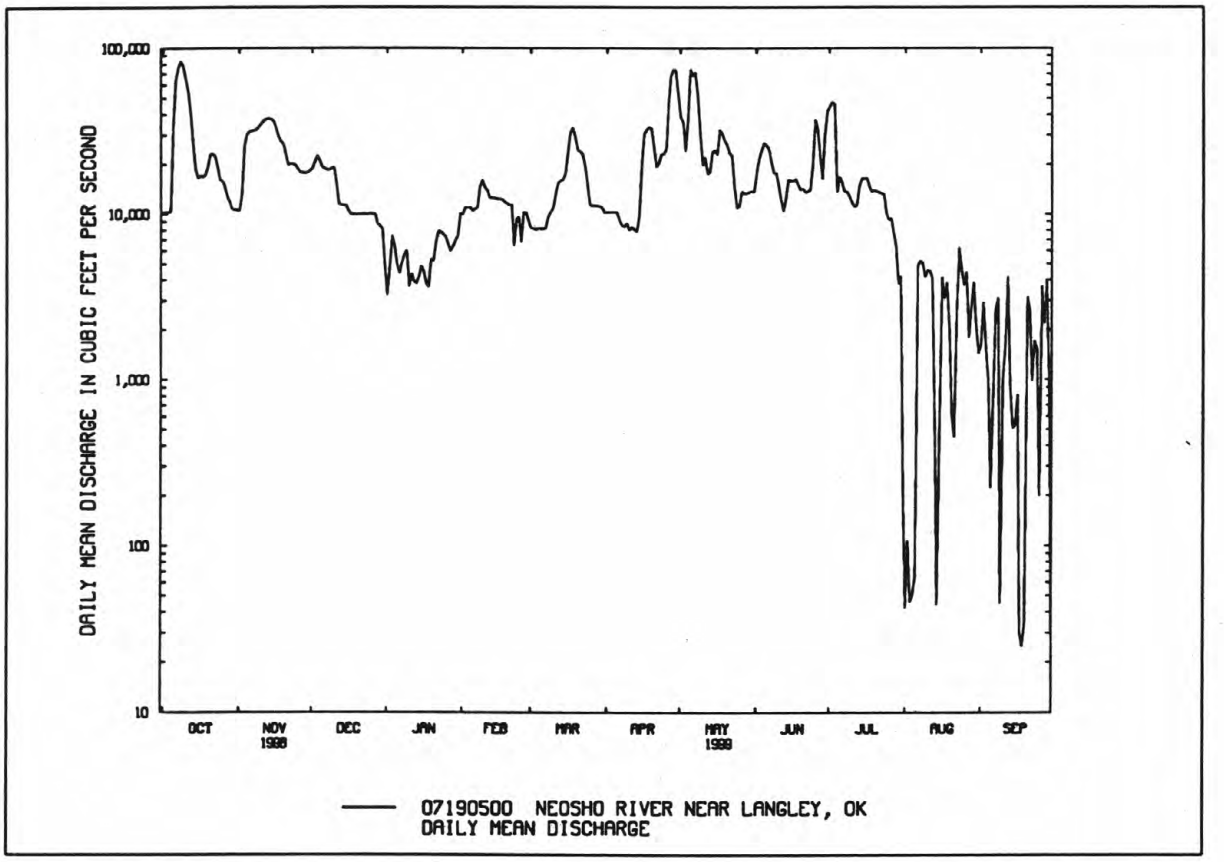
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1999, BY WATER YEAR (WY)

MEAN	6324	7150	5833	5014	6043	8705	11510	12060	11180	9116	4452	5129
MAX	51120	38870	35580	21440	23460	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

07190500 NEOSHO RIVER NEAR LANGLEY, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1940 - 1999	
ANNUAL TOTAL	4706833		5807322			
ANNUAL MEAN	12900		15910		7711	
HIGHEST ANNUAL MEAN					21710	1993
LOWEST ANNUAL MEAN					210	1940
HIGHEST DAILY MEAN	83600	Oct 8	83600	Oct 8	287000	May 20 1943
LOWEST DAILY MEAN	25	Jun 6	25	Sep 18, 30	[a]9.0	Mar 25 1940
ANNUAL SEVEN-DAY MINIMUM	477	Sep 1	408	Sep 13	15	Apr 11 1971
INSTANTANEOUS PEAK FLOW			86900	May 5	[b]300000	May 20 1943
INSTANTANEOUS PEAK STAGE			29.32	Oct 8	[c]45.50	May 20 1943
ANNUAL RUNOFF (AC-FT)	9336000		11520000		5586000	
10 PERCENT EXCEEDS	28200		33000		17200	
50 PERCENT EXCEEDS	10100		11800		3970	
90 PERCENT EXCEEDS	2590		2160		119	

[a]Caused by closure of Pensacola Dam.
[b]From computation of overflow 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.--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.

EXTREMES 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)
Oct 6	0430	19,900	37.56	Jun 21	0530	18,700	36.72
Apr 27	0630	25,800	40.66	Jun 25	0400	10,100	29.53
May 5	0800	38,000	44.54	Jul 1	2400	9,040	28.42
May 18	0200	9,280	28.67				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	50	546	41	1040	37	107	295	927	3870	9.4	3.8
2	3.0	3000	199	470	512	34	97	226	341	4610	9.6	3.3
3	5.4	751	128	270	301	31	133	191	202	618	14	2.8
4	7.2	277	102	152	202	31	274	7640	146	319	12	2.5
5	9810	175	99	76	148	28	191	32200	118	211	10	1.9
6	15900	120	87	55	184	67	142	8460	100	149	13	.75
7	924	116	98	55	4660	79	106	501	91	121	16	.23
8	303	1430	128	57	1450	2910	84	345	96	83	12	.31
9	183	464	83	47	490	4460	70	272	88	67	12	.31
10	125	2000	62	40	293	634	58	212	69	1140	12	.30
11	88	822	52	35	287	301	46	180	203	478	12	1.7
12	69	276	46	39	370	933	38	227	113	131	11	4.2
13	49	178	43	52	202	7160	34	227	75	66	10	4.6
14	39	138	40	59	146	3050	133	170	107	46	9.8	3.7
15	30	113	37	48	123	2990	986	137	65	36	e9.7	3.0
16	25	95	34	43	105	6090	455	120	496	31	e9.6	2.8
17	34	78	32	42	97	5960	197	3580	1280	28	9.4	2.7
18	1490	68	32	43	91	964	130	4890	260	27	9.1	2.5
19	461	56	104	43	85	525	96	540	3650	24	8.2	2.4
20	173	53	248	39	78	1760	77	302	12400	22	7.9	2.6
21	95	52	137	36	68	1690	63	1150	15200	21	7.8	2.6
22	62	50	94	34	60	590	362	1040	1390	21	7.6	2.6
23	48	47	57	51	56	385	4540	3860	3900	20	7.2	2.5
24	38	42	43	215	51	303	640	2090	4680	19	6.8	2.3
25	32	40	37	211	48	249	6620	478	7570	17	6.4	2.0
26	28	37	34	127	46	211	21500	328	878	16	6.2	2.0
27	26	35	34	88	44	180	23900	250	460	14	6.3	1.6
28	23	34	36	68	41	162	6450	188	332	11	6.1	1.4
29	24	34	39	64	---	152	626	150	425	11	5.6	1.3
30	28	1540	39	1090	---	138	409	133	3160	11	4.9	1.0
31	36	---	34	4260	---	124	---	1100	---	9.8	4.3	---
TOTAL	30161.0	12171	2784	7950	11278	42228	68564	71482	58822	12247.8	285.9	65.70
MEAN	973	406	89.8	256	403	1362	2285	2306	1961	395	9.22	2.19
MAX	15900	3000	546	4260	4660	7160	23900	32200	15200	4610	16	4.6
MIN	2.4	34	32	34	41	28	34	120	65	9.8	4.3	.23
AC-FT	59820	24140	5520	15770	22370	83760	136000	141800	116700	24290	567	130
CFSM	2.16	.90	.20	.57	.90	3.03	5.08	5.12	4.36	.88	.02	.00
IN.	2.49	1.01	.23	.66	.93	3.49	5.67	5.91	4.86	1.01	.02	.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1999, BY WATER YEAR (WY)

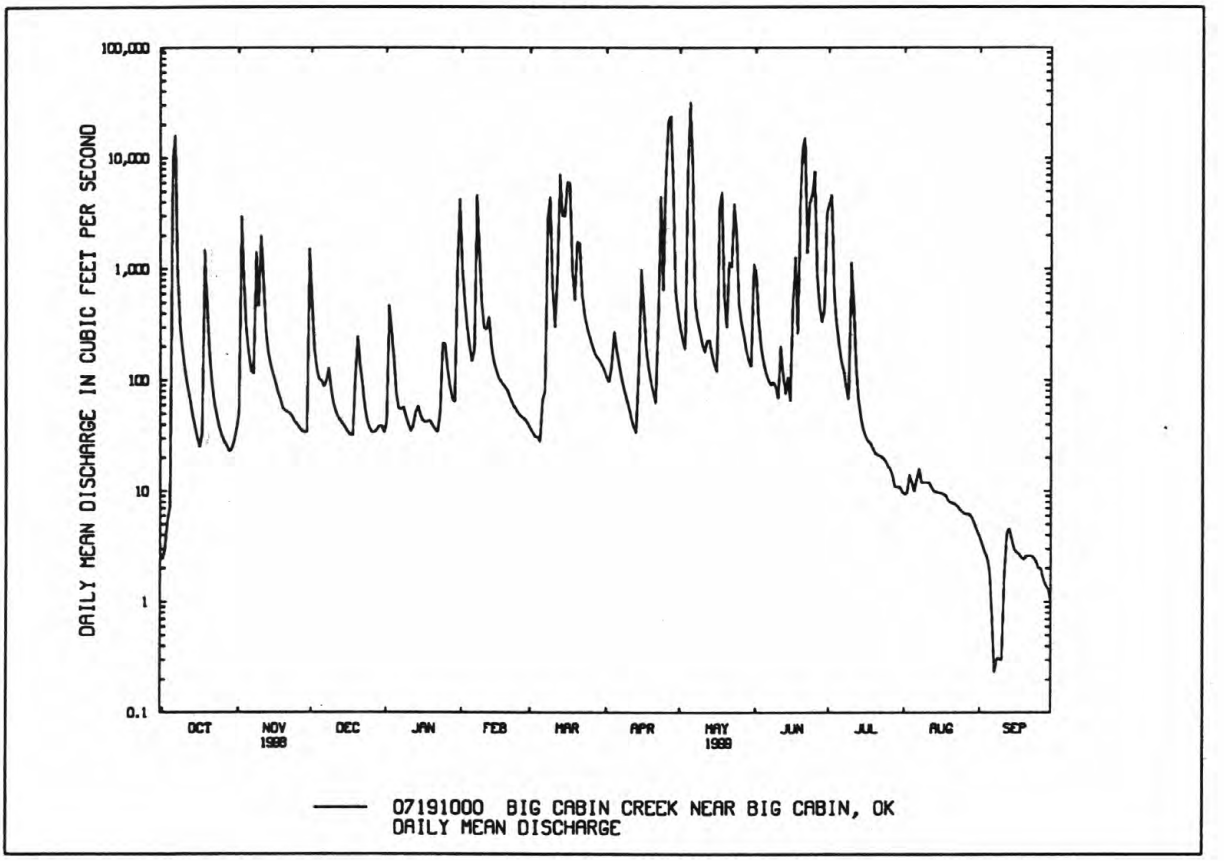
MEAN	273	441	302	234	317	594	524	637	470	214	85.1	218
MAX	4250	2844	2552	1157	2940	2621	2285	3580	2817	1947	1757	1891
(WY)	1960	1986	1993	1973	1985	1990	1999	1961	1948	1958	1948	1961
MIN	.22	.89	1.52	1.29	1.50	1.37	30.0	20.3	2.47	.53	.41	.22
(WY)	1957	1956	1956	1954	1954	1956	1954	1963	1988	1954	1954	1954

e Estimated

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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1948 - 1999	
ANNUAL TOTAL	168174.68		318039.40			
ANNUAL MEAN	461		871		359	
HIGHEST ANNUAL MEAN					1044	1993
LOWEST ANNUAL MEAN					37.9	1956
HIGHEST DAILY MEAN	15900	Oct 6	32200	May 5	46300	Oct 3 1959
LOWEST DAILY MEAN	.20	Aug 28	.23	Sep 7	.10	Oct 4 1954
ANNUAL SEVEN-DAY MINIMUM	.21	Aug 26	.79	Sep 5	.11	Sep 11 1956
INSTANTANEOUS PEAK FLOW			38000	May 5	[a]52000	Oct 3 1959
INSTANTANEOUS PEAK STAGE			44.54	May 5	46.65	Feb 23 1985
ANNUAL RUNOFF (AC-FT)	333600		630800		260000	
ANNUAL RUNOFF (CFSM)	1.02		1.94		.80	
ANNUAL RUNOFF (INCHES)	13.90		26.29		10.83	
10 PERCENT EXCEEDS	672		1600		525	
50 PERCENT EXCEEDS	60		83		34	
90 PERCENT EXCEEDS	3.2		5.9		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 1880's.

EXTREMES 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)
May 4	1530	2,560	8.82	Jun 30	1000	15,200	16.23

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

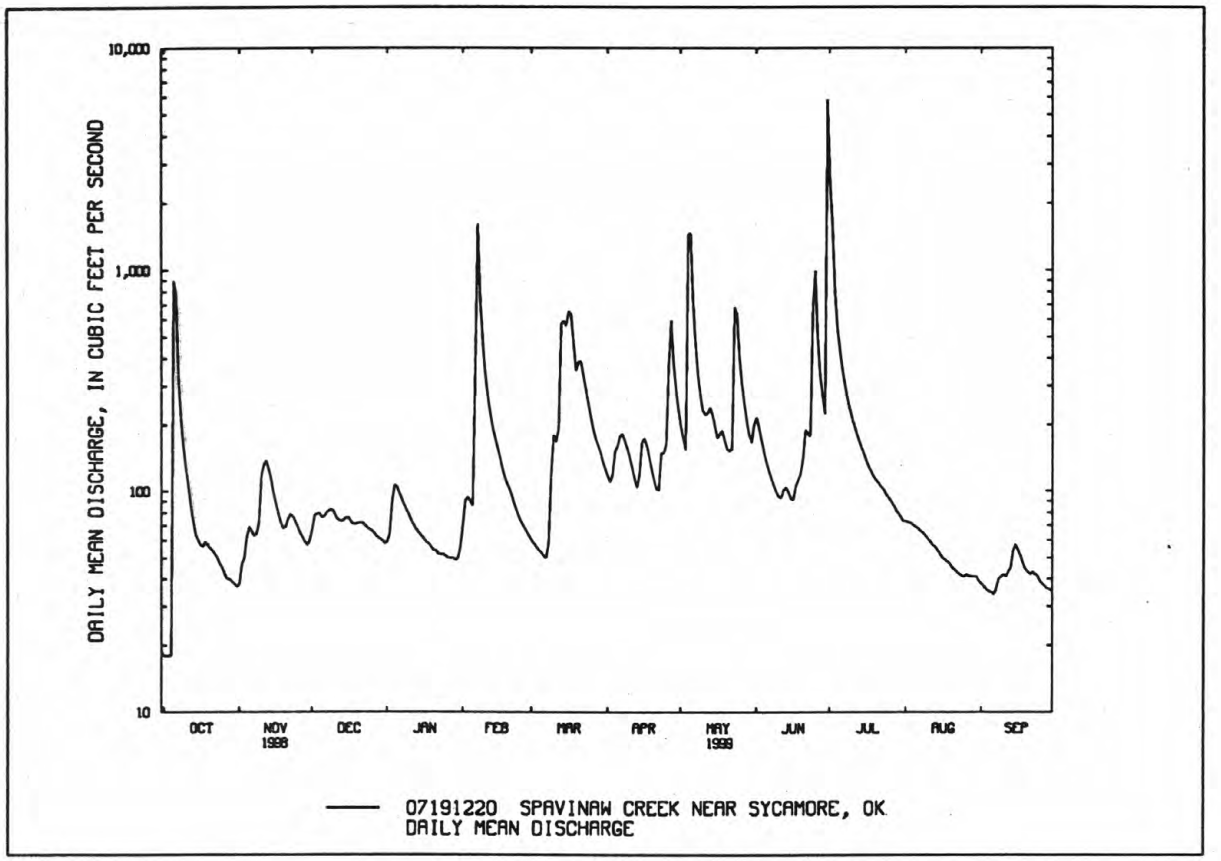
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	38	67	59	71	60	117	198	216	2610	73	38
2	18	47	78	64	91	58	110	172	193	1630	72	37
3	18	50	79	89	94	56	118	154	169	810	72	36
4	18	62	80	107	90	54	151	1460	150	554	70	35
5	894	69	76	105	86	53	159	1470	135	438	69	35
6	776	66	77	98	402	51	178	719	123	358	68	34
7	323	63	80	92	1620	50	182	467	114	305	66	36
8	211	64	82	87	741	58	169	336	106	266	65	40
9	158	72	83	82	478	120	156	271	99	236	63	41
10	128	117	81	78	342	180	143	232	94	213	61	42
11	106	132	76	73	274	168	128	222	93	196	59	41
12	87	137	74	70	229	191	114	226	101	180	57	43
13	73	126	73	67	197	575	104	240	104	166	56	45
14	64	113	74	65	176	592	118	222	99	155	54	54
15	60	98	76	63	158	563	167	196	92	145	52	57
16	57	88	76	61	145	654	173	174	91	135	50	54
17	56	79	73	59	129	634	160	181	105	127	49	51
18	59	72	71	58	117	471	144	188	112	121	48	47
19	57	68	71	56	109	353	127	170	119	115	47	44
20	55	69	72	54	103	386	113	154	138	111	45	43
21	54	75	72	54	96	389	102	152	189	108	44	42
22	52	79	72	52	88	336	101	155	182	104	43	43
23	50	77	70	52	82	291	149	681	177	101	42	42
24	47	73	68	52	76	252	149	639	670	96	41	41
25	45	69	67	51	72	219	162	402	989	93	41	39
26	42	65	66	50	69	193	374	305	497	90	42	38
27	40	62	64	50	66	174	592	248	332	86	41	37
28	40	59	62	50	63	161	384	206	268	82	41	36
29	39	57	61	49	---	151	288	179	224	79	41	36
30	38	60	60	50	---	136	235	166	5840	76	41	35
31	37	---	58	56	---	126	---	203	---	73	39	---
TOTAL	3720	2306	2239	2053	6264	7755	5367	10788	11821	9859	1652	1242
MEAN	120	76.9	72.2	66.2	224	250	179	348	394	318	53.3	41.4
MAX	894	137	83	107	1620	654	592	1470	5840	2610	73	57
MIN	18	38	58	49	63	50	101	152	91	73	39	34
AC-FT	7380	4570	4440	4070	12420	15380	10650	21400	23450	19560	3280	2460
CFSM	.90	.58	.54	.50	1.68	1.88	1.35	2.62	2.96	2.39	.40	.31
IN.	1.04	.64	.63	.57	1.75	2.17	1.50	3.02	3.31	2.76	.46	.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1999, BY WATER YEAR (WY)

MEAN	59.5	118	130	110	126	194	204	153	149	67.0	31.3	51.6
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 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1962 - 1999	
ANNUAL TOTAL	38778.3		65066			
ANNUAL MEAN	106		178		116	
HIGHEST ANNUAL MEAN					265	1974
LOWEST ANNUAL MEAN					18.0	1967
HIGHEST DAILY MEAN	1160	Jan 5	5840	Jun 30	11700	Jul 27 1975
LOWEST DAILY MEAN	8.4	Sep 11	18	Oct 1-4	1.3	Aug 9 1964
ANNUAL SEVEN-DAY MINIMUM	9.2	Sep 7	36	Sep 1	1.6	Aug 3 1964
INSTANTANEOUS PEAK FLOW			15200	Jun 30	39800	Jul 27 1975
INSTANTANEOUS PEAK STAGE			16.23	Jun 30	22.07	Jul 27 1975
ANNUAL RUNOFF (AC-FT)	76920		129100		83970	
ANNUAL RUNOFF (CFSM)	.80		1.34		.87	
ANNUAL RUNOFF (INCHES)	10.85		18.20		11.84	
10 PERCENT EXCEEDS	187		338		237	
50 PERCENT EXCEEDS	70		86		56	
90 PERCENT EXCEEDS	19		42		14	



07191222 BEATY CREEK NEAR JAY, OK

LOCATION.--Lat 36°21'19", long 94°46'34", in NW 1/4 SE 1/4 sec.30, T.22 N., R.24 E., Delaware County, Hydrologic Unit 11020209, on left bank of county road bridge, 0.5 mi upstream from Spavinaw Creek, 2.3 mi east of Lake Eucha Bridge on U.S. Highway 10 and 59, and at mile 0.5.

DRAINAGE AREA.--59.2 mi^2.

PERIOD OF RECORD.--July 30, 1998 to current year.

GAGE.--Water-stage recorder. Datum of gage is 783.52 ft above sea level from topographic map.

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

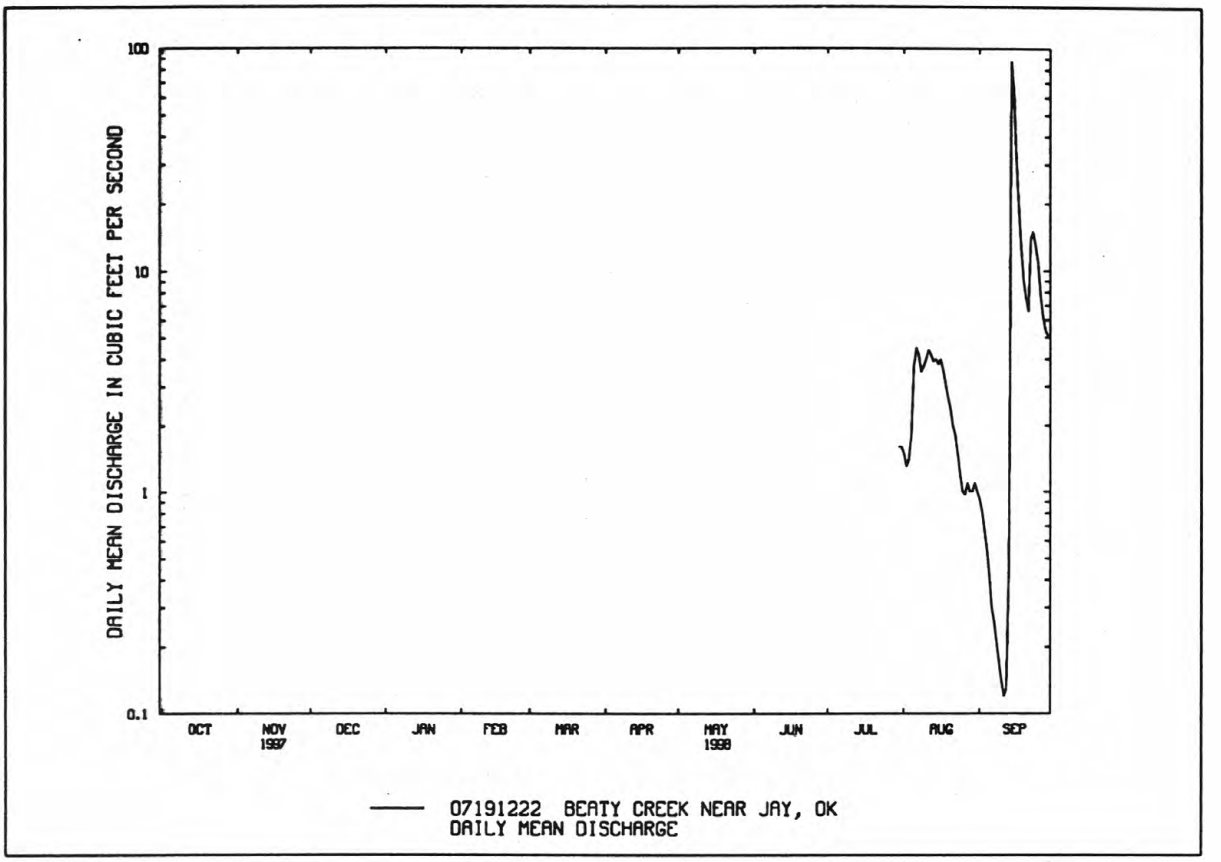
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	1.5	.93
2	---	---	---	---	---	---	---	---	---	---	1.3	.81
3	---	---	---	---	---	---	---	---	---	---	1.4	.67
4	---	---	---	---	---	---	---	---	---	---	1.8	.55
5	---	---	---	---	---	---	---	---	---	---	3.7	.42
6	---	---	---	---	---	---	---	---	---	---	4.5	.30
7	---	---	---	---	---	---	---	---	---	---	4.2	.26
8	---	---	---	---	---	---	---	---	---	---	3.5	.21
9	---	---	---	---	---	---	---	---	---	---	3.7	.17
10	---	---	---	---	---	---	---	---	---	---	4.0	.14
11	---	---	---	---	---	---	---	---	---	---	4.4	.12
12	---	---	---	---	---	---	---	---	---	---	4.2	.13
13	---	---	---	---	---	---	---	---	---	---	3.9	.44
14	---	---	---	---	---	---	---	---	---	---	4.0	88
15	---	---	---	---	---	---	---	---	---	---	3.8	66
16	---	---	---	---	---	---	---	---	---	---	4.0	33
17	---	---	---	---	---	---	---	---	---	---	3.6	20
18	---	---	---	---	---	---	---	---	---	---	3.1	13
19	---	---	---	---	---	---	---	---	---	---	2.7	9.1
20	---	---	---	---	---	---	---	---	---	---	2.4	7.5
21	---	---	---	---	---	---	---	---	---	---	2.0	6.6
22	---	---	---	---	---	---	---	---	---	---	1.8	14
23	---	---	---	---	---	---	---	---	---	---	1.5	15
24	---	---	---	---	---	---	---	---	---	---	1.2	e13
25	---	---	---	---	---	---	---	---	---	---	1.0	11
26	---	---	---	---	---	---	---	---	---	---	.97	7.8
27	---	---	---	---	---	---	---	---	---	---	1.1	6.2
28	---	---	---	---	---	---	---	---	---	---	1.0	5.4
29	---	---	---	---	---	---	---	---	---	---	1.0	5.1
30	---	---	---	---	---	---	---	---	---	1.6	1.1	5.0
31	---	---	---	---	---	---	---	---	---	1.6	1.0	---
TOTAL	---	---	---	---	---	---	---	---	---	---	79.37	330.85
MEAN	---	---	---	---	---	---	---	---	---	---	2.56	11.0
MAX	---	---	---	---	---	---	---	---	---	---	4.5	88
MIN	---	---	---	---	---	---	---	---	---	---	.97	.12
AC-FT	---	---	---	---	---	---	---	---	---	---	157	656

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

MEAN	---	---	---	---	---	---	---	---	---	---	2.56	11.0
MAX	---	---	---	---	---	---	---	---	---	---	2.56	11.0
(WY)	---	---	---	---	---	---	---	---	---	---	1998	1998
MIN	---	---	---	---	---	---	---	---	---	---	2.56	11.0
(WY)	---	---	---	---	---	---	---	---	---	---	1998	1998

e Estimated


DAILY MEAN DISCHARGE IN CUBIC FEET PER SECOND
100
10
1
0.1
OCT
NOV
1997
DEC
JAN
FEB
MAR
APR
MAY
1998
JUN
JUL
AUG
SEP
07191222 BEATY CREEK NEAR JAY, OK
DAILY MEAN DISCHARGE

07191222 BEATY CREEK NEAR JAY, OK--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	24	66	12	67	28	57	124	190	802	17	5.2
2	5.1	20	56	30	68	26	52	103	129	536	17	4.9
3	5.3	19	44	47	68	25	61	88	100	373	24	4.6
4	5.5	16	39	52	63	23	121	613	83	279	18	4.6
5	1800	11	35	65	56	22	89	514	69	214	12	6.9
6	762	7.5	34	72	358	22	79	242	59	171	11	8.2
7	342	7.4	35	67	1120	20	69	180	53	144	10	13
8	239	14	34	60	386	52	61	145	47	124	9.7	23
9	181	21	31	54	255	122	55	120	42	107	9.1	20
10	140	52	26	47	193	93	49	103	39	96	8.7	17
11	107	58	21	44	162	78	43	91	37	86	8.5	15
12	83	42	19	42	136	112	38	103	35	77	7.9	32
13	66	31	17	41	115	474	38	97	33	68	8.8	47
14	54	22	15	36	100	321	52	80	32	61	9.1	30
15	45	15	12	33	90	316	79	70	29	56	8.7	21
16	42	13	11	32	82	411	66	61	34	50	8.2	15
17	44	16	9.6	31	73	339	58	74	39	46	7.8	12
18	55	14	9.5	28	66	232	52	96	32	42	7.5	11
19	51	17	15	26	60	183	46	73	53	39	7.1	11
20	43	27	21	25	54	300	41	64	88	37	7.0	12
21	39	31	24	24	48	243	38	68	145	35	6.4	12
22	35	31	24	23	44	189	40	67	113	33	6.0	11
23	32	28	22	22	40	158	74	311	170	30	6.3	9.6
24	29	23	21	21	37	135	70	218	285	28	6.5	8.9
25	26	19	19	19	35	117	86	146	328	26	6.7	8.7
26	25	17	17	18	34	103	532	120	185	24	6.6	8.4
27	24	15	16	17	32	92	590	96	136	22	6.8	8.3
28	23	13	14	16	30	84	278	81	110	21	7.1	8.6
29	22	13	13	16	---	76	198	68	91	19	6.8	8.5
30	22	43	12	20	---	67	153	69	2970	18	6.1	8.4
31	23	---	10	41	---	61	---	201	---	17	5.6	---
TOTAL	4375.1	679.9	742.1	1081	3872	4524	3265	4486	5756	3681	288.0	405.8
MEAN	141	22.7	23.9	34.9	138	146	109	145	192	119	9.29	13.5
MAX	1800	58	66	72	1120	474	590	613	2970	802	24	47
MIN	5.1	7.4	9.5	12	30	20	38	61	29	17	5.6	4.6
AC-FT	8680	1350	1470	2140	7680	8970	6480	8900	11420	7300	571	805

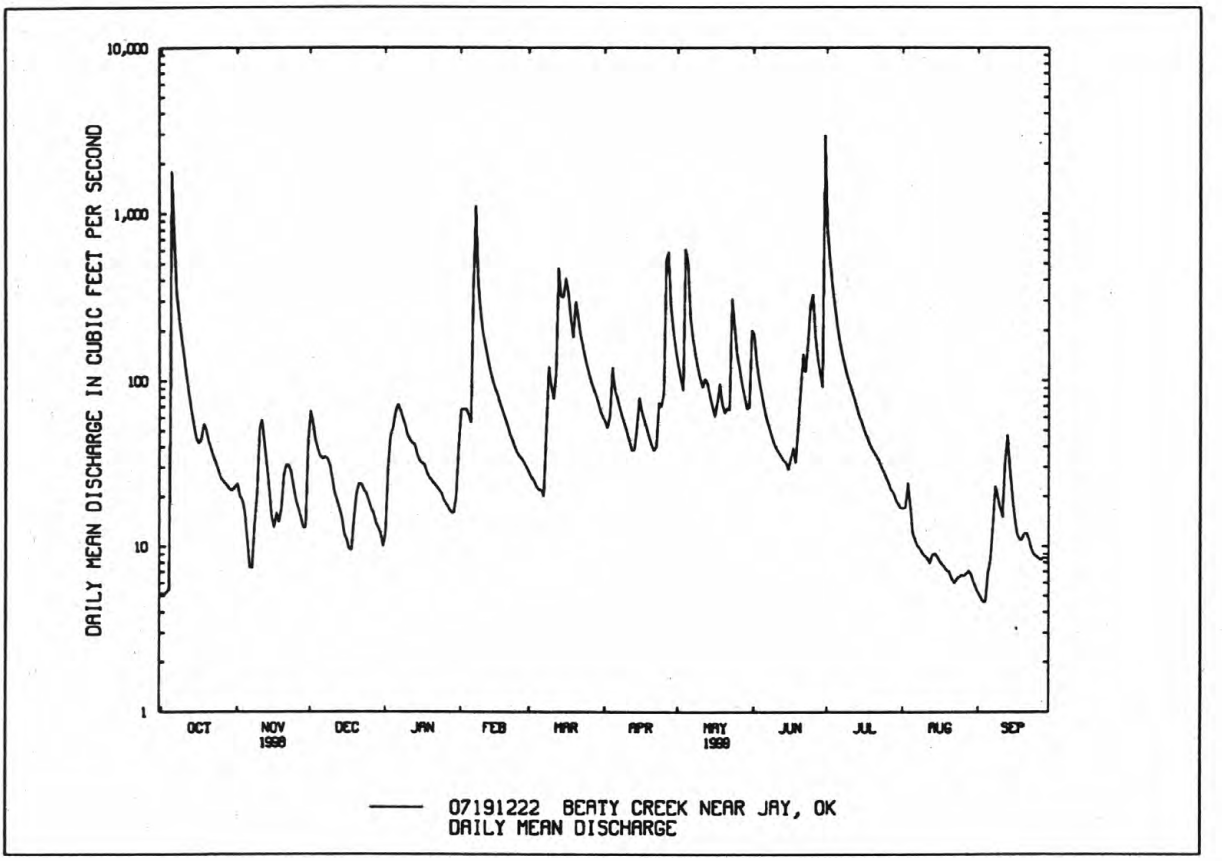
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 1999, BY WATER YEAR (WY)

MEAN	141	22.7	23.9	34.9	138	146	109	145	192	119	5.93	12.3
MAX	141	22.7	23.9	34.9	138	146	109	145	192	119	9.29	13.5
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999
MIN	141	22.7	23.9	34.9	138	146	109	145	192	119	2.56	11.0
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1998	1998

07191222 BEATY CREEK NEAR JAY, OK--Continued--Continued

SUMMARY STATISTICS	FOR 1999 WATER YEAR		WATER YEARS 1998 - 1999	
ANNUAL TOTAL	33155.9			
ANNUAL MEAN	90.8		90.8	
HIGHEST ANNUAL MEAN			90.8	1999
LOWEST ANNUAL MEAN			90.8	1999
HIGHEST DAILY MEAN	2970	Jun 30	2970	Jun 30 1999
LOWEST DAILY MEAN	4.6	Sep 3-4	.12	Sep 11 1998
ANNUAL SEVEN-DAY MINIMUM	5.4	Aug 29	.19	Sep 6 1998
INSTANTANEOUS PEAK FLOW	17400	Jun 30	17400	Jun 30 1999
INSTANTANEOUS PEAK STAGE	[a]14.26	Jun 30	[a]14.26	Jun 30 1999
ANNUAL RUNOFF (AC-FT)	65760		65810	
10 PERCENT EXCEEDS	189		170	
50 PERCENT EXCEEDS	39		32	
90 PERCENT EXCEEDS	8.7		4.2	

[a]From high-water mark.



07191297 BLACK HOLLOW NEAR SPAVINAW, OK

LOCATION.--Lat 36°22'37", long 95°00'25", in NE ¼ NE ¼ sec.24, T.22 N., R.21 E., Mayes County, Hydrologic Unit 11070209, on left bank, 0.1 mi upstream from Spavinaw Lake, 0.7 mi below Ground Hog Hollow, and 2.4 mi southeast of Spavinaw.

DRAINAGE AREA.--6.0 mi^2.

PERIOD OF RECORD.--July 1998 to current year.

GAGE.--Water-stage recorder. Datum of gage is 675.60 ft above sea level from elevation of Spavinaw Lake.

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

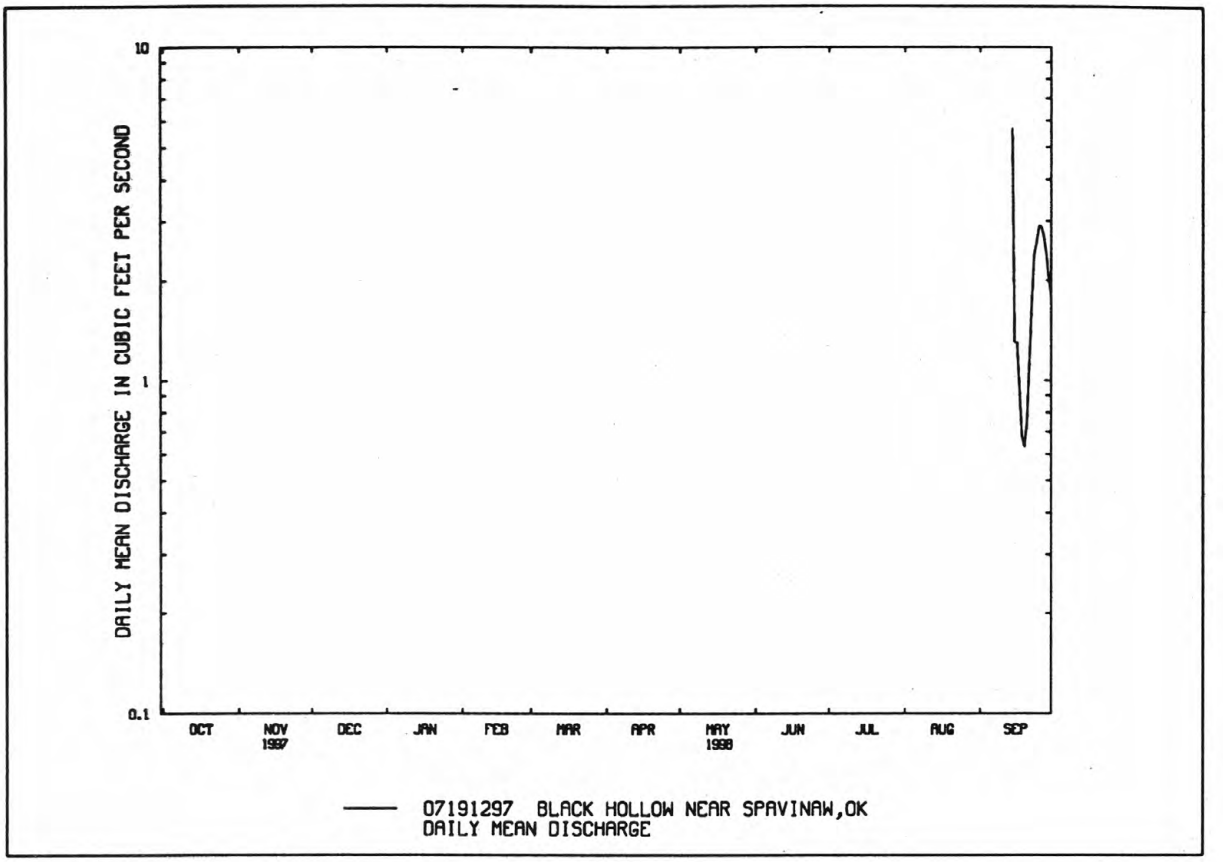
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	.00	.00
2	---	---	---	---	---	---	---	---	---	---	.00	.00
3	---	---	---	---	---	---	---	---	---	---	.00	.00
4	---	---	---	---	---	---	---	---	---	---	.00	.00
5	---	---	---	---	---	---	---	---	---	---	.00	.00
6	---	---	---	---	---	---	---	---	---	---	.00	.00
7	---	---	---	---	---	---	---	---	---	---	.00	.00
8	---	---	---	---	---	---	---	---	---	---	.00	.00
9	---	---	---	---	---	---	---	---	---	---	.00	.00
10	---	---	---	---	---	---	---	---	---	---	.00	.00
11	---	---	---	---	---	---	---	---	---	---	.00	.00
12	---	---	---	---	---	---	---	---	---	---	.00	.00
13	---	---	---	---	---	---	---	---	---	---	.00	.00
14	---	---	---	---	---	---	---	---	---	---	.00	5.7
15	---	---	---	---	---	---	---	---	---	---	.00	1.3
16	---	---	---	---	---	---	---	---	---	---	.00	1.3
17	---	---	---	---	---	---	---	---	---	---	.00	.95
18	---	---	---	---	---	---	---	---	---	---	.00	.68
19	---	---	---	---	---	---	---	---	---	---	.00	.63
20	---	---	---	---	---	---	---	---	---	---	.00	.73
21	---	---	---	---	---	---	---	---	---	---	.00	1.1
22	---	---	---	---	---	---	---	---	---	.00	.00	1.7
23	---	---	---	---	---	---	---	---	---	.00	.00	2.4
24	---	---	---	---	---	---	---	---	---	.00	.00	e2.6
25	---	---	---	---	---	---	---	---	---	.00	.00	2.9
26	---	---	---	---	---	---	---	---	---	.00	.00	2.9
27	---	---	---	---	---	---	---	---	---	.00	.00	2.7
28	---	---	---	---	---	---	---	---	---	.00	.00	2.4
29	---	---	---	---	---	---	---	---	---	.00	.00	2.0
30	---	---	---	---	---	---	---	---	---	.00	.00	1.8
31	---	---	---	---	---	---	---	---	---	.00	.00	---
TOTAL	---	---	---	---	---	---	---	---	---	---	0.00	33.79
MEAN	---	---	---	---	---	---	---	---	---	---	.000	1.13
MAX	---	---	---	---	---	---	---	---	---	---	.00	5.7
MIN	---	---	---	---	---	---	---	---	---	---	.00	.00

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

MEAN	---	---	---	---	---	---	---	---	---	---	.000	1.13
MAX	---	---	---	---	---	---	---	---	---	---	.000	1.13
(WY)	---	---	---	---	---	---	---	---	---	---	1998	1998
MIN	---	---	---	---	---	---	---	---	---	---	.000	1.13
(WY)	---	---	---	---	---	---	---	---	---	---	1998	1998

e Estimated


10
1
0.1
DAILY MEAN DISCHARGE IN CUBIC FEET PER SECOND
OCT
NOV
1997
DEC
JAN
FEB
MAR
APR
MAY
1998
JUN
JUL
AUG
SEP
07191297 BLACK HOLLOW NEAR SPAVINAW,OK
DAILY MEAN DISCHARGE

07191297 BLACK HOLLOW NEAR SPAVINAW, OK--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	2.1	1.6	.19	.00	1.8	6.2	22	6.8	38	.01	.00
2	1.4	2.0	1.7	.21	.00	1.4	5.9	19	7.3	14	.00	.00
3	1.0	1.8	1.9	.19	.00	1.2	5.7	17	7.0	12	.00	.00
4	.78	1.6	1.9	.24	.00	1.1	5.4	21	6.5	11	.00	.00
5	27	1.5	1.7	.37	.04	.93	5.3	23	6.1	9.6	.00	.00
6	36	1.3	1.5	.46	.38	.65	5.1	21	5.9	8.6	.00	.00
7	51	1.2	1.2	.47	8.5	.52	5.5	19	5.8	8.0	.00	.00
8	38	1.0	1.0	.42	8.9	.71	5.8	17	5.6	7.4	.00	.00
9	27	.98	.95	.30	7.0	1.3	5.4	16	5.4	6.8	.00	.00
10	22	1.2	.92	.27	5.9	2.0	5.4	14	5.1	6.4	.00	.00
11	19	1.3	.98	.25	5.3	2.0	5.1	12	4.9	6.0	.00	.00
12	16	1.3	1.1	.31	5.9	2.1	5.2	11	4.6	5.9	.00	.00
13	14	1.4	1.1	.23	10	6.6	5.1	9.4	4.3	5.6	.00	.00
14	12	1.4	1.1	.20	13	9.0	5.4	7.6	3.9	5.5	.00	.00
15	11	1.4	1.2	.19	13	15	5.1	6.7	3.5	5.2	.00	.00
16	9.8	1.4	1.2	.12	11	45	4.9	5.9	3.2	4.7	.00	.00
17	9.3	1.4	1.1	.08	9.2	48	5.0	5.7	2.7	4.6	.00	.00
18	8.4	1.6	1.1	.00	7.6	38	4.8	5.4	2.4	4.0	.00	.00
19	7.5	1.8	1.0	.00	6.4	29	4.3	5.2	2.5	3.7	.00	.00
20	7.1	1.8	.96	.00	5.4	25	4.2	5.2	13	3.2	.00	.00
21	6.7	1.7	.93	.00	4.4	23	4.2	5.1	13	2.8	.00	.00
22	6.1	1.8	.83	.00	4.0	20	4.5	4.9	10	2.7	.00	.00
23	5.5	1.8	.67	.00	3.7	17	5.0	4.9	44	2.3	.00	.00
24	5.0	1.9	.43	.00	3.3	15	5.5	5.3	51	2.1	.00	.00
25	4.7	1.9	.37	.00	3.0	13	24	5.6	44	1.8	.00	.00
26	4.2	1.7	.36	.00	2.6	11	87	5.5	33	1.6	.00	.00
27	3.6	1.7	.32	.00	2.4	9.8	96	5.2	24	1.4	.00	.00
28	3.2	1.7	.29	.00	2.0	9.0	55	5.0	19	1.2	.00	.00
29	2.8	1.6	.22	.00	---	7.8	38	4.9	16	.95	.00	.00
30	2.5	1.7	.16	.00	---	6.9	28	4.9	28	.68	.00	.00
31	2.1	---	.14	.00	---	6.5	---	6.0	---	.31	.00	---
TOTAL	366.28	46.98	29.93	4.50	142.92	370.31	452.0	320.4	388.5	188.04	0.01	0.00
MEAN	11.8	1.57	.97	.15	5.10	11.9	15.1	10.3	12.9	6.07	.000	.000
MAX	51	2.1	1.9	.47	13	48	96	23	51	38	.01	.00
MIN	.78	.98	.14	.00	.00	.52	4.2	4.9	2.4	.31	.00	.00

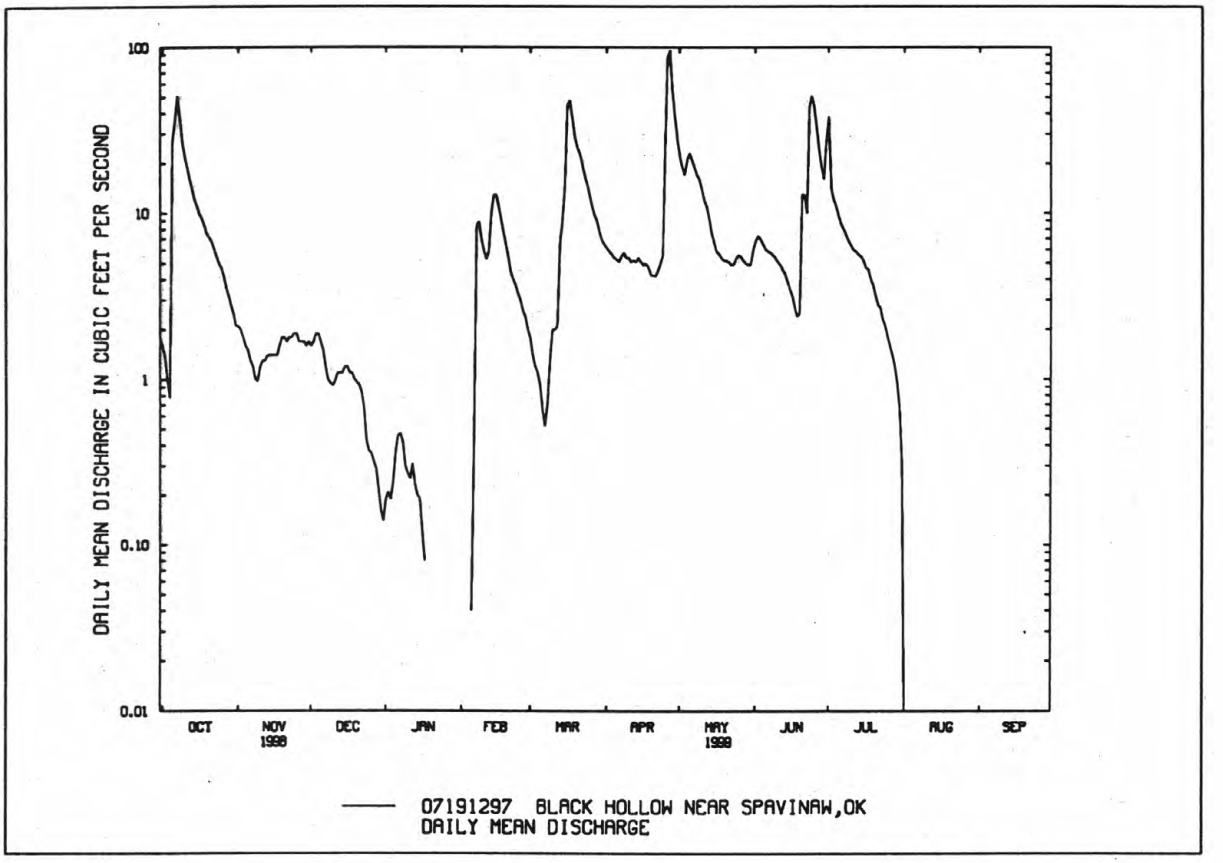
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 1999, BY WATER YEAR (WY)

MEAN	11.8	1.57	.97	.15	5.10	11.9	15.1	10.3	12.9	6.07	.000	.56
MAX	11.8	1.57	.97	.15	5.10	11.9	15.1	10.3	12.9	6.07	.000	1.13
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1998
MIN	11.8	1.57	.97	.15	5.10	11.9	15.1	10.3	12.9	6.07	.000	.000
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1998	1999

07191297 BLACK HOLLOW NEAR SPAVINAW, OK--Continued

SUMMARY STATISTICS	FOR 1999 WATER YEAR		WATER YEARS 1998 - 1999	
ANNUAL TOTAL	2309.87			
ANNUAL MEAN	6.33		6.33	
HIGHEST ANNUAL MEAN			6.33	1999
LOWEST ANNUAL MEAN			6.33	1999
HIGHEST DAILY MEAN	96	Apr 27	96	Apr 27 1999
LOWEST DAILY MEAN	.00	at times	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 18	.00	Jul 22 1998
INSTANTANEOUS PEAK FLOW	[a]173	Oct 5	[a]173	Oct 5 1998
INSTANTANEOUS PEAK STAGE	8.56	Oct 5	8.56	Oct 5 1998
10 PERCENT EXCEEDS	17		14	
50 PERCENT EXCEEDS	2.1		1.6	
90 PERCENT EXCEEDS	.00		.00	

[a]From step-backwater computation.



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.--No estimated record. 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, 38,580 acre-ft, June 30, elevation 683.10 ft; minimum, 30,010 acre-ft, Aug. 10, elevation 679.66 ft.

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

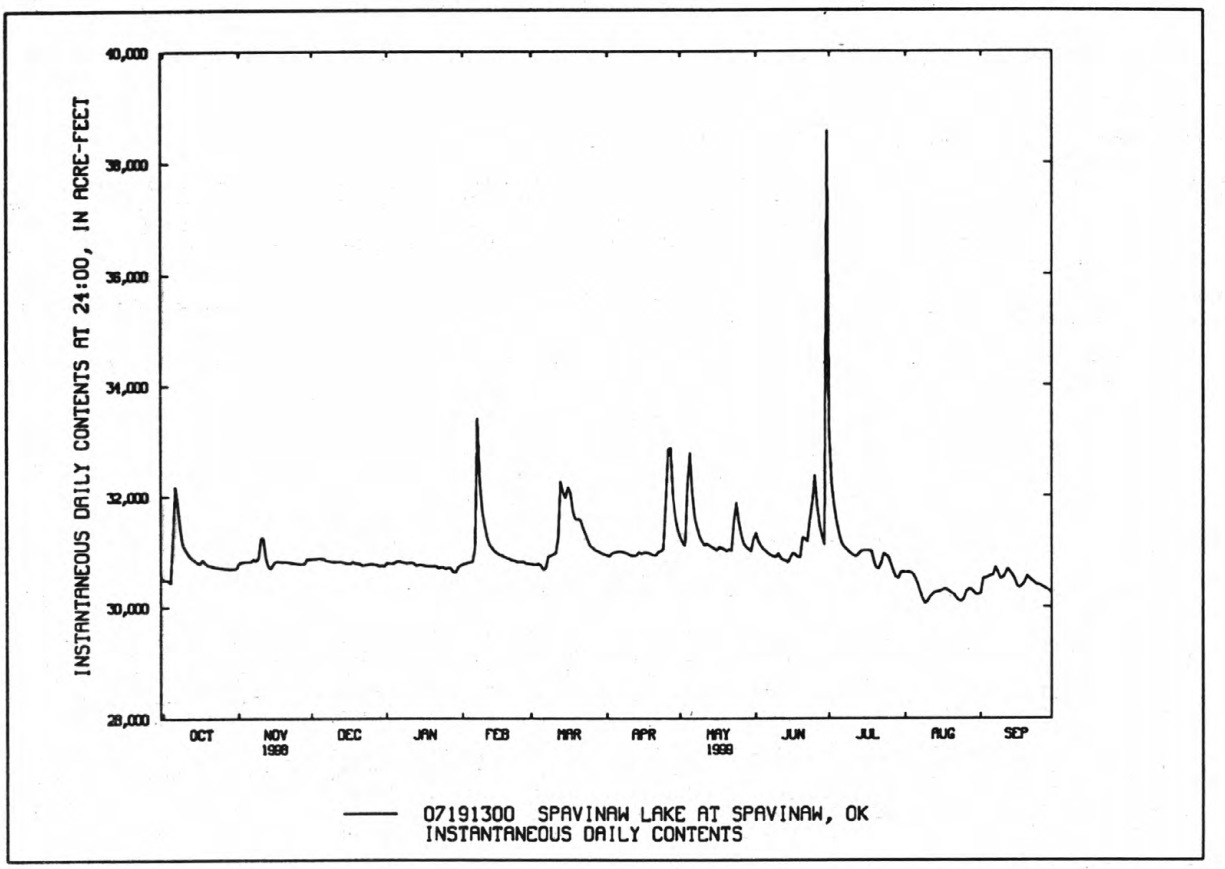
676	24,300	679	28,960
677	25,400	680	30,600
678	27,690	685	46,500

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30490	30790	30860	30800	30770	30780	30930	31250	31330	33200	30620	30250
2	30490	30810	30870	30780	30780	30760	30910	31160	31180	32220	30630	30520
3	30490	30820	30870	30780	30800	30760	30970	31100	31100	31820	30620	30520
4	30440	30820	30880	30790	30810	30780	30990	32220	31040	31540	30600	30540
5	31270	30820	30870	30820	30810	30750	30990	32790	31000	31330	30520	30570
6	32180	30820	30870	30830	31060	30670	31000	32030	30960	31160	30420	30570
7	31840	30870	30830	30810	33410	30700	31000	31610	30930	31080	30280	30720
8	31390	30830	30830	30800	32260	30910	30980	31420	30910	31040	30160	30630
9	31120	30880	30820	30790	31730	30920	30970	31270	30890	30990	30060	30510
10	31040	31250	30810	30800	31460	30950	30940	31180	30970	30950	30100	30520
11	30960	31250	30810	30800	31250	30960	30920	31110	30880	30920	30180	30590
12	30900	30890	30820	30790	31120	31230	30920	31140	30840	30910	30230	30690
13	30870	30740	30820	30750	31060	32260	30930	31100	30840	30960	30270	30630
14	30830	30700	30800	30760	31000	32070	30990	31080	30800	31010	30270	30570
15	30800	30770	30790	30770	30970	31960	30950	31050	30890	31010	30280	30490
16	30780	30820	30780	30750	30940	32160	30980	31010	30970	31010	30300	30370
17	30860	30830	30780	30740	30930	32070	30980	31080	30950	31010	30330	30350
18	30800	30820	30820	30740	30900	31730	30970	31060	30890	31010	30320	30390
19	30760	30810	30780	30740	30880	31580	30950	31040	30890	30820	30280	30450
20	30750	30820	30790	30740	30870	31580	30930	31000	31250	30700	30250	30560
21	30740	30810	30770	30740	30840	31580	30930	31040	31230	30690	30220	30510
22	30720	30810	30750	30700	30840	31440	31000	31010	31180	30790	30160	30470
23	30720	30790	30760	30720	30810	31330	31000	31540	31580	30960	30110	30440
24	30710	30790	30760	30720	30810	31210	31050	31880	31880	30930	30100	30400
25	30700	30780	30770	30690	30810	31100	31900	31540	32370	30890	30150	30400
26	30700	30780	30780	30710	30820	31070	32850	31310	31820	30770	30280	30370
27	30690	30770	30760	30710	30780	31020	32870	31140	31460	30640	30330	30350
28	30690	30780	30760	30630	30780	31010	31990	31080	31270	30540	30320	30320
29	30690	30870	30740	30620	---	30980	31600	31040	31120	30510	30270	30300
30	30690	30860	30750	30710	---	30960	31390	31000	38580	30620	30230	30250
31	30700	---	30730	30750	---	30940	---	31230	---	30640	30220	---
MAX	32180	31250	30880	30830	33410	32260	32870	32790	38580	33200	30630	30720
MIN	30440	30700	30730	30620	30770	30670	30910	31000	30800	30510	30060	30250
(‡)	680.10	680.25	680.13	680.15	680.18	680.33	680.64	680.56	683.10	680.05	679.78	679.80
(‡‡)	+110	+160	-130	+20	+30	+160	+450	-160	+7350	-7940	-420	+30

CAL YR 1998 MAX 32730 MIN 30180 (‡‡) -170
WTR YR 1999 MAX 38580 MIN 30060 (‡‡) -340

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


INSTANTANEOUS DAILY CONTENTS AT 24:00, IN ACRE-FEET
40,000
38,000
36,000
34,000
32,000
30,000
28,000
OCT
NOV
1998
DEC
JAN
FEB
MAR
APR
MAY
1999
JUN
JUL
AUG
SEP
07191300 SPAVINAW LAKE AT SPAVINAW, OK
INSTANTANEOUS DAILY CONTENTS

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 rep- resent 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, 396,000 acre-ft, May 10, elevation, 633.29 ft; minimum, 194,900 acre-ft, Dec. 31, elevation, 618.50 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

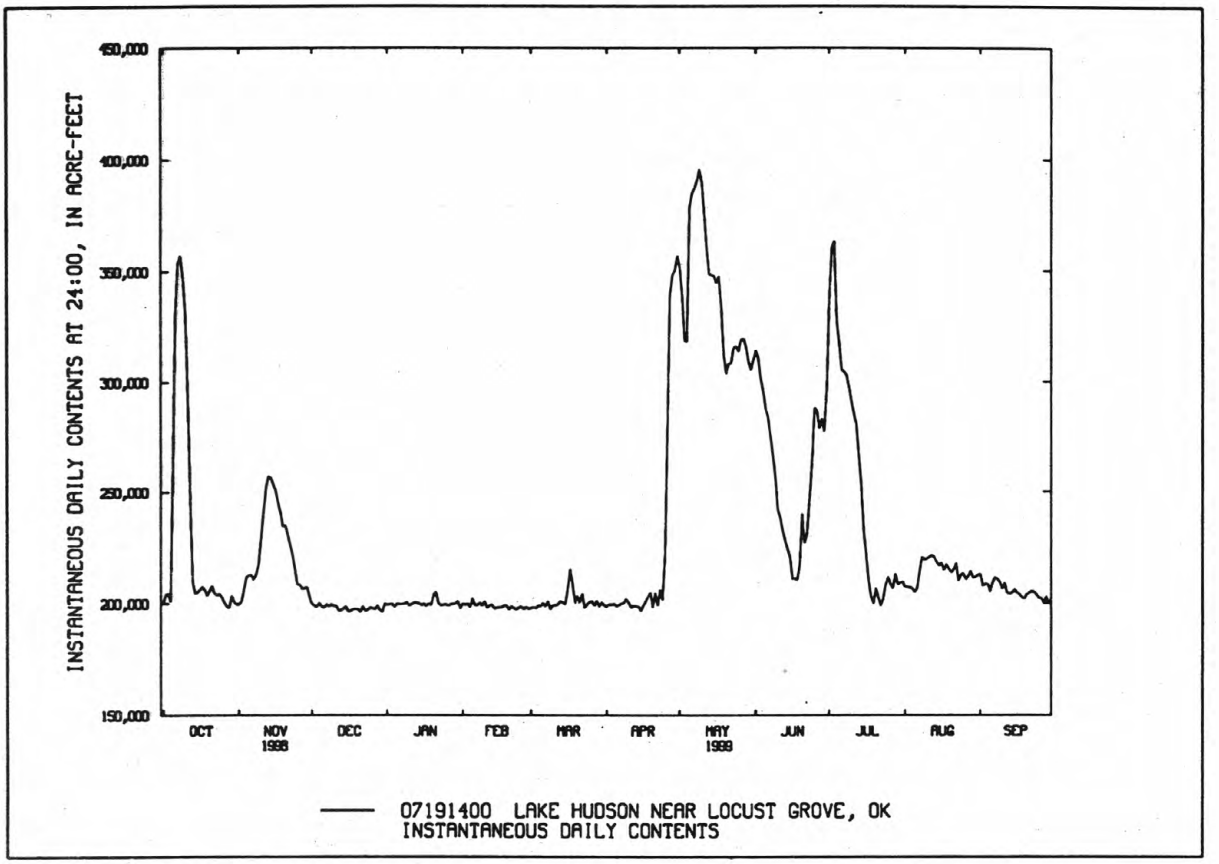
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200000	199700	199900	199400	200000	197900	198700	352100	314000	337600	207400	213100
2	204100	201000	199000	199700	199600	198600	199800	339100	310900	360900	207500	207900
3	204600	206300	198600	200000	200100	197900	199400	318500	301300	363600	207500	208800
4	201200	211900	200300	198600	198400	199200	200100	318100	296000	327800	206500	208800
5	265000	212800	198700	199900	202200	199000	198800	378600	288100	317600	205200	205400
6	331300	212900	198300	199800	199300	200200	199300	384800	283900	305500	207000	209400
7	354300	210800	199600	199700	199300	198800	200100	387100	275100	304500	214700	211700
8	357200	213100	198700	199900	200300	201100	200200	390600	266900	303000	220900	210900
9	348300	217700	199600	200500	199100	197400	202100	395600	256600	297500	219600	209500
10	332300	229200	198900	199100	201100	199400	200600	390000	242000	291200	220100	206600
11	295300	240700	199000	199700	198100	199200	198300	375800	238600	285400	220900	209100
12	247200	251700	196900	200500	199100	199600	199100	361100	232700	280600	221600	204600
13	210000	257200	196900	200400	199600	201100	198900	348500	228300	265900	220700	204400
14	204600	256600	197900	200100	197800	200600	198800	348200	224300	252700	218500	204700
15	204900	253700	198700	199300	198200	199600	196800	347900	221100	232300	216900	206300
16	206200	250700	196300	200000	198400	205800	199200	344600	211000	221800	218200	204700
17	207600	244900	196800	198800	198400	215500	201000	347600	211200	210100	214800	204100
18	206200	240900	197500	200100	199200	209600	203200	333400	210700	203200	217500	202700
19	203600	234500	197600	199400	199200	200400	205100	312100	217000	200000	215600	202200
20	205800	235000	197500	203900	197400	203600	198500	303700	240200	206800	213900	204100
21	208100	230700	196200	205100	198700	200400	204700	308300	227000	202800	215000	204800
22	204400	226400	198800	200100	198100	204500	199200	308300	231200	199000	218100	205500
23	203800	221700	196800	199300	197400	198100	206200	315300	247100	202200	210200	205200
24	204400	215000	197100	199400	198100	199700	201800	316000	263200	208400	212700	203900
25	202800	208500	198300	199800	198800	200700	222100	313700	288000	211900	213500	202500
26	200400	208600	197900	199000	197500	201200	279000	319200	287100	208700	210800	202300
27	198700	206400	197500	199800	198500	199000	339100	319500	278900	206800	212300	200400
28	198200	207000	199100	199900	197700	201400	348000	316000	283200	213300	214400	203000
29	203600	207300	197000	200100	---	198800	350200	309500	277500	208700	211500	200400
30	200700	202800	196300	201100	---	200600	356900	305500	297800	209300	211800	201300
31	199400	---	200100	197900	---	199200	---	309700	---	209700	212800	---
TOTAL	7214200	6715700	6141800	6200300	5569600	6228100	6705200	10518400	7750900	7848800	6638100	6168300
MEAN	232700	223900	198100	200000	198900	200900	223500	339300	258400	253200	214100	205600
MAX	357200	257200	200300	205100	202200	215500	356900	395600	314000	363600	221600	213100
MIN	198200	199700	196200	197900	197400	197400	196800	303700	210700	199000	205200	200400
(‡)	618.92	919.23	618.98	618.78	618.76	618.90	630.92	627.77	626.92	619.85	620.13	619.09
(‡‡)	-600	+3400	-2700	-2200	-200	+1500	+157700	-47200	-11900	-88100	+3100	-11500

CAL YR 1998 TOTAL 80323500 MEAN 220100 MAX 357200 MIN 194600 (‡‡) -8,800
WTR YR 1999 TOTAL 83699400 MEAN 229300 MAX 395600 MIN 196200 (‡‡) +1,300

(‡) 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.--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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7860	8990	19000	3340	8620	6880	8270	e44700	e23900	40400	319	475
2	7280	13400	17700	4000	8940	5890	7190	e44100	e29400	50300	317	3220
3	7610	21300	19900	6100	9170	7300	8980	e37200	34400	58900	318	2280
4	11100	24600	18500	6020	10000	5680	7180	e48700	34900	52300	318	901
5	27700	27600	17300	3280	6520	6360	9640	e78700	32900	45800	998	374
6	54800	28400	17500	3560	11600	6490	6780	e80800	31400	44800	2700	345
7	70400	29700	15300	4270	20000	7030	6200	e73100	28400	39200	569	1610
8	86900	30500	16300	4660	18500	10500	6370	e53500	24300	37300	785	2670
9	90400	30400	16900	3990	18200	16800	5630	e35100	23000	35200	4060	350
10	79800	30900	16900	3150	12900	9360	7240	e32300	22200	31700	3840	915
11	78600	31300	13500	3400	15200	11900	7610	e38000	14200	28900	2900	1200
12	71100	31800	9800	3440	11800	17500	4840	e33200	13500	27200	2980	5740
13	52200	34200	10000	3270	10600	23800	6410	e30700	13100	28200	432	847
14	28000	36000	8850	3300	11200	21600	8660	e28900	15500	26600	327	306
15	17700	35800	7980	3190	11900	23400	17300	e30200	15400	27300	2240	299
16	15900	33200	10100	3410	10500	27900	25700	e30600	18300	22400	2250	568
17	13200	29800	7690	3690	9540	33800	27500	e41800	15200	21100	4530	323
18	16900	26900	8020	2470	8220	37000	29200	e49300	13200	16500	2270	300
19	18800	26600	8070	3940	8320	34000	29300	e41600	13900	13900	1430	297
20	18400	20200	8160	2140	8500	24700	25500	e32000	31700	9170	1230	1700
21	19700	18700	8100	4720	8540	26600	13200	e26700	36900	12000	363	1470
22	21100	19100	6870	8690	6750	22400	19800	e26900	17100	13900	332	640
23	16500	19600	8760	6080	8230	21500	21700	e23300	15100	10000	7650	1500
24	13200	20000	7050	5940	8120	14700	23100	e20200	21400	5660	2780	1260
25	14700	19200	7140	5570	4780	9710	27000	e19300	35400	5800	3230	375
26	14500	14600	8060	4930	9500	9610	42200	e18300	37900	9030	3890	5370
27	11100	16600	8370	4930	8210	11500	70900	e21300	33000	7200	1240	655
28	10200	14300	6170	4990	7980	8970	e82500	e21200	21800	2270	1020	2280
29	7530	15200	8050	5370	---	12200	e75400	e23300	31700	5070	3450	398
30	9730	19700	6920	6940	---	8510	e50800	e22300	36900	2090	1910	310
31	9310	---	1690	13800	---	9260	---	e22200	---	457	843	---
TOTAL	922220	728590	344650	146580	292340	492850	682100	1129500	736000	730647	61521	38978
MEAN	29750	24290	11120	4728	10440	15900	22740	36440	24530	23570	1985	1299
MAX	90400	36000	19900	13800	20000	37000	82500	80800	37900	58900	7650	5740
MIN	7280	8990	1690	2140	4780	5680	4840	18300	13100	457	317	297
AC-FT	1829000	1445000	683600	290700	579900	977600	1353000	2240000	1460000	1449000	122000	77310

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1999, BY WATER YEAR (WY)

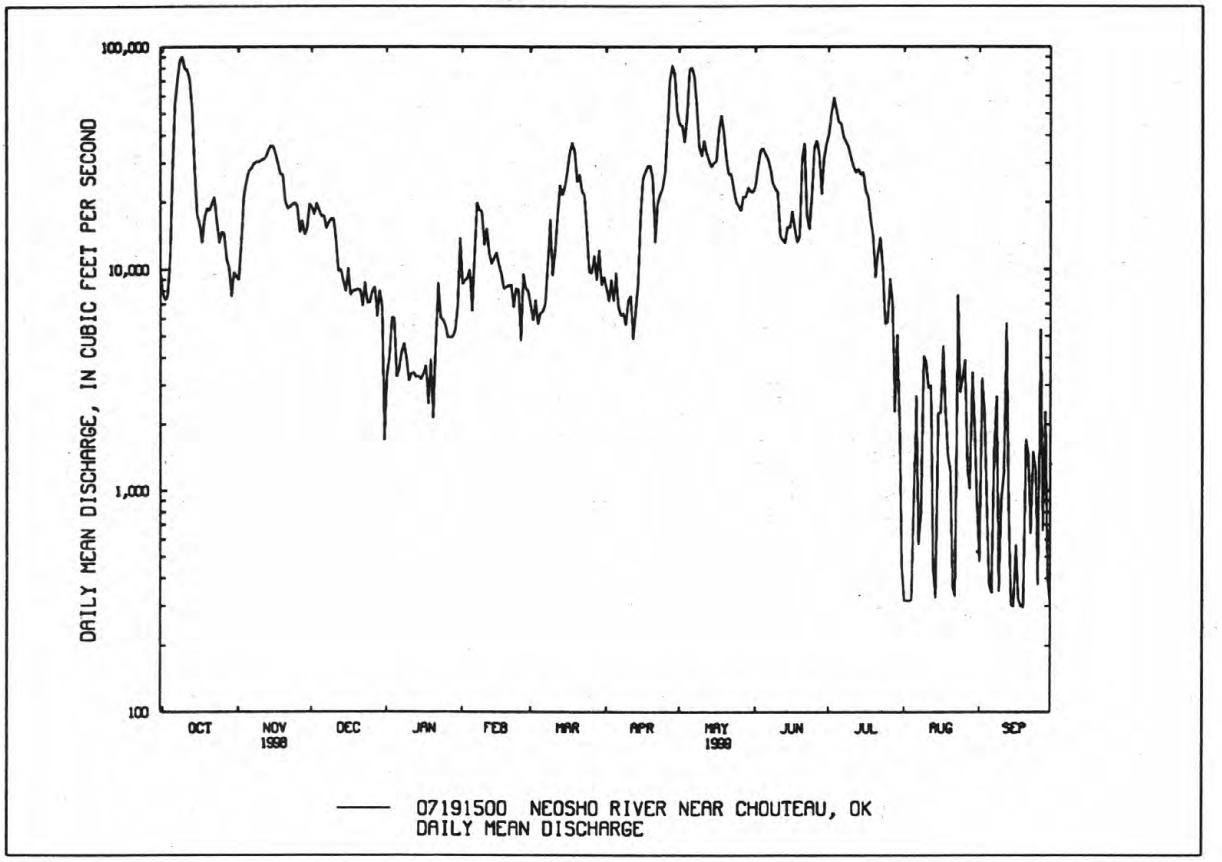
MEAN	6342	9517	8511	7022	7618	12390	14100	12340	13270	8954	4550	4673
MAX	59840	40780	40400	23350	23640	39260	46000	40650	48020	28710	15140	28460
(WY)	1987	1986	1993	1973	1985	1973	1973	1995	1995	1976	1993	1993
MIN	169	83.3	87.5	189	79.4	75.8	160	122	735	1067	603	591
(WY)	1964	1964	1964	1981	1964	1964	1971	1964	1972	1991	1991	1983

e Estimated

07191500 NEOSHO RIVER NEAR CHOUTEAU, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1964 - 1999	
ANNUAL TOTAL	4844229		6305976			
ANNUAL MEAN	13270		17280		[a]9105	
HIGHEST ANNUAL MEAN					22240	1993
LOWEST ANNUAL MEAN					1924	1981
HIGHEST DAILY MEAN	90400	Oct 9	90400	Oct 9	154000	Jun 11 1995
LOWEST DAILY MEAN	256	Jun 7	297	Sep 19	[b]12	Nov 13 1963
ANNUAL SEVEN-DAY MINIMUM	266	Sep 7	420	Sep 13	45	Feb 21 1964
INSTANTANEOUS PEAK FLOW			[c]82500	Apr 28	[d]164000	Jun 11 1995
INSTANTANEOUS PEAK STAGE			[e]30.03	May 7	[e]36.29	Jun 11 1995
ANNUAL RUNOFF (AC-FT)	9609000		12510000		6596000	
10 PERCENT EXCEEDS	29800		36900		22700	
50 PERCENT EXCEEDS	8990		11900		5000	
90 PERCENT EXCEEDS	1420		1360		180	

[a]Since regulation by Lake Hudson.
[b]Minimum daily for period of record, caused by closure of Robert S. Kerr Dam.
[c]Maximum daily from release records due to backwater.
[d]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-srea measurement of peak flow.
[e]Occurred during 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 collected periodically. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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)
NOV											
05...	1356	37.0	12.0	751	1028	1028	83	4.35	288	9.8	7.8
05...	1357	33.0	12.0	751	1028	1028	83	4.35	289	10.0	7.8
05...	1358	29.0	12.0	751	1028	1028	83	4.35	288	10.1	7.8
05...	1359	25.0	12.0	751	1028	1028	83	4.35	288	9.7	7.8
05...	1400	21.0	12.5	751	1028	1028	83	4.35	289	9.9	7.6
05...	1401	17.0	12.5	751	1028	1028	83	4.35	289	9.8	7.6
05...	1402	13.0	12.5	751	1028	1028	83	4.35	289	10.0	7.6
05...	1403	9.00	12.5	751	1028	1028	83	4.35	289	10.0	7.6
05...	1404	5.00	12.5	751	1028	1028	83	4.35	289	9.4	7.6
MAR											
16...	0906	3.00	9.0	750	1028	1028	1200	6.54	187	10.0	7.2
16...	0908	13.0	9.0	750	1028	1028	1200	6.54	186	10.2	7.4
16...	0909	23.0	9.0	750	1028	1028	1200	6.54	185	10.3	7.4
16...	0911	33.0	9.0	750	1028	1028	1200	6.54	186	10.3	7.4
16...	0912	43.0	9.0	750	1028	1028	1200	6.54	187	10.3	7.5
16...	0914	53.0	9.0	750	1028	1028	1200	6.54	186	10.3	7.5
16...	0915	63.0	9.0	750	1028	1028	1200	6.54	186	10.3	7.5
16...	0917	73.0	9.0	750	1028	1028	1200	6.54	186	10.3	7.5
16...	0919	83.0	9.0	750	1028	1028	1200	6.54	186	10.2	7.5
16...	0920	93.0	9.0	750	1028	1028	1200	6.54	185	10.1	7.5
16...	0922	103	9.0	750	1028	1028	1200	6.54	185	10.1	7.5
16...	0924	113	9.0	750	1028	1028	1200	6.54	186	10.1	7.5

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...	1145	1028	80020	89	315	7.7	17.0	16.0	--	759	8.6	87
NOV												
05...	1355	1028	80020	83	289	7.7	7.0	12.5	1.0	751	9.9	94
DEC												
09...	0930	1028	80020	285	261	7.4	-4.0	9.0	--	757	11.0	95
JAN												
12...	1545	1028	80020	123	275	8.2	16.0	7.0	1.3	738	15.7	133
FEB												
02...	1205	1028	80020	510	250	7.5	15.0	10.0	--	749	10.6	95
MAR												
16...	0950	1028	80020	1200	185	7.5	15.5	9.0	15	750	10.2	90
APR												
06...	1210	1028	80020	1210	177	7.6	19.5	14.5	--	745	9.1	92
MAY												
05...	0825	1028	80020	3030	140	7.2	23.0	16.5	70	728	7.9	85
JUN												
09...	1120	1028	80020	148	283	7.4	30.0	23.5	--	742	7.9	96
AUG												
12...	1750	1028	80020	46	289	7.5	38.0	30.0	1.0	741	9.3	127

07194830 ILLINOIS RIVER NEAR PEDRO, AR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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)	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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
OCT												
20...	130	--	93	138	0	113	--	--	--	<.010	--	2.51
NOV												
05...	100	--	K110	138	0	113	<1	--	--	<.010	--	1.52
DEC												
09...	250	--	K10	115	0	94	--	--	--	<.010	--	2.23
JAN												
12...	K3	--	K22	123	0	101	3	2.34	10	.012	.04	2.36
FEB												
02...	440	--	260	91	0	75	--	2.80	12	.010	.03	2.81
MAR												
16...	48	--	200	71	0	58	19	--	--	<.010	--	2.40
APR												
06...	3400	--	1100	78	0	64	--	--	--	<.010	--	1.19
MAY												
05...	K15000	--	K16000	61	0	50	118	--	--	<.010	--	1.10
JUN												
09...	56	--	55	128	0	105	--	--	--	<.010	--	2.28
AUG												
12...	41	38	310	125	0	103	--	--	--	<.010	--	1.74

DATE	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)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT												
20...	<.020	--	--	.20	2.7	.042	.040	.038	.12	--	--	--
NOV												
05...	.042	.05	.19	.24	1.8	.037	.038	.044	.13	--	--	--
DEC												
09...	.032	.04	.15	.18	2.4	.047	.047	.041	.13	--	--	--
JAN												
12...	<.020	--	--	.14	2.5	<.050	<.050	<.010	--	--	--	--
FEB												
02...	.024	.03	.43	.46	3.3	.091	E.047	.047	.14	--	--	--
MAR												
16...	<.020	--	--	.35	2.8	.091	E.046	.045	.14	--	--	--
APR												
06...	.026	.03	.85	.88	2.1	.190	.102	.076	.23	--	--	--
MAY												
05...	.075	.10	.91	.98	2.1	.326	.159	.148	.45	--	--	--
JUN												
09...	<.020	--	--	.35	2.6	.067	<.050	.022	.07	--	--	--
AUG												
12...	<.020	--	--	.12	1.9	E.036	<.050	.029	.09	21	2.6	94

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
OCT											
21...	0800	5.00	16.0	756	1028	1028	204	5.65	331	8.5	7.4
21...	0801	10.0	16.0	756	1028	1028	204	5.65	331	8.3	7.4
21...	0802	15.0	16.0	756	1028	1028	204	5.65	331	8.4	7.4
21...	0803	20.0	16.0	756	1028	1028	204	5.65	332	8.5	7.5
21...	0804	25.0	16.0	756	1028	1028	204	5.65	332	8.5	7.4
21...	0805	30.0	16.0	756	1028	1028	204	5.65	332	8.5	7.5
21...	0806	35.0	16.0	756	1028	1028	204	5.65	332	8.6	7.5
21...	0807	40.0	16.0	756	1028	1028	204	5.65	332	8.5	7.5
21...	0808	45.0	16.0	756	1028	1028	204	5.65	332	8.4	7.5
AUG											
19...	0808	69.0	24.0	750	1028	1028	200	5.45	347	7.8	7.7
19...	0809	62.0	24.0	750	1028	1028	200	5.45	347	7.5	7.7
19...	0810	55.0	24.0	750	1028	1028	200	5.45	347	7.5	7.7
19...	0811	48.0	24.0	750	1028	1028	200	5.45	346	7.6	7.7
19...	0812	41.0	24.0	750	1028	1028	200	5.45	343	7.6	7.7
19...	0813	34.0	24.0	750	1028	1028	200	5.45	346	7.5	7.7
19...	0815	27.0	24.0	750	1028	1028	200	5.45	340	7.5	7.7
19...	0816	20.0	24.0	750	1028	1028	200	5.45	340	7.6	7.7
19...	0817	13.0	24.0	750	1028	1028	200	5.45	343	7.6	7.7
19...	0820	6.00	24.0	750	1028	1028	200	5.45	345	7.5	7.7

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...	1240	1028	80020	215	346	7.7	20.5	16.5	--	754	9.1	94
NOV												
17...	0755	1028	80020	245	313	7.5	2.5	12.5	1.7	755	8.8	83
DEC												
09...	1030	1028	80020	300	299	7.6	6.5	9.5	--	758	11.5	101
JAN												
13...	0905	1028	80020	158	318	7.6	-1.5	7.5	2.1	750	11.4	96
FEB												
02...	1315	1028	80020	570	279	8.1	17.5	9.5	--	748	10.9	98
MAR												
17...	0830	1028	80020	1550	219	7.6	17.0	11.5	16	747	9.8	92
APR												
07...	0845	1028	80020	1300	217	7.4	20.0	15.0	--	750	8.7	88
MAY												
05...	0830	1028	80020	15600	125	7.0	18.5	17.0	180	732	7.4	80
JUN												
09...	1230	1028	80020	410	300	7.9	36.5	24.0	--	743	8.3	101
AUG												
19...	0800	1028	80020	200	344	7.7	23.0	24.0	2.1	750	7.6	92

07195400 ILLINOIS RIVER AT SILOAM SPRINGS, AR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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)	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)
OCT												
20...	110	--	K2700	147	0	120	--	--	--	<.010	--	2.44
NOV												
17...	<2	--	K81	150	0	123	7	--	--	<.010	--	2.75
DEC												
09...	140	--	K20	105	0	86	--	--	--	<.010	--	2.35
JAN												
13...	210	--	K33	134	0	110	6	2.99	13	.018	.06	3.01
FEB												
02...	270	--	1700	101	0	84	--	2.94	13	.012	.04	2.95
MAR												
17...	100	--	230	78	0	64	33	--	--	<.010	--	3.73
APR												
07...	32	--	200	86	0	71	--	--	--	<.010	--	2.51
MAY												
05...	4400	--	K36000	46	0	38	544	1.02	4.5	.014	.05	1.04
JUN												
09...	K58	--	140	135	0	111	--	--	--	<.010	--	2.99
AUG												
19...	72	72	230	146	0	120	--	--	--	<.010	--	2.80

DATE	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)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT												
20...	.022	.03	.25	.27	2.7	.190	.158	.156	.48	--	--	--
NOV												
17...	.027	.03	.19	.21	3.0	.144	.123	.131	.40	--	--	--
DEC												
09...	.034	.04	.19	.22	2.6	.169	.149	.127	.39	--	--	--
JAN												
13...	<.020	--	--	.15	3.2	.095	.073	.070	.21	--	--	--
FEB												
02...	.026	.03	.45	.47	3.4	.148	.099	.101	.31	--	--	--
MAR												
17...	<.020	--	--	.34	4.1	.171	.122	.110	.34	--	--	--
APR												
07...	<.020	--	--	.41	2.9	.162	.144	.106	.33	--	--	--
MAY												
05...	.118	.15	1.5	1.6	2.6	.672	.332	.294	.90	--	--	--
JUN												
09...	<.020	--	--	.18	3.2	.166	.174	.117	.36	--	--	--
AUG												
19...	<.020	--	--	.30	3.1	.239	.190	.220	.67	39	21	98

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.--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.

EXTREMES 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)
Feb 7	1500	8,220	12.25	May 5	1200	12,100	15.44
Mar 13	1300	7,520	11.64	Jul 1	0100	22,100	20.54

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	174	1120	261	1130	295	640	1690	1420	10900	308	e180
2	131	273	643	503	854	291	598	1530	1070	3820	296	e185
3	132	369	511	712	689	283	1150	1420	898	2430	293	e165
4	130	293	500	586	577	270	3900	2170	785	1820	294	e190
5	1230	261	723	455	510	261	2520	8230	694	1500	295	203
6	4450	238	579	416	594	260	2740	3020	621	1250	296	269
7	1820	235	540	404	5060	251	1830	1930	571	1090	294	230
8	1090	359	494	393	2690	436	1490	1530	544	1000	287	239
9	639	408	437	373	1760	1720	1290	1260	515	887	275	248
10	461	433	389	341	1370	974	1110	1070	494	890	268	233
11	375	659	354	318	1150	717	950	2380	954	1410	265	219
12	320	615	378	311	1140	894	802	3150	1200	885	260	220
13	281	496	1380	309	923	5520	714	3670	720	744	253	396
14	258	434	1050	298	771	4160	748	2080	813	656	248	282
15	235	380	753	281	671	3270	990	1590	647	595	243	238
16	213	341	606	269	605	2590	772	1350	562	558	236	223
17	326	315	521	259	555	2090	644	1340	817	529	232	216
18	398	293	463	252	522	1670	569	1730	596	497	232	210
19	326	279	445	253	487	1410	522	1300	565	471	231	205
20	268	296	428	246	451	2160	492	1090	758	456	228	205
21	245	311	396	241	418	2170	466	1010	780	440	227	208
22	227	277	376	242	390	1650	441	1310	683	426	226	207
23	213	253	348	246	376	1410	964	3090	672	402	222	e200
24	202	241	327	256	360	1220	1950	2880	1270	387	222	e190
25	191	234	309	249	347	1080	1910	1790	2870	368	221	e185
26	181	224	290	243	338	958	2490	2750	2280	357	216	e180
27	175	213	280	239	329	866	3360	1770	1520	353	214	e176
28	174	204	274	238	314	787	2630	1340	1140	347	227	e172
29	172	200	272	329	---	780	2220	1110	1170	331	220	e170
30	171	810	261	595	---	753	1930	973	5740	322	209	e168
31	172	---	254	1520	---	681	---	1180	---	315	e190	---
TOTAL	15336	10118	15701	11638	25381	41877	42832	62733	33369	36436	7728	6412
MEAN	495	337	506	375	906	1351	1428	2024	1112	1175	249	214
MAX	4450	810	1380	1520	5060	5520	3900	8230	5740	10900	308	396
MIN	130	174	254	238	314	251	441	973	494	315	190	165
AC-FT	30420	20070	31140	23080	50340	83060	84960	124400	66190	72270	15330	12720
CFSM	.78	.53	.80	.59	1.43	2.13	2.25	3.19	1.75	1.85	.39	.34
IN.	.90	.59	.92	.68	1.49	2.45	2.51	3.68	1.95	2.13	.45	.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1999, BY WATER YEAR (WY)

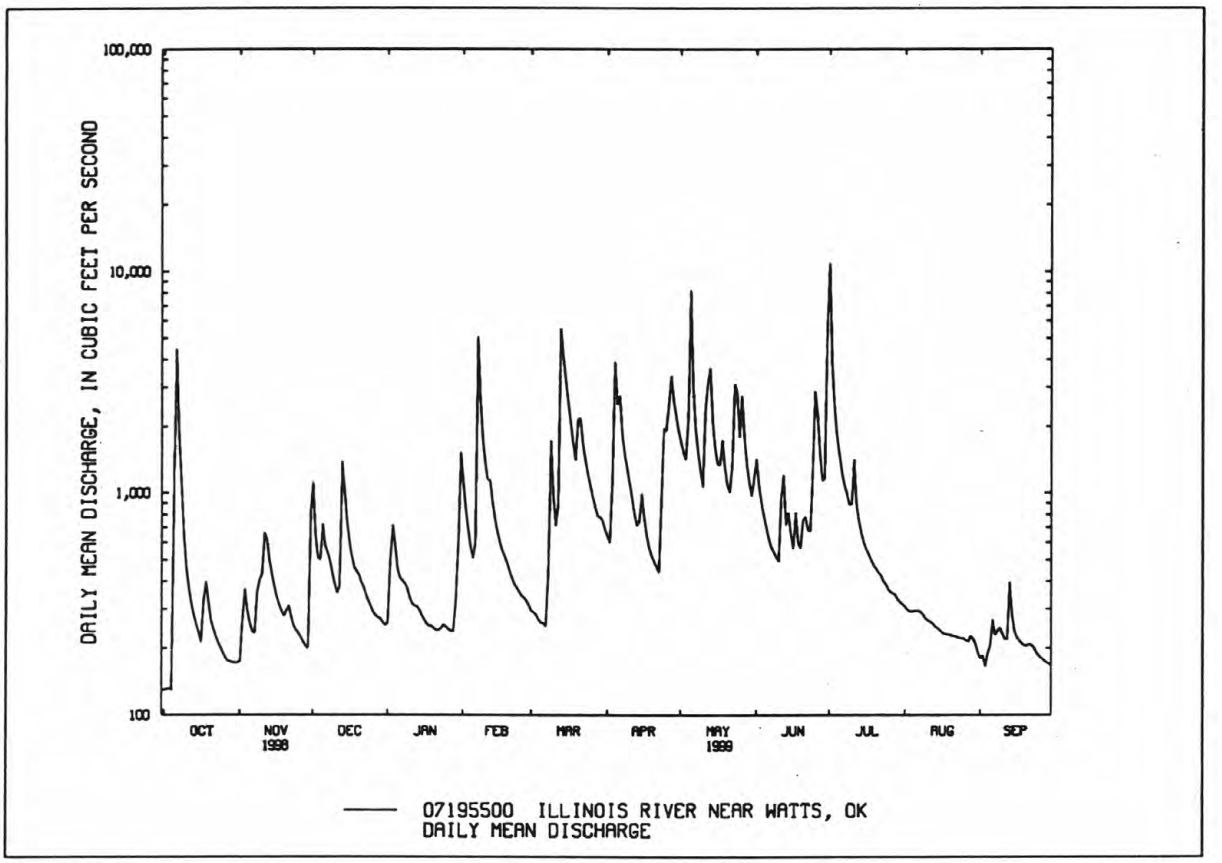
MEAN	371	688	685	590	694	1009	1047	1024	662	359	236	296
MAX	2734	3087	2786	2307	1818	2934	3347	4286	3225	1807	1172	1393
(WY)	1987	1974	1988	1998	1975	1973	1957	1961	1974	1958	1961	1986
MIN	20.9	65.6	60.4	61.4	75.1	114	176	144	113	50.7	33.2	14.9
(WY)	1957	1964	1956	1956	1964	1956	1963	1977	1963	1964	1956	1956

e Estimated

07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1956 - 1999	
ANNUAL TOTAL	260155		309561			
ANNUAL MEAN	713		848		638	
HIGHEST ANNUAL MEAN					1247	1993
LOWEST ANNUAL MEAN					151	1964
HIGHEST DAILY MEAN	16800	Jan 5	10900	Jul 1	34500	Oct 1 1986
LOWEST DAILY MEAN	88	Sep 10	130	Oct 1	10	Sep 19 1956
ANNUAL SEVEN-DAY MINIMUM	91	Sep 6	174	Oct 26	11	Sep 22 1956
INSTANTANEOUS PEAK FLOW			22100	Jul 1	[a]68000	Jul 25 1960
INSTANTANEOUS PEAK STAGE			20.54	Jul 1	25.96	Jul 25 1960
ANNUAL RUNOFF (AC-FT)	516000		614000		461900	
ANNUAL RUNOFF (CFSM)	1.12		1.34		1.00	
ANNUAL RUNOFF (INCHES)	15.24		18.13		13.64	
10 PERCENT EXCEEDS	1390		1920		1280	
50 PERCENT EXCEEDS	375		451		296	
90 PERCENT EXCEEDS	130		213		98	

[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 collected periodically. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
OCT											
20...	0936	13.0	17.0	758	1028	1028	270	2.61	324	9.3	7.8
20...	0937	26.0	17.0	758	1028	1028	270	2.61	325	9.6	7.8
20...	0938	39.0	17.0	758	1028	1028	270	2.61	325	9.6	7.8
20...	0939	52.0	17.0	758	1028	1028	270	2.61	325	9.6	7.8
20...	0940	65.0	17.0	758	1028	1028	270	2.61	325	9.6	7.8
20...	0941	78.0	17.0	758	1028	1028	270	2.61	325	9.5	7.8
20...	0942	91.0	17.0	758	1028	1028	270	2.61	325	9.6	7.8
20...	0943	104	17.0	758	1028	1028	270	2.61	325	9.6	7.7
20...	0944	117	17.0	758	1028	1028	270	2.61	324	9.3	7.7
JUN											
16...	1235	20.0	21.0	750	1028	1028	562	3.48	275	8.6	7.7
16...	1236	40.0	21.0	750	1028	1028	562	3.48	275	8.5	7.7
16...	1237	60.0	21.0	750	1028	1028	562	3.48	275	8.5	7.7
16...	1238	80.0	21.0	750	1028	1028	562	3.48	275	8.5	7.7
16...	1239	100	21.0	750	1028	1028	562	3.48	275	8.4	7.7
16...	1240	110	21.0	750	1028	1028	562	3.48	275	8.5	7.7

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...	0935	1028	80020	270	325	7.8	12.0	17.0	--	758	9.5	99
NOV												
17...	0950	1028	80020	315	305	7.7	8.5	13.5	3.6	758	10.3	99
DEC												
08...	1420	1028	80020	493	281	7.8	8.0	12.5	--	757	11.1	105
JAN												
07...	1030	1028	80020	404	289	8.1	1.5	4.5	1.3	755	13.8	108
FEB												
03...	0850	1028	80020	709	265	7.9	9.5	8.0	--	743	11.1	96
MAR												
24...	1230	1028	80020	1220	235	7.8	19.0	11.5	6.9	753	10.6	98
APR												
07...	1040	1028	80020	1840	212	7.5	22.0	15.0	--	752	10.1	101
MAY												
04...	1035	1028	80020	1370	271	7.6	21.5	18.0	--	728	7.5	83
JUN												
16...	1230	1028	80020	562	275	7.7	17.5	20.9	7.2	750	8.5	97
AUG												
12...	0810	1028	80020	260	325	7.9	29.0	28.0	2.9	746	7.9	103

07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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...	190	--	K120	--	--	--	--	--	--	--	--
NOV 17...	K1	K6	K78	130	20	48	2.2	11	15	.4	3.9
DEC 08...	270	--	K68	--	--	--	--	--	--	--	--
JAN 07...	K19	K11	K60	120	18	44	2.2	9.7	15	.4	3.1
FEB 03...	<1	--	72	--	--	--	--	--	--	--	--
MAR 24...	64	66	160	100	29	39	2.1	6.0	11	.3	2.8
APR 07...	35	--	240	--	--	--	--	--	--	--	--
MAY 04...	1300	--	2000	--	--	--	--	--	--	--	--
JUN 16...	K18	K40	260	110	24	43	2.0	8.2	13	.3	3.6
AUG 12...	120	K300	260	130	14	48	2.0	12	16	.4	3.7

DATE	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CARBONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	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...	150	0	123	--	--	--	--	--	--	--	--
NOV 17...	134	0	110	12	12	186	168	.25	158	15	--
DEC 08...	120	0	98	--	--	--	--	--	--	--	--
JAN 07...	124	0	102	13	11	175	159	.24	191	2	--
FEB 03...	111	0	91	--	--	--	--	--	--	--	3.04
MAR 24...	92	0	75	9.4	8.0	144	129	.20	474	18	--
APR 07...	93	0	77	--	--	--	--	--	--	--	--
MAY 04...	123	0	101	--	--	--	--	--	--	--	--
JUN 16...	111	0	91	8.4	9.0	176	142	.24	267	21	--
AUG 12...	138	0	113	8.5	13	184	166	.25	129	--	--

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 20...	--	<.010	--	2.46	.027	.03	.18	.21	2.7	.213	.171
NOV 17...	--	<.010	--	2.73	.029	.04	.16	.19	2.9	.133	.096
DEC 08...	--	<.010	--	2.42	.036	.05	.13	.17	2.6	.108	.115
JAN 07...	--	<.010	--	3.18	<.020	--	--	.14	3.3	.095	.083
FEB 03...	13	.010	.03	3.05	.026	.03	.30	.33	3.4	.131	.081
MAR 24...	--	<.010	--	3.74	<.020	--	--	.24	4.0	.105	.073
APR 07...	--	<.010	--	2.40	.025	.03	.48	.51	2.9	.185	.131
MAY 04...	--	<.010	--	2.63	.048	.06	.30	.35	3.0	.155	.106
JUN 16...	--	<.010	--	2.94	.027	.03	.28	.30	3.2	.232	.185
AUG 12...	--	<.010	--	2.55	<.020	--	--	.15	2.7	.157	.138

07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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...	.152	.47	--	--	--	--	--	--	--	--	--
NOV											
17...	.105	.32	33	53	45	95	<1.00	2.00	<1.00	<1.00	<1.00
DEC											
08...	.105	.32	--	--	--	--	--	--	--	--	--
JAN											
07...	.067	.21	21	44	48	87	<1.00	<1.00	<1.00	<1.00	<1.00
FEB											
03...	.087	.27	--	--	--	--	--	--	--	--	--
MAR											
24...	.067	.21	20	40	132	99	<1.00	5.00	2.00	<1.00	<1.00
APR											
07...	.097	.30	--	--	--	--	--	--	--	--	--
MAY											
04...	.105	.32	--	--	--	--	--	--	--	--	--
JUN											
16...	.156	.48	26	66	100	75	<1.00	3.00	2.00	<1.00	<1.00
AUG											
12...	.155	.48	13	46	32	84	1.00	6.00	4.00	<1.00	<1.00

07195610 ILLINOIS RIVER ABOVE FLINT CREEK NEAR FLINT, OK

LOCATION.--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.

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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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										
17...	1245	70.0	14.0	758	1028	1028	376	292	10.5	7.8
17...	1246	62.0	13.5	758	1028	1028	376	292	10.7	7.8
17...	1247	54.0	13.5	758	1028	1028	376	292	10.7	7.8
17...	1248	46.0	13.5	758	1028	1028	376	292	10.8	7.9
17...	1249	38.0	13.5	758	1028	1028	376	292	10.7	7.8
17...	1250	30.0	13.5	758	1028	1028	376	292	10.7	7.8
17...	1251	22.0	14.0	758	1028	1028	376	292	10.6	7.8
17...	1252	14.0	14.0	758	1028	1028	376	292	10.5	7.8
17...	1253	6.00	14.5	758	1028	1028	376	292	10.6	7.9
JUL										
29...	0826	7.00	27.5	750	1028	1028	356	303	5.4	7.4
29...	0827	12.0	27.5	750	1028	1028	356	303	5.4	7.4
29...	0828	17.0	27.5	750	1028	1028	356	303	5.4	7.4
29...	0829	22.0	27.5	750	1028	1028	356	303	5.4	7.4
29...	0830	27.0	27.5	750	1028	1028	356	303	5.5	7.4
29...	0831	32.0	27.5	750	1028	1028	356	303	5.5	7.4
29...	0832	37.0	27.5	750	1028	1028	356	303	5.5	7.4
29...	0833	42.0	27.5	750	1028	1028	356	303	5.5	7.4
29...	0834	47.0	27.5	750	1028	1028	356	303	5.6	7.4
29...	0835	52.0	27.5	750	1028	1028	356	303	5.5	7.4
29...	0836	57.0	27.5	750	1028	1028	356	303	5.5	7.4
29...	0837	62.0	27.5	750	1028	1028	356	303	5.6	7.4
29...	0838	67.0	27.5	750	1028	1028	356	303	5.6	7.4
29...	0839	72.0	27.5	750	1028	1028	356	302	5.5	7.3
29...	0840	77.0	27.0	750	1028	1028	356	299	5.5	7.3

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
NOV												
17...	1255	1028	80020	376	292	7.8	23.0	14.0	1.4	758	10.6	103
JAN												
12...	1300	1028	80020	323	292	8.3	15.0	5.5	1.0	743	15.6	128
JUL												
29...	0825	1028	80020	356	303	7.4	31.0	27.5	2.1	750	5.5	71
AUG												
19...	1000	1028	80020	221	320	7.8	27.5	26.0	.80	751	7.5	94
SEP												
15...	0825	1028	80020	273	368	8.1	15.5	21.5	1.7	751	6.3	73

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)	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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
NOV												
17...	<1	--	K15	140	0	115	6	--	--	<.010	--	2.68
JAN												
12...	<1	--	K8	132	0	108	4	2.71	12	.011	.04	2.72
JUL												
29...	--	--	80	135	0	111	--	--	--	<.010	--	2.54
AUG												
19...	36	34	80	129	0	106	--	--	--	<.010	--	2.07
SEP												
15...	K17	K5	74	139	0	114	--	--	--	<.010	--	2.14

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	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)	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)
NOV 17...	.027	.03	.13	.15	2.8	.142	.090	.103	.32	--	--	--
JAN 12...	<.020	--	--	.14	2.9	.066	.057	.055	.17	--	--	--
JUL 29...	<.020	--	--	.22	2.8	.160	.130	.129	.40	27	26	99
AUG 19...	<.020	--	--	E.10	--	.170	.155	.163	.50	22	13	100
SEP 15...	<.020	--	--	.20	2.3	.185	.162	.180	.55	31	23	95

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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	17	35	21	39	31	44	69	103	647	42	22
2	3.7	36	33	30	39	30	43	65	84	469	40	21
3	3.9	35	32	30	39	29	46	59	77	314	38	21
4	3.9	28	31	30	37	28	56	451	67	251	39	30
5	133	24	30	29	34	27	58	466	64	202	38	42
6	171	22	29	29	93	27	70	219	55	177	36	32
7	92	26	31	28	382	27	64	136	50	160	35	28
8	58	37	30	27	193	44	59	101	46	146	33	34
9	41	39	28	25	148	70	53	83	43	131	32	26
10	31	80	28	23	123	59	47	76	61	126	31	25
11	24	79	25	22	110	53	42	76	105	115	30	27
12	20	62	26	22	94	65	37	93	75	106	28	38
13	17	51	32	22	82	219	36	88	71	97	27	36
14	14	42	32	20	73	192	44	81	154	91	27	29
15	14	36	32	20	68	178	50	70	76	84	26	26
16	12	33	31	20	66	188	43	66	67	80	28	24
17	13	31	28	19	56	158	39	78	78	76	25	24
18	23	28	28	19	53	130	37	83	55	72	24	23
19	21	27	29	19	50	110	33	71	78	68	23	24
20	17	33	28	19	47	134	32	67	111	65	23	25
21	15	31	27	19	43	134	31	82	101	62	23	25
22	14	29	24	19	39	118	30	82	91	58	22	23
23	13	28	24	18	39	103	45	225	101	55	22	23
24	12	27	24	18	37	91	42	192	203	53	22	22
25	13	25	24	18	35	79	44	152	345	51	21	21
26	13	23	24	17	35	71	64	129	229	49	21	21
27	15	23	24	17	35	61	113	111	178	47	22	20
28	16	22	24	17	32	56	92	96	154	44	22	18
29	17	22	22	19	---	55	83	87	132	42	21	16
30	17	35	21	23	---	49	75	75	1910	41	20	15
31	17	---	21	36	---	44	---	121	---	41	20	---
TOTAL	878.0	1031	857	695	2121	2660	1552	3850	4964	4020	861	761
MEAN	28.3	34.4	27.6	22.4	75.8	85.8	51.7	124	165	130	27.8	25.4
MAX	171	80	35	36	382	219	113	466	1910	647	42	42
MIN	3.5	17	21	17	32	27	30	59	43	41	20	15
AC-FT	1740	2040	1700	1380	4210	5280	3080	7640	9850	7970	1710	1510

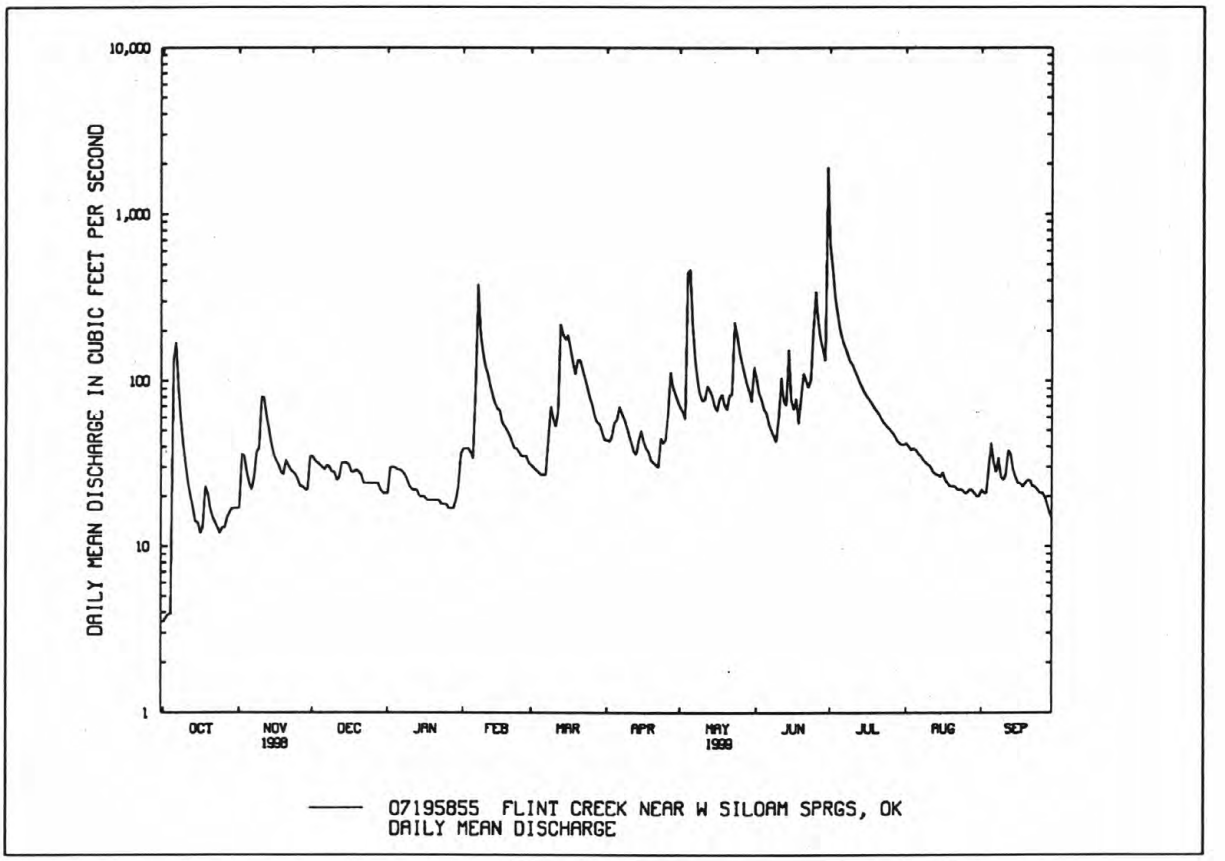
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1999, BY WATER YEAR (WY)

MEAN	31.0	55.2	68.5	52.0	55.9	77.2	69.0	69.4	56.3	26.4	16.7	22.1
MAX	199	148	219	123	120	176	143	251	169	130	35.6	132
(WY)	1987	1994	1993	1985	1989	1985	1985	1990	1995	1999	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 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1980 - 1999	
ANNUAL TOTAL	15668.5		24250.0			
ANNUAL MEAN	42.9		66.4		49.9	
HIGHEST ANNUAL MEAN					97.9	1985
LOWEST ANNUAL MEAN					10.7	1981
HIGHEST DAILY MEAN	382	Jan 8	1910	Jun 30	2560	Sep 30 1986
LOWEST DAILY MEAN	1.0	Aug 25	3.5	Oct 1	.40	Aug 7 1980
ANNUAL SEVEN-DAY MINIMUM	1.1	Aug 20	14	Oct 21	.56	Aug 5 1980
INSTANTANEOUS PEAK FLOW			[a]6860	Jun 30	[a]6860	Jun 30 1999
INSTANTANEOUS PEAK STAGE			12.80	Jun 30	12.80	Jun 30 1999
ANNUAL RUNOFF (AC-FT)	31080		48100		36170	
10 PERCENT EXCEEDS	91		130		106	
50 PERCENT EXCEEDS	30		37		28	
90 PERCENT EXCEEDS	3.9		19		6.8	

[a]From rating curve extended above 3,300 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 collected periodically. Specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field. Samples collected by Arkansas Department of Environmental Quality, Little Rock, Arkansas, from 1983 to 1994, were published by the U.S. Geological Survey, Arkansas District, in Water Resources Data, Arkansas.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
OCT											
20...	1206	2.00	16.5	756	1028	1028	16	3.58	297	8.5	7.4
20...	1207	6.00	16.5	756	1028	1028	16	3.58	298	8.6	7.3
20...	1208	10.0	16.5	756	1028	1028	16	3.58	298	8.6	7.4
20...	1209	14.0	16.5	756	1028	1028	16	3.58	298	8.6	7.4
20...	1210	18.0	16.5	756	1028	1028	16	3.58	297	8.6	7.4
20...	1211	22.0	16.5	756	1028	1028	16	3.58	297	8.7	7.4
20...	1212	26.0	16.5	756	1028	1028	16	3.58	297	8.8	7.4
20...	1213	30.0	16.5	756	1028	1028	16	3.58	297	8.7	7.4
20...	1214	34.0	16.5	756	1028	1028	16	3.58	297	8.8	7.4
20...	1215	38.0	16.5	756	1028	1028	16	3.58	297	8.9	7.4
JUN											
15...	1801	5.00	23.5	751	1028	1028	72	4.65	263	8.0	7.6
15...	1802	10.0	23.5	751	1028	1028	72	4.65	261	8.0	7.6
15...	1803	15.0	23.5	751	1028	1028	72	4.65	260	8.0	7.6
15...	1804	20.0	23.5	751	1028	1028	72	4.65	261	8.0	7.6
15...	1805	25.0	23.5	751	1028	1028	72	4.65	261	8.0	7.6
15...	1806	30.0	23.5	751	1028	1028	72	4.65	261	8.0	7.6
15...	1807	35.0	23.5	751	1028	1028	72	4.65	261	8.0	7.6
15...	1808	40.0	23.5	751	1028	1028	72	4.65	261	8.0	7.6
15...	1809	45.0	23.5	751	1028	1028	72	4.65	260	8.0	7.6
15...	1810	50.0	23.5	751	1028	1028	72	4.65	261	8.0	7.6
15...	1811	55.0	23.5	751	1028	1028	72	4.65	261	8.0	7.6

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...	1205	1028	80020	16	297	7.4	21.0	16.5	--	756	8.7	89
NOV												
16...	1420	1028	80020	26	292	7.5	23.5	15.0	.48	743	10.1	103
DEC												
10...	0900	1028	80020	27	293	7.6	4.5	10.5	--	759	9.5	86
JAN												
05...	1345	1028	80020	30	301	8.1	13.0	4.0	.49	749	12.7	99
FEB												
02...	1450	1028	80020	40	282	8.0	12.0	11.0	--	750	11.7	107
MAR												
24...	0850	1028	80020	16	247	7.9	10.0	12.0	2.5	751	10.2	96
APR												
06...	1550	1028	80020	83	262	8.2	23.5	19.0	--	752	10.9	119
MAY												
04...	1330	1028	80020	130	190	7.2	19.5	17.5	--	735	8.2	88
JUN												
15...	1800	1028	80020	72	261	7.6	26.0	23.5	3.5	751	8.0	96
AUG												
12...	1100	1028	80020	34	315	7.5	35.0	27.0	.55	744	7.3	94

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
20...	200	--	280	--	--	--	--	--	--	--	--
NOV											
16...	K6	<2	120	130	18	47	2.2	9.2	13	.4	3.0
DEC											
10...	K26	--	190	--	--	--	--	--	--	--	--
JAN											
05...	25	K1	88	120	24	46	2.1	8.8	13	.3	2.7
FEB											
02...	<1	--	53	--	--	--	--	--	--	--	--
MAR											
24...	250	250	390	100	30	38	2.0	7.8	14	.3	2.8
APR											
06...	K10	--	54	--	--	--	--	--	--	--	--
MAY											
04...	620	--	K18000	--	--	--	--	--	--	--	--
JUN											
15...	49	180	330	100	20	38	2.1	9.6	16	.4	3.9
AUG											
12...	110	100	280	110	17	39	2.4	17	25	.7	4.1

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											
20...	127	0	104	--	--	--	--	--	--	--	--
NOV											
16...	132	0	108	15	10	177	164	.24	12.4	2	--
DEC											
10...	128	0	105	--	--	--	--	--	--	--	--
JAN											
05...	120	0	99	15	10	174	160	.24	14.1	<1	3.51
FEB											
02...	117	0	96	--	--	--	--	--	--	--	2.99
MAR											
24...	88	0	72	15	8.5	151	138	.21	6.52	4	--
APR											
06...	96	0	79	--	--	--	--	--	--	--	--
MAY											
04...	68	0	56	--	--	--	--	--	--	--	--
JUN											
15...	102	0	83	16	8.2	166	138	.23	32.3	7	--
AUG											
12...	110	0	90	32	11	181	164	.25	16.6	--	--

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	--	1.52	<.020	--	--	.12	1.6	.029	.020
NOV											
16...	--	<.010	--	2.96	.030	.04	.12	.15	3.1	.021	.015
DEC											
10...	--	<.010	--	2.51	.029	.04	--	<.10	--	.018	.024
JAN											
05...	16	.029	.10	3.54	.030	.04	.12	.15	3.7	.031	.037
FEB											
02...	13	.010	.03	3.00	<.020	--	--	.16	3.2	<.050	<.050
MAR											
24...	--	<.010	--	4.81	.028	.04	.18	.21	5.0	E.033	<.050
APR											
06...	--	<.010	--	2.98	.021	.03	.92	.94	3.9	.688	.676
MAY											
04...	--	<.010	--	1.91	.094	.12	.81	.90	2.8	.364	.259
JUN											
15...	--	<.010	--	2.09	.026	.03	.34	.36	2.5	.089	.083
AUG											
12...	--	<.010	--	.907	<.020	--	--	.14	1.0	E.036	<.050

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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...	.015	.05	--	--	--	--	--	--	--	--	--
NOV											
16...	.020	.06	<3.0	40	2.8	90	<1.00	2.00	<1.00	<1.00	<1.00
DEC											
10...	.026	.08	--	--	--	--	--	--	--	--	--
JAN											
05...	.030	.09	<3.0	23	1.9	97	<1.00	4.00	2.00	<1.00	<1.00
FEB											
02...	.023	.07	--	--	--	--	--	--	--	--	--
MAR											
24...	.019	.06	E2.7	22	.95	95	1.00	8.00	6.00	<1.00	<1.00
APR											
06...	.580	1.8	--	--	--	--	--	--	--	--	--
MAY											
04...	.213	.65	--	--	--	--	--	--	--	--	--
JUN											
15...	.057	.17	5.1	32	6.2	93	2.00	20.0	14.0	3.00	<1.00
AUG											
12...	.028	.09	6.8	24	2.2	96	<1.00	<1.00	<1.00	<1.00	<1.00

07301481 North Fork Red River near Sayer, OK June 4, 1995. Near peak.

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.--No estimated daily discharge. Records fair. 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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	6.3	14	9.6	20	11	20	12	51	119	8.3	5.9
2	6.0	21	12	19	18	11	18	11	36	71	9.6	5.6
3	4.2	11	11	13	17	10	29	11	30	41	9.9	5.5
4	3.2	9.6	12	13	16	9.6	30	303	25	34	10	10
5	42	8.6	12	13	14	9.7	48	159	21	29	9.6	19
6	41	7.8	11	12	104	9.9	35	77	19	27	9.7	8.7
7	17	14	14	12	168	6.8	23	57	19	25	8.3	7.8
8	11	18	13	12	72	78	21	46	18	24	7.2	19
9	9.1	14	12	9.8	56	49	19	37	18	22	8.5	8.9
10	6.9	54	11	8.8	47	29	15	43	25	22	8.9	7.2
11	5.2	21	10	11	50	23	13	39	39	19	8.4	7.1
12	6.3	17	12	11	43	94	14	98	42	18	8.1	11
13	6.3	14	17	10	33	159	13	55	36	18	7.9	9.8
14	6.4	12	15	10	28	114	25	40	39	17	6.6	6.9
15	6.3	9.5	13	10	29	98	23	32	38	16	6.2	6.1
16	6.1	10	12	9.5	27	77	17	28	45	16	7.3	8.1
17	5.0	10	12	8.2	24	57	14	69	42	14	7.3	9.8
18	22	10	11	9.4	22	47	11	47	38	13	7.2	7.7
19	9.2	12	12	9.7	20	43	12	36	66	14	6.7	6.6
20	8.0	13	10	9.8	15	80	12	31	71	14	6.7	8.7
21	6.9	11	11	10	13	55	11	43	68	13	5.9	8.8
22	6.3	8.9	12	10	16	44	11	46	54	13	5.5	8.3
23	5.8	10	11	8.4	15	39	15	154	75	13	6.8	7.8
24	5.5	10	11	7.5	14	35	10	75	114	12	7.2	7.8
25	4.4	10	8.5	9.4	14	32	16	52	99	10	11	6.7
26	5.8	7.4	8.1	9.3	12	28	46	44	64	11	7.6	5.4
27	6.0	8.6	7.9	9.2	9.6	24	38	35	52	12	6.6	6.8
28	5.9	7.0	9.4	9.3	8.4	21	23	30	57	11	5.7	6.8
29	5.9	6.4	9.6	13	---	26	19	25	56	11	4.8	6.8
30	6.0	22	9.0	19	---	23	16	23	419	11	5.8	7.1
31	5.0	---	9.2	27	---	21	---	89	---	9.3	7.2	---
TOTAL	291.0	394.1	352.7	352.9	925.0	1364.0	617	1847	1776	699.3	236.5	251.7
MEAN	9.39	13.1	11.4	11.4	33.0	44.0	20.6	59.6	59.2	22.6	7.63	8.39
MAX	42	54	17	27	168	159	48	303	419	119	11	19
MIN	3.2	6.3	7.9	7.5	8.4	6.8	10	11	18	9.3	4.8	5.4
AC-FT	577	782	700	700	1830	2710	1220	3660	3520	1390	469	499

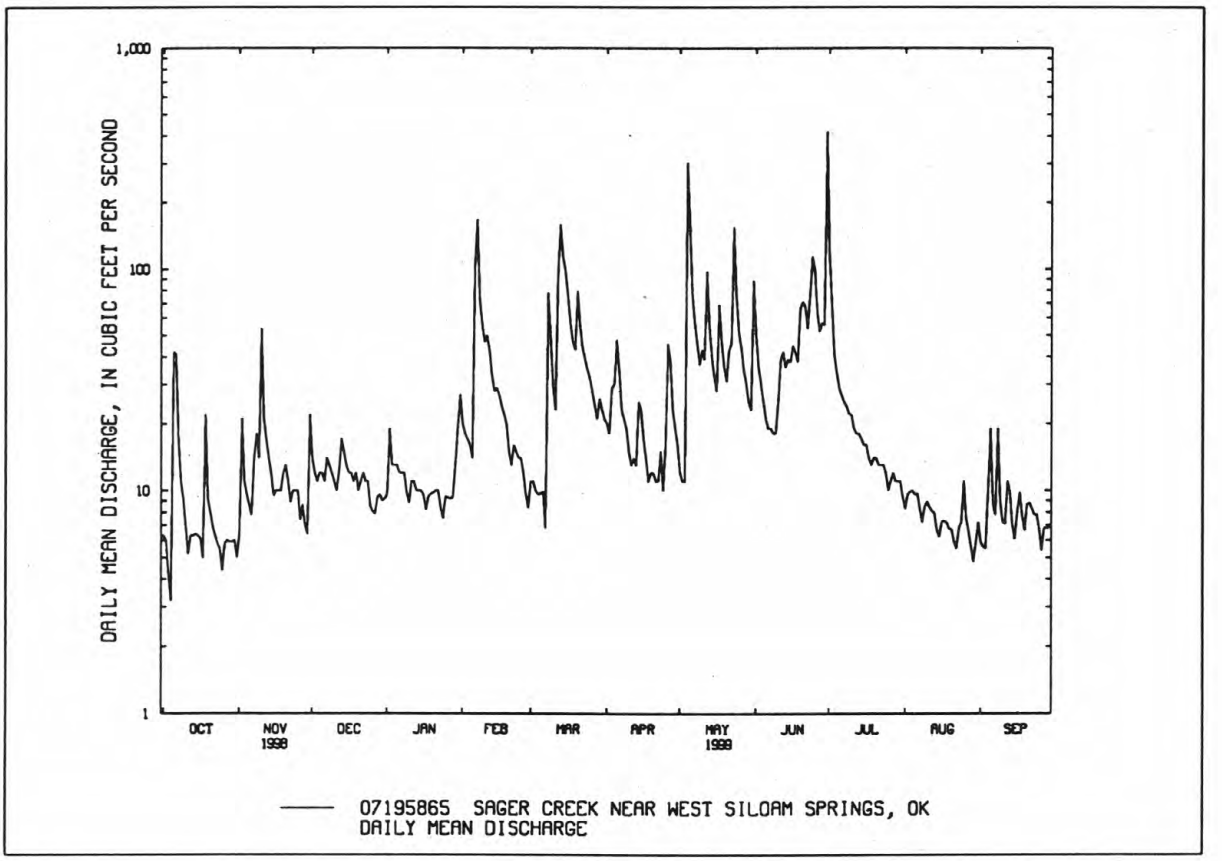
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1999, BY WATER YEAR (WY)

MEAN	9.20	27.1	19.5	25.6	35.3	41.8	20.4	29.8	27.3	11.9	7.00	7.75
MAX	10.3	54.7	24.7	53.6	53.2	44.0	23.3	59.6	59.2	22.6	8.79	9.72
(WY)	1997	1997	1998	1998	1997	1999	1997	1999	1999	1999	1997	1998
MIN	7.86	13.1	11.4	11.4	19.6	37.4	17.4	11.8	8.82	5.70	4.58	5.14
(WY)	1998	1999	1999	1999	1998	1997	1998	1997	1998	1997	1998	1997

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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1996 - 1999	
ANNUAL TOTAL	6616.4		9107.2			
ANNUAL MEAN	18.1		25.0		21.8	
HIGHEST ANNUAL MEAN					25.0	1999
LOWEST ANNUAL MEAN					19.2	1998
HIGHEST DAILY MEAN	309 -	Jan 4	419	Jun 30	537	Feb 21 1997
LOWEST DAILY MEAN	2.1	Sep 6	3.2	Oct 4	[a]2.0	Aug 3 1997
ANNUAL SEVEN-DAY MINIMUM	3.0	Sep 3	5.6	Oct 25	2.8	Jul 31 1997
INSTANTANEOUS PEAK FLOW			1280	Jun 30	3400	Feb 20 1997
INSTANTANEOUS PEAK STAGE			9.13	Jun 30	12.27	Feb 20 1997
ANNUAL RUNOFF (AC-FT)	13120		18060		15780	
10 PERCENT EXCEEDS	30		54		42	
50 PERCENT EXCEEDS	11		13		12	
90 PERCENT EXCEEDS	4.8		6.6		5.1	

[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 collected periodically. Specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
OCT											
20...	1326	23.0	17.0	756	1028	1028	8.3	4.72	417	9.2	7.7
20...	1327	20.0	17.0	756	1028	1028	8.3	4.72	417	9.4	7.7
20...	1328	17.0	17.0	756	1028	1028	8.3	4.72	417	9.4	7.7
20...	1329	14.0	17.0	756	1028	1028	8.3	4.72	417	9.4	7.7
20...	1330	11.0	17.0	756	1028	1028	8.3	4.72	417	9.4	7.7
20...	1331	8.00	17.0	756	1028	1028	8.3	4.72	417	9.4	7.7
20...	1332	5.00	17.0	756	1028	1028	8.3	4.72	417	9.3	7.7
20...	1333	2.00	17.0	756	1028	1028	8.3	4.72	417	9.3	7.7
JUN											
16...	0917	2.00	20.0	750	1028	1028	40	4.91	388	6.3	7.4
16...	0918	4.00	20.0	750	1028	1028	40	4.91	390	6.5	7.4
16...	0919	6.00	20.0	750	1028	1028	40	4.91	390	6.6	7.4
16...	0920	8.00	20.0	750	1028	1028	40	4.91	390	6.5	7.4
16...	0921	10.0	20.0	750	1028	1028	40	4.91	390	6.5	7.4
16...	0922	12.0	20.0	750	1028	1028	40	4.91	390	6.5	7.4
16...	0923	14.0	20.0	750	1028	1028	40	4.91	390	6.5	7.4
16...	0924	16.0	20.0	750	1028	1028	40	4.91	390	6.6	7.4
16...	0925	18.0	20.0	750	1028	1028	40	4.91	390	6.5	7.4
16...	0926	20.0	20.0	750	1028	1028	40	4.91	390	6.4	7.4
16...	0927	22.0	20.0	750	1028	1028	40	4.91	390	6.3	7.4

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...	1325	1028	80020	8.3	417	7.7	19.5	17.0	--	756	9.4	98
NOV												
16...	1220	1028	80020	11	450	7.7	25.5	15.0	.30	740	9.6	98
DEC												
10...	1050	1028	80020	10	486	7.8	6.0	11.5	--	760	10.5	96
JAN												
05...	1244	1028	80020	13	416	8.0	5.0	5.0	.50	750	12.7	101
FEB												
02...	1135	1028	80020	19	379	8.0	9.0	11.0	--	751	11.5	106
MAR												
17...	1020	1028	80020	57	257	7.6	21.0	13.0	2.4	747	9.9	96
APR												
06...	1230	1028	80020	33	269	7.8	18.0	17.0	--	754	11.1	115
MAY												
05...	1015	1028	80020	148	190	7.0	20.5	16.5	--	735	8.6	92
JUN												
16...	0915	1028	80020	40	390	7.4	15.0	20.0	1.5	750	6.5	73
AUG												
11...	1715	1028	80020	8.3	464	7.5	38.0	29.0	1.6	742	6.9	93

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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...	K90	--	390	--	--	--	--	--	--	--	--
NOV 16...	55	K15	91	140	38	52	3.1	25	26	.9	11
DEC 10...	36	--	K50	--	--	--	--	--	--	--	--
JAN 05...	29	K3	33	140	36	53	2.7	19	22	.7	7.2
FEB 02...	<1	--	38	--	--	--	--	--	--	--	--
MAR 17...	44	210	600	93	21	34	2.0	9.0	16	.4	4.7
APR 06...	55	--	440	--	--	--	--	--	--	--	--
MAY 05...	900	--	K14000	--	--	--	--	--	--	--	--
JUN 16...	K9	K36	520	130	46	46	2.5	21	25	.8	7.5
AUG 11...	98	86	330	130	53	46	2.6	29	31	1	11

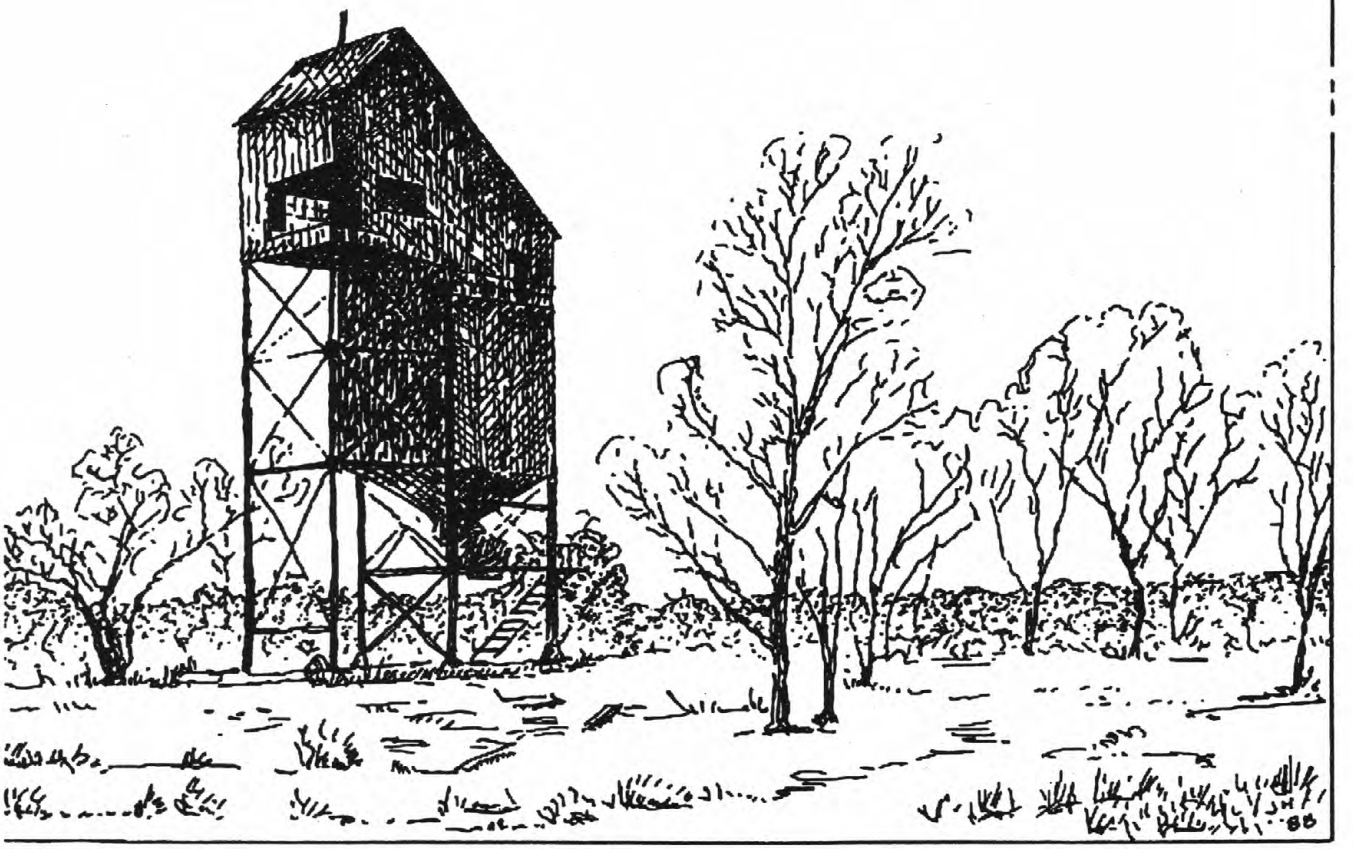
DATE	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CARBONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, 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...	104	0	85	--	--	--	--	--	--	--	--
NOV 16...	126	0	103	17	37	265	246	.36	7.87	2	--
DEC 10...	129	0	106	--	--	--	--	--	--	--	--
JAN 05...	132	0	108	17	28	240	227	.33	8.42	<1	7.14
FEB 02...	116	0	95	--	--	--	--	--	--	--	--
MAR 17...	88	0	72	12	15	160	140	.22	24.6	<1	--
APR 06...	88	0	72	--	--	--	--	--	--	--	--
MAY 05...	72	0	59	--	--	--	--	--	--	--	--
JUN 16...	98	0	81	11	38	274	211	.37	29.6	<1	--
AUG 11...	89	0	73	13	56	287	241	.39	6.43	--	--

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 20...	--	<.010	--	7.45	.020	.03	.28	.30	7.8	1.09	1.08
NOV 16...	--	<.010	--	8.34	.038	.05	.40	.44	8.8	.879	.780
DEC 10...	--	<.010	--	8.66	.033	.04	.15	.19	8.8	.726	.720
JAN 05...	32	.012	.04	7.15	.132	.17	.32	.45	7.6	.716	.763
FEB 02...	--	<.010	--	5.97	<.020	--	--	.44	6.4	.644	.642
MAR 17...	--	<.010	--	4.48	<.020	--	--	.40	4.9	.422	.373
APR 06...	--	<.010	--	2.89	<.020	--	--	.26	3.2	.055	E.032
MAY 05...	--	<.010	--	2.19	.051	.07	.84	.89	3.1	.710	.605
JUN 16...	--	<.010	--	7.63	.023	.03	.34	.36	8.0	.661	.662
AUG 11...	--	<.010	--	8.06	<.020	--	--	.34	8.4	1.05	.979

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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...	1.03	3.1	--	--	--	--	--	--	--	--	--
NOV											
16...	.787	2.4	<3.0	35	1.0	99	<1.00	1.00	<1.00	<1.00	<1.00
DEC											
10...	.677	2.1	--	--	--	--	--	--	--	--	--
JAN											
05...	.682	2.1	<3.0	39	1.4	99	<1.00	2.00	<1.00	<1.00	<1.00
FEB											
02...	.632	1.9	--	--	--	--	--	--	--	--	--
MAR											
17...	.370	1.1	<3.0	28	4.3	99	<1.00	2.00	1.00	<1.00	<1.00
APR											
06...	.017	.05	--	--	--	--	--	--	--	--	--
MAY											
05...	.551	1.7	--	--	--	--	--	--	--	--	--
JUN											
16...	.564	1.7	E2.4	--	--	--	<1.00	3.00	2.00	<1.00	<1.00
AUG											
11...	1.05	3.2	E2.0	45	1.0	91	<1.00	2.00	<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.

EXTREMES 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)
Feb 7	0100	3,000	8.48	June 30	1530	5,930	9.67
May 4	0930	3,210	8.57				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	46	91	63	132	73	119	156	250	940	65	36
2	18	89	86	84	127	72	117	137	189	660	68	36
3	18	98	83	98	118	71	128	128	165	409	66	36
4	17	89	82	98	106	68	176	1950	149	314	66	38
5	56	78	81	94	99	67	185	1280	135	249	66	72
6	633	70	79	91	390	67	229	534	124	216	63	62
7	279	70	81	85	1480	65	187	361	115	195	61	53
8	170	89	81	81	522	111	165	272	107	177	59	73
9	129	90	81	78	347	168	152	222	102	161	56	60
10	106	146	79	72	262	136	135	199	102	155	56	50
11	88	148	76	68	226	124	124	193	155	144	55	53
12	76	126	76	67	199	171	114	244	139	132	50	58
13	61	110	84	66	168	824	108	220	118	128	48	75
14	60	98	84	63	151	566	129	186	152	121	47	60
15	55	85	83	61	138	536	163	163	121	115	45	53
16	51	77	80	60	131	542	149	148	110	109	45	49
17	51	73	78	58	121	410	133	186	118	105	43	47
18	68	67	76	56	112	313	122	205	103	101	42	45
19	63	70	78	55	106	257	113	168	129	98	42	43
20	57	78	75	55	100	376	105	152	176	95	40	47
21	53	79	74	55	94	373	101	166	175	91	40	46
22	49	77	72	56	89	293	98	278	156	87	39	45
23	46	77	70	56	87	245	106	944	160	83	38	43
24	43	72	69	53	83	214	105	548	322	81	40	42
25	41	67	67	51	80	191	109	352	565	79	39	41
26	38	62	64	52	79	171	200	269	313	77	42	40
27	39	59	63	51	78	156	433	218	232	76	40	39
28	39	58	63	51	75	143	269	190	198	74	40	40
29	39	55	63	56	---	141	212	167	184	70	38	37
30	40	78	61	68	---	130	179	153	2100	68	36	35
31	41	---	60	122	---	123	---	267	---	67	36	---
TOTAL	2542	2481	2340	2124	5700	7197	4665	10656	7164	5477	1511	1454
MEAN	82.0	82.7	75.5	68.5	204	232	156	344	239	177	48.7	48.5
MAX	633	148	91	122	1480	824	433	1950	2100	940	68	75
MIN	17	46	60	51	75	65	98	128	102	67	36	35
AC-FT	5040	4920	4640	4210	11310	14280	9250	21140	14210	10860	3000	2880
CFSM	.75	.75	.69	.62	1.85	2.11	1.41	3.12	2.17	1.61	.44	.44
IN.	.86	.84	.79	.72	1.93	2.43	1.58	3.60	2.42	1.85	.51	.49

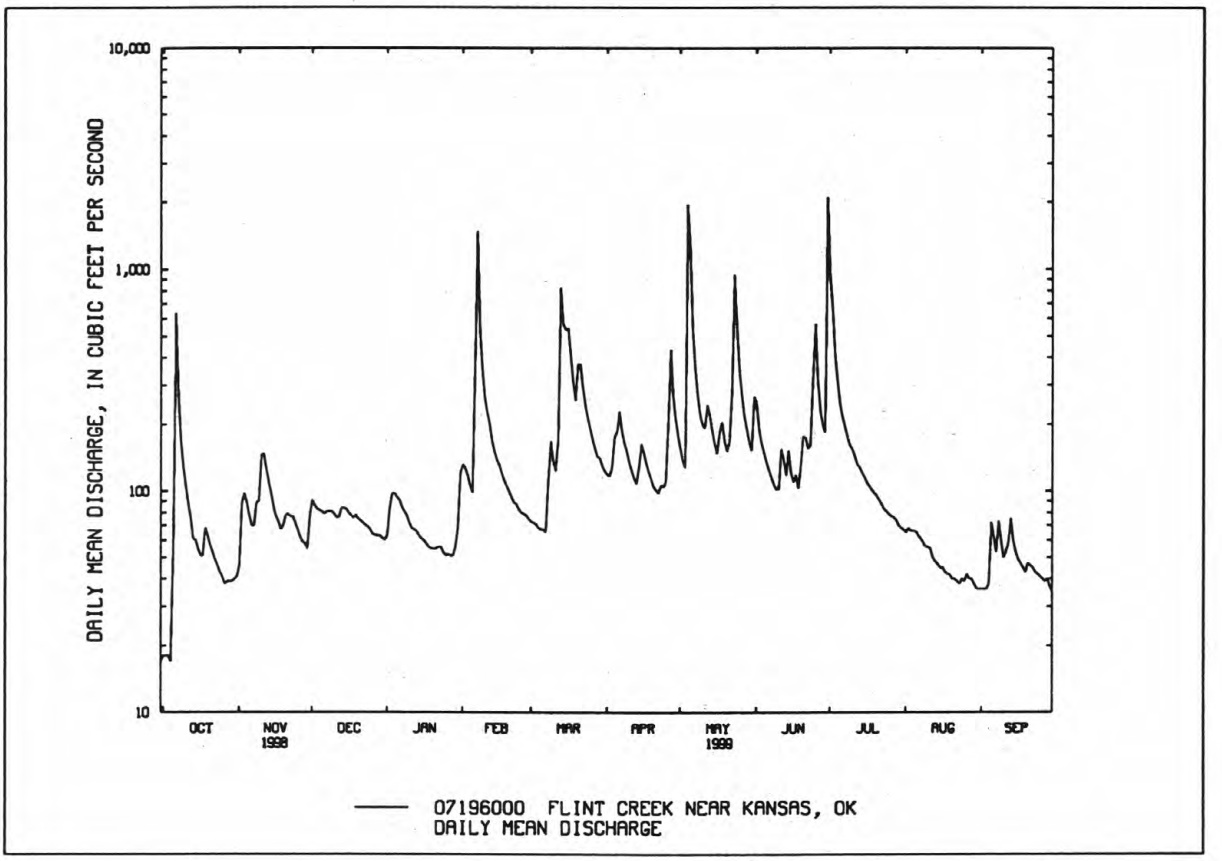
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1999, BY WATER YEAR (WY)

MEAN	75.5	137	132	111	122	182	186	190	143	62.1	45.1	61.3
MAX	415	850	624	385	331	593	577	783	1066	262	369	416
(WY)	1987	1974	1985	1969	1968	1973	1973	1961	1974	1958	1961	1986
MIN	.73	9.87	11.4	10.3	16.4	11.5	13.0	37.5	25.1	11.7	4.84	1.27
(WY)	1957	1956	1956	1956	1956	1956	1956	1964	1972	1980	1956	1956

07196000 FLINT CREEK NEAR KANSAS, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1956 - 1999	
ANNUAL TOTAL	35235.2		53311			
ANNUAL MEAN	96.5		146		121	
HIGHEST ANNUAL MEAN					296	1974
LOWEST ANNUAL MEAN					22.3	1956
HIGHEST DAILY MEAN	1210	Jan 8	2100	Jun 30	14500	Nov 24 1973
LOWEST DAILY MEAN	8.3	Sep 9	17	Oct 4	.60	Oct 11 1956
ANNUAL SEVEN-DAY MINIMUM	8.9	Sep 6	37	Aug 29	.66	Oct 7 1956
INSTANTANEOUS PEAK FLOW			5930	Jun 30	[a]44400	Jun 8 1974
INSTANTANEOUS PEAK STAGE			9.67	Jun 30	19.42	Jun 8 1974
ANNUAL RUNOFF (AC-FT)	69890		105700		87690	
ANNUAL RUNOFF (CFSM)	.88		1.33		1.10	
ANNUAL RUNOFF (INCHES)	11.92		18.03		14.95	
10 PERCENT EXCEEDS	165		264		243	
50 PERCENT EXCEEDS	67		86		56	
90 PERCENT EXCEEDS	16		43		18	

[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 collected periodically. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
OCT											
21...	0936	2.00	17.5	758	1028	1028	54	6.26	283	9.2	7.5
21...	0937	6.00	17.5	758	1028	1028	54	6.26	284	9.2	7.5
21...	0938	10.0	17.5	758	1028	1028	54	6.26	284	9.2	7.5
21...	0939	14.0	17.5	758	1028	1028	54	6.26	284	9.1	7.5
21...	0940	18.0	17.5	758	1028	1028	54	6.26	284	8.8	7.5
21...	0941	22.0	17.5	758	1028	1028	54	6.26	283	8.7	7.5
21...	0942	26.0	17.5	758	1028	1028	54	6.26	283	8.7	7.5
21...	0943	30.0	17.5	758	1028	1028	54	6.26	283	8.8	7.5
21...	0944	34.0	17.5	758	1028	1028	54	6.26	284	8.7	7.5
21...	0945	38.0	17.5	758	1028	1028	54	6.26	284	8.8	7.5
JUN											
15...	1511	10.0	23.5	751	1028	1028	119	6.53	252	9.1	8.0
15...	1512	20.0	23.5	751	1028	1028	119	6.53	252	9.1	8.0
15...	1513	30.0	23.5	751	1028	1028	119	6.53	252	9.1	8.0
15...	1514	40.0	23.5	751	1028	1028	119	6.53	252	9.1	8.0
15...	1515	50.0	23.5	751	1028	1028	119	6.53	252	9.1	8.0
15...	1516	60.0	23.5	751	1028	1028	119	6.53	252	9.1	8.0

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT												
21...	0935	1028	80020	54	284	7.5	11.0	17.5	--	758	8.9	93
NOV												
16...	1040	1028	80020	77	283	7.8	20.5	14.5	.32	745	10.1	101
DEC												
09...	1320	1028	80020	80	281	7.8	11.5	12.5	--	759	12.1	114
JAN												
07...	0835	1028	80020	87	271	7.8	.5	7.0	.24	755	12.2	101
FEB												
02...	0955	1028	80020	129	269	7.8	8.0	9.0	--	752	11.1	98
MAR												
24...	1530	1028	80020	209	215	8.2	19.5	14.0	2.7	752	11.0	107
APR												
06...	1115	1028	80020	225	230	7.8	17.0	14.5	--	755	11.0	109
MAY												
04...	1145	1028	80020	2760	128	6.9	19.0	16.5	--	735	8.4	89
JUN												
15...	1520	1028	80020	119	252	8.0	28.0	23.5	1.7	751	9.1	109
AUG												
12...	1320	1028	80020	48	304	7.8	38.5	28.0	.40	745	8.5	111

07196000 FLINT CREEK NEAR KANSAS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
21...	110	--	270	--	--	--	--	--	--	--	--
NOV											
16...	16	K5	38	110	21	41	1.9	10	16	.4	4.1
DEC											
09...	32	--	K10	--	--	--	--	--	--	--	--
JAN											
07...	41	20	K38	110	12	40	1.9	9.6	16	.4	3.5
FEB											
02...	K2	--	55	--	--	--	--	--	--	--	--
MAR											
24...	K13	K11	50	87	23	32	1.7	6.7	14	.3	3.0
APR											
06...	K6	--	210	--	--	--	--	--	--	--	--
MAY											
04...	1200	--	K33000	--	--	--	--	--	--	--	--
JUN											
15...	20	110	110	100	25	38	1.9	8.7	15	.4	3.7
AUG											
12...	49	34	200	110	24	41	2.1	13	20	.6	4.5

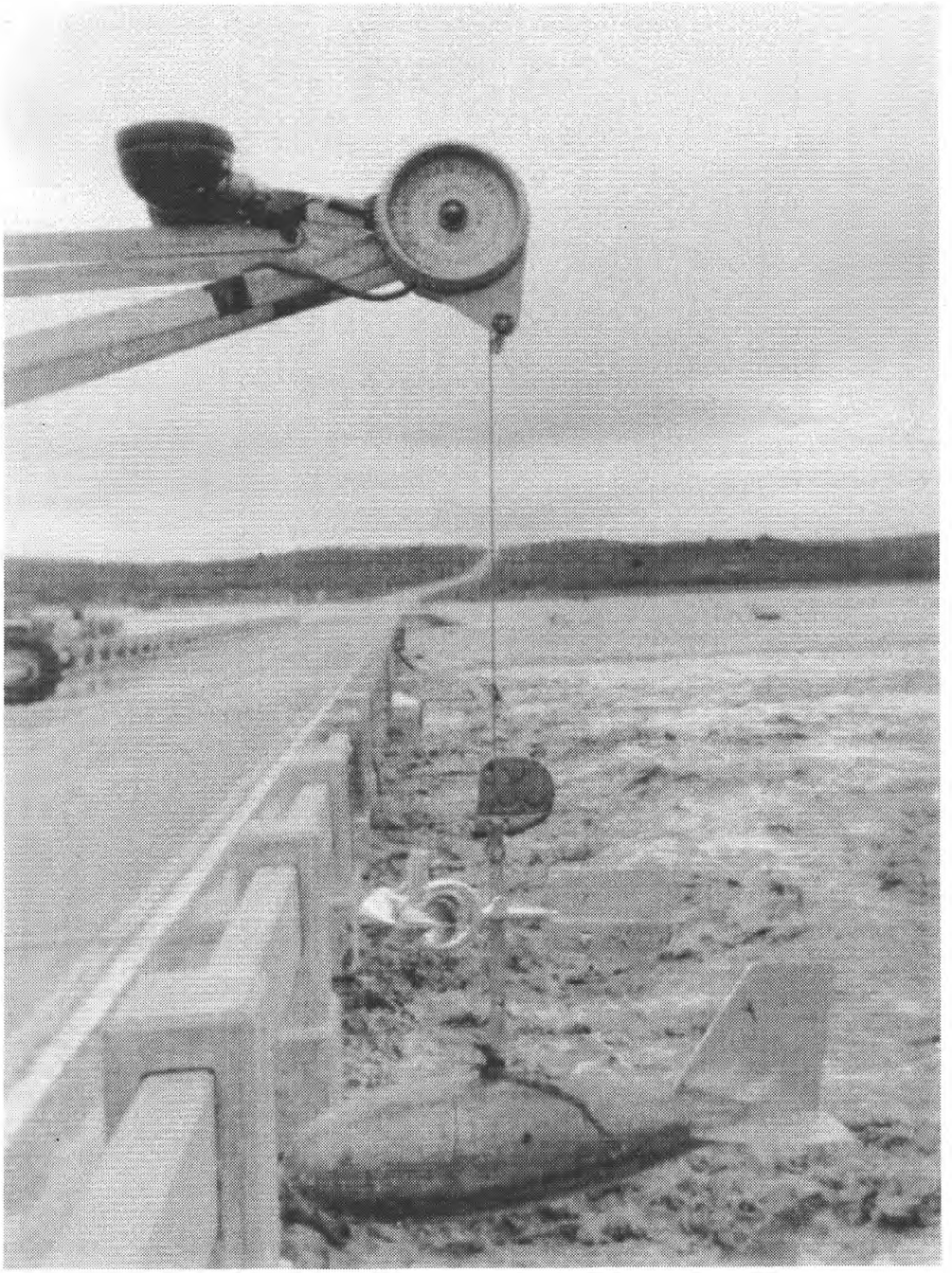
DATE	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	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											
21...	113	0	93	--	--	--	--	--	--	--	--
NOV											
16...	109	0	89	10	14	167	153	.23	34.7	1	--
DEC											
09...	106	0	87	--	--	--	--	--	--	--	--
JAN											
07...	117	0	96	11	12	164	154	.22	38.5	<1	--
FEB											
02...	100	0	82	--	--	--	--	--	--	--	--
MAR											
24...	79	0	65	11	9.0	132	121	.18	74.5	5	--
APR											
06...	87	0	71	--	--	--	--	--	--	--	--
MAY											
04...	44	0	36	--	--	--	--	--	--	--	1.55
JUN											
15...	95	0	78	10	10	163	130	.22	52.4	1	--
AUG											
12...	105	0	86	20	15	179	157	.24	23.2	--	--

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											
21...	--	<.010	--	3.49	<.020	--	--	<.10	--	.130	.116
NOV											
16...	--	<.010	--	3.94	.032	.04	.14	.17	4.1	.139	.136
DEC											
09...	--	<.010	--	3.59	.029	.04	--	<.10	--	.114	.132
JAN											
07...	--	<.010	--	3.95	<.020	--	--	<.10	--	.103	.105
FEB											
02...	--	<.010	--	4.08	<.020	--	--	.16	4.2	.132	.117
MAR											
24...	--	<.010	--	4.13	.050	.06	.13	.18	4.3	.115	.095
APR											
06...	--	<.010	--	2.69	.021	.03	.35	.37	3.1	.202	.172
MAY											
04...	6.9	.014	.05	1.56	.156	.20	1.9	2.1	3.6	.875	.401
JUN											
15...	--	<.010	--	2.17	<.020	--	--	.25	2.4	.157	.133
AUG											
12...	--	<.010	--	2.06	<.020	--	--	.12	2.2	.124	.108

07196000 FLINT CREEK NEAR KANSAS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
21...	.103	.32	--	--	--	--	--	--	--	--	--
NOV											
16...	.130	.40	E2.6	25	5.2	89	<1.00	<1.00	<1.00	<1.00	<1.00
DEC											
09...	.123	.38	--	--	--	--	--	--	--	--	--
JAN											
07...	.086	.26	<4.0	25	5.9	96	<1.00	1.00	<1.00	<1.00	<1.00
FEB											
02...	.136	.42	--	--	--	--	--	--	--	--	--
MAR											
24...	.090	.28	<3.0	19	11	100	<1.00	2.00	1.00	<1.00	<1.00
APR											
06...	.150	.46	--	--	--	--	--	--	--	--	--
MAY											
04...	.399	1.2	--	--	--	--	--	--	--	--	--
JUN											
15...	.116	.36	E2.9	23	7.4	97	<1.00	7.00	4.00	<1.00	<1.00
AUG											
12...	.121	.37	4.1	32	4.1	100	<1.00	1.00	<1.00	<1.00	<1.00



Measurement equipment used during high water

07196040 ILLINOIS RIVER BELOW FLINT CREEK NEAR FLINT, OK

LOCATION.--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.

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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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										
05...	0901	113	14.0	755	1028	1028	422	302	9.3	7.7
05...	0902	100	14.0	755	1028	1028	422	302	9.2	7.7
05...	0903	87.0	14.0	755	1028	1028	422	303	9.1	7.7
05...	0904	74.0	14.0	755	1028	1028	422	303	9.1	7.7
05...	0905	61.0	14.0	755	1028	1028	422	303	9.1	7.7
05...	0906	48.0	14.0	755	1028	1028	422	305	9.1	7.7
05...	0907	35.0	14.0	755	1028	1028	422	306	9.1	7.7
05...	0908	22.0	14.0	755	1028	1028	422	305	9.1	7.7
05...	0909	9.00	14.0	755	1028	1028	422	305	9.0	7.7
JUL										
29...	0930	115	27.0	750	1028	1028	411	298	6.5	7.4
29...	0931	105	27.0	750	1028	1028	411	298	6.5	7.4
29...	0932	95.0	27.0	750	1028	1028	411	298	6.5	7.4
29...	0933	85.0	27.0	750	1028	1028	411	298	6.5	7.4
29...	0934	75.0	27.0	750	1028	1028	411	299	6.5	7.4
29...	0935	65.0	27.0	750	1028	1028	411	299	6.5	7.4
29...	0936	55.0	27.0	750	1028	1028	411	299	6.4	7.5
29...	0937	45.0	27.0	750	1028	1028	411	299	6.4	7.5
29...	0938	35.0	27.0	750	1028	1028	411	299	6.4	7.5
29...	0939	25.0	27.5	750	1028	1028	411	299	6.2	7.5
29...	0940	15.0	27.5	750	1028	1028	411	299	6.2	7.5
29...	0941	5.00	27.5	750	1028	1028	411	301	6.4	7.5

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
NOV												
05...	0900	1028	80020	422	304	7.7	5.0	14.0	.90	755	9.1	89
JAN												
12...	1400	1028	80020	378	288	8.3	15.0	6.5	.76	743	15.3	127
JUL												
29...	0945	1028	80020	411	299	7.4	31.0	27.0	2.2	750	6.4	82
AUG												
19...	1050	1028	80020	264	315	7.7	27.5	26.0	.70	751	8.1	101
SEP												
15...	0955	1028	80020	334	315	7.6	15.5	21.5	.81	751	7.0	80

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)	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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
NOV												
05...	120	--	K56	129	0	106	<1	--	--	<.010	--	2.08
JAN												
12...	<1	--	<4	126	0	103	2	2.82	12	.012	.04	2.83
JUL												
29...	--	--	67	127	0	104	--	--	--	<.010	--	2.48
AUG												
19...	33	46	97	124	0	102	--	--	--	<.010	--	2.03
SEP												
15...	K26	K13	63	136	0	111	--	--	--	<.010	--	2.11

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	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)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV												
05...	.045	.06	.08	.12	2.2	.142	.138	.135	.41	--	--	--
JAN												
12...	<.020	--	--	.14	3.0	.057	.056	.058	.18	--	--	--
JUL												
29...	<.020	--	--	.28	2.8	.153	.135	.127	.39	25	28	94
AUG												
19...	<.020	--	--	.15	2.2	.174	.139	.156	.48	26	19	93
SEP												
15...	<.020	--	--	.18	2.3	.174	.185	.159	.49	26	23	93

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 collected periodically. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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)
NOV											
05...	1101	5.00	13.5	757	1028	1028	426	4.40	303	9.1	7.7
05...	1102	15.0	13.5	757	1028	1028	426	4.40	303	9.1	7.7
05...	1103	25.0	13.5	757	1028	1028	426	4.40	302	9.2	7.7
05...	1104	35.0	13.5	757	1028	1028	426	4.40	302	9.2	7.7
05...	1105	45.0	13.5	757	1028	1028	426	4.40	302	9.2	7.7
05...	1106	55.0	13.5	757	1028	1028	426	4.40	303	9.1	7.7
05...	1107	65.0	13.5	757	1028	1028	426	4.40	303	9.1	7.7
05...	1108	75.0	13.5	757	1028	1028	426	4.40	303	9.2	7.7
05...	1109	85.0	13.5	757	1028	1028	426	4.40	301	9.2	7.7
JUN											
24...	1533	155	22.0	748	1028	1028	1610	6.17	261	8.6	7.6
24...	1534	135	22.0	748	1028	1028	1610	6.17	261	8.6	7.5
24...	1535	115	22.0	748	1028	1028	1610	6.17	260	8.5	7.5
24...	1536	95.0	22.0	748	1028	1028	1610	6.17	260	8.5	7.6
24...	1537	75.0	22.0	748	1028	1028	1610	6.17	260	8.5	7.6
24...	1538	55.0	22.0	748	1028	1028	1610	6.17	260	8.5	7.6
24...	1539	35.0	22.0	748	1028	1028	1610	6.17	260	8.4	7.6
24...	1540	15.0	22.0	748	1028	1028	1610	6.17	259	8.4	7.6
JUL											
01...	1040	30.0	22.0	749	1028	1028	23300	16.46	115	6.3	6.7
01...	1041	60.0	22.0	749	1028	1028	23300	16.46	115	6.3	6.8
01...	1042	90.0	22.0	749	1028	1028	23300	16.46	115	6.3	6.8
01...	1043	120	22.0	749	1028	1028	23300	16.46	115	6.2	6.8
01...	1044	150	22.0	749	1028	1028	23300	16.46	115	6.4	6.8
01...	1045	180	22.0	749	1028	1028	23300	16.46	115	6.4	6.8
01...	1046	210	22.0	749	1028	1028	23300	16.46	115	6.6	6.8
01...	1047	240	22.0	749	1028	1028	23300	16.46	115	6.6	6.8
01...	1048	270	22.0	749	1028	1028	23300	16.46	115	6.3	6.9
01...	1049	300	22.0	749	1028	1028	23300	16.46	115	6.9	6.8
01...	1050	330	22.0	749	1028	1028	23300	16.46	115	6.6	6.7
01...	1051	360	22.0	749	1028	1028	23300	16.46	115	6.3	6.9
AUG											
13...	1040	7.00	28.5	750	1028	1028	282	3.95	305	7.6	7.8
13...	1041	12.0	28.5	750	1028	1028	282	3.95	305	7.5	7.8
13...	1042	17.0	28.5	750	1028	1028	282	3.95	305	7.5	7.8
13...	1043	22.0	28.5	750	1028	1028	282	3.95	304	7.5	7.8
13...	1044	27.0	28.5	750	1028	1028	282	3.95	304	7.5	7.8
13...	1045	32.0	28.5	750	1028	1028	282	3.95	304	7.5	7.8
13...	1046	37.0	28.5	750	1028	1028	282	3.95	304	7.5	7.8
13...	1047	42.0	28.5	750	1028	1028	282	3.95	304	7.5	7.8
13...	1048	47.0	28.5	750	1028	1028	282	3.95	304	7.5	7.8
13...	1049	52.0	28.5	750	1028	1028	282	3.95	305	7.6	7.8
13...	1050	57.0	28.5	750	1028	1028	282	3.95	305	7.6	7.8
13...	1051	62.0	28.5	750	1028	1028	282	3.95	305	7.6	7.8
13...	1052	67.0	28.5	750	1028	1028	282	3.95	305	7.5	7.8
13...	1053	72.0	28.5	750	1028	1028	282	3.95	305	7.5	7.8
13...	1054	77.0	28.5	750	1028	1028	282	3.95	305	7.5	7.8
13...	1055	82.0	28.5	750	1028	1028	282	3.95	305	7.7	7.8

07196090 ILLINOIS RIVER AT CHEWEY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

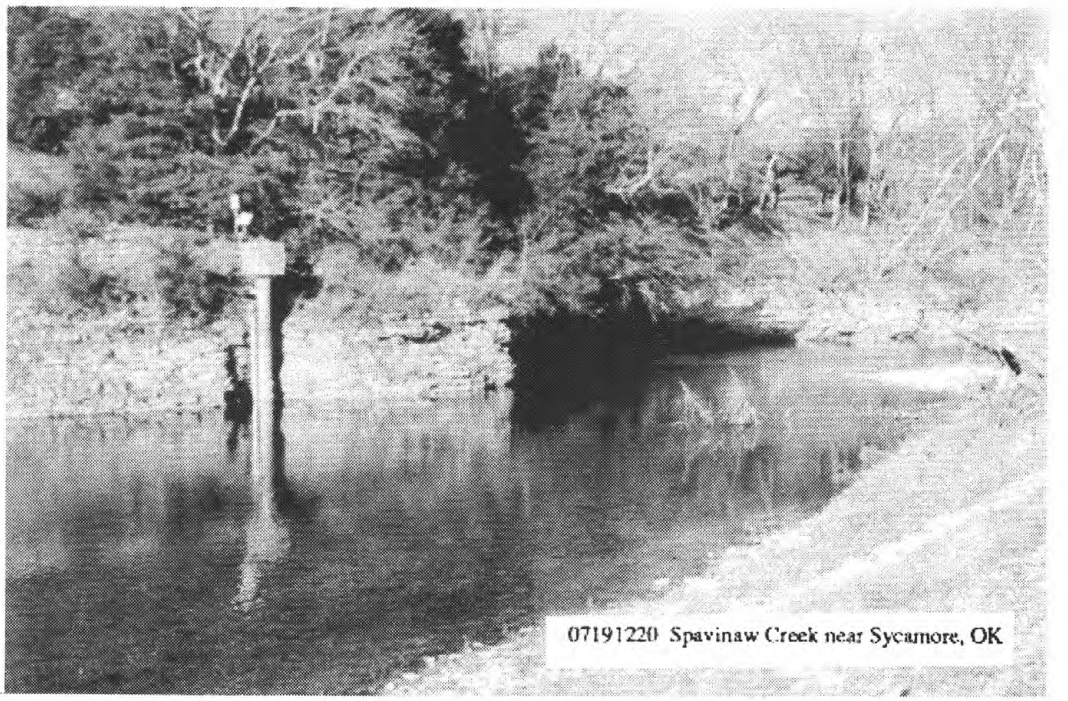
DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT												
20...	0920	1028	80020	358	315	8.0	9.0	16.5	--	759	8.2	85
NOV												
05...	1100	1028	80020	426	302	7.7	6.0	13.5	.53	757	9.1	89
DEC												
16...	1050	1028	80020	775	252	7.7	5.0	8.0	--	757	11.9	102
JAN												
06...	1510	1028	80020	590	279	8.7	16.0	5.0	1.7	745	16.4	131
FEB												
02...	0920	1028	80020	1320	248	7.9	9.0	8.5	--	754	10.4	90
MAR												
15...	1700	1028	80020	4660	175	7.3	15.0	10.0	23	754	11.2	99
APR												
06...	1400	1028	80020	3600	201	7.6	22.0	16.0	--	750	9.0	93
MAY												
04...	0905	1028	80020	3240	164	7.4	20.5	16.5	200	735	8.3	88
JUN												
24...	1530	1028	80020	1610	260	7.6	21.5	22.0	--	748	8.5	99
JUL												
01...	1110	1028	80020	23300	115	6.8	23.0	22.0	400	749	6.4	75
AUG												
13...	1100	1028	80020	282	305	7.8	29.5	28.5	.42	750	7.5	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)	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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
OCT												
20...	45	--	160	128	0	105	--	--	--	<.010	--	2.55
NOV												
05...	97	--	K56	127	0	104	<1	--	--	<.010	--	2.05
DEC												
16...	41	--	140	112	0	92	--	2.58	11	.012	.04	2.59
JAN												
06...	18	--	89	110	1	91	2	2.91	13	.038	.12	2.95
FEB												
02...	270	--	760	90	0	74	--	--	--	<.010	--	2.61
MAR												
15...	180	--	420	67	0	55	45	--	--	<.010	--	2.82
APR												
06...	2400	--	5400	87	0	72	--	--	--	<.010	--	1.95
MAY												
04...	K7200	--	24000	68	0	56	229	--	--	<.010	--	1.47
JUN												
24...	72	--	1000	111	0	91	--	--	--	<.010	--	2.49
JUL												
01...	6000	7800	19000	47	0	38	--	.979	4.3	.021	.07	1.00
AUG												
13...	24	K11	190	125	0	103	--	--	--	<.010	--	2.04

07196090 ILLINOIS RIVER AT CHEWEY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	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)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT												
20...	<.020	--	--	.13	2.7	.149	.142	.136	.42	--	--	--
NOV												
05...	.044	.06	.06	.11	2.2	.140	.126	.134	.41	--	--	--
DEC												
16...	.021	.03	.17	.20	2.8	.106	.055	.089	.27	--	--	--
JAN												
06...	.027	.03	.18	.21	3.2	.070	.080	.074	.23	--	--	--
FEB												
02...	.045	.06	.45	.49	3.1	.174	.115	.115	.35	--	--	--
MAR												
15...	.027	.03	.45	.47	3.3	.203	.123	.114	.35	--	--	--
APR												
06...	.020	.03	.75	.77	2.7	.209	.123	.092	.28	--	--	--
MAY												
04...	.058	.07	1.3	1.4	2.9	.432	.187	.164	.50	--	--	--
JUN												
24...	<.020	--	--	.30	2.8	.200	.157	.128	.39	--	--	--
JUL												
01...	.067	.09	2.4	2.5	3.5	.928	.256	.189	.58	575	36200	93
AUG												
13...	<.020	--	--	.20	2.2	.136	.119	.125	.38	25	19	98



07191220 Spavinaw Creek near Sycamore, OK

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 collected periodically. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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										
04...	1546	4.00	15.0	755	1028	1028	544	296	8.6	7.7
04...	1547	24.0	15.0	755	1028	1028	544	293	9.0	7.7
04...	1548	44.0	15.0	755	1028	1028	544	295	9.1	7.7
04...	1549	64.0	15.0	755	1028	1028	544	295	9.2	7.7
04...	1550	84.0	15.0	755	1028	1028	544	295	9.2	7.7
04...	1551	104	15.0	755	1028	1028	544	295	9.3	7.7
04...	1552	124	15.0	755	1028	1028	544	295	9.3	7.7
04...	1553	144	15.0	755	1028	1028	544	295	9.3	7.7
04...	1554	164	15.0	755	1028	1028	544	295	9.4	7.7
04...	1555	184	15.0	755	1028	1028	544	293	9.2	7.7
JUL										
29...	1215	7.00	28.5	750	1028	1028	439	293	7.1	7.6
29...	1216	22.0	28.5	750	1028	1028	439	293	7.3	7.6
29...	1217	37.0	28.5	750	1028	1028	439	293	7.5	7.7
29...	1218	52.0	28.5	750	1028	1028	439	294	7.6	7.7
29...	1219	67.0	28.5	750	1028	1028	439	294	7.6	7.7
29...	1220	82.0	28.5	750	1028	1028	439	294	7.6	7.7
29...	1221	97.0	28.5	750	1028	1028	439	293	7.7	7.7
29...	1222	112	28.5	750	1028	1028	439	293	7.7	7.7
29...	1223	127	28.5	750	1028	1028	439	293	7.7	7.7
29...	1224	142	28.5	750	1028	1028	439	293	7.6	7.7
29...	1225	157	28.5	750	1028	1028	439	292	7.7	7.7

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											
04...	1545	1028	80020	544	295	7.7	7.0	15.0	1.0	755	9.2
JAN											
06...	1325	1028	80020	653	261	8.4	15.5	4.5	1.5	756	16.4
JUL											
29...	1230	1028	80020	439	293	7.7	36.5	28.5	2.0	750	7.6
AUG											
18...	1420	1028	80020	277	303	8.2	38.0	28.0	1.2	753	9.4
SEP											
14...	1030	1028	80020	445	316	7.4	20.0	21.5	.51	755	7.3

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)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)
NOV											
04...	92	240	--	K60	122	0	100	<1	<.010	2.09	.048
JAN											
06...	128	K11	--	K57	111	*0	91	6	<.010	2.54	<.020
JUL											
29...	100	<1	77	K9	136	0	111	--	<.010	2.25	<.020
AUG											
18...	122	K7	K9	37	124	0	102	--	<.010	1.75	<.020
SEP											
14...	84	K26	K24	130	134	0	110	--	<.010	1.95	<.020

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

07196190 ILLINOIS RIVER NEAR SCRAPER, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	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)
NOV											
04...	.06	.06	.10	2.2	.122	.125	.129	.40	--	--	--
JAN											
06...	--	--	.20	2.7	.095	.060	.059	.18	--	--	--
JUL											
29...	--	--	.20	2.5	.131	.110	.117	.36	26	31	94
AUG											
18...	--	--	.36	2.1	.125	.124	.122	.37	25	19	98
SEP											
14...	--	--	.19	2.1	.160	.148	.145	.44	150	180	39

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 collected periodically. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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										
04...	1111	11.0	15.0	757	1028	1028	622	288	9.0	7.7
04...	1112	21.0	15.0	757	1028	1028	622	288	9.0	7.7
04...	1113	31.0	15.0	757	1028	1028	622	287	9.0	7.7
04...	1114	41.0	15.5	757	1028	1028	622	287	9.0	7.7
04...	1115	51.0	15.0	757	1028	1028	622	288	9.0	7.7
04...	1116	61.0	15.0	757	1028	1028	622	288	9.0	7.7
04...	1117	71.0	15.0	757	1028	1028	622	288	9.1	7.7
04...	1118	81.0	15.0	757	1028	1028	622	288	9.1	7.7
04...	1119	91.0	15.0	757	1028	1028	622	288	9.3	7.8
JUL										
29...	1501	88.0	32.5	750	1028	1028	449	270	10.5	8.3
29...	1502	83.0	31.0	750	1028	1028	449	280	8.8	8.1
29...	1503	78.0	30.5	750	1028	1028	449	282	8.8	8.0
29...	1504	73.0	30.0	750	1028	1028	449	283	8.8	7.9
29...	1505	68.0	30.0	750	1028	1028	449	282	8.8	7.9
29...	1506	63.0	30.0	750	1028	1028	449	282	8.8	7.9
29...	1507	58.0	30.0	750	1028	1028	449	283	8.8	7.9
29...	1508	53.0	30.0	750	1028	1028	449	283	8.9	7.9
29...	1509	48.0	30.0	750	1028	1028	449	283	9.0	7.9
29...	1510	43.0	30.0	750	1028	1028	449	283	9.0	7.9
29...	1511	38.0	30.0	750	1028	1028	449	283	9.0	7.9
29...	1512	33.0	30.0	750	1028	1028	449	283	9.0	7.9
29...	1513	28.0	30.0	750	1028	1028	449	283	9.1	7.9
29...	1514	23.0	30.5	750	1028	1028	449	283	9.1	7.9
29...	1515	18.0	30.0	750	1028	1028	449	283	9.1	7.9
29...	1516	13.0	30.5	750	1028	1028	449	283	9.0	8.0
29...	1517	8.00	30.5	750	1028	1028	449	283	9.0	8.0
29...	1518	3.00	30.5	750	1028	1028	449	283	9.0	8.0

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											
04...	1110	1028	80020	622	288	7.7	7.0	15.0	.85	757	9.1
JAN											
06...	1140	1028	80020	647	259	7.9	8.5	4.0	1.6	758	14.4
JUL											
29...	1500	1028	80020	449	283	7.9	36.5	30.5	2.0	750	8.9
AUG											
18...	1110	1028	80020	276	263	7.9	34.0	26.5	1.5	750	7.8
SEP											
15...	1210	1028	80020	382	304	8.0	24.0	22.5	.49	750	8.4

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)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)
NOV											
04...	91	K430	--	K130	123	0	101	<1	<.010	1.88	.044
JAN											
06...	111	34	--	K51	123	0	101	<1	<.010	2.29	<.020
JUL											
29...	121	<1	21	20	122	0	100	--	<.010	1.97	<.020
AUG											
18...	99	22	27	50	126	0	103	--	<.010	1.55	<.020
SEP											
15...	99	K11	K7	--	139	0	114	--	<.010	1.68	<.020

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	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)
NOV										
04...	.06	<.10	--	.111	.098	.103	.32	--	--	--
JAN										
06...	--	.14	2.4	.064	<.050	.047	.14	--	--	--
JUL										
29...	--	.27	2.2	.108	.087	.093	.29	27	33	85
AUG										
18...	--	.26	1.8	.128	.084	.091	.28	49	37	70
SEP										
15...	--	.16	1.8	.126	.111	.108	.33	20	21	92

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 collected periodically. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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										
04...	0906	15.0	15.5	757	1028	1028	638	278	8.6	7.7
04...	0907	28.0	15.5	757	1028	1028	638	278	8.6	7.7
04...	0908	41.0	15.5	757	1028	1028	638	278	8.6	7.7
04...	0909	54.0	15.5	757	1028	1028	638	278	8.6	7.7
04...	0910	67.0	15.5	757	1028	1028	638	278	8.6	7.7
04...	0911	80.0	15.5	757	1028	1028	638	278	8.6	7.7
04...	0912	93.0	15.5	757	1028	1028	638	278	8.6	7.7
04...	0913	106	15.5	757	1028	1028	638	278	8.6	7.7
04...	0914	119	15.5	757	1028	1028	638	278	8.9	7.7
JUL										
27...	1700	108	31.5	757	1028	1028	496	270	9.9	8.1
27...	1701	98.0	31.5	757	1028	1028	496	270	9.7	8.1
27...	1702	88.0	31.5	757	1028	1028	496	271	9.7	8.1
27...	1703	78.0	31.5	757	1028	1028	496	271	9.6	8.1
27...	1704	68.0	31.5	757	1028	1028	496	271	9.5	8.1
27...	1705	58.0	31.5	757	1028	1028	496	271	9.5	8.1
27...	1706	48.0	31.5	757	1028	1028	496	271	9.4	8.1
27...	1707	38.0	31.5	757	1028	1028	496	271	9.3	8.1
27...	1708	28.0	31.5	757	1028	1028	496	271	9.3	8.1
27...	1709	18.0	31.5	757	1028	1028	496	271	9.3	8.1
27...	1710	8.00	31.0	757	1028	1028	496	271	9.2	8.1

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											
04...	0905	1028	80020	638	278	7.7	7.5	15.5	1.7	757	8.6
JAN											
06...	1014	1028	80020	670	260	7.8	4.0	3.5	1.3	759	14.3
JUL											
27...	1715	1028	80020	496	271	8.1	35.0	31.5	3.0	757	9.5
AUG											
18...	0910	1028	80020	266	287	7.7	20.5	25.5	.70	756	6.6
SEP											
14...	0805	1028	80020	394	291	8.0	13.5	21.5	.50	757	6.4

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)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)
NOV											
04...	87	240	--	K140	124	0	102	<1	<.010	1.83	.046
JAN											
06...	109	61	--	K33	111	0	91	<1	<.010	2.41	.024
JUL											
27...	130	--	--	K22	110	0	90	--	<.010	1.82	<.020
AUG											
18...	81	33	32	55	124	0	102	--	<.010	1.40	<.020
SEP											
14...	73	K28	K13	6500	125	0	102	--	<.010	1.39	<.020

07196490 ILLINOIS RIVER NEAR BRIGGS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	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)
NOV 04...	.06	.06	.10	1.9	.082	.090	.098	.30	--	--	--
JAN 06...	.03	.12	.14	2.6	.062	.048	.046	.14	--	--	--
JUL 27...	--	--	.30	2.1	.105	.077	.083	.25	33	44	92
AUG 18...	--	--	.17	1.6	.121	.080	.085	.26	28	20	84
SEP 14...	--	--	.17	1.6	.097	.119	.101	.31	32	34	93

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.--No estimated daily discharge. Records good. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 1916 reached a stage of about 26 ft.

EXTREMES 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)
Feb 8	1100	9,740	10.82	May 6	1000	13,100	12.20
Mar 14	0800	9,080	10.56	Jul 2	0330	19,600	14.45

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	199	264	779	405	1750	530	1040	1540	2010	9310	399	190
2	187	395	1370	444	1600	499	974	1330	2020	11800	384	187
3	185	523	1090	580	1340	482	1060	1180	1690	4410	424	185
4	185	654	969	839	1160	470	2090	4100	1480	2910	400	203
5	725	606	908	773	1010	449	3800	10100	1320	2300	379	209
6	4260	528	1040	705	996	427	3130	10100	1180	1920	374	235
7	5670	496	991	662	5430	419	2960	3920	1060	1720	367	283
8	2670	497	914	631	7810	491	2230	2690	963	1520	353	382
9	1800	559	861	602	4020	801	1870	2140	890	1350	336	350
10	1310	789	782	571	2810	1810	1660	1810	873	1220	314	328
11	993	1100	703	537	2250	1420	1470	1830	943	1220	300	339
12	780	1480	665	503	1910	1340	1320	3210	1230	1510	294	311
13	642	1190	662	477	1760	3500	1180	4790	1520	1200	279	305
14	537	978	1340	465	1540	7780	1130	3750	1180	1050	263	374
15	470	834	1350	455	1370	5700	1210	2580	1160	952	259	396
16	422	719	1110	435	1230	4620	1380	2090	1030	876	250	327
17	392	630	963	416	1130	3780	1250	1930	913	815	238	289
18	402	565	862	398	1040	2970	1120	2160	1020	768	233	269
19	427	521	799	381	960	2410	1020	2250	920	721	226	259
20	471	498	742	376	889	2270	934	1810	1140	681	225	260
21	436	499	702	375	815	3130	872	1680	1400	656	221	249
22	386	518	653	365	755	2840	843	1670	1370	630	221	245
23	352	489	614	362	703	2290	917	3040	1260	602	220	246
24	326	453	578	361	665	1960	1010	5570	1410	574	219	240
25	301	427	541	359	632	1730	1130	3850	2630	547	213	234
26	283	401	515	362	603	1550	1600	3280	3780	521	213	234
27	264	379	488	353	580	1410	3380	3500	2990	498	220	228
28	250	363	463	345	554	1300	3250	2500	2240	481	209	216
29	245	348	444	369	---	1230	2280	2040	1830	462	212	211
30	239	439	429	436	---	1170	1820	1770	1830	439	220	208
31	241	---	412	944	---	1110	---	1670	---	417	201	---
TOTAL	26050	18142	24739	15286	47312	61888	49930	95880	45282	54080	8666	7992
MEAN	840	605	798	493	1690	1996	1664	3093	1509	1745	280	266
MAX	5670	1480	1370	944	7810	7780	3800	10100	3780	11800	424	396
MIN	185	264	412	345	554	419	843	1180	873	417	201	185
AC-FT	51670	35980	49070	30320	93840	122800	99040	190200	89820	107300	17190	15850
CFSM	.88	.63	.83	.51	1.76	2.08	1.74	3.23	1.57	1.82	.29	.28
IN.	1.01	.70	.96	.59	1.84	2.40	1.94	3.72	1.76	2.10	.34	.31

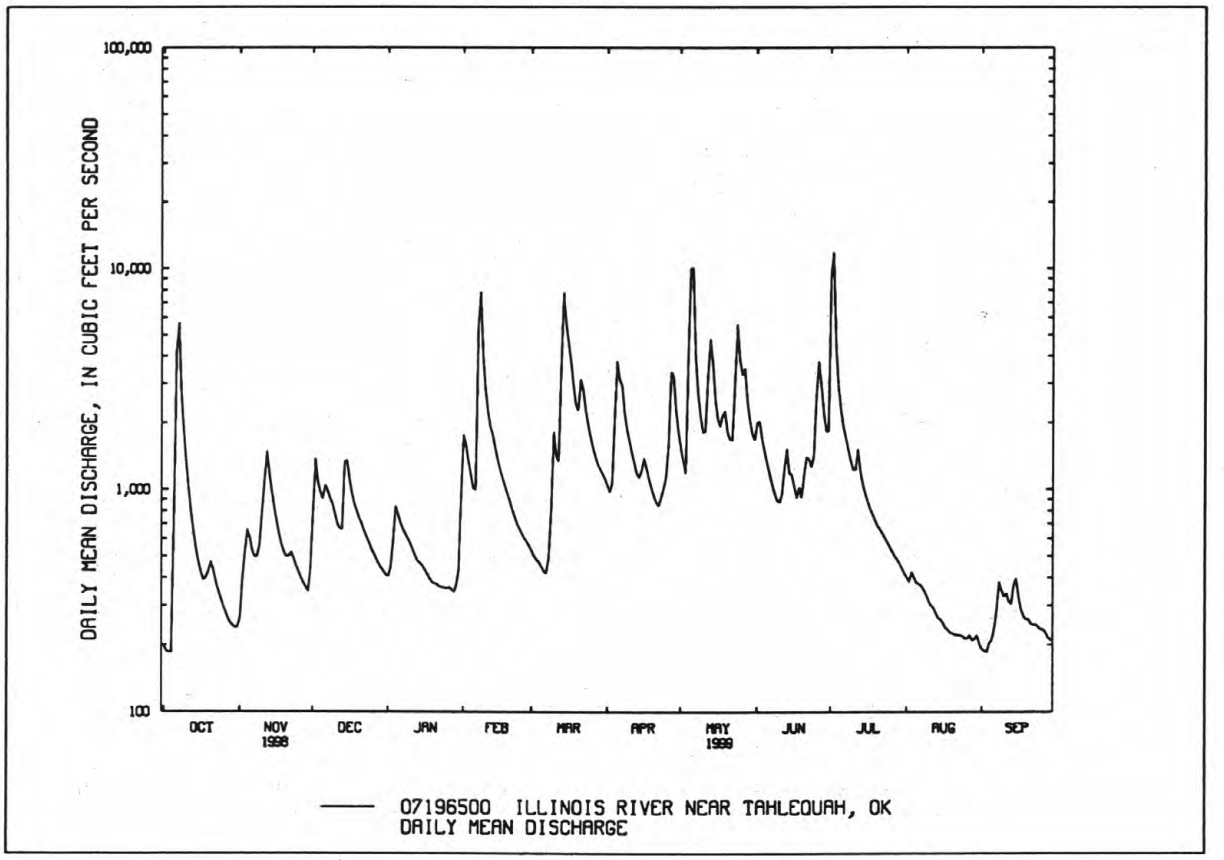
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1999, BY WATER YEAR (WY)

MEAN	546	935	921	863	1117	1470	1595	1682	1010	491	351	367
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

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1936 - 1999	
ANNUAL TOTAL	380990		455247			
ANNUAL MEAN	1044		1247		944	
HIGHEST ANNUAL MEAN					1980	1974
LOWEST ANNUAL MEAN					193	1954
HIGHEST DAILY MEAN	20100	Jan 6	11800	Jul 2	90400	May 11 1950
LOWEST DAILY MEAN	82	Sep 9	185	Oct 3	.10	Oct 10 1956
ANNUAL SEVEN-DAY MINIMUM	87	Sep 6	199	Aug 30	.14	Oct 8 1956
INSTANTANEOUS PEAK FLOW			19600	Jul 2	[a]150000	May 10 1950
INSTANTANEOUS PEAK STAGE			14.45	Jul 2	27.94	May 10 1950
ANNUAL RUNOFF (AC-FT)	755700		903000		683800	
ANNUAL RUNOFF (CFSM)	1.09		1.30		.98	
ANNUAL RUNOFF (INCHES)	14.78		17.66		13.37	
10 PERCENT EXCEEDS	1960		2820		1950	
50 PERCENT EXCEEDS	640		779		422	
90 PERCENT EXCEEDS	168		246		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, October 1989 to August 1995, July 1996 to current year.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
OCT											
19...	1201	13.0	18.5	763	1028	1028	424	3.48	264	10.1	7.7
19...	1202	25.0	18.5	763	1028	1028	424	3.48	264	10.1	7.7
19...	1203	37.0	18.5	763	1028	1028	424	3.48	264	10.1	7.7
19...	1204	49.0	18.5	763	1028	1028	424	3.48	264	10.2	7.7
19...	1205	61.0	18.5	763	1028	1028	424	3.48	264	10.2	7.7
19...	1206	73.0	18.5	763	1028	1028	424	3.48	264	10.1	7.7
19...	1207	85.0	18.5	763	1028	1028	424	3.48	264	10.1	7.6
19...	1208	97.0	18.5	763	1028	1028	424	3.48	264	10.1	7.6
19...	1209	109	19.0	763	1028	1028	424	3.48	265	10.0	7.6
JUN											
23...	1037	20.0	22.0	744	1028	1028	1260	4.75	242	7.1	9.9
23...	1039	40.0	22.0	744	1028	1028	1260	4.75	243	7.2	7.9
23...	1040	60.0	21.5	744	1028	1028	1260	4.75	243	7.1	7.9
23...	1043	80.0	22.0	744	1028	1028	1260	4.75	244	7.1	7.9
23...	1045	100	22.0	744	1028	1028	1260	4.75	243	7.1	7.9
23...	1047	120	21.5	744	1028	1028	1260	4.75	244	6.9	7.9
23...	1050	140	21.5	744	1028	1028	1260	4.75	244	6.8	7.9
23...	1058	160	22.0	744	1028	1028	1260	4.75	244	6.8	7.9
23...	1105	180	22.0	744	1028	1028	1260	4.75	245	6.9	7.9
23...	1110	200	21.5	744	1028	1028	1260	4.75	247	6.8	7.9
JUL											
01...	1510	12.0	22.0	749	1028	1028	11800	11.34	148	7.1	7.1
01...	1511	32.0	22.0	749	1028	1028	11800	11.34	148	7.1	7.1
01...	1512	52.0	22.0	749	1028	1028	11800	11.34	148	7.3	7.1
01...	1513	72.0	22.0	749	1028	1028	11800	11.34	148	7.2	7.1
01...	1514	92.0	22.5	749	1028	1028	11800	11.34	146	6.9	7.1
01...	1515	112	22.0	749	1028	1028	11800	11.34	146	6.8	7.1
01...	1516	132	22.0	749	1028	1028	11800	11.34	143	6.8	7.0
01...	1517	152	22.0	749	1028	1028	11800	11.34	145	6.8	7.1
01...	1518	172	22.0	749	1028	1028	11800	11.34	145	6.9	7.1
01...	1519	192	22.0	749	1028	1028	11800	11.34	145	6.9	7.1
01...	1520	212	22.0	749	1028	1028	11800	11.34	144	6.9	7.1
01...	1521	232	22.0	749	1028	1028	11800	11.34	144	6.8	7.1
01...	1522	252	22.0	749	1028	1028	11800	11.34	144	6.8	7.1

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												
19...	1200	1028	80020	424	264	7.7	16.0	18.5	--	763	10.1	108
NOV												
02...	1505	1028	80020	410	268	7.7	15.0	17.5	2.0	749	9.5	101
DEC												
15...	1340	1028	80020	1320	244	7.9	15.5	9.0	--	764	12.1	105
JAN												
05...	0755	1028	80020	785	290	8.1	-1.0	2.0	1.1	762	13.6	98
FEB												
01...	1240	1028	80020	1940	251	7.5	9.5	9.0	--	755	10.2	89
MAR												
23...	1330	1028	80020	2230	196	7.8	10.5	12.5	23	757	9.9	93
APR												
05...	1335	1028	80020	3590	184	7.3	21.5	16.0	--	743	8.3	87
MAY												
03...	1450	1028	80020	1160	227	8.1	25.5	17.5	--	743	11.1	120
JUN												
08...	1125	1028	80020	970	234	8.2	32.0	24.5	2.5	752	10.3	125
JUL												
01...	1615	1028	80020	11800	146	7.1	29.0	22.0	290	749	6.9	81
AUG												
11...	1045	1028	80020	302	283	7.5	35.5	29.0	1.6	751	5.6	74

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
19...	130	--	K140	--	--	--	--	--	--	--	--
NOV											
02...	<3	4800	490	110	9	41	2.2	10	16	.4	3.4
DEC											
15...	K1300	--	930	--	--	--	--	--	--	--	--
JAN											
05...	33	K2	50	120	18	43	2.3	9.3	14	.4	3.2
FEB											
01...	K2800	--	2000	--	--	--	--	--	--	--	--
MAR											
23...	50	65	280	80	17	29	1.8	4.9	11	.2	2.5
APR											
05...	K4400	--	2400	--	--	--	--	--	--	--	--
MAY											
03...	27	--	220	--	--	--	--	--	--	--	--
JUN											
08...	40	K24	K9	100	12	37	1.9	6.2	12	.3	2.9
JUL											
01...	1800	2300	20000	--	--	--	--	--	--	--	--
AUG											
11...	54	42	80	110	16	42	2.1	9.4	15	.4	3.6

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											
19...	126	0	103	--	--	--	--	--	--	--	--
NOV											
02...	124	0	102	11	13	161	148	.22	178	7	1.55
DEC											
15...	106	0	87	--	--	--	--	--	--	--	--
JAN											
05...	120	0	98	13	11	164	153	.22	348	<1	2.58
FEB											
01...	94	0	77	--	--	--	--	--	--	--	2.31
MAR											
23...	77	0	63	9.1	7.3	122	105	.17	735	55	--
APR											
05...	81	0	66	--	--	--	--	--	--	--	--
MAY											
03...	105	0	86	--	--	--	--	--	--	--	--
JUN											
08...	107	0	88	7.0	7.2	137	122	.19	359	7	--
JUL											
01...	57	0	47	--	--	--	--	--	--	--	1.37
AUG											
11...	118	0	97	9.3	11	163	142	.22	133	--	--

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
19...	--	<.010	--	1.95	<.020	--	--	.13	2.1	.092	.068
NOV											
02...	6.9	.012	.04	1.56	.054	.07	.11	.16	1.7	.091	.066
DEC											
15...	--	<.010	--	2.12	<.020	--	--	.28	2.4	.126	.103
JAN											
05...	11	.020	.07	2.60	.032	.04	.13	.16	2.8	.083	.089
FEB											
01...	10	.014	.05	2.33	.080	.10	.67	.75	3.1	.239	.142
MAR											
23...	--	<.010	--	2.82	.037	.05	.35	.38	3.2	.165	.070
APR											
05...	--	<.010	--	1.51	.037	.05	.74	.77	2.3	.262	.139
MAY											
03...	--	<.010	--	1.84	.040	.05	.20	.24	2.1	.087	.092
JUN											
08...	--	<.010	--	1.56	<.020	--	--	.38	1.9	.076	E.038
JUL											
01...	6.1	.021	.07	1.39	.057	.07	3.1	3.1	4.5	1.14	.239
AUG											
11...	--	<.010	--	1.53	<.020	--	--	.15	1.7	.113	.054

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											
19...	.062	.19	--	--	--	--	--	--	--	--	--
NOV											
02...	.079	.24	<3.0	39	43	96	<1.00	4.00	2.00	<1.00	<1.00
DEC											
15...	.105	.32	--	--	--	--	--	--	--	--	--
JAN											
05...	.067	.21	E2.0	26	55	93	<1.00	2.00	1.00	--	<1.00
FEB											
01...	.145	.44	--	--	--	--	--	--	--	--	--
MAR											
23...	.066	.20	12	84	506	88	<1.00	3.00	2.00	<1.00	<1.00
APR											
05...	.120	.37	--	--	--	--	--	--	--	--	--
MAY											
03...	.081	.25	--	--	--	--	--	--	--	--	--
JUN											
08...	.040	.12	3.4	31	81	72	1.00	18.0	12.0	<1.00	2.00
JUL											
01...	.185	.57	--	869	27700	96	--	--	--	--	--
AUG											
11...	.080	.25	9.2	36	29	93	<1.00	5.00	3.00	<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 August 1999 (discontinued).

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
AUG 11...	1330	1028	80020	304	280	7.8	38.0	30.5	751	7.3	99	119

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)
AUG 11...	0	97	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200	<.200

DATE	METRIBUZIN WATER WHOLE TOT.REC (UG/L) (82611)	PROPACHLOR WATER WHOLE RECOV. (UG/L) (30295)	TERBACIL WATER WHOLE RECOV. (UG/L) (30311)	VERNOLATE WATER WHOLE RECOV. (UG/L) (30324)	ALACHLOR TOTAL RECOVER (UG/L) (77825)	ALDRIN, TOTAL (UG/L) (39330)	AMETRYNE TOTAL (UG/L) (82184)	ATRAZINE WATER UNFLTRD REC (UG/L) (39630)	DEETHYL ATRAZINE, WATER, WHOLE, TOTAL (UG/L) (75981)	DE-ISO PROPYL ATRAZIN WATER, WHOLE, TOTAL (UG/L) (75980)	CHLORDANE, TECHNICAL TOTAL (UG/L) (39350)	CYANAZINE TOTAL (UG/L) (81757)
AUG 11...	<.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)	DIELDRIN TOTAL (UG/L) (39380)	2,4-DP TOTAL (UG/L) (82183)	ENDOSULFAN I TOTAL (UG/L) (39388)	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	HEPTACHLOR, TOTAL (UG/L) (39410)	HEPTACHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	METHOXYCHLOR, TOTAL (UG/L) (39480)
AUG 11...	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010

DATE	MIREX, TOTAL (UG/L) (39755)	PERTHANE TOTAL (UG/L) (39034)	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)
AUG 11...	<.010	<.100	<.200	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<.100

07191300 Spavinaw Lake near Spavinaw, OK

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 collected periodically. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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										
03...	1236	20.0	17.0	750	1028	1028	500	272	9.5	7.9
03...	1237	40.0	17.0	750	1028	1028	500	273	9.6	7.9
03...	1238	60.0	17.0	750	1028	1028	500	273	9.6	8.0
03...	1239	80.0	17.0	750	1028	1028	500	273	9.7	8.0
03...	1240	100	17.0	750	1028	1028	500	273	9.7	8.0
03...	1241	120	17.0	750	1028	1028	500	273	9.7	8.0
03...	1242	140	17.0	750	1028	1028	500	273	9.7	8.0
03...	1243	160	17.0	750	1028	1028	500	273	9.6	8.0
JUL										
27...	1334	15.0	30.0	757	1028	1028	529	271	9.3	7.9
27...	1335	30.0	30.0	757	1028	1028	529	272	9.3	8.0
27...	1336	45.0	30.0	757	1028	1028	529	271	9.5	8.1
27...	1337	60.0	30.5	757	1028	1028	529	271	9.7	8.1
27...	1338	75.0	30.5	757	1028	1028	529	270	9.7	8.2
27...	1339	90.0	30.5	757	1028	1028	529	270	9.7	8.2
27...	1340	105	30.5	757	1028	1028	529	271	9.7	8.2
27...	1341	120	30.5	757	1028	1028	529	271	9.7	8.2
27...	1342	135	30.5	757	1028	1028	529	270	9.8	8.2
27...	1343	150	31.5	757	1028	1028	529	267	10.6	8.4
27...	1344	175	33.0	757	1028	1028	529	259	10.3	8.5

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
NOV												
03...	1235	1028	80020	500	273	8.0	14.0	17.0	1.3	750	9.6	102
JAN												
06...	0835	1028	80020	722	262	7.2	-2.5	3.5	1.3	760	13.5	102
JUL												
27...	1350	1028	80020	529	270	8.2	34.0	30.5	2.5	757	9.7	130
AUG												
10...	1720	1028	80020	350	275	8.2	35.5	32.0	1.4	750	9.1	126
SEP												
13...	1335	1028	80020	356	286	8.1	24.5	28.5	1.5	762	11.9	154

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)	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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
NOV												
03...	K19	--	310	116	0	95	<1	--	--	<.010	--	1.61
JAN												
06...	59	--	96	115	0	94	<1	2.33	10	.013	.04	2.34
JUL												
27...	--	--	K18	109	0	89	--	--	--	<.010	--	1.69
AUG												
10...	24	29	48	116	0	95	--	--	--	<.010	--	1.39
SEP												
13...	K21	K5	K17	103	0	85	--	--	--	<.010	--	1.25

07196520 ILLINOIS RIVER NEAR PARK HILL, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	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)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV												
03...	.048	.06	.08	.13	1.7	.065	.076	.083	.25	--	--	--
JAN												
06...	.027	.03	.13	.16	2.5	.052	.044	.043	.13	--	--	--
JUL												
27...	<.020	--	--	.27	2.0	.090	.067	.072	.22	29	41	93
AUG												
10...	<.020	--	--	.19	1.6	.082	.069	.074	.23	34	32	89
SEP												
13...	<.020	--	--	.18	1.4	.100	.075	.079	.24	24	23	99

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.

EXTREMES 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)

No peaks greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.0	15	9.9	75	11	29	47	52	23	3.2	.03
2	1.2	5.9	19	10	59	11	28	41	48	22	3.3	.00
3	.97	6.2	19	11	47	10	31	36	44	20	3.8	.00
4	.53	6.9	21	11	39	10	38	122	41	20	3.8	.00
5	42	7.0	21	12	33	11	59	190	37	19	3.2	1.5
6	63	6.2	21	12	39	11	69	105	33	18	4.3	2.4
7	41	7.4	22	12	105	9.8	66	76	29	18	7.1	1.3
8	30	9.0	21	12	82	18	60	65	e29	17	7.3	8.7
9	23	9.4	21	12	70	24	54	57	28	15	7.3	4.6
10	18	14	20	11	57	26	48	51	27	15	7.1	3.8
11	15	17	18	11	47	25	43	45	26	15	6.6	5.7
12	13	18	21	10	39	57	38	52	24	14	5.8	5.1
13	11	16	30	9.8	34	185	34	46	23	13	5.4	4.8
14	9.7	15	31	9.0	29	145	33	42	21	13	5.1	4.0
15	8.3	14	30	8.1	26	140	30	39	20	13	4.7	3.0
16	7.1	13	28	7.7	23	109	29	35	20	12	4.2	2.0
17	7.0	12	25	7.3	22	90	28	56	20	e11	3.9	1.3
18	8.3	10	24	7.0	20	75	26	55	19	e11	3.2	1.4
19	6.5	11	22	6.7	19	65	25	49	19	e11	2.8	2.0
20	5.5	9.8	20	6.3	17	69	25	44	21	e10	3.0	3.7
21	4.8	9.6	18	5.9	16	70	24	43	19	e9.6	3.3	2.9
22	3.6	8.8	16	5.5	15	67	25	40	18	e9.2	2.5	2.5
23	2.8	8.3	15	5.2	14	63	27	58	18	e8.6	2.8	2.1
24	2.1	7.9	13	e5.2	13	57	25	58	19	e8.2	3.8	1.4
25	1.7	7.3	12	e5.4	13	51	27	59	20	e7.4	2.7	.93
26	1.4	6.7	12	5.2	12	46	57	62	18	e6.5	1.9	.58
27	1.1	6.4	11	5.0	12	42	101	55	18	e6.0	3.1	.07
28	1.1	6.3	11	5.2	12	38	80	51	19	e5.6	2.6	.08
29	.93	5.9	11	13	---	35	65	47	20	5.3	1.5	.65
30	1.1	15	9.9	25	---	32	54	46	23	4.1	.90	e.20
31	.94	---	9.3	82	---	29	---	53	---	3.6	.38	---
TOTAL	334.47	292.0	587.2	358.4	989	1631.8	1278	1825	773	384.1	120.58	66.74
MEAN	10.8	9.73	18.9	11.6	35.3	52.6	42.6	58.9	25.8	12.4	3.89	2.22
MAX	63	18	31	82	105	185	101	190	52	23	7.3	8.7
MIN	.53	2.0	9.3	5.0	12	9.8	24	35	18	3.6	.38	.00
AC-FT	663	579	1160	711	1960	3240	2530	3620	1530	762	239	132

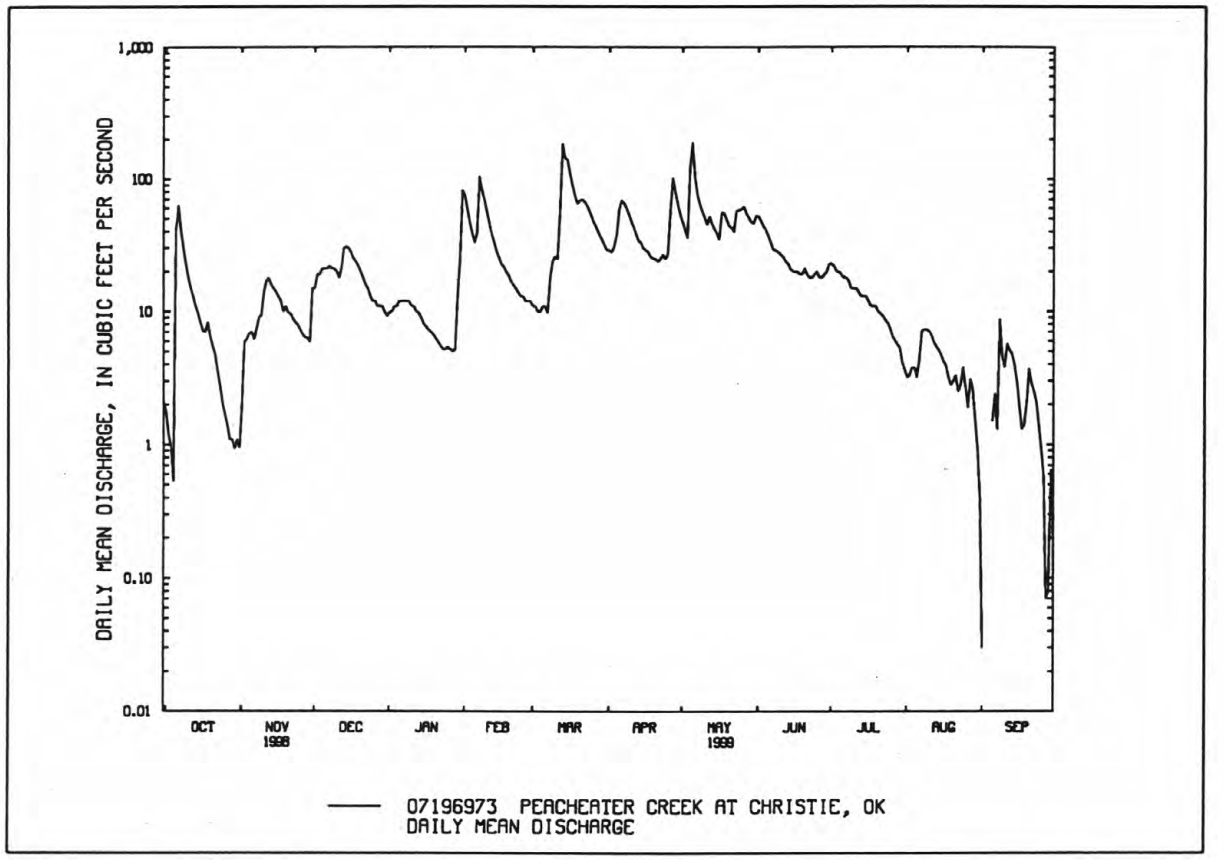
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1999, BY WATER YEAR (WY)

MEAN	10.7	37.9	37.1	33.7	31.4	44.0	40.5	45.6	28.5	10.0	3.69	12.2
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 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1993 - 1999	
ANNUAL TOTAL	7428.21		8640.29			
ANNUAL MEAN	20.4		23.7		27.9	
HIGHEST ANNUAL MEAN					48.2	1993
LOWEST ANNUAL MEAN					11.1	1996
HIGHEST DAILY MEAN	561	Jan 4	190	May 5	741	Sep 26 1996
LOWEST DAILY MEAN	.00	Jul 10	.00	Sep 2-4	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 17	.40	Aug 29	.00	Aug 8 1996
INSTANTANEOUS PEAK FLOW			421	May 4	2250	Jan 4 1998
INSTANTANEOUS PEAK STAGE			7.10	May 4	11.53	Jan 4 1998
ANNUAL RUNOFF (AC-FT)	14730		17140		20200	
10 PERCENT EXCEEDS	39		57		64	
50 PERCENT EXCEEDS	12		15		13	
90 PERCENT EXCEEDS	.00		2.5		1.6	



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), WDR OK-99-1: 1987 (M).

GAGE.--Water-stage recorder. Datum of gage is 701.14 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Dec. 14, 1948, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharge. 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.

EXTREMES 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)
Oct 6	0200	9,680	13.78	May 5	0400	12,500	15.10
Mar 13	0700	6,620	12.01				

REVISIONS.--The maximum discharge for water year 1987 has been revised to 50,000 ft^3/s, Oct. 1, 1986, gage height, 25.78 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	95	482	166	565	115	334	737	884	1520	60	26
2	38	133	398	182	522	110	314	603	679	787	61	25
3	37	193	333	228	519	104	329	479	570	588	61	24
4	37	194	315	230	492	100	1640	2420	493	478	57	24
5	595	174	531	213	442	96	1210	5660	441	412	55	32
6	4400	158	472	205	422	95	1790	1840	400	360	52	31
7	1220	155	451	202	2110	92	1090	1200	357	319	51	35
8	712	176	416	200	1390	121	873	904	318	296	49	56
9	505	221	375	197	992	541	743	739	285	264	47	52
10	433	288	336	188	788	470	630	640	291	239	45	48
11	378	466	298	175	665	381	532	844	386	256	43	52
12	326	386	288	171	646	398	464	931	384	243	40	52
13	289	327	583	167	521	3880	408	1080	303	214	38	52
14	256	285	655	161	430	3030	399	753	820	194	36	49
15	225	259	526	156	380	2280	441	594	485	176	34	46
16	200	240	467	150	332	1680	398	508	341	156	33	44
17	188	216	422	146	297	1260	348	611	285	145	32	42
18	202	195	375	142	270	999	317	1140	251	137	31	42
19	195	185	352	138	247	821	293	805	227	126	30	42
20	180	179	333	132	224	1280	274	671	253	118	29	45
21	167	169	307	130	201	1290	257	641	318	113	29	46
22	151	157	282	130	181	1020	245	675	280	107	28	45
23	137	148	260	129	165	863	552	958	263	100	27	43
24	125	140	239	126	153	745	660	1260	587	95	28	42
25	117	132	222	123	144	639	552	995	744	90	27	41
26	109	124	210	119	137	551	1040	2220	633	85	27	41
27	102	118	203	116	128	501	2470	1330	482	80	29	39
28	97	112	194	115	121	451	1620	956	387	77	29	38
29	91	108	186	132	---	426	1140	771	342	72	28	38
30	88	195	176	173	---	405	898	682	1120	67	27	39
31	87	---	167	465	---	361	---	693	---	64	26	---
TOTAL	11726	5928	10854	5307	13484	25105	22261	34340	13609	7978	1189	1231
MEAN	378	198	350	171	482	810	742	1108	454	257	38.4	41.0
MAX	4400	466	655	465	2110	3880	2470	5660	1120	1520	61	56
MIN	37	95	167	115	121	92	245	479	227	64	26	24
AC-FT	23260	11760	21530	10530	26750	49800	44150	68110	26990	15820	2360	2440
CFSM	1.23	.64	1.14	.56	1.57	2.64	2.42	3.61	1.48	.84	.12	.13
IN.	1.42	.72	1.32	.64	1.63	3.04	2.70	4.16	1.65	.97	.14	.15

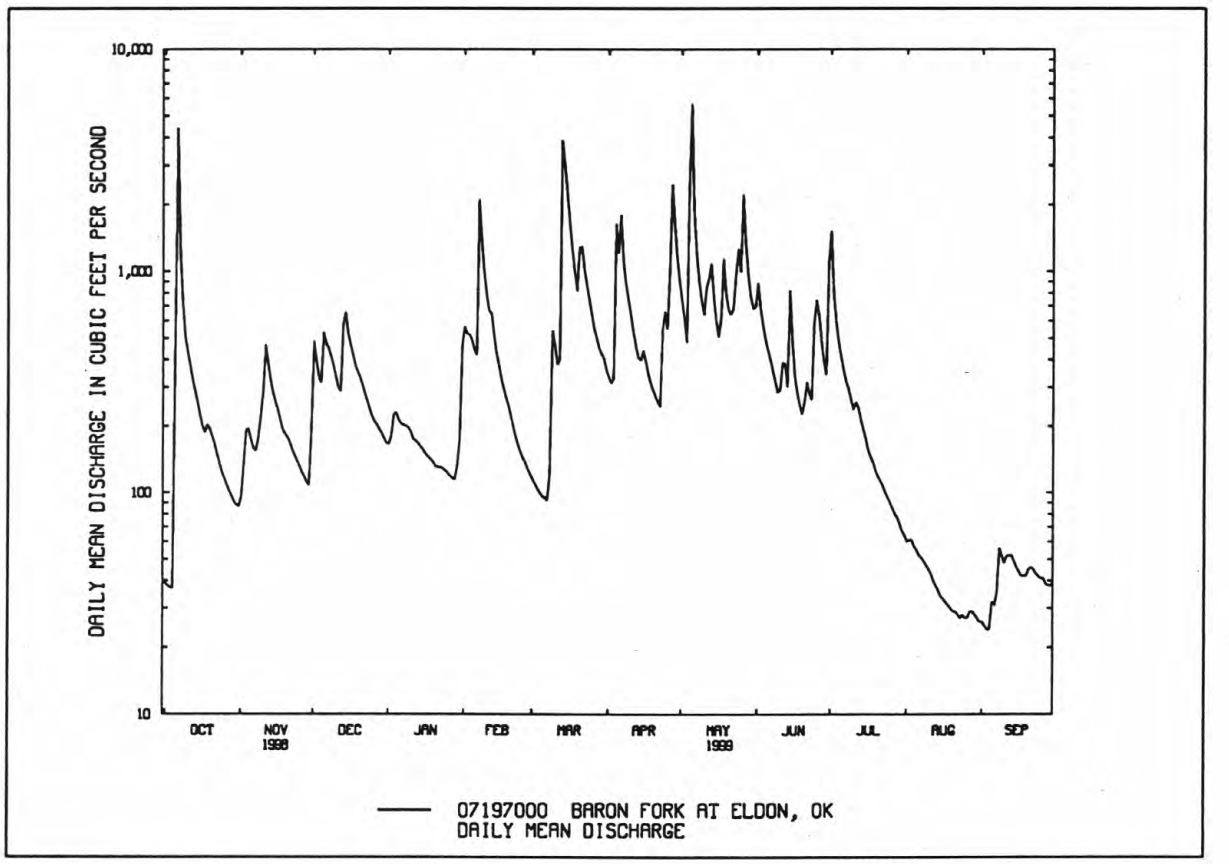
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1999, BY WATER YEAR (WY)

MEAN	179	335	326	313	393	549	591	651	324	149	73.2	122
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

07197000 BARON FORK AT ELDON, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1949 - 1999	
ANNUAL TOTAL	149444		153012			
ANNUAL MEAN	409		419		333	
HIGHEST ANNUAL MEAN					734	1993
LOWEST ANNUAL MEAN					55.7	1963
HIGHEST DAILY MEAN	10600	Jan 5	5660	May 5	34300	Oct 1 1986
LOWEST DAILY MEAN	13	Sep 9	24	Sep 3-4	[a]1.8	Oct 7 1956
ANNUAL SEVEN-DAY MINIMUM	13	Sep 6	26	Aug 29	1.8	Oct 21 1956
INSTANTANEOUS PEAK FLOW			12400	May 5	50600	May 3 1990
INSTANTANEOUS PEAK STAGE			15.08	May 5	25.91	May 3 1990
ANNUAL RUNOFF (AC-FT)	296400		303500		241400	
ANNUAL RUNOFF (CFSM)	1.33		1.37		1.09	
ANNUAL RUNOFF (INCHES)	18.11		18.54		14.75	
10 PERCENT EXCEEDS	688		941		720	
50 PERCENT EXCEEDS	203		243		125	
90 PERCENT EXCEEDS	23		41		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, July 1991 to July 1995, July 1996 to current year.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
OCT											
19...	1421	5.00	20.0	762	1028	1028	195	5.29	210	9.9	7.4
19...	1422	10.0	20.0	762	1028	1028	195	5.29	209	9.8	7.4
19...	1423	15.0	20.0	762	1028	1028	195	5.29	210	9.7	7.4
19...	1424	20.0	20.0	762	1028	1028	195	5.29	210	9.7	7.3
19...	1425	25.0	20.0	762	1028	1028	195	5.29	210	9.8	7.3
19...	1426	30.0	20.0	762	1028	1028	195	5.29	210	9.8	7.3
19...	1427	35.0	20.0	762	1028	1028	195	5.29	210	9.8	7.3
19...	1428	40.0	20.0	762	1028	1028	195	5.29	210	9.7	7.3
19...	1429	45.0	20.0	762	1028	1028	195	5.29	210	8.8	7.3
JUN											
23...	1403	62.0	21.5	745	1028	1028	258	5.38	204	8.8	7.7
23...	1404	57.0	21.5	745	1028	1028	258	5.38	204	8.6	7.7
23...	1405	52.0	21.5	745	1028	1028	258	5.38	204	8.9	7.7
23...	1406	47.0	21.5	745	1028	1028	258	5.38	204	8.8	7.7
23...	1407	42.0	21.5	745	1028	1028	258	5.38	204	8.9	7.7
23...	1408	37.0	21.5	745	1028	1028	258	5.38	204	8.9	7.7
23...	1409	32.0	21.5	745	1028	1028	258	5.38	204	8.9	7.7
23...	1410	27.0	21.5	745	1028	1028	258	5.38	204	8.9	7.7
23...	1411	22.0	21.5	745	1028	1028	258	5.38	204	8.9	7.7
23...	1412	17.0	21.5	745	1028	1028	258	5.38	204	8.9	7.7
23...	1413	12.0	21.5	745	1028	1028	258	5.38	204	8.7	7.7
23...	1414	7.00	21.5	745	1028	1028	258	5.38	204	8.7	7.7
23...	1415	2.00	21.5	745	1028	1028	258	5.38	204	8.4	7.7

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												
19...	1420	1028	80020	195	210	7.4	16.0	21.0	--	762	9.7	109
NOV												
16...	1125	1028	80020	242	219	7.4	19.0	15.0	.30	756	10.1	102
DEC												
14...	1420	1028	80020	638	206	7.4	14.5	12.0	--	762	12.0	111
JAN												
05...	0945	1028	80020	211	222	8.3	1.5	5.0	.57	761	11.9	94
FEB												
01...	1120	1028	80020	565	214	7.3	7.5	9.5	--	755	10.1	90
MAR												
23...	1645	1028	80020	831	169	7.8	11.0	12.5	1.9	755	10.1	95
APR												
05...	1420	1028	80020	1000	173	7.3	21.5	15.5	--	744	9.6	98
MAY												
03...	1105	1028	80020	481	183	7.5	20.0	15.5	--	745	9.2	95
JUN												
07...	1135	1028	80020	361	200	7.8	30.5	22.0	1.8	750	9.3	108
AUG												
11...	0830	1028	80020	44	212	7.1	29.5	25.5	.39	751	5.6	69

07197000 BARON FORK AT ELDON, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
19...	40	--	190	--	--	--	--	--	--	--	--
NOV											
16...	K2	<2	K52	100	11	38	1.9	3.5	7	.1	2.1
DEC											
14...	K15	--	180	--	--	--	--	--	--	--	--
JAN											
05...	K10	K8	K6	100	20	37	1.9	3.2	6	.1	1.9
FEB											
01...	340	--	280	--	--	--	--	--	--	--	--
MAR											
23...	K4	K28	K10	80	23	29	1.7	2.6	6	.1	1.8
APR											
05...	470	--	130	--	--	--	--	--	--	--	--
MAY											
03...	48	--	24	--	--	--	--	--	--	--	--
JUN											
07...	K16	K12	K16	87	--	32	1.7	3.0	7	.1	2.0
AUG											
11...	54	42	140	93	15	35	1.7	3.2	7	.1	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)
OCT											
19...	95	0	78	--	--	--	--	--	--	--	--
NOV											
16...	113	0	93	7.2	6.0	134	126	.18	87.6	2	--
DEC											
14...	88	0	72	--	--	--	--	--	--	--	--
JAN											
05...	98	0	81	8.0	5.7	130	119	.18	74.1	<1	2.80
FEB											
01...	86	0	71	--	--	--	--	--	--	--	--
MAR											
23...	69	0	56	6.5	4.3	103	92	.14	231	2	--
APR											
05...	79	0	64	--	--	--	--	--	--	--	--
MAY											
03...	85	0	70	--	--	--	--	--	--	--	--
JUN											
07...	109	0	89	5.1	4.1	120	108	.16	117	<1	--
AUG											
11...	96	0	78	5.2	5.0	125	103	.17	14.9	--	--

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											
19...	--	<.010	--	2.73	<.020	--	--	<.10	--	.038	.017
NOV											
16...	--	<.010	--	2.62	.030	.04	--	<.10	--	.022	.015
DEC											
14...	--	<.010	--	2.69	.024	.03	.08	.11	2.8	.029	.025
JAN											
05...	12	.020	.07	2.82	.025	.03	--	<.10	--	<.050	.028
FEB											
01...	--	<.010	--	2.70	.037	.05	.26	.30	3.0	.080	E.038
MAR											
23...	--	<.010	--	2.60	.033	.04	.11	.14	2.7	E.037	<.050
APR											
05...	--	<.010	--	1.59	.022	.03	.26	.28	1.9	.092	E.041
MAY											
03...	--	<.010	--	1.64	.049	.06	.09	.14	1.8	E.049	E.039
JUN											
07...	--	<.010	--	1.42	<.020	--	--	.20	1.6	E.036	<.050
AUG											
11...	--	<.010	--	.906	<.020	--	--	.19	1.1	<.050	<.050

07197000 BARON FORK AT ELDON, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
19...	.017	.05	--	--	--	--	--	--	--	--	--
NOV											
16...	.026	.08	<3.0	29	19	87	<1.00	<1.00	<1.00	<1.00	<1.00
DEC											
14...	.033	.10	--	--	--	--	--	--	--	--	--
JAN											
05...	.023	.07	E1.5	20	11	97	<1.00	<1.00	<1.00	<1.00	<1.00
FEB											
01...	.036	.11	--	--	--	--	--	--	--	--	--
MAR											
23...	.026	.08	3.9	25	56	94	<1.00	<1.00	<1.00	<1.00	<1.00
APR											
05...	.043	.13	--	--	--	--	--	--	--	--	--
MAY											
03...	.031	.10	--	--	--	--	--	--	--	--	--
JUN											
07...	.024	.07	8.9	13	13	90	<1.00	5.00	2.00	<1.00	<1.00
AUG											
11...	.018	.06	8.6	37	4.4	83	1.00	2.00	2.00	<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 collected periodically. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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)
NOV											
03...	1046	10.0	17.5	750	1028	1028	150	7.85	204	8.5	7.7
03...	1047	25.0	17.5	750	1028	1028	150	7.85	206	8.7	7.7
03...	1048	40.0	17.5	750	1028	1028	150	7.85	205	8.7	7.6
03...	1049	55.0	17.5	750	1028	1028	150	7.85	205	8.8	7.6
03...	1050	70.0	17.5	750	1028	1028	150	7.85	206	8.7	7.6
03...	1051	85.0	17.5	750	1028	1028	150	7.85	205	8.8	7.6
03...	1052	100	17.5	750	1028	1028	150	7.85	206	8.8	7.6
03...	1053	115	17.5	750	1028	1028	150	7.85	206	8.8	7.6
03...	1054	130	17.5	750	1028	1028	150	7.85	205	8.8	7.6
JUN											
08...	0913	200	21.5	752	1028	1028	376	8.14	197	6.2	7.6
08...	0915	185	21.5	752	1028	1028	376	8.14	197	6.7	7.6
08...	0917	170	21.5	752	1028	1028	376	8.14	196	7.1	7.6
08...	0919	155	21.5	752	1028	1028	376	8.14	196	7.3	7.6
08...	0920	140	21.5	752	1028	1028	376	8.14	196	7.3	7.6
08...	0922	125	21.5	752	1028	1028	376	8.14	196	7.4	7.6
08...	0924	110	21.5	752	1028	1028	376	8.14	196	7.1	7.6
08...	0926	95.0	21.5	752	1028	1028	376	8.14	196	7.3	7.6
08...	0928	80.0	21.5	752	1028	1028	376	8.14	196	7.3	7.6
08...	0930	65.0	21.5	752	1028	1028	376	8.14	196	6.8	7.6
08...	0932	50.0	21.5	752	1028	1028	376	8.14	196	6.9	7.6
08...	0934	35.0	21.5	752	1028	1028	376	8.14	196	7.0	7.6
08...	0936	20.0	21.5	752	1028	1028	376	8.14	196	7.1	7.6

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												
19...	1410	1028	80020	160	209	7.8	19.5	20.0	--	759	9.2	102
NOV												
03...	1045	1028	80020	150	205	7.6	14.0	17.5	.40	750	8.7	93
DEC												
15...	1025	1028	80020	543	205	7.9	.5	10.5	--	766	11.7	105
JAN												
04...	1350	1028	80020	229	214	8.5	-.5	6.0	.38	759	12.5	100
FEB												
01...	1440	1028	80020	571	208	7.5	15.5	10.5	--	753	11.9	108
MAR												
15...	1430	1028	80020	2460	150	7.3	16.5	10.5	24	759	10.7	97
APR												
06...	0900	1028	80020	1940	156	7.4	11.0	14.0	--	757	9.0	88
MAY												
05...	1030	1028	80020	4790	123	7.0	23.0	16.5	180	741	8.3	87
JUN												
08...	0950	1028	80020	376	196	7.6	26.5	21.5	--	752	7.4	85
AUG												
10...	1535	1028	80020	63	202	7.7	35.5	29.5	.50	750	8.8	118

07197080 BARON FORK AT WELLING, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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)	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)
OCT												
19...	40	--	51	96	0	79	--	--	--	<.010	--	2.82
NOV												
03...	K10	--	230	107	0	88	<1	--	--	<.010	--	1.96
DEC												
15...	110	--	64	103	0	84	--	--	--	<.010	--	2.41
JAN												
04...	K3	--	K6	93	0	77	<1	2.68	12	.030	.10	2.71
FEB												
01...	180	--	190	83	0	68	--	--	--	<.010	--	2.51
MAR												
15...	160	--	180	59	0	49	39	--	--	<.010	--	2.44
APR												
06...	K10000	--	K18000	71	0	58	--	--	--	<.010	--	1.28
MAY												
05...	14000	--	19000	58	0	48	324	--	--	<.010	--	1.10
JUN												
08...	K18	--	25	100	0	82	--	--	--	<.010	--	1.31
AUG												
10...	57	31	70	86	0	73	--	--	--	<.010	--	.721

DATE	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)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT												
19...	<.020	--	--	.11	2.9	.011	.030	.038	.12	--	--	--
NOV												
03...	.052	.07	--	<.10	--	.018	.021	.029	.09	--	--	--
DEC												
15...	<.020	--	--	<.10	--	.013	.018	.027	.08	--	--	--
JAN												
04...	.037	.05	--	<.10	--	<.050	.020	.020	.06	--	--	--
FEB												
01...	.027	.03	.19	.22	2.7	E.043	E.030	.031	.10	--	--	--
MAR												
15...	<.020	--	--	.25	2.7	.101	E.044	.046	.14	--	--	--
APR												
06...	.030	.04	.69	.72	2.0	.226	.114	.076	.23	--	--	--
MAY												
05...	.044	.06	1.2	1.3	2.4	.493	.108	.088	.27	--	--	--
JUN												
08...	<.020	--	--	.12	1.4	E.032	.118	.098	.30	--	--	--
AUG												
10...	<.020	--	--	.13	.85	<.050	<.050	.020	.06	20	3.4	88

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 current year.

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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	39	88	54	68	40	117	126	e170	e51	29	12
2	12	56	91	57	77	39	113	110	e150	e50	30	12
3	12	42	81	52	72	39	210	102	e136	e50	34	12
4	11	37	121	52	69	38	302	e300	e120	e49	28	12
5	1210	38	141	51	67	37	411	e240	e110	e49	27	20
6	963	37	132	51	95	36	397	e220	e98	e48	26	16
7	363	43	131	50	225	34	281	e200	e88	e48	25	15
8	202	51	118	49	198	51	240	e190	e80	e47	24	32
9	139	51	105	47	162	61	212	e170	e72	e46	23	21
10	110	88	94	48	135	68	190	e160	e76	e46	22	19
11	92	86	84	47	118	63	173	e150	e88	e56	21	24
12	79	78	161	46	101	418	158	e140	e80	e49	20	25
13	71	71	293	45	90	938	150	e190	e74	e46	19	24
14	64	65	213	43	81	586	150	e170	e140	e43	19	22
15	58	60	165	42	77	429	143	e157	89	e42	18	21
16	53	57	136	41	72	311	134	e142	85	e41	17	20
17	52	53	116	40	66	253	126	e132	74	e40	16	19
18	55	50	105	39	64	215	120	e200	61	e39	16	19
19	50	51	101	38	60	198	116	e180	60	e38	15	18
20	45	48	91	38	56	284	112	e150	63	e37	15	20
21	42	45	86	38	53	261	109	e132	57	e37	15	18
22	39	42	79	38	51	230	112	e140	54	e36	15	16
23	36	41	73	37	49	206	168	e210	59	e35	15	16
24	34	41	68	36	47	184	140	e180	69	e35	15	15
25	33	40	65	35	46	167	159	e160	e62	e35	14	15
26	32	37	62	34	45	153	510	e240	e58	35	14	15
27	30	36	61	34	43	144	444	e200	e56	33	14	14
28	29	36	57	34	41	138	245	e180	e54	33	14	14
29	28	35	55	33	---	135	180	e160	e53	32	14	13
30	27	74	54	49	---	128	147	e148	e52	31	13	13
31	26	---	52	63	---	122	---	e138	---	30	13	---
TOTAL	4010	1528	3279	1361	2328	6006	6069	5317	2488	1287	600	532
MEAN	129	50.9	106	43.9	83.1	194	202	172	82.9	41.5	19.4	17.7
MAX	1210	88	293	63	225	938	510	300	170	56	34	32
MIN	11	35	52	33	41	34	109	102	52	30	13	12
AC-FT	7950	3030	6500	2700	4620	11910	12040	10550	4930	2550	1190	1060

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1999, BY WATER YEAR (WY)

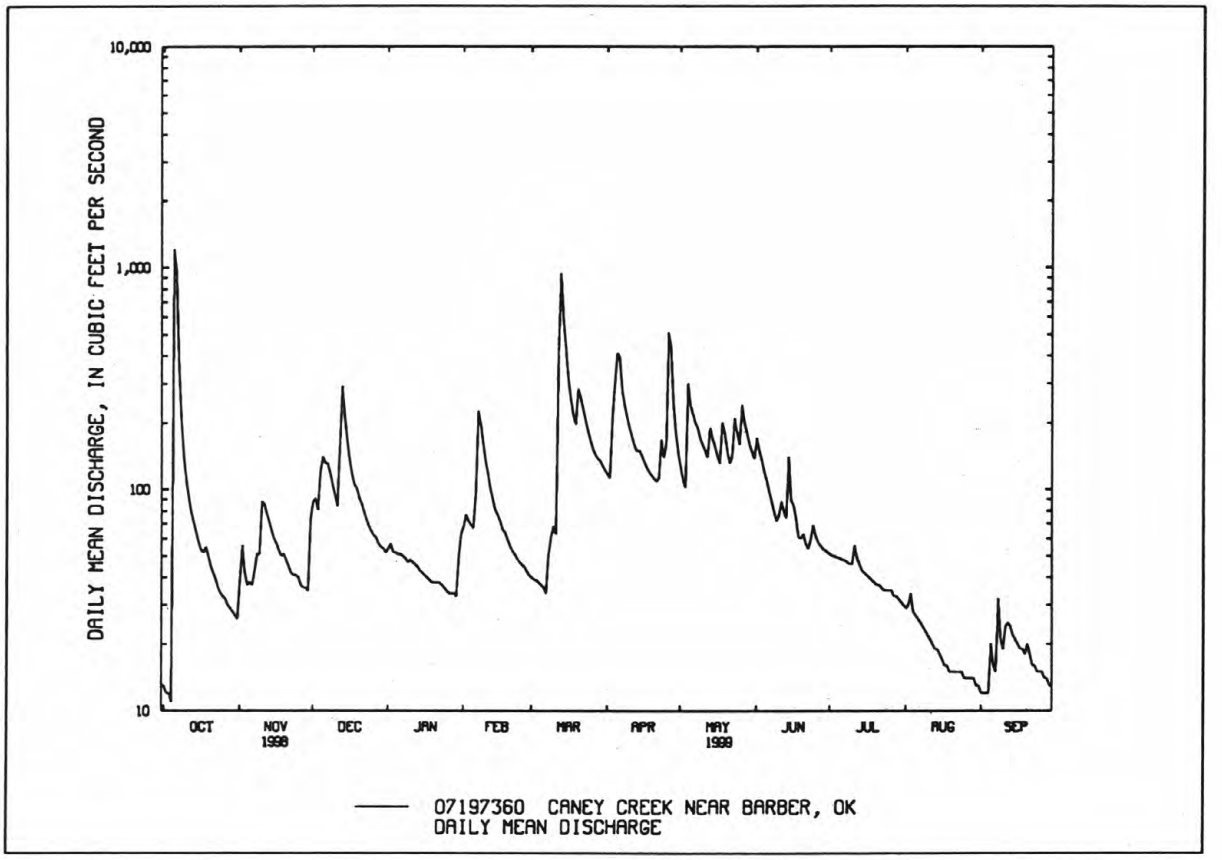
MEAN	79.5	50.4	99.4	290	73.5	255	157	114	58.3	28.8	15.7	17.1
MAX	129	50.9	106	537	83.1	316	202	172	82.9	41.5	19.4	17.7
(WY)	1999	1999	1999	1998	1999	1998	1999	1999	1999	1999	1999	1999
MIN	29.7	49.9	93.1	43.9	63.9	194	112	56.7	33.8	16.0	12.1	16.4
(WY)	1998	1998	1998	1999	1998	1999	1998	1998	1998	1998	1998	1998

e Estimated

07197360 CANEY CREEK NEAR BARBER, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1997 - 1999	
ANNUAL TOTAL	44543.2		34805			
ANNUAL MEAN	122		95.4		104	
HIGHEST ANNUAL MEAN					112	1998
LOWEST ANNUAL MEAN					95.4	1999
HIGHEST DAILY MEAN	3600	Jan 4	1210	Oct 5	3600	Jan 4 1998
LOWEST DAILY MEAN	3.5	Sep 10	11	Oct 4	3.5	Sep 10 1998
ANNUAL SEVEN-DAY MINIMUM	3.7	Sep 6	13	Aug 29	3.7	Sep 6 1998
INSTANTANEOUS PEAK FLOW			3670	Oct 5	4000	Jan 4 1998
INSTANTANEOUS PEAK STAGE			[a]18.36	May 25	[a]18.36	May 25 1999
ANNUAL RUNOFF (AC-FT)	88350		69040		75260	
10 PERCENT EXCEEDS	216		199		198	
50 PERCENT EXCEEDS	51		55		50	
90 PERCENT EXCEEDS	11		18		15	

[a]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 collected monthly. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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)
NOV											
03...	1551	59.0	18.0	753	1028	1028	40	6.08	248	9.3	7.7
03...	1552	53.0	18.0	753	1028	1028	40	6.08	247	9.3	7.7
03...	1553	47.0	18.0	753	1028	1028	40	6.08	248	9.1	7.7
03...	1554	41.0	18.0	753	1028	1028	40	6.08	248	9.1	7.7
03...	1555	35.0	18.0	753	1028	1028	40	6.08	248	9.1	7.7
03...	1556	29.0	18.0	753	1028	1028	40	6.08	248	9.1	7.7
03...	1557	23.0	18.0	753	1028	1028	40	6.08	248	9.1	7.7
03...	1558	17.0	18.0	753	1028	1028	40	6.08	248	9.1	7.7
03...	1559	11.0	18.0	753	1028	1028	40	6.08	248	9.1	7.7
03...	1600	5.00	18.0	753	1028	1028	40	6.08	248	8.9	7.7
JUN											
23...	1238	51.0	21.0	747	1028	1028	62	6.43	227	7.7	7.9
23...	1239	46.0	21.0	747	1028	1028	62	6.43	227	8.0	7.9
23...	1240	41.0	21.0	747	1028	1028	62	6.43	228	8.2	7.9
23...	1241	36.0	21.0	747	1028	1028	62	6.43	228	8.2	7.9
23...	1242	31.0	21.0	747	1028	1028	62	6.43	228	8.1	7.9
23...	1243	26.0	21.0	747	1028	1028	62	6.43	229	8.1	7.9
23...	1245	21.0	21.0	747	1028	1028	62	6.43	229	8.0	7.9
23...	1246	16.0	21.0	747	1028	1028	62	6.43	229	7.9	7.9
23...	1248	11.0	21.0	747	1028	1028	62	6.43	229	7.7	7.9
23...	1250	6.00	21.0	747	1028	1028	62	6.43	229	7.2	7.9
JUL											
27...	1103	4.00	26.5	757	1028	1028	33	6.20	240	7.8	7.4
27...	1104	10.0	26.5	757	1028	1028	33	6.20	240	8.1	7.4
27...	1105	16.0	26.5	757	1028	1028	33	6.20	240	8.3	7.4
27...	1106	22.0	26.5	757	1028	1028	33	6.20	240	8.2	7.4
27...	1107	28.0	26.5	757	1028	1028	33	6.20	240	8.2	7.4
27...	1108	34.0	26.5	757	1028	1028	33	6.20	240	8.4	7.4
27...	1109	40.0	26.5	757	1028	1028	33	6.20	240	8.3	7.4
27...	1110	46.0	26.5	757	1028	1028	33	6.20	240	8.3	7.4

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											
19...	1145	1028	80020	50	237	7.7	20.5	19.0	760	8.4	91
NOV											
03...	1550	1028	80020	40	248	7.7	14.0	18.0	753	9.1	97
DEC											
15...	1140	1028	80020	163	230	8.0	10.5	11.5	765	11.7	107
JAN											
04...	1130	1028	80020	51	242	8.1	-5.0	6.0	761	12.2	98
FEB											
01...	1500	1028	80020	66	242	8.1	12.0	11.0	755	12.6	115
MAR											
23...	1040	1028	80020	209	192	7.6	8.0	12.0	757	10.1	95
APR											
05...	1145	1028	80020	247	207	7.9	13.5	15.0	745	8.8	89
MAY											
03...	1300	1028	80020	102	209	7.9	23.5	17.0	745	10.4	110
JUN											
07...	1400	1028	80020	E88	180	8.6	33.0	23.5	754	8.0	95
JUL											
27...	1115	1028	80020	33	240	7.4	32.5	26.5	757	8.2	103
AUG											
10...	1245	1028	80020	23	235	7.4	36.0	29.0	750	7.7	102
SEP											
13...	1235	1028	80020	24	245	7.9	28.5	24.5	755	8.3	100

07197360 CANEY CREEK NEAR BARBER, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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)
OCT										
19...	41	K13	130	113	0	93	--	--	<.010	--
NOV										
03...	K10	380	K220	126	0	103	--	--	<.010	--
DEC										
15...	42	130	44	113	0	93	--	--	<.010	--
JAN										
04...	K7	K2	K450	121	0	99	1.69	7.5	.026	.09
FEB										
01...	K8	K1	120	126	0	103	--	--	<.010	--
MAR										
23...	K5	K42	K18	93	0	76	--	--	<.010	--
APR										
05...	210	150	150	104	0	86	--	--	<.010	--
MAY										
03...	44	K23	K26	107	0	88	--	--	<.010	--
JUN										
07...	K7	K13	K4	84	1	70	.441	2.0	.029	.10
JUL										
27...	<1	K2	K20	118	0	97	--	--	<.010	--
AUG										
10...	20	22	43	110	0	90	--	--	<.010	--
SEP										
13...	20	K5	K19	125	0	102	--	--	<.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, 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										
19...	2.04	.024	.03	.15	.17	2.2	--	.060	.042	.13
NOV										
03...	1.47	.045	.06	--	<.10	--	.029	.035	.041	.13
DEC										
15...	1.80	.024	.03	--	<.10	--	E.035	E.024	.037	.11
JAN										
04...	1.71	.024	.03	--	<.10	--	<.050	.048	.033	.10
FEB										
01...	1.45	<.020	--	--	E.10	--	E.040	E.033	.035	.11
MAR										
23...	1.72	.036	.05	--	E.06	--	E.033	E.034	.035	.11
APR										
05...	1.08	<.020	--	--	.19	1.3	.093	.056	.034	.10
MAY										
03...	1.16	.047	.06	.12	.17	1.3	.050	E.042	.041	.13
JUN										
07...	.470	<.020	--	--	.89	1.4	.208	<.050	.023	.07
JUL										
27...	.871	<.020	--	--	.25	1.1	.056	<.050	.032	.10
AUG										
10...	.731	.020	.03	.11	.13	.86	E.048	<.050	.037	.11
SEP										
13...	.868	<.020	--	--	.20	1.1	.061	E.037	.036	.11

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 poor. 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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	91	659	2330	1260	2170	3930	46	10300	107	3010	736
2	122	548	645	2250	2590	2240	3200	43	2250	509	2730	914
3	94	497	578	2200	3230	2230	1440	453	4840	596	2790	1000
4	90	471	921	2030	2830	1710	1080	68	6080	557	3290	e700
5	823	392	542	2340	2500	1670	2420	72	6080	667	3350	e250
6	371	82	1010	2480	1300	74	2690	53	6110	1920	3410	e100
7	126	74	701	2460	1550	71	3870	47	6640	2690	1390	e1200
8	104	74	1170	2250	2930	1160	3830	45	7650	3900	1410	e1000
9	152	75	2390	111	2810	1180	3780	43	7630	3860	1810	e600
10	111	1060	646	71	3320	1600	3760	45	7690	3910	2170	e550
11	139	722	2380	1630	2760	1280	3740	758	7130	3910	2530	e150
12	209	692	2460	977	3040	1810	3710	364	5960	3900	1660	e100
13	1210	642	2570	206	4160	4590	2160	1030	5950	3890	1410	e600
14	1540	647	2370	847	4190	4360	2570	2780	5980	3930	57	e750
15	1370	612	2300	758	4180	4280	3060	2750	5300	5000	42	e1000
16	2090	604	2240	72	2670	4310	3000	2710	3940	6190	1490	817
17	1550	625	2330	69	1930	3950	3030	2270	3940	6200	1580	36
18	678	659	2250	69	1940	4240	3040	1020	3950	6160	1440	29
19	1410	2050	2370	1570	1580	4220	2880	3480	2260	6140	1370	29
20	1180	1400	2260	1440	1130	4240	2060	3580	2180	6140	1590	530
21	1200	889	2270	895	1740	4220	2110	3610	3080	6170	54	544
22	1250	430	2250	922	1080	4970	1930	3560	2840	6170	40	32
23	1240	1500	2390	92	1160	6870	2040	1450	870	5120	1070	269
24	63	1480	1190	70	2380	8160	72	1020	657	4020	1250	452
25	36	1080	162	353	2480	8020	1020	4790	775	4010	1590	31
26	1120	1040	71	362	2270	7250	1020	5970	72	3700	1700	28
27	1150	1010	69	347	2260	5930	103	6000	54	2300	1600	353
28	816	687	1910	619	2270	5960	458	7840	1040	2780	1080	807
29	644	579	1190	690	---	5390	455	10400	275	2260	1070	31
30	590	556	1180	633	---	4020	57	10400	72	2720	1330	100
31	112	---	1150	837	---	3940	---	10300	---	2970	1510	---
TOTAL	21716	21268	46624	31980	67540	116115	68515	86997	121595	112396	50823	13738
MEAN	701	709	1504	1032	2412	3746	2284	2806	4053	3626	1639	458
MAX	2090	2050	2570	2480	4190	8160	3930	10400	10300	6200	3410	1200
MIN	36	74	69	69	1080	71	57	43	54	107	40	28
AC-FT	43070	42190	92480	63430	134000	230300	135900	172600	241200	222900	100800	27250

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1999, BY WATER YEAR (WY)

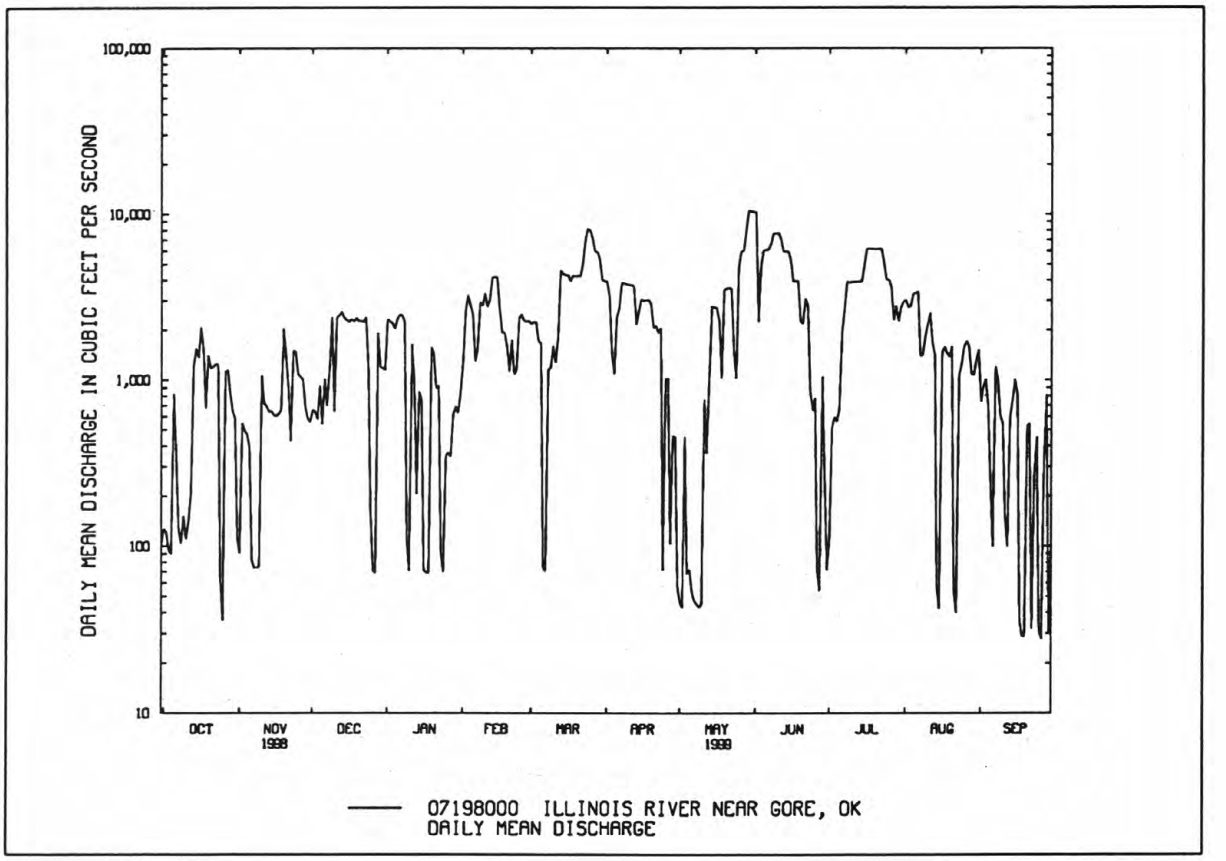
MEAN	807	1286	1738	1704	1683	2061	2708	2320	1797	1314	863	653
MAX	8165	4538	9652	6204	5740	5323	8340	10940	7177	8046	2358	2174
(WY)	1987	1992	1974	1998	1969	1994	1990	1990	1957	1957	1961	1993
MIN	74.4	56.0	55.5	27.7	57.1	60.9	70.0	105	141	84.9	81.4	80.7
(WY)	1981	1984	1981	1965	1981	1981	1980	1981	1963	1988	1963	1963

e Estimated

07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1954 - 1999	
ANNUAL TOTAL	665363		759307			
ANNUAL MEAN	1823		2080		1577	
HIGHEST ANNUAL MEAN					3199	1993
LOWEST ANNUAL MEAN					280	1964
HIGHEST DAILY MEAN	10200	Jan 14	10400	May 29	15800	May 6 1957
LOWEST DAILY MEAN	36	Oct 25	28	Sep 26	2.1	Sep 16 1959
ANNUAL SEVEN-DAY MINIMUM	143	Sep 8	53	May 4	3.5	Feb 2 1965
INSTANTANEOUS PEAK FLOW			10800	Jun 1	[a]18100	Jun 9 1957
INSTANTANEOUS PEAK STAGE			15.89	Jun 1	[b]18.70	Jun 9 1957
ANNUAL RUNOFF (AC-FT)	1320000		1506000		1142000	
10 PERCENT EXCEEDS	4000		4890		3750	
50 PERCENT EXCEEDS	1060		1440		944	
90 PERCENT EXCEEDS	101		74		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 September 1999 (discontinued).
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 September 1999 (discontinued).

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, June 27, 1999; minimum 3.0°C Jan. 17, 1994, Feb. 4, 1996.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded (more than 20% missing record) 24.5°C, June 27; minimum recorded 6.0°C, Jan. 11.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18.5	16.5	18.0	17.0	16.0	16.5	17.0	14.5	15.5	11.5	10.0	11.0
2	17.5	16.5	17.0	17.0	16.0	16.5	16.0	15.0	15.5	11.5	9.0	11.0
3	18.0	16.5	17.0	17.0	16.0	16.5	16.0	15.5	15.5	11.0	7.5	10.0
4	22.0	17.0	18.5	16.5	15.0	15.5	16.5	15.5	15.5	10.5	7.5	10.0
5	21.0	18.5	19.5	---	---	---	17.0	15.5	16.0	10.5	8.5	10.0
6	20.0	18.5	19.5	---	---	---	16.5	15.5	16.0	10.5	8.5	10.0
7	20.0	17.5	18.5	---	---	---	16.0	14.0	15.0	10.5	9.0	10.0
8	19.0	16.0	17.5	---	---	---	15.0	13.5	14.5	10.5	9.0	10.0
9	18.0	15.0	16.5	---	---	---	15.0	12.5	14.5	10.5	8.5	10.0
10	19.0	15.0	17.0	15.5	13.5	15.0	15.0	14.0	14.5	9.0	7.0	8.0
11	19.0	15.5	17.0	15.5	13.5	15.0	15.0	13.0	14.5	10.0	6.0	8.0
12	20.0	16.0	17.5	15.5	14.0	15.0	14.5	13.5	14.5	10.0	8.5	9.5
13	18.5	15.0	16.5	15.5	14.0	15.0	14.5	12.0	14.0	10.0	8.0	9.5
14	18.0	16.0	17.0	16.0	14.5	15.0	14.5	12.5	14.0	9.5	7.0	8.5
15	18.0	16.5	17.0	16.5	15.0	15.5	14.5	12.5	14.0	9.5	7.0	8.5
16	18.0	16.0	17.0	16.5	14.5	15.5	14.0	12.5	14.0	11.0	8.0	9.5
17	17.5	16.0	17.0	16.5	15.0	15.5	14.0	12.5	14.0	11.5	9.0	10.0
18	18.0	16.0	17.0	16.0	15.0	15.5	14.0	12.5	14.0	11.5	8.0	9.5
19	18.5	15.5	17.0	16.0	15.5	16.0	14.0	13.0	13.5	10.0	7.0	9.0
20	20.0	15.5	17.0	16.0	14.0	15.5	14.0	12.5	13.5	10.5	7.5	9.5
21	22.5	16.0	18.0	16.0	13.5	15.5	14.0	12.5	13.5	10.5	8.5	10.0
22	18.0	15.0	16.5	15.5	13.5	15.0	13.5	10.5	12.5	10.5	8.5	9.5
23	19.0	14.0	16.5	15.5	14.0	15.0	13.0	11.0	12.5	10.0	8.0	9.0
24	19.5	15.0	16.5	15.5	14.5	15.5	12.5	10.5	12.0	10.5	7.0	8.5
25	21.5	13.0	16.5	15.5	14.5	15.5	12.5	10.0	12.0	10.5	8.0	9.5
26	22.5	14.5	17.0	15.5	13.0	15.0	11.5	8.5	10.0	11.5	9.0	10.0
27	22.5	16.5	18.0	15.5	13.5	15.0	11.0	9.0	10.0	11.0	9.0	10.5
28	18.5	16.5	17.0	17.0	15.0	16.0	12.0	9.0	11.0	10.5	9.0	10.0
29	20.5	16.5	18.0	16.5	15.5	16.0	12.0	9.5	11.5	10.0	8.5	9.5
30	18.0	16.0	17.0	17.0	15.5	16.0	12.0	9.5	11.0	10.0	8.5	9.5
31	18.5	17.0	17.5	---	---	---	11.5	9.0	11.0	10.0	8.5	9.5
MONTH	22.5	13.0	17.3	---	---	---	17.0	8.5	13.5	11.5	6.0	9.6

07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	10.0	8.0	9.5	10.5	8.5	10.0	10.5	10.5	10.5	19.5	13.0	15.5
2	10.0	8.5	9.0	10.5	9.0	10.0	12.0	10.0	11.0	17.0	14.0	15.0
3	10.0	7.5	9.0	10.0	8.0	10.0	13.0	10.5	11.5	19.0	14.0	15.5
4	10.0	8.0	9.0	10.0	8.0	9.5	12.0	10.5	11.5	16.0	14.5	15.5
5	10.0	8.0	9.0	10.5	9.5	10.0	13.0	11.0	11.5	18.5	14.5	16.5
6	10.0	8.5	9.5	12.5	10.0	11.0	12.5	10.5	11.0	20.0	14.5	16.5
7	10.5	9.0	9.5	10.5	8.5	9.0	11.0	10.5	10.5	20.0	13.0	16.0
8	10.0	8.0	9.0	10.5	7.5	9.5	11.0	10.5	11.0	22.0	13.5	17.0
9	10.0	8.5	9.0	11.0	9.0	10.0	11.0	10.5	10.5	22.5	15.5	18.5
10	10.5	8.5	9.0	10.5	9.0	10.0	11.0	10.5	11.0	19.0	17.0	18.0
11	10.5	8.5	9.0	12.0	9.0	10.5	12.0	10.5	11.0	17.5	14.0	15.5
12	10.0	8.5	9.0	11.0	8.0	9.5	11.5	11.0	11.0	16.0	13.5	15.0
13	9.0	8.5	9.0	9.5	9.0	9.5	13.0	11.0	11.5	15.5	13.0	14.0
14	9.0	8.5	9.0	10.0	9.0	9.5	12.0	11.0	11.5	13.5	11.5	12.5
15	9.0	8.5	9.0	10.0	9.5	9.5	12.0	10.5	11.0	13.5	12.0	12.5
16	11.0	9.0	9.5	10.0	9.5	9.5	12.0	10.5	11.0	13.5	11.5	12.5
17	10.5	9.0	9.0	11.0	9.5	10.0	12.0	10.0	11.0	16.0	12.0	13.5
18	11.5	9.0	9.5	10.0	10.0	10.0	12.0	10.0	11.0	18.0	13.0	14.5
19	11.0	9.0	10.0	10.0	10.0	10.0	12.5	10.5	11.0	13.0	12.5	12.5
20	11.0	9.0	10.0	10.0	10.0	10.0	12.5	11.0	11.5	13.0	12.0	12.5
21	10.5	8.5	9.5	10.5	10.0	10.0	12.5	11.0	12.0	12.5	12.5	12.5
22	10.0	8.0	9.5	10.5	10.0	10.0	12.5	11.0	12.0	13.0	12.5	12.5
23	10.0	8.5	9.5	10.0	10.0	10.0	12.5	11.5	12.0	15.0	12.5	13.5
24	10.0	9.0	9.0	10.5	10.0	10.5	13.0	12.0	12.5	19.0	13.0	14.5
25	10.5	9.0	9.5	10.5	10.5	10.5	13.0	11.0	12.0	13.0	13.0	13.0
26	10.5	9.0	10.0	11.5	10.5	10.5	14.5	11.0	12.5	13.5	13.0	13.5
27	11.0	9.0	10.0	10.5	10.5	10.5	15.0	13.0	13.5	13.5	13.0	13.5
28	11.0	8.5	10.0	10.5	10.5	10.5	17.0	13.0	15.0	14.5	13.0	13.5
29	---	---	---	11.5	10.5	10.5	14.5	12.5	13.5	14.5	14.5	14.5
30	---	---	---	11.0	10.5	10.5	18.5	12.5	15.0	15.0	14.5	15.0
31	---	---	---	10.5	10.5	10.5	---	---	---	15.5	15.0	15.0
MONTH	11.5	7.5	9.3	12.5	7.5	10.0	18.5	10.0	11.7	22.5	11.5	14.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	15.5	15.0	15.5	---	---	---	---	---	---	---	---	---
2	17.0	14.5	15.5	---	---	---	---	---	---	---	---	---
3	15.0	14.0	14.5	---	---	---	---	---	---	---	---	---
4	15.0	14.5	15.0	---	---	---	---	---	---	---	---	---
5	15.5	14.5	15.0	---	---	---	---	---	---	---	---	---
6	15.5	15.0	15.0	---	---	---	---	---	---	---	---	---
7	16.0	15.0	15.5	---	---	---	---	---	---	---	---	---
8	16.0	16.0	16.0	---	---	---	---	---	---	---	---	---
9	16.5	16.0	16.0	---	---	---	---	---	---	---	---	---
10	16.5	16.0	16.5	---	---	---	---	---	---	---	---	---
11	16.5	16.0	16.5	---	---	---	---	---	---	---	---	---
12	16.5	16.0	16.5	---	---	---	---	---	---	---	---	---
13	16.5	16.5	16.5	---	---	---	---	---	---	---	---	---
14	17.0	16.5	16.5	---	---	---	---	---	---	---	---	---
15	17.0	16.0	16.5	---	---	---	---	---	---	---	---	---
16	16.5	16.0	16.0	---	---	---	---	---	---	---	---	---
17	17.0	16.5	16.5	---	---	---	---	---	---	---	---	---
18	16.5	16.5	16.5	---	---	---	---	---	---	---	---	---
19	16.5	16.0	16.5	---	---	---	---	---	---	---	---	---
20	16.5	16.0	16.5	---	---	---	---	---	---	---	---	---
21	17.0	16.0	16.5	---	---	---	---	---	---	---	---	---
22	17.0	16.5	16.5	---	---	---	---	---	---	---	---	---
23	17.5	16.5	17.0	---	---	---	---	---	---	---	---	---
24	19.5	17.5	18.0	---	---	---	---	---	---	---	---	---
25	19.5	17.0	17.5	---	---	---	---	---	---	---	---	---
26	22.0	17.5	19.5	---	---	---	---	---	---	---	---	---
27	24.5	20.0	22.0	---	---	---	---	---	---	---	---	---
28	23.5	18.0	21.0	---	---	---	---	---	---	---	---	---
29	21.0	18.0	19.5	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	8740	e312	377	1030	469	400	e1280	e350	435	e23	28
2	132	3300	e306	348	909	508	380	e1200	340	319	e22	27
3	255	1760	e570	341	791	490	891	e1170	358	e260	68	26
4	150	e1210	e400	e300	709	490	1880	1450	412	e230	278	25
5	116	e860	e215	e295	650	505	1490	e1300	334	e220	153	e25
6	71	e580	e360	e280	607	504	1460	1260	296	216	317	e25
7	52	e350	e530	e280	e587	446	1000	975	275	193	174	e24
8	47	e300	e460	e300	e567	506	e920	856	260	260	120	e24
9	44	e210	e379	e320	547	496	e880	779	246	291	91	e24
10	42	e320	e360	350	492	473	e830	1110	238	748	77	23
11	41	e250	351	357	439	482	e770	997	e220	485	64	98
12	39	e190	353	400	421	1120	e730	660	243	293	47	109
13	38	e150	345	430	406	2280	e700	515	324	257	35	60
14	36	e133	329	369	408	1570	643	419	324	241	e30	41
15	35	e150	322	353	405	1280	2010	398	348	214	e28	35
16	41	150	308	345	404	e1100	1500	375	253	176	e26	31
17	60	e165	317	340	403	e800	1210	531	241	e157	e24	36
18	147	e165	321	331	404	e550	e1090	506	237	e140	e23	37
19	86	e160	315	336	405	e700	e1050	466	236	122	e22	36
20	64	e155	302	340	431	e1350	e1020	381	236	100	e21	33
21	62	e152	321	349	451	e1150	1010	365	418	84	e20	32
22	55	e150	e315	365	462	e1050	1030	e340	479	71	e19	31
23	50	e150	e300	403	419	987	989	e328	533	60	e19	29
24	49	e150	e250	433	394	865	904	e320	557	52	19	28
25	48	e155	e210	431	396	820	9170	472	537	45	e18	42
26	49	e160	e220	415	396	735	7440	525	476	39	e17	38
27	48	e165	e250	392	433	615	3930	460	485	32	55	35
28	54	e185	e300	409	461	513	2300	664	446	28	43	33
29	52	e240	345	476	---	486	1470	504	395	e26	38	30
30	91	e293	368	1000	---	454	e1350	e400	580	e25	34	29
31	759	---	389	1090	---	437	---	e370	---	e23	31	---
TOTAL	2839	21098	10423	12555	14427	24231	50447	21376	10677	5842	1956	1094
MEAN	91.6	703	336	405	515	782	1682	690	356	188	63.1	36.5
MAX	759	8740	570	1090	1030	2280	9170	1450	580	748	317	109
MIN	26	133	210	280	394	437	380	320	220	23	17	23
AC-FT	5630	41850	20670	24900	28620	48060	100100	42400	21180	11590	3880	2170

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1999, BY WATER YEAR (WY)

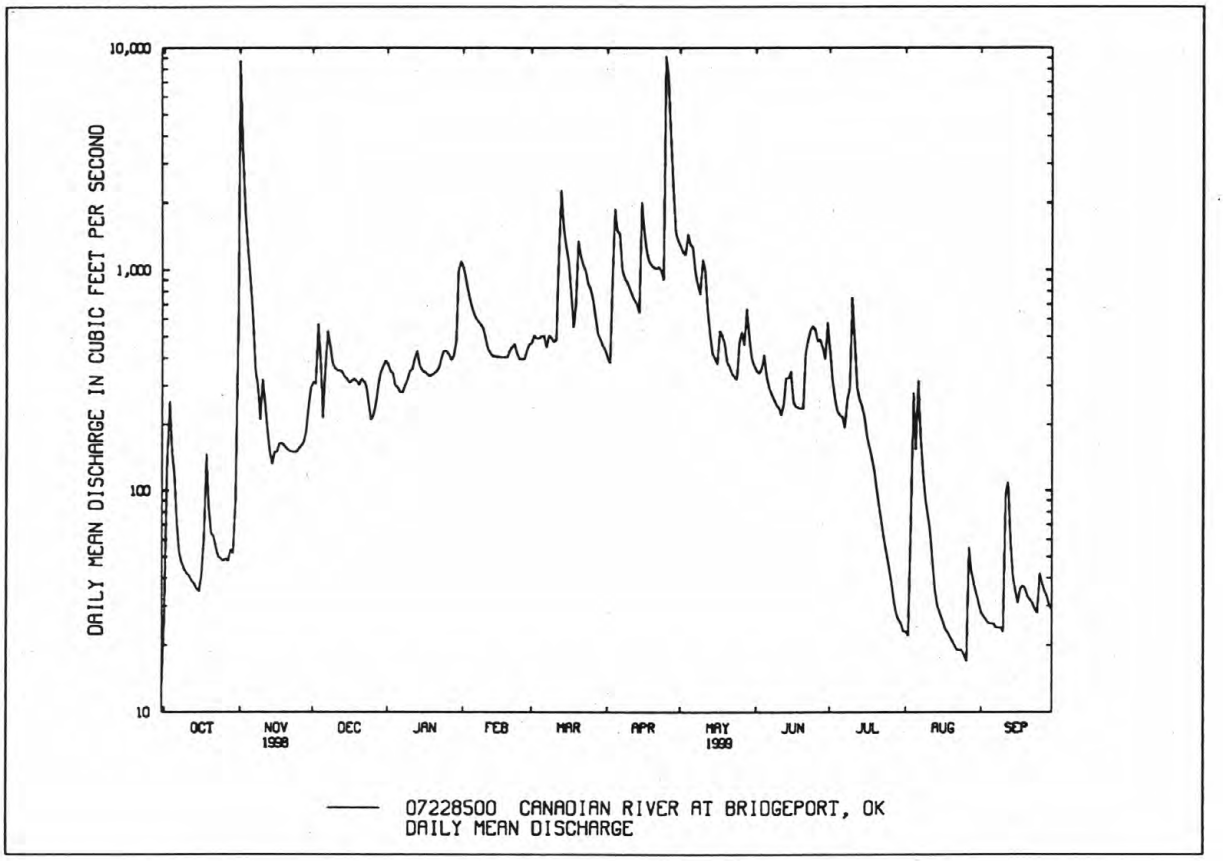
MEAN	208	244	198	235	256	471	428	780	543	122	149	201
MAX	2412	1525	870	1162	578	1907	1795	4188	2342	500	1036	1386
(WY)	1987	1975	1998	1988	1998	1973	1997	1987	1995	1979	1974	1996
MIN	7.01	17.5	16.2	22.5	36.8	60.8	20.5	13.4	12.9	3.18	.14	1.14
(WY)	1979	1971	1979	1979	1981	1977	1971	1971	1970	1970	1970	1984

e Estimated

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1970 - 1999	
ANNUAL TOTAL	164537.6		176965			
ANNUAL MEAN	451		485		[a]320	
HIGHEST ANNUAL MEAN					1018	1987
LOWEST ANNUAL MEAN					70.2	1981
HIGHEST DAILY MEAN	11900	Mar 17	9170	Apr 25	42100	May 29 1987
LOWEST DAILY MEAN	7.0	Sep 11	17	Aug 26	.00	Jul 18 1970
ANNUAL SEVEN-DAY MINIMUM	7.6	Sep 6	19	Aug 20	.00	Aug 3 1970
INSTANTANEOUS PEAK FLOW			12400	Nov 1	[b]86100	May 17 1982
INSTANTANEOUS PEAK STAGE			14.16	Nov 1	[c]17.55	May 17 1982
ANNUAL RUNOFF (AC-FT)	326400		351000		231600	
10 PERCENT EXCEEDS	712		1020		550	
50 PERCENT EXCEEDS	293		331		120	
90 PERCENT EXCEEDS	12		31		12	

[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.



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.

REVISED RECORDS.--OK-95-1: 1994 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,017.14 ft above sea level.

REMARKS.--Records poor. Flow regulated since October 1964 by Lake Meredith (station 07227900) located in Texas. U.S. Army Corps of Engineers' satellite telemeter located at site.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1904 reached a stage of 14.18 ft and flood in 1914 reached a stage of 12.98 ft, from information by the Atchison, Topeka, and Santa Fe Railway Co.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	8590	426	e505	1810	e419	1010	1480	e1020	e8570	37	e49
2	216	12800	440	e470	1450	e402	e1100	1270	e720	e5750	32	e37
3	378	4690	438	e330	1140	e389	1190	1460	e651	e3580	24	e28
4	231	2320	1380	e340	871	e378	1660	2220	e638	e1760	28	e30
5	1070	1470	325	e340	803	e367	3250	2900	e527	e937	65	e29
6	1250	904	270	e350	1350	e375	2210	1690	e444	e644	495	e28
7	256	677	916	e360	2850	642	2440	1500	e347	e526	611	e27
8	163	481	664	e370	1790	922	2480	1250	e333	264	725	65
9	100	356	e520	e380	e959	898	1870	1140	1030	246	379	45
10	60	460	e460	e390	686	845	1540	2180	e3660	3490	265	22
11	39	513	e430	e400	534	959	1300	2120	e1780	3460	195	1940
12	29	287	e410	e420	485	1570	1090	1640	e1380	1420	140	1080
13	23	205	e380	e450	489	5980	1050	1190	e2800	969	108	502
14	19	174	e360	496	494	3800	1900	1080	e1070	719	78	268
15	16	161	e360	546	543	2450	1550	1000	e762	588	65	215
16	16	165	e350	486	515	e1700	3370	e2420	e903	481	51	153
17	97	201	e350	466	494	e1620	2420	e1800	e741	422	39	145
18	906	203	e345	438	482	e1430	1810	e900	e568	364	36	123
19	369	195	e343	453	467	e1320	1820	e1050	e2980	318	29	110
20	179	194	e340	421	519	1960	1670	e762	e2310	270	28	129
21	227	193	e343	444	548	1580	1750	e1040	e1790	243	24	157
22	176	188	e345	484	596	1680	1590	e2330	e1200	218	e21	177
23	119	178	e345	485	651	1610	1240	e1620	e8520	187	e21	115
24	96	173	e310	434	593	1470	e16600	e1110	e6620	157	e20	91
25	82	173	e270	434	e541	1210	e12800	e997	e3240	125	e19	139
26	73	181	e250	484	e495	1100	e9030	e776	e2110	107	e18	129
27	63	197	e255	526	e437	1100	6680	e679	e1410	95	e64	108
28	58	205	e300	516	e431	1070	4140	e723	e5630	84	e69	87
29	72	236	e360	587	---	1020	2530	e1080	e15500	73	e58	79
30	158	408	e390	1430	---	955	1950	e3070	e12000	60	e52	80
31	157	---	e430	2060	---	894	---	e1730	---	47	e60	---
TOTAL	6761	37178	13105	16295	23023	42115	95040	46207	82684	36174	3856	6187
MEAN	218	1239	423	526	822	1359	3168	1491	2756	1167	124	206
MAX	1250	12800	1380	2060	2850	5980	16600	3070	15500	8570	725	1940
MIN	16	161	250	330	431	367	1010	679	333	47	18	22
AC-FT	13410	73740	25990	32320	45670	83540	188500	91650	164000	71750	7650	12270

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1999, BY WATER YEAR (WY)

MEAN	650	615	696	659	681	1054	978	2021	1448	391	295	457
MAX	7083	2648	2602	2055	1865	3533	3168	7717	5863	1216	1183	1563
(WY)	1987	1987	1992	1987	1987	1998	1999	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

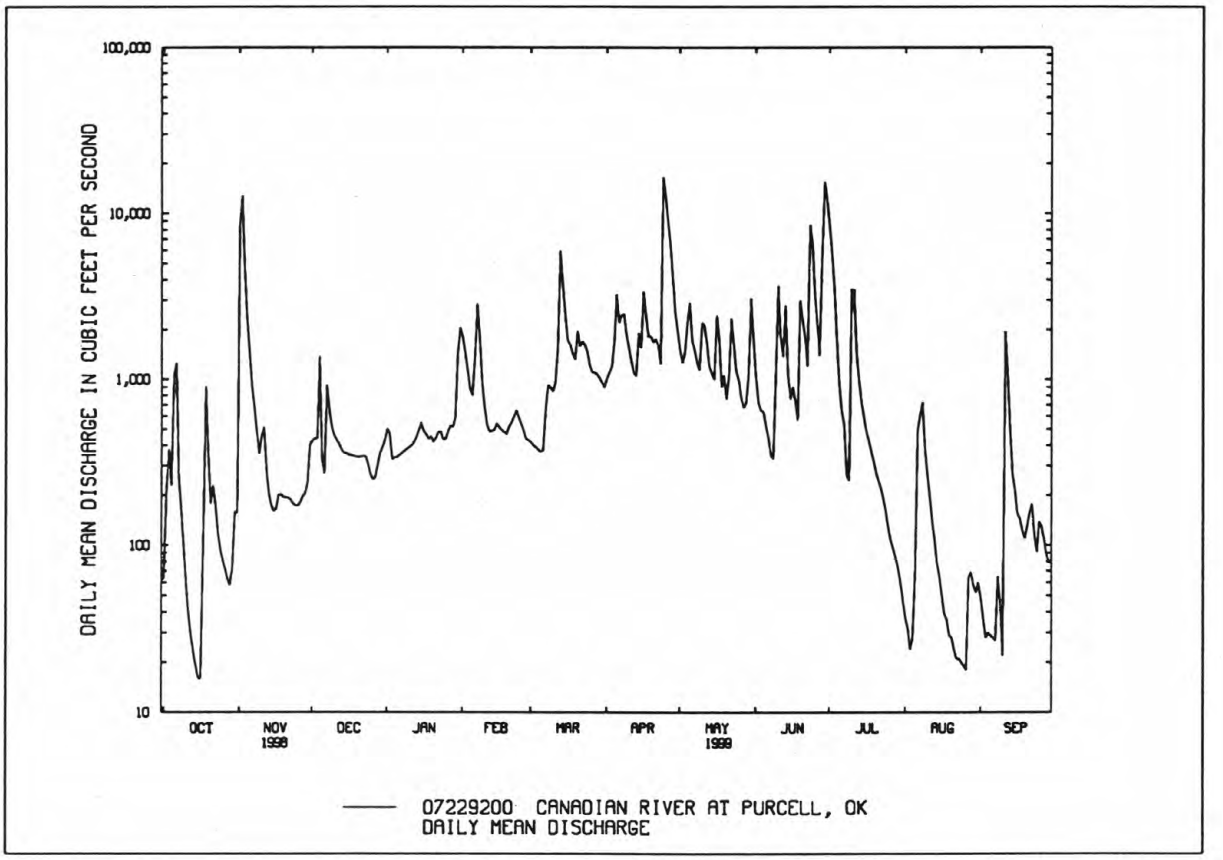
e Estimated

ARKANSAS RIVER BASIN

07229200 CANADIAN RIVER AT PURCELL, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1980 - 1999	
ANNUAL TOTAL	340306.5		408625			
ANNUAL MEAN	932		1120		829	
HIGHEST ANNUAL MEAN					2287	1987
LOWEST ANNUAL MEAN					117	1981
HIGHEST DAILY MEAN	20500	Mar 17	16600	Apr 24	71000	May 29 1987
LOWEST DAILY MEAN	4.2	Sep 6	16	Oct 15	[a].00	Aug 2 1980
ANNUAL SEVEN-DAY MINIMUM	4.7	Sep 6	22	Aug 20	.00	Aug 6 1980
INSTANTANEOUS PEAK FLOW			[b]20100	Nov 2	102000	May 29 1987
INSTANTANEOUS PEAK STAGE			[b]10.74	Nov 2	[c]14.75	May 29 1987
INSTANTANEOUS LOW FLOW			7.0	Sep 4		
ANNUAL RUNOFF (AC-FT)	675000		810500		600900	
10 PERCENT EXCEEDS	1480		2320		1510	
50 PERCENT EXCEEDS	440		484		343	
90 PERCENT EXCEEDS	14		60		41	

[a]No flow at times in 1980.
[b]May have been higher on Apr. 24
[c]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.

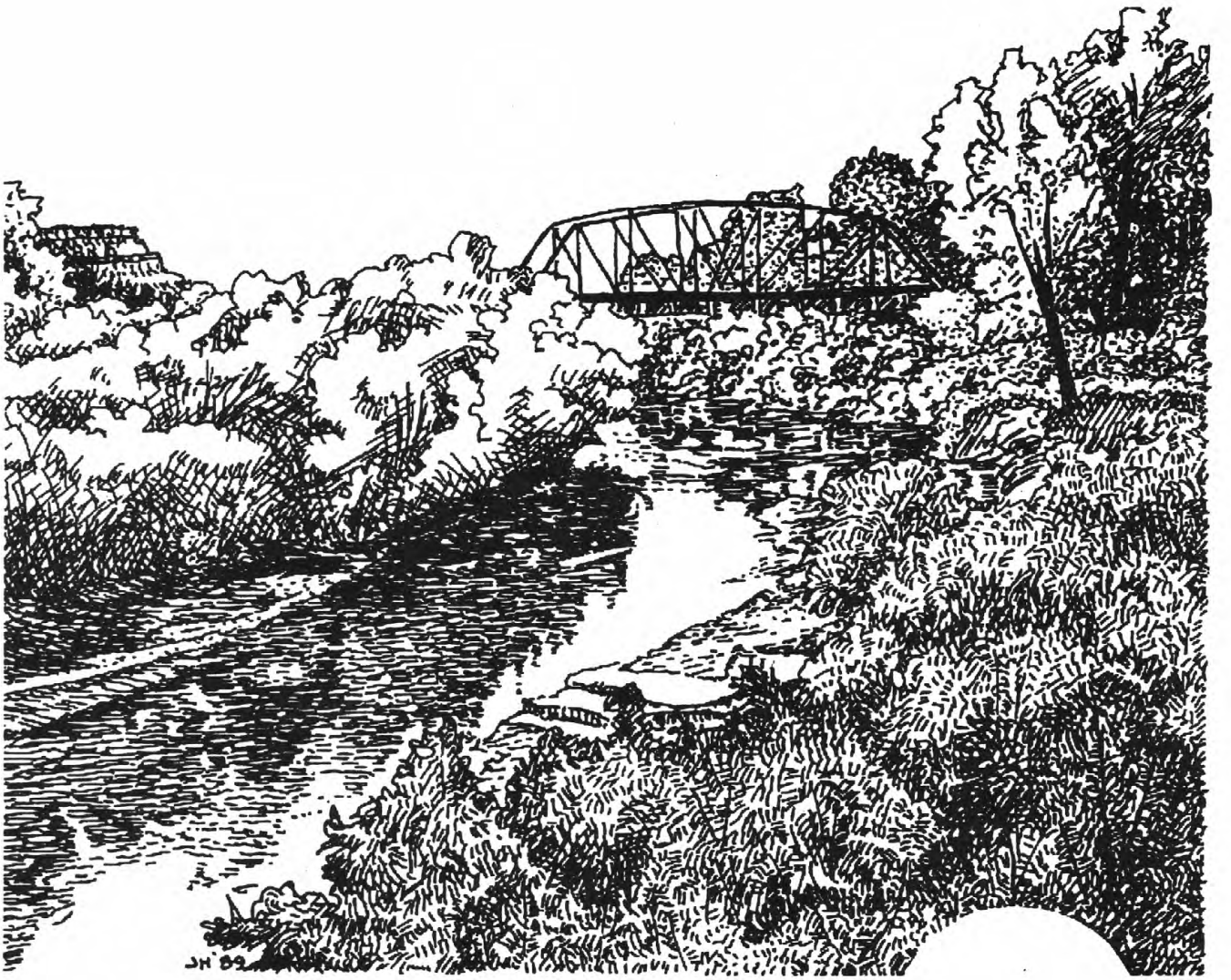
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 187,400 acre-ft, May 5, 1990, elevation, 1,048.38 ft; minimum since conservation pool first reached, 15,370 acre-ft, Nov. 30, 1965, elevation, 1,011.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 150,500 acre-ft, Apr. 28, elevation, 1,043.66 ft; minimum, 104,600 acre-ft, Oct. 1, elevation, 1,036.41 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

Date	*Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Diversions (acre-feet)
Sept. 30	1036.41	104,500	-	-
Oct. 31	1036.79	106,600	+2,100	1,118
Nov. 30	1037.46	110,500	+3,900	979
Dec. 31	1037.57	111,100	+600	1,044
CAL YR 98	-	-	-13,800	
Jan. 31	1037.79	112,400	+1,300	1,054
Feb. 28	1038.70	117,800	+5,400	932
Mar. 31	1039.00	119,600	+1,800	1,150
Apr. 30	1043.29	147,900	+28,300	1,213
May 31	1039.02	119,700	-28,200	1,305
June 30	1040.99	132,100	+12,400	1,401
July 31	1038.51	116,700	-15,400	1,976
Aug. 31	1037.44	110,400	-6,300	2,388
Sept. 30	1037.64	111,500	+1,100	1,570
WTR YR 99	-	-	+7,000	

*Elevation at 2400



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 poor. 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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.94	1.2	.78	.78	.87	.78	1.1	577	1.2	1.4	1.2	1.2
2	1.1	.78	.78	.78	.79	.78	1.1	574	1.2	127	1.2	1.2
3	.92	.78	.87	.78	.78	.78	1.1	574	1.2	303	1.2	1.2
4	.87	.78	.88	.78	.78	.78	.97	572	1.2	360	1.2	1.2
5	1.3	.78	.78	.78	.78	.78	119	700	1.2	360	1.2	1.2
6	.83	.78	.82	.78	1.0	.78	232	777	1.4	483	1.2	1.2
7	.78	.78	.78	.78	.94	.79	232	771	1.2	557	1.2	1.2
8	.78	.78	.78	.78	.87	1.0	232	768	1.2	611	1.2	1.8
9	.78	.81	.78	.78	.82	.78	88	764	1.2	644	1.2	1.2
10	.78	.80	.78	.78	.78	.78	.92	763	1.4	641	1.2	1.3
11	.78	.78	.78	.78	.78	.82	.87	759	1.2	641	1.2	1.8
12	.78	.78	.78	.78	.78	1.5	.87	756	1.2	638	1.2	1.2
13	.78	.78	.78	.78	.78	1.1	.87	753	1.2	637	1.2	1.2
14	.78	.78	.78	.87	.78	.94	1.1	750	197	476	1.2	1.2
15	.78	.78	.78	.87	.78	218	138	749	357	115	1.2	1.2
16	.78	.78	.78	.87	.78	371	225	732	357	1.2	1.2	1.2
17	1.2	.78	.78	.87	.78	371	225	188	357	1.2	1.2	1.2
18	.82	.78	.81	.87	.78	355	225	479	357	1.2	1.2	1.2
19	.78	.78	.80	.87	.78	1.4	225	553	12	1.2	1.2	1.1
20	.78	.78	.78	.87	.78	1.1	225	553	1.4	1.2	1.2	1.1
21	.78	.78	.78	.87	.78	1.1	88	431	2.0	1.2	1.2	1.1
22	.78	.78	.78	.89	.78	138	.97	354	1.4	1.2	1.2	1.1
23	.78	.78	.78	.87	.78	313	.97	354	2.1	1.2	1.2	1.1
24	.78	.78	.78	.87	.78	368	1.2	354	77	1.2	1.2	1.2
25	.78	.78	.78	.86	.78	368	3.5	354	84	1.2	1.2	1.2
26	.78	.78	.78	.87	.78	368	1.5	123	302	1.2	1.2	1.0
27	.78	.78	.78	.87	.78	365	148	1.2	362	1.2	1.2	1.0
28	.78	.78	.78	.87	.78	236	501	1.2	362	1.2	1.2	1.1
29	.78	.85	.78	.96	---	1.1	577	1.2	362	1.2	1.2	.97
30	.78	.83	.78	1.1	---	1.1	577	1.2	118	1.2	1.2	.97
31	.78	---	.78	.87	---	1.1	---	1.2	---	1.2	1.2	---
TOTAL	25.92	23.99	24.46	26.13	22.45	3490.29	4074.04	15088.0	3326.9	6613.6	37.2	35.84
MEAN	.84	.80	.79	.84	.80	113	136	487	111	213	1.20	1.19
MAX	1.3	1.2	.88	1.1	1.0	371	577	777	362	644	1.2	1.8
MIN	.78	.78	.78	.78	.78	.78	.87	1.2	1.2	1.2	1.2	.97
AC-FT	51	48	49	52	45	6920	8080	29930	6600	13120	74	71

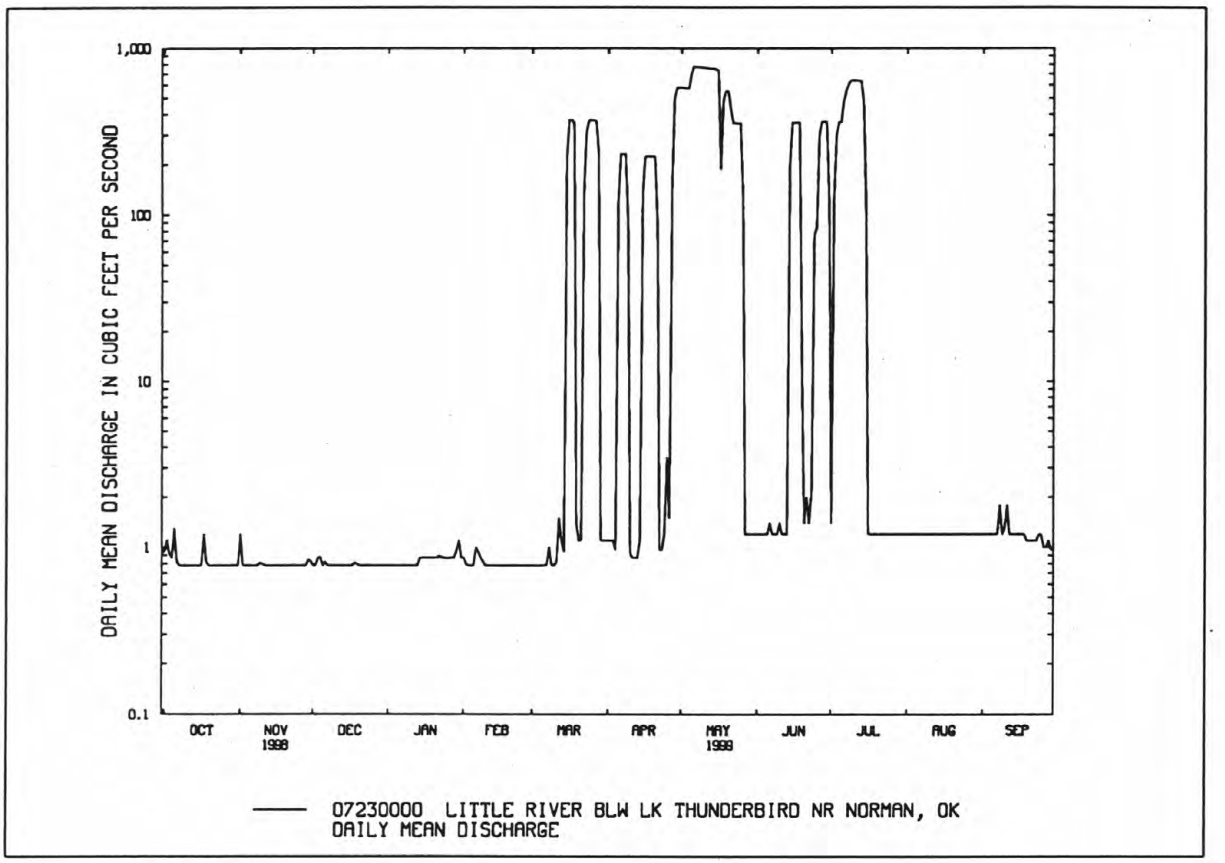
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1999, BY WATER YEAR (WY)

MEAN	30.9	47.4	37.6	44.3	43.6	95.6	94.8	131	136	34.6	17.2	7.81
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 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1966 - 1999	
ANNUAL TOTAL	32894.44		32788.82			
ANNUAL MEAN	90.1		89.8		[a]60.0	
HIGHEST ANNUAL MEAN					251	1985
LOWEST ANNUAL MEAN					.22	1966
HIGHEST DAILY MEAN	978	Mar 24	777	May 6	1280	May 14 1990
LOWEST DAILY MEAN	.78	at times	.78	at times	[b].10	Oct 1 1965
ANNUAL SEVEN-DAY MINIMUM	.78	Oct 7	.78	Oct 7	.10	Oct 19 1965
INSTANTANEOUS PEAK FLOW			785	May 5	[c]1450	May 10 1990
INSTANTANEOUS PEAK STAGE			6.33	May 5	[d]8.62	Oct 26 1983
ANNUAL RUNOFF (AC-FT)	65250		65040		43500	
10 PERCENT EXCEEDS	446		368		262	
50 PERCENT EXCEEDS	.92		1.1		.67	
90 PERCENT EXCEEDS	.78		.78		.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 September 1999 (discontinued). 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 poor. 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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	e368	18	19	84	e14	e64	1030	27	773	e12	e7.3
2	15	134	14	19	57	e14	e84	1010	21	454	e12	e7.1
3	22	33	53	22	51	e15	e153	977	19	446	e12	e7.1
4	14	19	492	23	42	e14	125	1130	18	443	e11	e7.1
5	1290	15	78	23	37	e15	108	1090	18	433	e12	e7.5
6	281	14	45	22	849	e15	230	1200	49	492	e12	e7.5
7	65	14	35	15	728	e20	204	1130	48	699	e12	e6.8
8	35	17	30	14	208	158	204	1110	20	727	e12	e6.8
9	28	16	25	14	109	86	188	1110	18	825	e12	e6.8
10	e21	45	23	15	83	e46	e99	1310	79	809	e11	e7.6
11	e18	e17	21	20	70	e26	e79	1110	90	793	e11	550
12	e13	e11	21	23	e60	935	e73	1090	31	788	e9.9	e56
13	e11	e8.1	20	21	e53	720	e69	1080	22	778	e9.9	e30
14	10	e6.8	20	e17	e48	317	e455	1090	28	683	e9.2	e19
15	8.8	e6.1	20	e15	e44	266	218	1080	253	e104	e8.7	e15
16	8.5	e5.6	19	e15	e36	482	218	1090	262	e40	e7.9	e10
17	320	e4.6	19	e14	e31	447	200	e576	258	e33	e7.5	e10
18	246	e4.3	19	e14	e30	422	191	e695	256	e26	7.3	e8.9
19	37	e3.6	20	e13	e27	231	188	880	621	20	e6.7	e8.2
20	19	e2.8	21	e14	e25	102	186	859	224	e19	e6.7	e7.0
21	16	e2.3	21	e15	e21	90	179	e661	313	e16	e6.7	e6.9
22	14	e2.3	21	e17	e19	98	e90	e627	321	e16	e6.7	e6.8
23	10	e2.2	21	26	e18	231	54	e605	911	e15	e6.7	e6.8
24	10	e2.3	21	28	e17	376	e110	e586	350	e15	e6.7	e6.6
25	e7.7	e2.4	22	24	e17	383	3420	315	204	e14	e7.1	e6.5
26	e5.3	e2.3	23	22	e17	376	3920	233	241	e14	e7.1	e6.4
27	e3.9	e2.2	24	21	e14	393	1670	31	343	13	e6.5	e6.3
28	e3.2	e2.1	23	21	e14	451	1060	24	318	e13	e6.3	e6.3
29	e2.8	e7.0	21	50	---	144	1060	21	354	e13	e6.7	e6.3
30	e2.6	24	20	565	---	e84	1030	38	2630	e13	e6.9	e6.3
31	e2.5	---	19	180	---	e69	---	23	---	e12	e7.1	---
TOTAL	2551.3	794.0	1249	1321	2809	7040	15929	23811	8347	9539	277.3	850.9
MEAN	82.3	26.5	40.3	42.6	100	227	531	768	278	308	8.95	28.4
MAX	1290	368	492	565	849	935	3920	1310	2630	825	12	550
MIN	2.5	2.1	14	13	14	14	54	21	18	12	6.3	6.3
AC-FT	5060	1570	2480	2620	5570	13960	31600	47230	16560	18920	550	1690

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1999, BY WATER YEAR (WY)

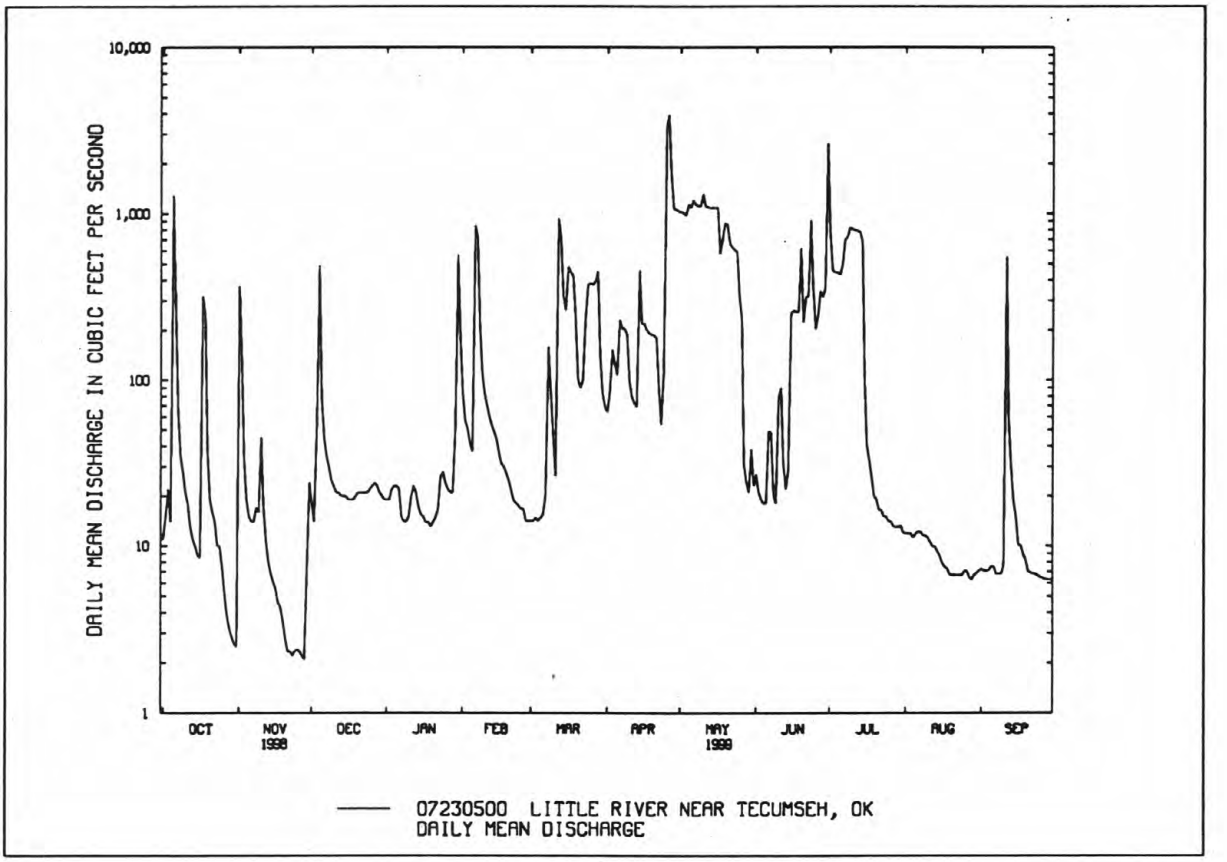
MEAN	109	111	102	95.8	124	220	262	356	277	74.1	49.1	56.8
MAX	898	628	851	844	783	1086	1265	1687	1401	505	510	477
(WY)	1984	1984	1993	1985	1985	1990	1990	1990	1995	1989	1996	1970
MIN	.009	2.27	2.12	2.74	2.45	4.49	5.55	9.25	5.53	1.38	.000	.22
(WY)	1979	1981	1979	1981	1967	1966	1981	1981	1972	1967	1972	1980

e Estimated

07230500 LITTLE RIVER NEAR TECUMSEH, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1966 - 1999	
ANNUAL TOTAL	70779.06		74518.5			
ANNUAL MEAN	194		204		[a]153	
HIGHEST ANNUAL MEAN					511	1985
LOWEST ANNUAL MEAN					9.34	1981
HIGHEST DAILY MEAN	3820	Mar 16	3920	Apr 26	9740	May 3 1990
LOWEST DAILY MEAN	.00	Sep 4	2.1	Nov 28	.00	Jun 23 1966
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 4	2.3	Nov 22	.00	Jun 23 1966
INSTANTANEOUS PEAK FLOW			5400	Apr 25	[b]14000	May 3 1990
INSTANTANEOUS PEAK STAGE			16.18	Apr 25	[c]19.24	Oct 20 1984
ANNUAL RUNOFF (AC-FT)	140400		147800		110900	
10 PERCENT EXCEEDS	742		727		504	
50 PERCENT EXCEEDS	27		22		19	
90 PERCENT EXCEEDS	2.3		6.8		1.7	

[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 1/4 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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	44	88	26	583	67	e200	1720	269	6190	e37	e6.0
2	11	495	30	27	335	63	e190	1430	188	5110	e33	e5.6
3	71	251	22	e25	219	59	190	1250	112	2220	e32	4.4
4	50	86	1180	e23	161	57	365	2570	66	1160	e32	e4.2
5	1600	41	855	e22	125	56	383	e1560	44	e903	e31	e4.2
6	2600	24	371	e21	202	54	661	e1280	34	e761	e30	e4.2
7	e1170	24	198	e26	3240	56	397	e1240	29	677	e28	e3.8
8	e480	34	130	30	2660	158	306	e1120	74	787	e27	e3.1
9	e200	20	93	e27	1140	384	261	e1050	43	732	e25	e3.5
10	e100	42	71	e22	688	308	230	2600	327	804	e25	49
11	e70	48	57	e19	476	168	141	1760	1450	e738	e23	259
12	e48	34	64	28	332	818	80	1320	e420	e704	e23	613
13	e29	17	67	30	235	2120	64	e1140	e170	e668	e22	289
14	20	13	50	28	187	2310	208	e1030	e135	632	e22	97
15	13	11	42	23	158	1360	981	e995	e115	646	e20	47
16	9.9	8.5	37	21	142	868	446	e961	e190	354	e19	43
17	10	7.0	34	20	132	e550	307	e1120	288	208	e17	42
18	413	5.4	33	20	112	e510	247	e780	262	e109	e15	40
19	378	4.6	45	19	100	e460	200	543	307	79	e15	e37
20	115	4.0	45	18	92	424	187	707	1110	62	e13	e34
21	48	3.2	43	18	87	231	169	701	626	55	e13	e32
22	27	2.7	35	21	86	173	160	671	343	50	e12	e30
23	17	2.6	28	34	84	138	101	509	1610	45	e12	e30
24	13	2.8	e27	32	83	179	1050	e430	2830	43	e11	e27
25	9.0	2.8	e25	35	81	323	5480	e400	e1100	42	e11	e26
26	6.4	2.5	e24	39	80	358	10900	e360	e580	43	e11	e25
27	4.9	2.5	e35	31	82	456	14700	355	571	42	e11	e23
28	4.2	2.5	33	26	75	1540	12800	183	472	42	e9.7	e22
29	3.9	2.9	33	28	---	1100	4870	95	1570	41	e8.3	e22
30	3.5	93	29	525	---	463	2490	149	5770	e40	e7.0	e20
31	2.8	---	27	1180	---	e225	---	225	---	e38	e6.3	---
TOTAL	7532.9	1331.0	3851	2444	11977	16036	58764	30254	21105	24025	601.3	1846.0
MEAN	243	44.4	124	78.8	428	517	1959	976	704	775	19.4	61.5
MAX	2600	495	1180	1180	3240	2310	14700	2600	5770	6190	37	613
MIN	2.8	2.5	22	18	75	54	64	95	29	38	6.3	3.1
AC-FT	14940	2640	7640	4850	23760	31810	116600	60010	41860	47650	1190	3660

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1999, BY WATER YEAR (WY)

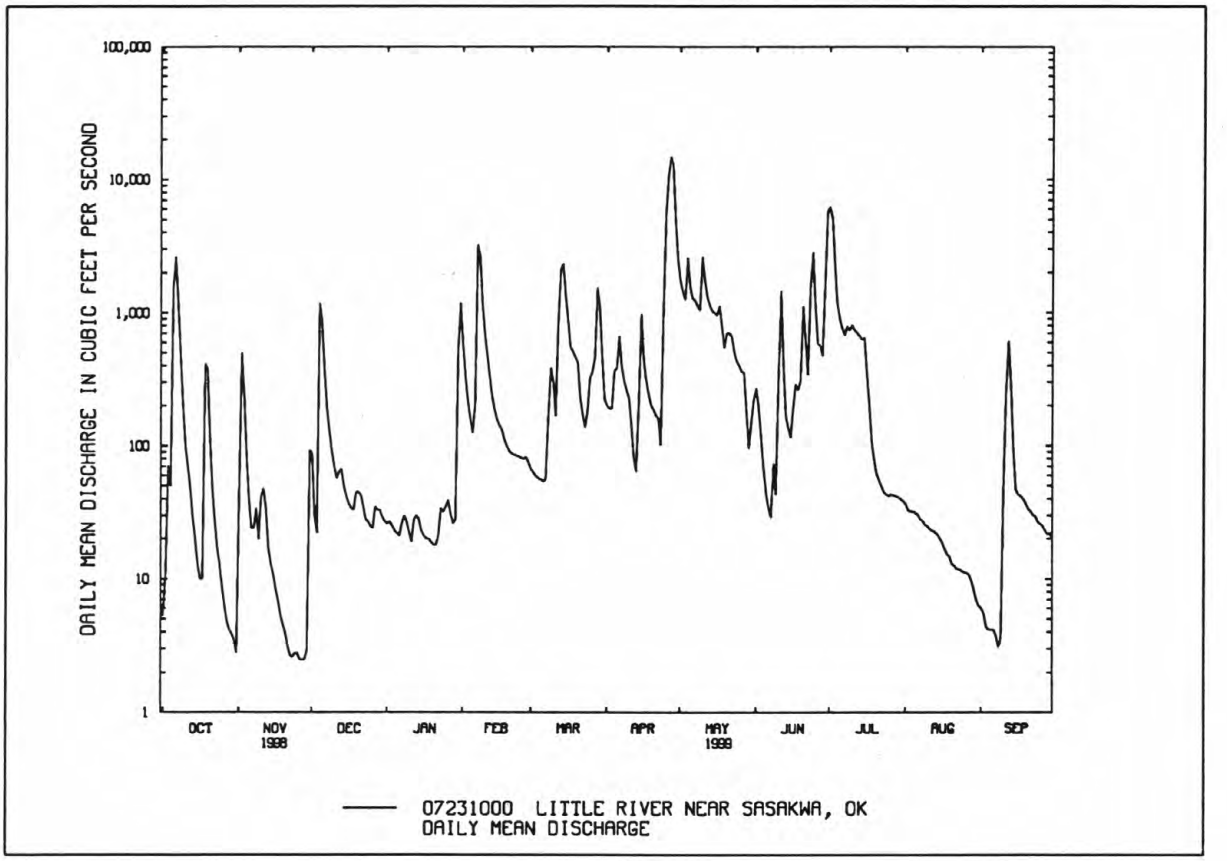
MEAN	253	312	279	234	356	550	673	861	628	150	89.8	132
MAX	2523	1705	2095	1307	1852	2618	3591	2762	2135	775	904	753
(WY)	1971	1993	1993	1985	1993	1990	1990	1990	1995	1999	1992	1970
MIN	.000	.009	.30	1.69	1.80	7.39	17.2	30.7	11.2	2.00	.004	.005
(WY)	1979	1981	1979	1967	1967	1967	1981	1981	1966	1967	1980	1980

e Estimated

07231000 LITTLE RIVER NEAR SASAKWA, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1966 - 1999	
ANNUAL TOTAL	198727.56		179767.2			
ANNUAL MEAN	544		493		[a]376	
HIGHEST ANNUAL MEAN					996	1993
LOWEST ANNUAL MEAN					19.0	1981
HIGHEST DAILY MEAN	12900	May 3	14700	Apr 27	15600	May 1 1985
LOWEST DAILY MEAN	.13	Sep 9	2.5	Nov 26-28	.00	Nov 23 1965
ANNUAL SEVEN-DAY MINIMUM	.16	Sep 5	2.6	Nov 22	.00	Nov 23 1965
INSTANTANEOUS PEAK FLOW			15600	Apr 27	[b]18500	May 1 1985
INSTANTANEOUS PEAK STAGE			26.77	Apr 27	[c]31.73	May 1 1985
ANNUAL RUNOFF (AC-FT)	394200		356600		272400	
10 PERCENT EXCEEDS	1260		1150		1010	
50 PERCENT EXCEEDS	70		71		56	
90 PERCENT EXCEEDS	.81		10		1.3	

[a]Prior to regulation, water year 1943-64, 410 ft^3/s.
[b]Maximum discharge for period of record 44,600 ft^3/s, May 11, 1950.
[c]Maximum gage height for period of record 33.48 ft, May 11, 1950.



07231500 CANADIAN RIVER AT CALVIN, OK

LOCATION.--Lat 34°58'40", long 96°14'36", in NW 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 September 30, 1999 (discontinued). Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected in this vicinity since 1904 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1341: Drainage area. WSP 1391: 1941. 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 good. 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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 25,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 2	1830	26,600	8.07	Jun 24	0615	35,100	8.93
Apr 26	1700	96,800	13.57	Jun 30	1445	45,100	9.98

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	972	1190	660	4240	497	e1800	5610	1960	17200	42	e32
2	47	7970	929	583	3250	485	e2000	4450	1160	12000	41	31
3	168	12700	963	574	3010	473	e1900	4030	916	6900	43	e30
4	219	5290	4440	568	2540	471	e3500	12700	673	4120	40	e30
5	1030	3090	5800	572	2270	454	e8000	8990	539	2490	31	e40
6	10500	2140	2350	470	2380	451	6950	6570	431	1910	69	e35
7	5110	1990	1170	408	11700	457	4080	3930	379	1550	e460	e42
8	2470	1820	1820	598	9570	1460	3290	3690	372	1570	e400	e100
9	1150	1490	2500	519	4430	1920	3670	3120	479	1610	e500	e62
10	742	1340	1270	505	2690	2150	2550	12000	511	1440	e300	e70
11	488	1320	822	618	2030	1680	1770	7880	6260	4510	e280	1680
12	318	1330	1200	522	e1200	4910	1310	8660	2420	6500	e190	7050
13	221	1290	1220	510	e800	17500	1120	4290	2080	4110	e130	4240
14	163	918	650	540	e680	13600	1320	3170	3330	2490	e110	1540
15	120	737	504	528	e700	7760	4980	2380	1060	1900	e86	902
16	97	646	452	562	644	3960	2960	1820	696	1290	e56	575
17	89	584	437	802	620	2860	3530	2760	853	778	e52	405
18	364	528	436	677	594	2490	3360	3440	759	484	e50	319
19	1860	505	501	600	563	2370	2340	1140	957	368	e45	272
20	1530	494	524	538	534	2200	1740	1000	3820	308	e43	271
21	840	487	536	509	524	2820	1850	1390	3180	259	e40	233
22	458	478	510	516	573	2880	1650	1180	1430	208	e35	191
23	329	448	445	913	678	2270	1570	1580	5180	171	e30	204
24	292	436	416	785	680	2460	8740	2290	30900	162	e23	218
25	274	425	292	709	620	2270	23700	1760	14300	145	e20	366
26	219	429	263	679	579	2160	68400	1150	8650	124	e27	979
27	187	419	313	591	513	2030	52200	883	3700	103	e60	838
28	185	413	364	551	514	7700	31700	772	2610	97	e45	392
29	176	426	396	656	---	6110	16000	871	6850	93	e40	259
30	155	605	582	3060	---	2800	8700	1420	24600	89	e34	202
31	140	---	552	5630	---	e2200	---	3600	---	60	e33	---
TOTAL	29977	51720	33847	25953	59126	103848	276680	118526	131055	75039	3355	21608
MEAN	967	1724	1092	837	2112	3350	9223	3823	4368	2421	108	720
MAX	10500	12700	5800	5630	11700	17500	68400	12700	30900	17200	500	7050
MIN	36	413	263	408	513	451	1120	772	372	60	20	30
AC-FT	59460	102600	67140	51480	117300	206000	548800	235100	259900	148800	6650	42860

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 1999, BY WATER YEAR (WY)

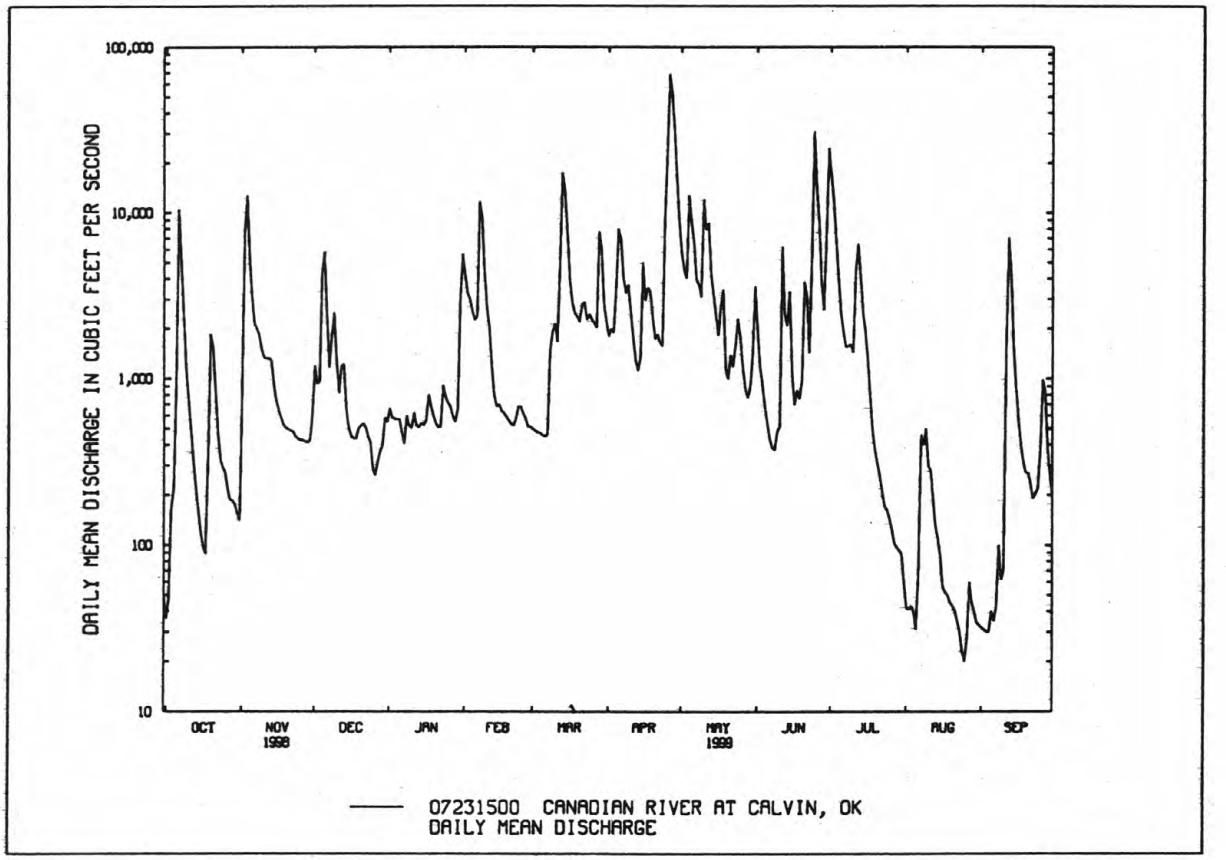
MEAN	1627	1188	1052	935	1322	1958	2685	4460	3350	1367	832	1217
MAX	21530	6529	9355	6655	7059	10230	15110	20640	15350	9669	8398	6467
(WY)	1942	1993	1993	1998	1985	1998	1990	1990	1941	1950	1906	1941
MIN	.10	3.82	7.76	16.4	23.4	20.9	45.7	195	33.7	10.8	.068	.000
(WY)	1957	1967	1967	1940	1967	1967	1956	1966	1966	1966	1980	1956

e Estimated

07231500 CANADIAN RIVER AT CALVIN, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1906 - 1999	
ANNUAL TOTAL	982701.6		930734			
ANNUAL MEAN	2692		2550		1836	
HIGHEST ANNUAL MEAN					5513	1942
LOWEST ANNUAL MEAN					184	1981
HIGHEST DAILY MEAN	65800	Mar 17	68400	Apr 26	140000	May 29 1987
LOWEST DAILY MEAN	6.0	Jul 30	20	Aug 25	.00	Sep 10 1939
ANNUAL SEVEN-DAY MINIMUM	6.9	Jul 27	31	Aug 20	.00	Sep 10 1939
INSTANTANEOUS PEAK FLOW			96800	Apr 26	174000	May 11 1950
INSTANTANEOUS PEAK STAGE			13.57	Apr 26	[a]21.00	Aug 7 1906
ANNUAL RUNOFF (AC-FT)	1949000		1846000		1330000	
10 PERCENT EXCEEDS	4870		5920		4160	
50 PERCENT EXCEEDS	1030		772		407	
90 PERCENT EXCEEDS	18		89		26	

[a]From floodmark, site and datum then in use.



07232250 BEAVER RIVER NEAR FELT, OK

LOCATION.--Lat 36°37'47", long 102°40'52", 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.--19 years, 1.07 ft^3/s, 775 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.--Maximum discharge, 2,480 ft^3/s, May 2, gage height 9.90 ft; no flow most days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
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	946	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	168	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	17	.00	.00	2.0	.00
5	.00	.00	.00	.00	.00	.00	.00	5.5	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	e1.0	.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	1137.50	0.00	0.00	2.00	0.00
MEAN	.000	.000	.000	.000	.000	.000	.000	36.7	.000	.000	.065	.000
MAX	.00	.00	.00	.00	.00	.00	.00	946	.00	.00	2.0	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	2260	.00	.00	4.0	.00

CAL YR 1988 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1999 TOTAL 1139.50 MEAN 3.12 MAX 946 MIN .00 AC-FT 2260

e Estimated

Canadian River at Calvin May 5, 1941

07232900 COLDWATER CREEK NEAR GUYMON, OK

LOCATION.--Lat 36°34'19", long 101°22'52", 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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft^3/s:

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

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

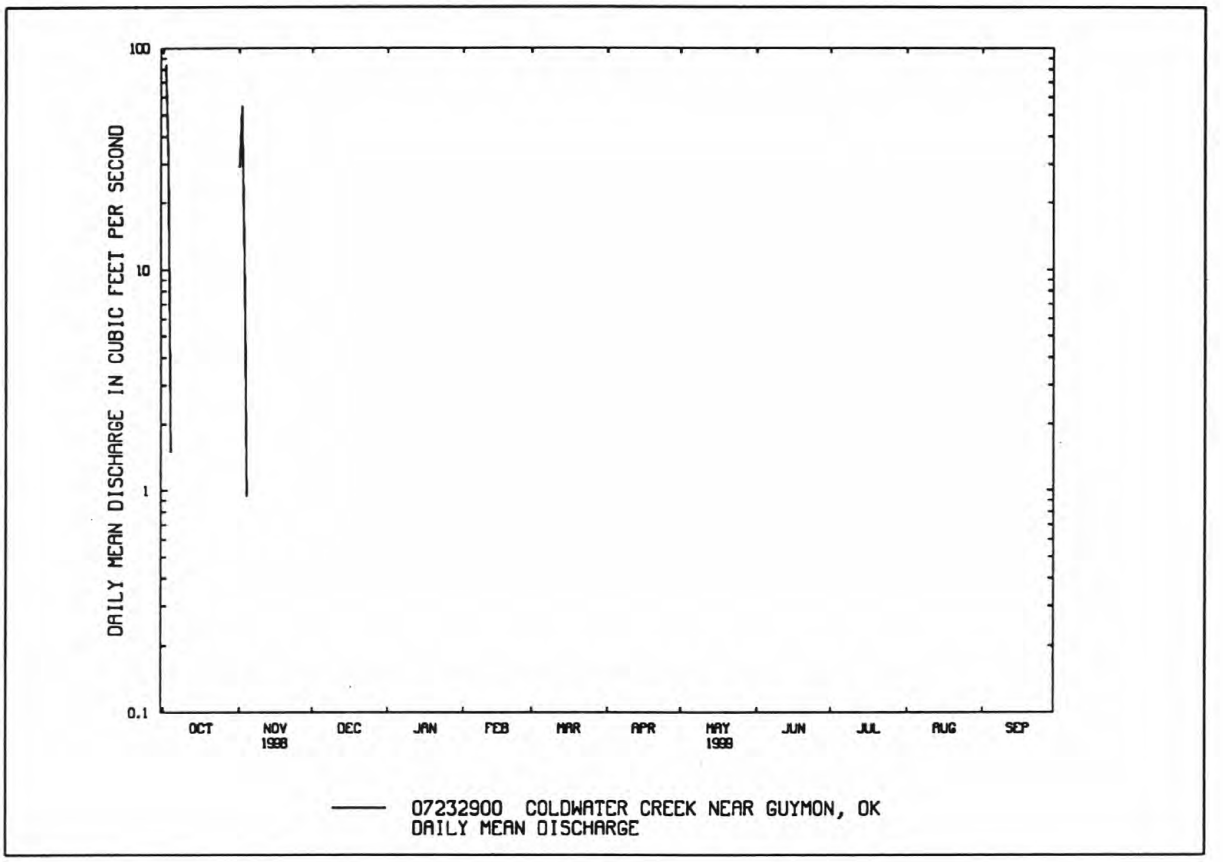
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	84	55	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	32	12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	1.5	.94	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.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	117.50	96.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	3.79	3.23	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	84	55	.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	233	192	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1999, BY WATER YEAR (WY)

MEAN	1.31	.17	.000	.000	.000	.000	2.77	8.30	4.74	.026	1.13	1.67
MAX	21.0	3.23	.000	.000	.000	.000	52.7	86.0	42.3	.31	6.90	27.5
(WY)	1986	1999	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 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1981 - 1999	
ANNUAL TOTAL	214.44		214.44			
ANNUAL MEAN	.59		.59		1.68	
HIGHEST ANNUAL MEAN					8.37	1982
LOWEST ANNUAL MEAN					.000	1983
HIGHEST DAILY MEAN	84	Oct 2	84	Oct 2	1500	May 18 1989
LOWEST DAILY MEAN	.00	Jan 1	.00	most days	.00	each year
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 5	.00	Oct 1 1980
INSTANTANEOUS PEAK FLOW			159	Oct 2	5800	Jun 20 1982
INSTANTANEOUS PEAK STAGE			10.26	Oct 2	14.34	Jun 20 1982
ANNUAL RUNOFF (AC-FT)	425		425		1220	
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.--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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	3.9	.72	1.2	1.3	1.3	1.6	4.4	1.7	59	.26	.00
2	.28	3.5	.71	1.2	1.4	1.2	1.5	5.8	e1.8	9.6	.72	.00
3	.18	2.5	.77	1.2	1.2	1.2	1.4	5.3	2.0	3.9	.86	.00
4	.10	2.2	.89	1.2	1.2	1.2	1.5	4.7	e1.9	2.5	1.1	.00
5	.09	2.0	.86	1.2	1.2	1.3	1.8	4.4	e1.8	1.9	1.1	.00
6	.04	1.8	.97	1.2	1.2	1.2	2.3	4.3	e1.7	1.6	.95	.00
7	.01	1.8	.99	1.2	1.2	1.2	2.6	4.3	e1.6	1.4	.92	.00
8	.02	1.6	.95	1.2	1.1	1.3	2.6	4.0	e1.5	1.3	.93	.00
9	.03	1.6	.89	1.2	1.1	1.3	3.2	4.0	e1.4	1.2	.88	.00
10	.07	1.6	.88	1.2	1.1	1.3	3.2	3.8	e1.3	1.2	.86	.00
11	.06	1.5	.90	1.3	1.2	1.3	3.1	3.6	e1.4	1.2	.81	.00
12	.07	1.3	.91	1.4	1.2	1.5	2.9	3.6	1.4	1.2	.62	.00
13	.07	1.3	.89	1.4	1.2	1.5	3.4	3.5	1.2	1.2	.60	.00
14	.06	1.2	.92	1.4	1.2	1.6	4.7	3.5	1.1	e1.1	.38	.04
15	.05	1.2	.97	1.3	1.2	1.7	5.8	3.1	1.1	e1.0	.23	.14
16	.07	1.1	.97	1.3	1.2	1.6	5.3	3.1	1.1	e.90	.14	.28
17	.07	1.1	.98	1.1	1.2	1.5	4.5	3.1	1.1	.80	.17	.30
18	.06	1.1	1.0	1.0	1.2	1.7	4.3	2.7	1.1	.67	.17	.29
19	.07	.98	1.0	1.0	1.2	2.1	4.1	2.4	1.0	.54	.13	.32
20	.07	.94	1.1	1.0	1.2	2.3	4.1	2.4	.99	.50	.07	.35
21	.08	.87	.97	1.0	1.3	2.3	4.1	2.2	1.0	.51	.05	.36
22	.09	.87	.99	1.0	1.3	2.1	4.0	2.3	1.0	.50	.02	.32
23	.14	.79	1.0	1.0	1.2	2.0	3.8	2.2	.85	.45	.02	.20
24	.23	.78	1.0	1.0	1.2	1.9	3.8	2.1	.83	.40	.00	.11
25	.57	.72	1.0	.97	1.2	1.9	4.3	2.1	.83	.42	.00	.10
26	.81	.71	1.1	1.0	1.2	1.9	4.1	2.1	.82	.36	.00	.07
27	.97	.72	1.1	.96	1.1	1.9	3.9	2.1	.72	.34	.00	.03
28	1.2	.69	1.1	.92	1.2	1.8	3.6	2.1	.67	.35	.00	.08
29	1.1	.68	1.1	1.1	---	1.8	3.7	2.1	.66	.32	.00	.13
30	1.9	.75	1.2	1.3	---	1.8	3.7	2.1	46	.25	.00	.18
31	4.5	---	1.2	1.2	---	1.8	---	1.7	---	.20	.00	---
TOTAL	13.06	41.80	30.03	35.65	33.7	50.5	102.9	99.1	81.57	96.81	11.99	3.30
MEAN	.42	1.39	.97	1.15	1.20	1.63	3.43	3.20	2.72	3.12	.39	.11
MAX	4.5	3.9	1.2	1.4	1.4	2.3	5.8	5.8	46	59	1.1	.36
MIN	.00	.68	.71	.92	1.1	1.2	1.4	1.7	.66	.20	.00	.00
AC-FT	26	83	60	71	67	100	204	197	162	192	24	6.5

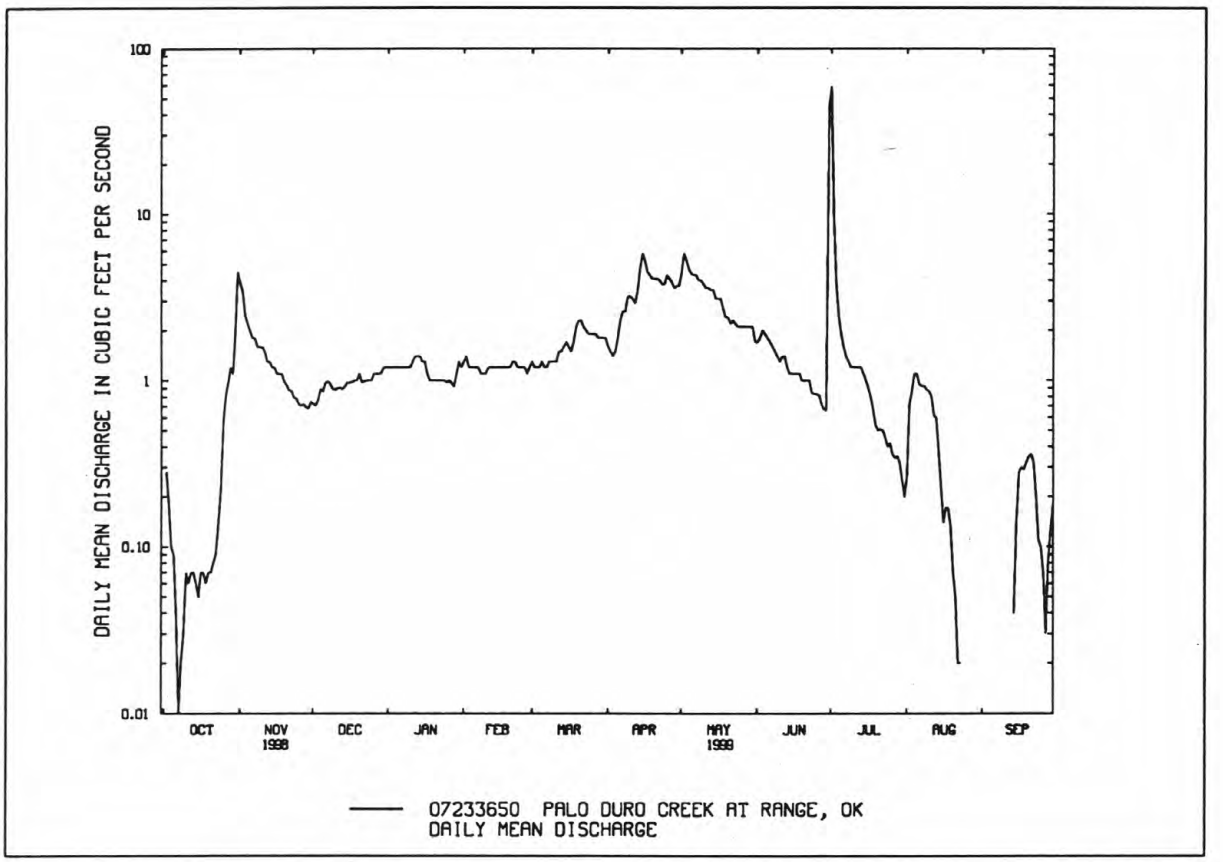
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1999, BY WATER YEAR (WY)

MEAN	.42	.94	1.18	1.24	1.39	1.58	1.75	1.62	1.10	.61	.28	.33
MAX	.97	1.58	2.68	1.73	2.17	1.99	3.43	3.20	2.72	3.12	.55	1.47
(WY)	1997	1997	1997	1997	1997	1998	1999	1999	1999	1999	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

e Estimated

07233650 PALO DURO CREEK AT RANGE, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1992 - 1999	
ANNUAL TOTAL	339.38		600.41			
ANNUAL MEAN	.93		1.64		1.03	
HIGHEST ANNUAL MEAN					1.64	1999
LOWEST ANNUAL MEAN					.67	1996
HIGHEST DAILY MEAN	4.5	Oct 31	59	Jul 1	59	Jul 1 1999
LOWEST DAILY MEAN	.00	several days	.00	several days	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 23	.00	Aug 24	.00	Jun 23 1994
INSTANTANEOUS PEAK FLOW			105	Jun 30	105	Jun 30 1999
INSTANTANEOUS PEAK STAGE			10.53	Jun 30	10.53	Jun 30 1999
ANNUAL RUNOFF (AC-FT)	673		1190		750	
10 PERCENT EXCEEDS	1.8		3.5		1.8	
50 PERCENT EXCEEDS	.99		1.1		1.0	
90 PERCENT EXCEEDS	.00		.07		.02	



07234000 BEAVER RIVER AT BEAVER, OK

(Headwater of the North Canadian River)

LOCATION.--Lat 36°49'20", long 100°31'08", SW 1/4 sec.7, T.4 N., R.24 E., Beaver County, Hydrologic Unit 11100102, near right bank on downstream side of pier of bridge on U.S. Highway 270 at Beaver, 1.1 mi downstream from Home Creek, 5.0 mi upstream from Clear Creek, and at mile 576.0.

DRAINAGE AREA.--7,955 mi^2, of which 4,270 mi^2 is probably noncontributing.

PERIOD OF RECORD.--March 1904 to December 1905 (gage heights only), October 1937 to September 1999 (discontinued). 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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	1.1	11	e9.3	16	12	25	43	24	18	3.6	.33
2	.04	9.9	11	e8.2	17	11	24	51	23	17	5.1	.33
3	.04	29	11	e8.0	17	11	23	124	22	15	5.9	.34
4	.04	141	11	e7.5	16	12	23	126	19	18	6.3	.32
5	.04	143	11	e8.0	17	11	27	282	18	29	6.6	.31
6	.04	79	11	e8.4	16	11	27	183	16	24	5.7	.33
7	.04	54	11	e8.5	16	11	27	126	14	19	4.7	.28
8	.04	40	11	e8.4	16	15	27	100	13	16	3.9	.27
9	.04	33	11	e9.0	15	14	26	83	11	13	3.4	.27
10	.04	28	11	e9.2	15	14	24	71	126	12	2.9	.26
11	.04	25	10	9.5	15	13	23	62	326	11	2.5	.31
12	.04	22	10	9.5	14	16	23	55	161	9.5	2.1	.58
13	.04	20	10	9.1	14	19	25	50	131	8.7	1.8	.35
14	.04	19	10	9.0	14	e18	33	47	139	7.7	1.6	.37
15	.04	18	10	9.2	13	25	46	43	83	6.7	1.4	.35
16	.04	17	9.8	9.2	13	27	78	40	63	6.6	1.2	.35
17	.04	16	9.8	9.2	13	26	53	36	55	26	1.0	.43
18	.04	15	10	8.8	13	25	45	34	51	31	.81	.36
19	.05	14	9.6	8.8	13	29	40	32	43	21	.70	.36
20	.05	14	9.6	8.9	12	31	38	30	37	14	.59	.35
21	.05	13	e7.0	9.0	12	31	37	29	33	11	.55	.36
22	.05	13	e6.8	9.1	13	31	36	30	30	9.6	.53	.43
23	.05	13	e6.6	9.4	13	30	34	28	28	8.5	.50	.53
24	.05	12	e6.6	9.3	13	29	34	26	26	7.6	.48	.59
25	.05	12	e6.7	9.2	13	28	39	25	25	6.7	.45	.62
26	.05	12	e6.7	9.4	13	27	41	27	22	5.8	.42	.60
27	.07	11	e7.0	9.6	12	27	40	27	21	5.3	.40	.59
28	.12	11	e8.0	9.8	12	27	38	27	19	4.9	.41	.62
29	.06	11	e9.0	11	---	25	38	26	18	4.4	.43	.64
30	.11	11	9.8	14	---	25	39	26	18	3.7	.44	.68
31	.48	---	11	15	---	26	---	24	---	3.1	.35	---
TOTAL	1.95	857.0	294.0	290.5	396	657	1033	1913	1615	393.8	66.76	12.51
MEAN	.063	28.6	9.48	9.37	14.1	21.2	34.4	61.7	53.8	12.7	2.15	.42
MAX	.48	143	11	15	17	31	78	282	326	31	6.6	.68
MIN	.03	1.1	6.6	7.5	12	11	23	24	11	3.1	.35	.26
AC-FT	3.9	1700	583	576	785	1300	2050	3790	3200	781	132	25

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1999, BY WATER YEAR (WY)

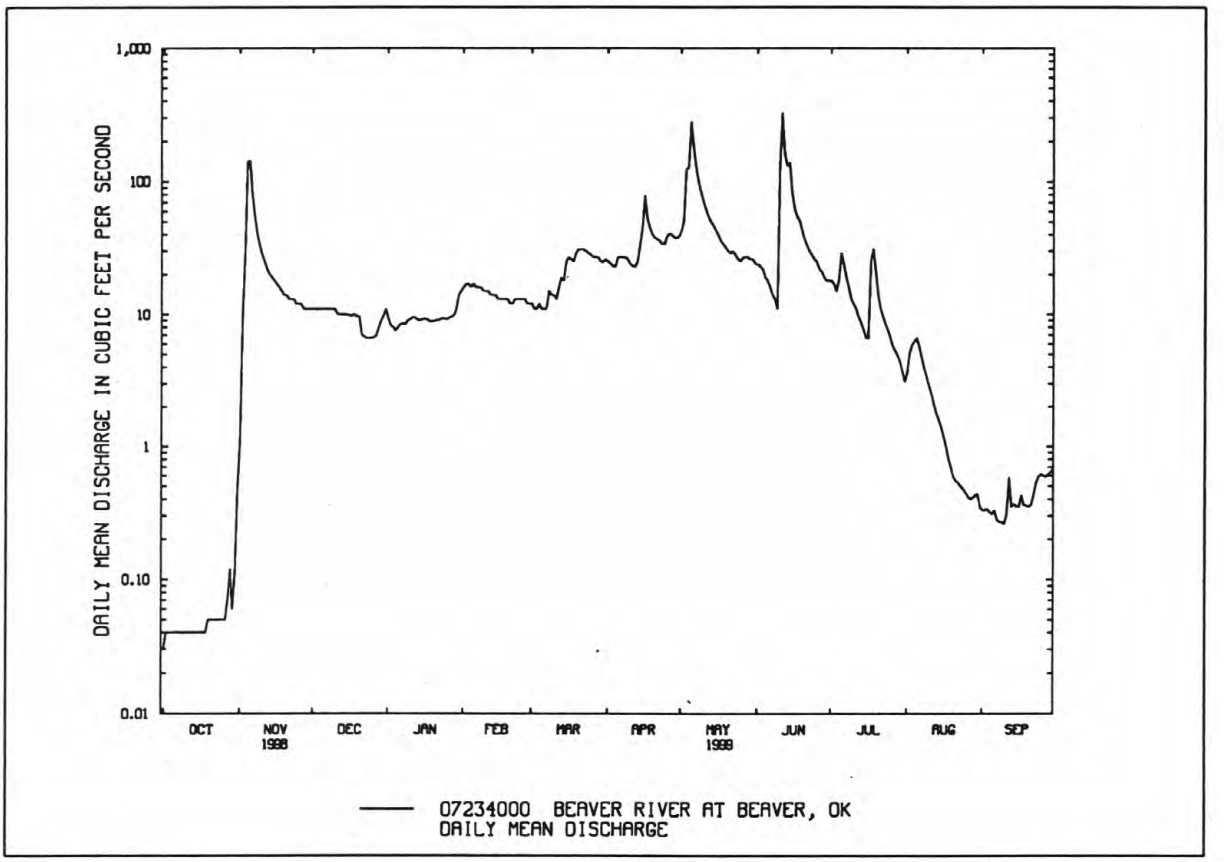
MEAN	7.72	3.50	3.04	4.26	6.59	10.7	16.9	52.6	60.7	16.0	4.39	11.0
MAX	130	28.6	13.7	17.2	21.4	27.6	83.8	295	362	79.4	25.9	78.5
(WY)	1986	1999	1988	1988	1993	1993	1990	1989	1989	1979	1982	1981
MIN	.000	.000	.000	.040	.11	.11	.029	.093	.000	.000	.000	.000
(WY)	1980	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981	1980

e Estimated

07234000 BEAVER RIVER AT BEAVER, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1979 - 1999	
ANNUAL TOTAL	3279.74		7530.52			
ANNUAL MEAN	8.99		20.6		[a]16.5	
HIGHEST ANNUAL MEAN					64.0	1989
LOWEST ANNUAL MEAN					2.25	1984
HIGHEST DAILY MEAN	143	Nov 5	326	Jun 11	3880	May 31 1980
LOWEST DAILY MEAN	.00	several days	.03	Oct 1	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 24	.04	Oct 1	.00	Oct 1 1978
INSTANTANEOUS PEAK FLOW			502	Jun 11	[b]5510	Jun 10 1983
INSTANTANEOUS PEAK STAGE			6.83	Jun 11	[c]10.50	Jun 10 1983
ANNUAL RUNOFF (AC-FT)	6510		14940		11930	
10 PERCENT EXCEEDS	21		40		26	
50 PERCENT EXCEEDS	8.2		12		1.3	
90 PERCENT EXCEEDS	.04		.32		.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 downstream 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 September 1999 (discontinued). Monthly discharge only for some periods, published in WSP 1311. Published as Canadian River (North Fork) near Woodward 1903-06. Gage-height records collected in this vicinity since 1919 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1341: Drainage area. WSP 1731: 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 1,829.95 ft above sea level. Prior to July 1906, nonrecording gage at railway bridge 275 ft upstream at different datum. Oct. 1, 1938 to Oct. 26, 1943, nonrecording gage and Oct. 27, 1943 to July 12, 1951, water-stage recorder, at site 7.8 mi upstream at datum 37.01 ft higher than present datum.

REMARKS.--Records good. Some regulation since May 1942 by Fort Supply Lake (station 07236500) on Wolf Creek, 33.0 mi upstream. Flow regulated since October 1978 by Optima Lake (station 07233200), 163.0 mi upstream, and by Palo Duro reservoir since May 1991. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 12, 1923, reached a stage of 11.0 ft, site and datum then in use; from reports of National Weather Service.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	357	130	100	180	170	231	797	406	633	94	50
2	26	313	273	98	235	146	227	819	389	560	92	48
3	15	280	306	e80	332	117	259	848	518	519	86	48
4	14	679	331	e60	348	111	241	919	448	475	88	49
5	13	794	270	e100	317	107	287	854	421	446	97	47
6	13	802	146	e190	238	100	273	825	409	424	91	47
7	12	685	115	e200	229	92	300	810	413	381	104	45
8	11	366	103	e195	222	107	298	787	393	343	144	41
9	11	327	95	e193	219	147	289	789	e400	327	148	34
10	9.8	312	89	e205	217	216	263	841	442	341	125	31
11	9.3	241	85	209	215	224	195	821	432	299	91	32
12	9.1	156	131	168	209	235	178	797	728	284	80	83
13	9.1	132	242	124	193	213	379	761	517	270	74	46
14	8.9	119	258	117	162	195	831	659	491	254	69	40
15	8.7	109	189	115	155	191	562	540	462	267	66	38
16	8.6	102	113	113	151	231	819	516	495	258	63	38
17	9.0	95	102	113	179	268	758	496	477	252	60	42
18	9.0	91	96	109	218	269	1080	474	459	248	57	39
19	9.2	128	88	108	204	315	1310	462	460	244	56	41
20	9.4	342	83	108	182	303	874	449	477	206	63	44
21	9.7	275	80	108	178	305	727	455	510	166	55	42
22	9.8	135	e65	117	177	300	886	389	480	152	52	42
23	10	108	e64	124	175	295	853	341	488	142	51	39
24	9.8	95	e63	125	174	256	876	322	467	135	48	37
25	9.6	87	e62	124	174	221	943	322	724	127	47	37
26	9.4	81	e72	123	174	230	646	389	530	120	45	37
27	9.6	79	97	125	172	242	541	447	382	113	44	36
28	9.9	79	100	125	171	242	534	439	333	109	44	37
29	9.7	79	98	146	---	238	809	444	305	106	50	38
30	18	77	100	197	---	236	809	428	478	103	51	38
31	257	---	99	185	---	234	---	416	---	98	50	---
TOTAL	630.6	7525	4145	4204	5800	6556	17278	18656	13934	8402	2285	1266
MEAN	20.3	251	134	136	207	211	576	602	464	271	73.7	42.2
MAX	257	802	331	209	348	315	1310	919	728	633	148	83
MIN	8.6	77	62	60	151	92	178	322	305	98	44	31
AC-FT	1250	14930	8220	8340	11500	13000	34270	37000	27640	16670	4530	2510

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1999, BY WATER YEAR (WY)

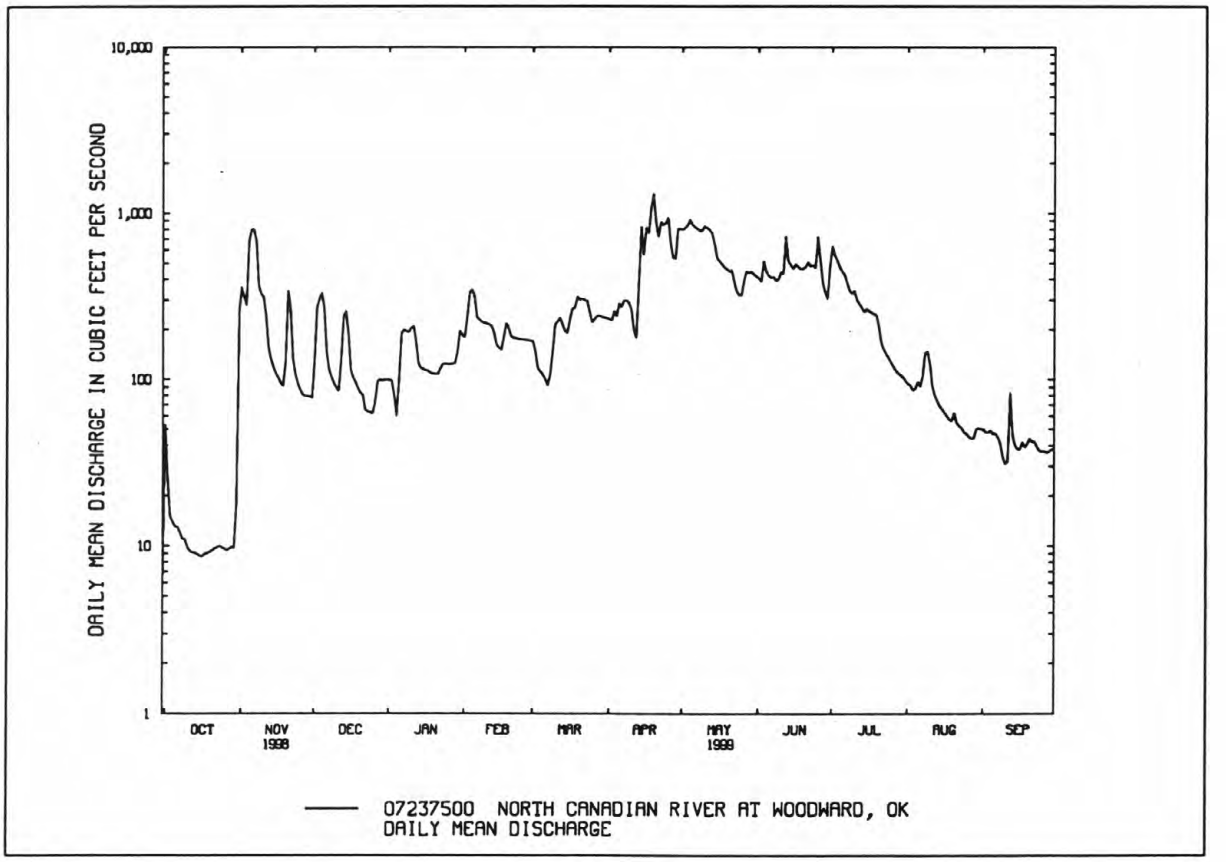
MEAN	61.4	66.1	61.1	78.1	92.5	138	168	249	211	90.3	49.4	44.2
MAX	377	281	242	205	207	404	576	900	814	328	254	368
(WY)	1986	1997	1997	1998	1999	1987	1999	1979	1989	1989	1996	1996
MIN	2.33	5.75	8.33	11.0	12.6	30.6	32.6	13.3	9.57	4.24	1.73	.95
(WY)	1992	1985	1995	1981	1981	1996	1996	1996	1996	1981	1991	1984

e Estimated

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1979 - 1999	
ANNUAL TOTAL	59089.5		90681.6			
ANNUAL MEAN	162		248		[a]109	
HIGHEST ANNUAL MEAN					248	1999
LOWEST ANNUAL MEAN					16.9	1981
HIGHEST DAILY MEAN	826	Mar 27	1310	Apr 19	2950	May 23 1989
LOWEST DAILY MEAN	6.0	Sep 30	8.6	Oct 16	.00	at times
ANNUAL SEVEN-DAY MINIMUM	7.1	Sep 15	8.9	Oct 12	.13	Sep 9 1984
INSTANTANEOUS PEAK FLOW			1360	Apr 19	[b]3090	May 23 1989
INSTANTANEOUS PEAK STAGE			8.48	Apr 19	[c]10.72	May 23 1989
ANNUAL RUNOFF (AC-FT)	117200		179900		79050	
10 PERCENT EXCEEDS	377		561		265	
50 PERCENT EXCEEDS	145		174		58	
90 PERCENT EXCEEDS	9.4		37		6.1	

[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 1/4 sec.28, T.20 N., R.16 W., Major County, Hydrologic Unit 11100301, near center of span on downstream side of pier of bridge on U.S. Highway 60, 2.0 mi upstream from Seiling Creek, 2.2 mi north of Seiling, 2.8 mi downstream from Deep Creek, and at mile 422.6.

DRAINAGE AREA.--12,261 mi^2, of which 4,847 mi is probably noncontributing.

PERIOD OF RECORD.--July 1946 to September 1999 (discontinued).

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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

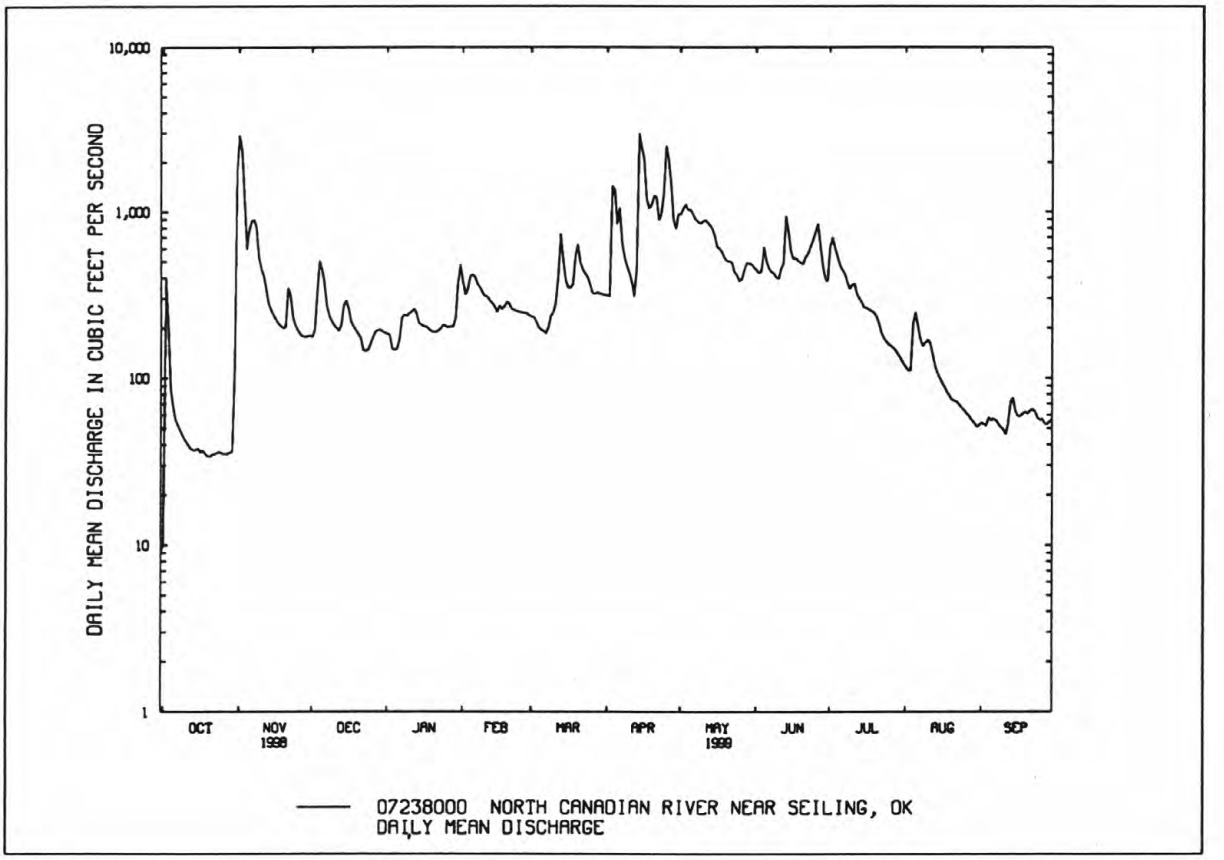
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	2900	177	185	380	234	313	967	446	616	116	54
2	392	2380	193	181	316	233	308	1050	423	697	111	53
3	212	1220	318	e150	338	219	1430	1110	440	611	111	52
4	86	600	504	e147	408	202	1370	1030	611	542	215	58
5	67	776	452	e150	418	195	847	1030	506	481	247	56
6	56	888	373	e170	403	191	1060	971	455	447	203	57
7	52	900	271	e230	364	185	651	903	432	422	170	56
8	48	803	237	e240	350	200	531	880	425	380	156	53
9	45	526	220	e235	324	236	470	845	399	341	163	51
10	42	452	208	e245	312	248	428	876	393	362	169	49
11	40	409	199	e250	307	281	377	900	451	368	163	46
12	38	341	192	e260	292	409	309	863	484	318	139	53
13	37	279	211	244	282	732	450	832	947	299	119	72
14	37	254	275	214	268	519	2980	792	766	283	107	76
15	38	239	292	208	249	387	2470	709	580	263	100	63
16	36	225	260	205	272	347	2100	612	516	263	93	59
17	37	212	217	203	259	348	1200	598	527	256	88	59
18	35	206	204	197	269	364	1050	571	504	252	82	61
19	34	199	193	191	287	544	1100	524	492	245	78	63
20	34	203	183	188	277	635	1260	503	483	235	74	61
21	35	346	e174	189	259	491	1240	499	530	212	73	64
22	35	318	e147	192	255	448	894	496	556	186	72	65
23	36	233	e145	199	252	421	963	431	611	174	69	63
24	36	207	e148	209	249	402	1310	414	669	165	66	58
25	35	193	e160	204	247	361	2530	380	748	159	64	56
26	35	184	e175	202	247	322	2090	391	854	156	61	57
27	35	178	190	204	245	320	1460	443	e640	151	59	53
28	36	176	194	203	237	325	886	490	480	145	56	53
29	36	178	195	227	---	321	794	489	395	137	54	55
30	119	180	190	372	---	317	969	482	380	130	51	57
31	1830	---	186	478	---	315	---	459	---	122	52	---
TOTAL	3643.9	16205	7083	6772	8366	10752	33840	21540	16143	9418	3381	1733
MEAN	118	540	228	218	299	347	1128	695	538	304	109	57.8
MAX	1830	2900	504	478	418	732	2980	1110	947	697	247	76
MIN	9.9	176	145	147	237	185	308	380	380	122	51	46
AC-FT	7230	32140	14050	13430	16590	21330	67120	42720	32020	18680	6710	3440
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1999, BY WATER YEAR (WY)												
MEAN	97.0	121	104	122	143	212	256	375	307	130	74.1	86.4
MAX	471	540	333	360	303	645	1128	984	982	380	409	698
(WY)	1997	1999	1997	1998	1998	1998	1999	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 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1979 - 1999	
ANNUAL TOTAL	104408.7		138876.9			
ANNUAL MEAN	286		380		[a]169	
HIGHEST ANNUAL MEAN					380	1999
LOWEST ANNUAL MEAN					29.4	1981
HIGHEST DAILY MEAN	2900	Nov 1	2980	Apr 14	5430	Sep 23 1997
LOWEST DAILY MEAN	9.1	Sep 30	9.9	Oct 1	.00	at times
ANNUAL SEVEN-DAY MINIMUM	10	Sep 8	35	Oct 18	.00	Sep 16 1980
INSTANTANEOUS PEAK FLOW			3340	Apr 14	[b]7200	Sep 23 1997
INSTANTANEOUS PEAK STAGE			12.43	Apr 14	[c]14.86	Sep 23 1997
ANNUAL RUNOFF (AC-FT)	207100		275500		122300	
10 PERCENT EXCEEDS	612		868		394	
50 PERCENT EXCEEDS	223		249		86	
90 PERCENT EXCEEDS	20		54		11	

[a]Prior to regulation, water years 1947-78, 215 ft3/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 September 1999 (discontinued).

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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	993	298	52	229	240	688	1010	870	792	72	52
2	88	409	340	50	320	240	482	1010	862	776	70	51
3	61	150	345	e29	346	238	430	995	871	758	94	53
4	30	87	361	e34	345	236	249	994	952	750	103	54
5	27	63	354	e121	343	233	201	992	960	744	91	55
6	17	53	546	222	348	233	339	1110	957	741	164	54
7	15	49	462	210	349	231	762	1220	949	733	164	52
8	14	46	448	210	348	261	832	1210	941	727	242	49
9	13	46	503	209	607	256	887	1220	935	716	250	36
10	12	50	506	242	742	242	926	1110	941	830	252	33
11	12	103	497	224	712	238	914	703	321	734	251	42
12	11	211	491	363	517	588	903	753	369	709	246	38
13	11	218	486	404	290	568	909	1000	401	725	242	36
14	11	227	480	410	244	197	669	1110	382	738	240	33
15	10	232	471	413	237	158	465	1110	717	720	235	31
16	11	232	467	413	242	359	724	1100	848	660	233	33
17	20	232	465	415	555	504	923	1120	919	663	229	33
18	30	232	459	413	579	507	937	1100	947	649	163	33
19	21	232	285	408	369	781	954	1080	947	635	81	32
20	14	229	111	408	254	601	964	1080	1020	619	72	31
21	14	226	88	408	246	537	972	987	974	603	68	31
22	13	227	e55	399	245	532	1080	930	956	497	64	32
23	12	225	e53	375	243	587	1050	934	1060	385	62	31
24	11	225	e55	365	245	717	1470	923	921	252	61	30
25	11	226	e60	358	245	736	2530	915	869	160	59	30
26	11	225	66	355	247	734	991	926	850	145	55	28
27	11	225	65	238	244	726	473	907	825	117	56	27
28	12	228	61	198	241	717	633	906	815	90	56	30
29	12	232	59	218	---	711	929	892	808	83	56	32
30	16	241	55	402	---	702	1010	885	802	77	56	31
31	372	---	53	263	---	700	---	877	---	74	54	---
TOTAL	931.1	6374	9045	8829	9932	14310	25296	31109	24989	16902	4141	1133
MEAN	30.0	212	292	285	355	462	843	1004	833	545	134	37.8
MAX	372	993	546	415	742	781	2530	1220	1060	830	252	55
MIN	8.1	46	53	29	229	158	201	703	321	74	54	27
AC-FT	1850	12640	17940	17510	19700	28380	50170	61700	49570	33530	8210	2250

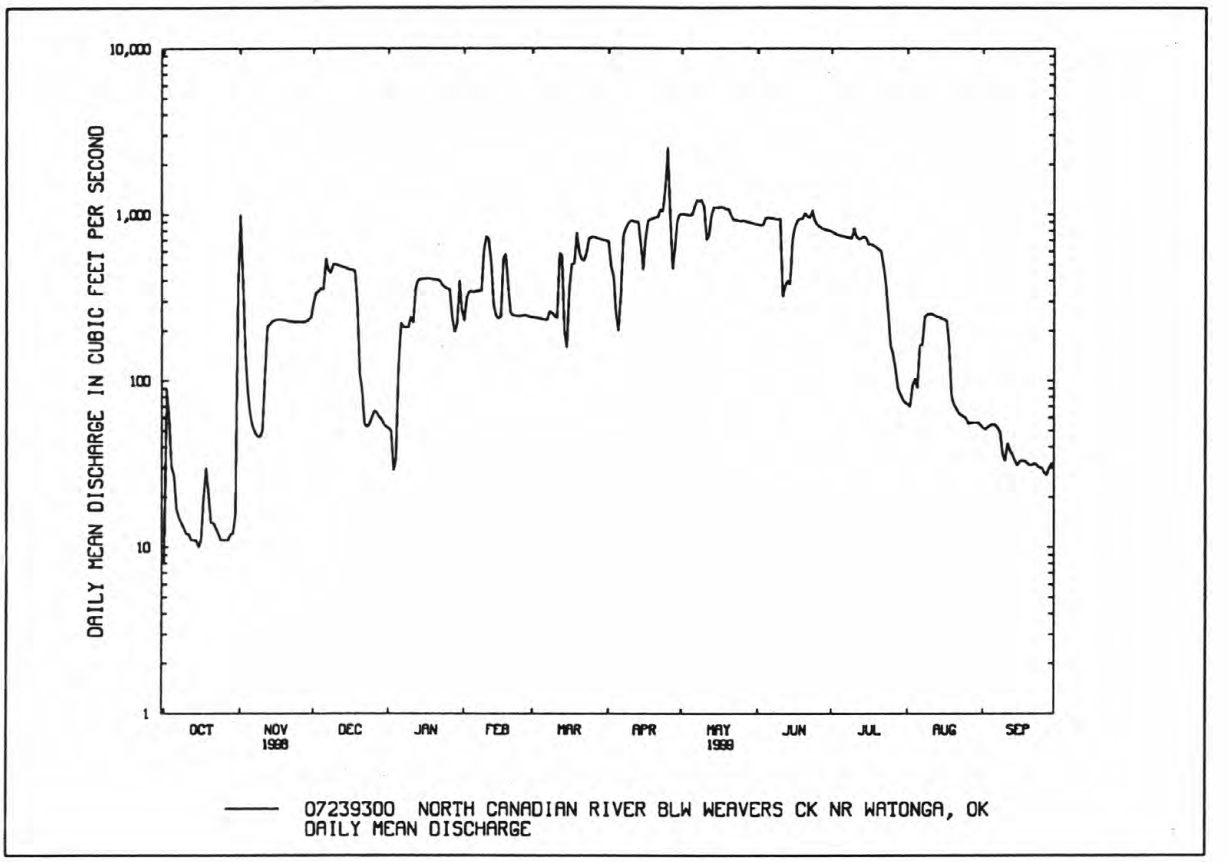
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1999, BY WATER YEAR (WY)

MEAN	141	131	130	162	200	228	330	331	370	195	192	156
MAX	708	532	380	620	532	597	863	1004	944	895	610	666
(WY)	1997	1997	1997	1998	1994	1988	1998	1999	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 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1984 - 1999	
ANNUAL TOTAL	123245.3		152991.1			
ANNUAL MEAN	338		419		214	
HIGHEST ANNUAL MEAN					476	1997
LOWEST ANNUAL MEAN					32.1	1985
HIGHEST DAILY MEAN	1760	Mar 16	2530	Apr 25	5170	Oct 3 1986
LOWEST DAILY MEAN	7.2	Jul 31	8.1	Oct 1	5.0	Sep 26 1985
ANNUAL SEVEN-DAY MINIMUM	8.7	Sep 25	11	Oct 10	5.5	Sep 14 1985
INSTANTANEOUS PEAK FLOW			3070	Apr 24	6180	Oct 3 1986
INSTANTANEOUS PEAK STAGE			15.86	Apr 24	19.24	Oct 3 1986
ANNUAL RUNOFF (AC-FT)	244500		303500		154800	
10 PERCENT EXCEEDS	900		950		692	
50 PERCENT EXCEEDS	227		285		58	
90 PERCENT EXCEEDS	11		31		17	



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 discharge. Records poor. Some regulation by Canton Lake (station 07238500). U.S. Geological Survey's satellite telemeter located at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	2770	293	104	464	273	e780	e1070	e920	833	101	57
2	13	2360	323	100	358	273	e760	e1090	945	821	98	55
3	115	948	387	84	406	273	702	e1100	933	793	96	53
4	89	538	529	106	437	273	597	e1010	e940	773	106	53
5	112	320	470	120	427	273	438	e1000	e980	763	132	54
6	56	243	547	115	420	271	309	e1000	e990	756	119	57
7	40	208	1100	262	421	271	433	e1150	e980	751	146	56
8	29	194	677	257	421	288	835	e1160	e975	747	151	54
9	26	179	565	252	413	319	968	e1100	e960	738	223	51
10	24	311	606	251	649	316	1010	e1200	950	898	234	47
11	22	276	599	278	836	297	1090	e1100	955	887	232	45
12	22	195	594	274	833	437	1080	e850	451	771	225	44
13	20	293	586	380	632	1360	1080	e1250	410	743	219	46
14	18	307	580	449	383	685	1060	e1090	460	744	216	41
15	18	310	570	e420	312	454	920	e1110	e520	753	213	38
16	20	308	567	e420	295	335	693	e1110	e790	730	207	37
17	24	307	559	e420	288	473	861	e1120	e810	682	203	36
18	25	303	559	e415	567	657	1100	e1100	960	682	200	36
19	51	299	553	e410	677	993	1130	1300	995	663	169	35
20	43	301	375	e410	465	1090	1120	e1180	984	645	101	34
21	38	296	202	e405	328	882	1130	e1060	1100	631	86	34
22	31	288	145	e395	306	768	1160	e1070	1080	613	79	32
23	29	282	125	e390	292	e734	1290	e1010	1080	515	74	32
24	27	279	135	e360	279	e783	1300	e1000	1250	410	71	31
25	26	278	132	e340	278	e800	2090	e1000	1010	296	68	31
26	25	278	122	e330	278	e800	2840	e990	944	193	66	31
27	25	276	126	e320	278	e790	2510	e990	889	166	64	29
28	25	276	124	e310	276	e780	1220	e980	852	144	63	29
29	26	279	118	e310	---	e770	1000	e975	847	122	61	29
30	30	300	114	510	---	e760	e1060	e940	840	114	60	29
31	487	---	108	772	---	e780	---	e935	---	106	59	---
TOTAL	1548	13802	12490	9969	12019	18258	32566	33040	26800	18483	4142	1236
MEAN	49.9	460	403	322	429	589	1086	1066	893	596	134	41.2
MAX	487	2770	1100	772	836	1360	2840	1300	1250	898	234	57
MIN	12	179	108	84	276	271	309	850	410	106	59	29
AC-FT	3070	27380	24770	19770	23840	36210	64590	65530	53160	36660	8220	2450

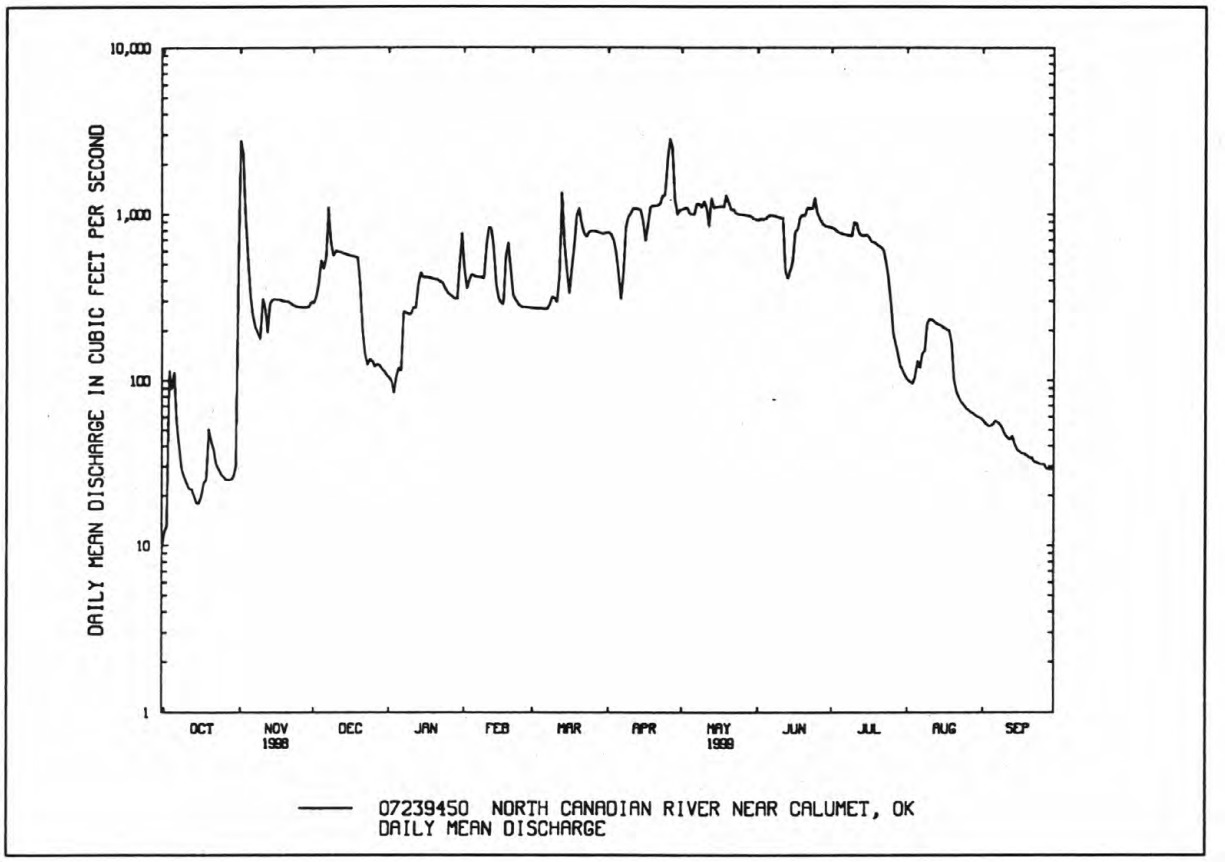
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1999, BY WATER YEAR (WY)

MEAN	183	196	186	205	262	322	435	587	589	229	233	196
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

e Estimated

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1989 - 1999	
ANNUAL TOTAL	158513.6		184353			
ANNUAL MEAN	434		505		301	
HIGHEST ANNUAL MEAN					635	1997
LOWEST ANNUAL MEAN					85.3	1992
HIGHEST DAILY MEAN	4040	Mar 18	2840	Apr 26	8430	May 10 1993
LOWEST DAILY MEAN	9.1	Sep 30	12	Oct 1	9.1	Sep 30 1998
ANNUAL SEVEN-DAY MINIMUM	10	Sep 25	21	Oct 10	10	Sep 25 1998
INSTANTANEOUS PEAK FLOW			3130	Nov 1	9310	May 10 1993
INSTANTANEOUS PEAK STAGE			12.75	Nov 1	14.32	Mar 18 1998
ANNUAL RUNOFF (AC-FT)	314400		365700		218400	
10 PERCENT EXCEEDS	984		1080		852	
50 PERCENT EXCEEDS	300		383		105	
90 PERCENT EXCEEDS	15		37		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 con- ductance, 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, 16.2 mg/L, Sept. 16, 1999; minimum, 3.1 mg/L, July 15, 1989.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,150 microsiemens, Apr. 19; minimum, 132 microsiemens, Nov. 1.
pH: Maximum, 8.9 units, Oct. 8, 9; minimum, 7.7 units, Sept. 25, 26, 27.
WATER TEMPERATURE: Maximum 33.0°C, July 23, Aug. 28, 29; minimum, 0.5°C, several days in Jan.
DISSOLVED OXYGEN: Maximum, 16.2 mg/L, Sept. 16; minimum, 4.7 mg/L, Apr. 27.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
29...	1033	5.00	13.5	740	1028	1028	30	5.16	1410	11.2	7.9
29...	1035	15.0	12.5	740	1028	1028	30	5.16	1410	11.5	7.9
29...	1036	20.0	12.5	740	1028	1028	30	5.16	1380	11.5	7.9
29...	1037	25.0	12.5	740	1028	1028	30	5.16	1410	11.5	7.9
29...	1038	30.0	12.5	740	1028	1028	30	5.16	1410	11.4	7.9
29...	1039	35.0	12.5	740	1028	1028	30	5.16	1400	11.4	8.0
29...	1040	40.0	12.5	740	1028	1028	30	5.16	1390	11.3	8.0
29...	1041	45.0	12.5	740	1028	1028	30	5.16	1390	11.2	8.0
29...	1042	50.0	12.5	740	1028	1028	30	5.16	1410	11.3	8.0
29...	1043	55.0	12.5	740	1028	1028	30	5.16	1400	11.5	8.0

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT												
06...	1000	1028	80020	52	515	8.7	15.0	14.5	220	734	8.7	89
NOV												
03...	0945	1028	80020	983	244	7.1	10.0	10.5	180	730	9.6	90
DEC												
01...	0947	1028	80020	268	1360	8.1	16.5	12.5	27	737	9.5	93
JAN												
05...	1015	1028	80020	160	1600	8.2	.0	.0	2.0	731	13.3	96
FEB												
23...	0920	1028	80020	288	1520	8.3	12.5	5.5	28	733	11.9	98
MAR												
17...	1045	1028	80020	443	1140	8.3	17.0	9.0	42	734	9.6	86
APR												
07...	0945	1028	80020	376	747	8.0	15.5	15.5	580	747	8.3	85
MAY												
26...	1300	1028	80020	1050	1370	8.2	19.5	21.0	80	755	8.1	92
JUN												
22...	1035	1028	80020	1080	1320	8.4	22.0	23.0	72	725	7.3	90
JUL												
07...	1055	1028	80020	756	1420	8.4	33.5	27.0	100	735	7.5	99
AUG												
04...	1005	1028	80020	106	1450	8.2	30.5	26.5	2.3	742	7.9	101
SEP												
01...	1200	1028	80020	58	1490	8.2	28.0	26.0	2.6	740	11.7	150

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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												
06...	--	13	K180	K200	--	--	--	--	--	--	--	--
NOV												
03...	.79	7.7	4900	4800	82	--	22	6.7	13	25	.6	3.8
DEC												
01...	1.3	.7	220	290	--	--	--	--	--	--	--	--
JAN												
05...	1.7	6.4	K30	340	--	--	--	--	--	--	--	--
FEB												
23...	--	3.3	920	160	480	270	120	46	138	38	3	5.8
MAR												
17...	1.4	3.0	900	700	--	--	--	--	--	--	--	--
APR												
07...	1.0	13	34000	15000	--	--	--	--	--	--	--	--
MAY												
26...	1.2	2.6	100	2600	420	220	100	39	119	38	3	5.9
JUN												
22...	.91	6.9	1300	2200	--	--	--	--	--	--	--	--
JUL												
07...	--	7.5	240	9800	--	--	--	--	--	--	--	--
AUG												
04...	--	5.7	K35	200	420	210	95	45	144	42	3	6.1
SEP												
01...	--	1.7	1400	8500	--	--	--	--	--	--	--	--

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												
06...	105	0	86	.3	--	--	--	--	--	--	--	--
NOV												
03...	122	0	100	11	40	9.4	.20	5.2	151	163	.21	401
DEC												
01...	198	0	162	2.4	--	--	--	--	--	--	--	--
JAN												
05...	404	0	331	4.2	--	--	--	--	--	--	--	--
FEB												
23...	255	0	209	2.0	310	180	.64	15	980	934	1.33	762
MAR												
17...	289	6	248	2.3	--	--	--	--	--	--	--	--
APR												
07...	184	0	151	3.4	--	--	--	--	--	--	--	--
MAY												
26...	244	5	208	2.5	260	160	.61	10	874	833	1.19	2480
JUN												
22...	210	5	180	1.7	--	--	--	--	--	--	--	--
JUL												
07...	259	6	222	2.0	--	--	--	--	--	--	--	--
AUG												
04...	263	0	216	2.7	270	180	.69	22	932	887	1.27	267
SEP												
01...	243	0	199	2.5	--	--	--	--	--	--	--	--

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
06...	210	.763	3.4	.056	.18	.819	.244	.31	--	--	.135
NOV											
03...	312	.377	1.7	.015	.05	.392	.086	.11	.31	.40	.171
DEC											
01...	69	--	--	<.010	--	.260	.130	.17	.92	1.0	.159
JAN											
05...	8	--	--	<.010	--	.621	.612	.79	.49	1.1	.130
FEB											
23...	41	--	--	<.010	--	<.050	.109	.14	1.0	1.1	E.034
MAR											
17...	120	.445	2.0	.026	.09	.471	.286	.37	.64	.93	.120
APR											
07...	1150	.500	2.2	.026	.09	.526	.057	.07	.44	.49	.064
MAY											
26...	94	--	--	<.010	--	.368	.098	.13	.71	.81	<.050
JUN											
22...	149	--	--	<.010	--	.114	.067	.09	.73	.80	.110
JUL											
07...	114	--	--	<.010	--	<.050	<.020	--	--	.41	.063
AUG											
04...	38	--	--	<.010	--	<.050	.026	.03	.38	.41	<.050
SEP											
01...	7	--	--	<.010	--	<.050	.041	.05	.70	.74	.060

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											
06...	.122	.37	--	--	--	--	--	--	--	--	--
NOV											
03...	.155	.48	2	42	<1.6	<8.0	<14	<7.0	<10	<10	<100
DEC											
01...	.071	.22	--	--	--	--	--	--	--	--	--
JAN											
05...	.126	.39	--	--	--	--	--	--	--	--	--
FEB											
23...	.032	.10	4	131	<1.6	<8.0	<14	<7.0	<10	<10	<100
MAR											
17...	.116	.36	--	--	--	--	--	--	--	--	--
APR											
07...	.058	.18	--	--	--	--	--	--	--	--	--
MAY											
26...	.024	.07	5	120	<1.6	<8.0	<14	<7.0	<10	E5.3	<100
JUN											
22...	.100	.31	--	--	--	--	--	--	--	--	--
JUL											
07...	.057	.17	--	--	--	--	--	--	--	--	--
AUG											
04...	.010	.03	6	121	<1.6	<8.0	<14	<7.0	<10	<10	<100
SEP											
01...	.056	.17	--	--	--	--	--	--	--	--	--

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
06...	--	--	--	--	--	--	--	--	--	--	--
NOV											
03...	E5	<3.0	<.1	<50	<40	1	<4.0	167	E6	<20	17
DEC											
01...	--	--	--	--	--	--	--	--	--	--	--
JAN											
05...	--	--	--	--	--	--	--	--	--	--	--
FEB											
23...	39	<3.0	<.1	<50	<40	<1	<4.0	1150	E9	E9.6	8.8
MAR											
17...	--	--	--	--	--	--	--	--	--	--	--
APR											
07...	--	--	--	--	--	--	--	--	--	--	--
MAY											
26...	35	E2.2	<.1	<50	<40	<1	<4.0	997	E7	E15	50
JUN											
22...	--	--	--	--	--	--	--	--	--	--	--
JUL											
07...	--	--	--	--	--	--	--	--	--	--	--
AUG											
04...	49	6.3	<.1	<50	<40	<1	<4.0	1110	<10	<20	--
SEP											
01...	--	--	--	--	--	--	--	--	--	--	--

DATE	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)	PCNS UNFILT RECOVER (UG/L) (39250)
NOV											
03...	1028	80020	E.220	<.100	<.100	<.200	<.100	<.100	<.100	<5.00	<.100
FEB											
23...	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<5.00	<.100
MAY											
26...	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<5.00	<.100
AUG											
04...	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<5.00	<.100

DATE	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)	AME-TRYNE TOTAL (UG/L) (82184)
NOV											
03...	<.200	<.200	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.200	<.100
FEB											
23...	<.200	<.200	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.200	<.100
MAY											
26...	<.200	<.200	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.200	<.100
AUG											
04...	<.200	<.200	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.200	<.100

DATE	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)	P,P'-DDE, TOTAL (UG/L) (39365)
NOV											
03...	<.100	<.200	<.200	<.100	<3.00	<.010	<.200	.016	<.001	<.500	<.001
FEB											
23...	<.100	<.200	<.200	<.100	<3.00	<.010	<.200	.010	<.001	<.500	<.001
MAY											
26...	E.120	<.200	<.200	<.100	<3.00	<.010	<.200	.042	<.001	<.500	<.001
AUG											
04...	<.100	<.200	<.200	<.200	<3.00	<.010	<.200	.012	<.001	<.500	<.001

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	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										
03...	.560	<.001	<.500	<.060	<.020	<.001	<.200	--	<.010	<.001
FEB										
23...	<.200	<.001	<.500	<.010	<.010	<.001	<.200	<.030	<.010	<.001
MAY										
26...	<.200	<.001	<.500	<.010	<.010	<.001	<.200	<.010	<.010	<.001
AUG										
04...	<.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										
03...	<.200	<.001	<.200	<.020	<.001	<.200	<.001	<.200	<.001	<.200
FEB										
23...	<.200	<.001	<.200	<.010	<.001	<.200	<.001	<.200	<.001	<.200
MAY										
26...	<.200	<.001	<.200	<.010	<.001	<.200	<.001	<.200	<.001	<.200
AUG										
04...	<.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										
03...	.020	<.010	<2.50	<.020	<.010	<.200	<.010	<.100	--	<.200
FEB										
23...	<.020	<.010	<2.50	<.010	<.010	<.200	<.010	<.100	<.010	<.200
MAY										
26...	<.010	<.010	<2.50	<.010	<.010	<.200	<.010	<.100	<.010	<.200
AUG										
04...	<.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										
03...	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<50.0	<.100	<.050
FEB										
23...	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<50.0	<.100	<.010
MAY										
26...	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<50.0	<.100	<.010
AUG										
04...	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<50.0	<.100	<.010

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1360	1240	1300	235	132	166	1380	1350	1370	1430	1420	1420
2	1250	884	1040	198	163	186	1400	1380	1390	1440	1420	1430
3	1300	440	794	309	198	242	1400	1340	1390	1460	1440	1450
4	581	379	463	474	309	392	1350	1080	1230	1510	1460	1480
5	620	344	459	661	474	560	1330	1250	1290	1530	1500	1520
6	698	406	553	803	661	730	1320	1040	1270	1510	1490	1500
7	895	698	857	939	803	872	1090	550	681	1500	1420	1440
8	855	829	841	995	939	968	1050	779	899	1420	1410	1420
9	838	814	826	---	---	---	1280	1050	1200	1460	1420	1440
10	991	832	916	---	---	---	1350	1280	1320	1470	1450	1460
11	1110	989	1060	879	696	768	1370	1330	1350	1460	1460	1460
12	1210	1110	1170	1050	841	913	1370	1330	1350	1460	1450	1450
13	1290	1210	1260	1390	1050	1250	1380	1360	1380	1480	1450	1460
14	1330	1270	1310	1410	1340	1380	1380	1380	1380	1490	1470	1480
15	1370	1320	1340	1360	1270	1310	1390	1380	1390	1480	1470	1470
16	1400	1320	1360	1390	1270	1350	1400	1390	1390	1470	1470	1470
17	1330	1250	1300	1460	1360	1400	1400	1390	1400	1480	1470	1470
18	1310	1270	1290	1380	1350	1370	1400	1390	1400	1480	1470	1470
19	1310	1050	1260	1420	1350	1390	1410	1400	1410	1480	1470	1480
20	1050	610	746	1420	1340	1390	1410	1400	1400	1480	1470	1480
21	1190	747	988	1400	1340	1380	1410	1400	1410	1480	1470	1480
22	1190	1020	1130	1390	1350	1370	1460	1400	1430	1470	1470	1470
23	1070	941	980	1360	1350	1360	1480	1450	1460	1480	1460	1470
24	1160	1070	1140	1370	1340	1350	1500	1470	1480	1460	1450	1460
25	1170	1140	1160	1360	1330	1350	1510	1480	1490	1480	1460	1470
26	1180	1160	1170	1360	1350	1350	1490	1470	1480	1480	1480	1480
27	1250	1180	1220	1400	1320	1370	1480	1400	1450	1490	1480	1480
28	1300	1240	1270	1390	1370	1380	1420	1400	1410	1500	1480	1490
29	1340	1280	1320	1430	1340	1380	1420	1400	1410	1490	1410	1470
30	1350	1130	1290	1440	1360	1380	1420	1390	1410	1410	1210	1350
31	1270	170	527	---	---	---	1420	1410	1420	1210	812	927
MONTH	1400	170	1040	---	---	---	1510	550	1350	1530	812	1450

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1200	919	1070	---	---	---	1540	1510	1520	1330	1200	1280
2	1360	1200	1300	---	---	---	1540	1520	1530	1260	1120	1170
3	1380	1330	1370	1550	1540	1540	1540	1520	1530	1150	1090	1110
4	---	---	---	1560	1540	1550	1530	1520	1530	1110	1090	1100
5	---	---	---	1560	1550	1560	1530	1310	1430	1110	1100	1110
6	---	---	---	1570	1560	1560	1470	1330	1400	1110	1100	1100
7	---	---	---	1570	1550	1560	1470	830	1090	1150	1110	1130
8	---	---	---	1580	1510	1530	1380	882	1100	1210	1150	1200
9	---	---	---	1520	1480	1510	1530	1370	1470	1210	1200	1210
10	---	---	---	1510	1470	1490	1570	1530	1550	1200	1170	1180
11	---	---	---	1550	1510	1540	1580	1570	1580	1210	1190	1190
12	---	---	---	1550	1070	1450	1590	1580	1580	1300	1210	1250
13	---	---	---	1100	549	714	1580	1570	1580	1320	1300	1320
14	---	---	---	665	593	620	1600	1540	1560	1320	1300	1320
15	---	---	---	855	665	777	1580	1300	1460	1320	1310	1310
16	---	---	---	1060	855	948	1520	1320	1420	---	---	---
17	---	---	---	1390	1060	1150	1640	1520	1600	---	---	---
18	---	---	---	1450	1390	1440	1640	1630	1640	1320	1250	1290
19	---	---	---	1440	1050	1320	1650	1640	1640	1400	1320	1370
20	---	---	---	1050	852	968	1640	1630	1630	1390	1380	1390
21	---	---	---	1280	976	1130	1630	1610	1620	1380	1370	1370
22	---	---	---	1410	1280	1350	1620	1600	1610	1380	1370	1370
23	---	---	---	1430	1410	1420	1610	1020	1460	1380	1360	1370
24	---	---	---	1480	1430	1450	1370	1020	1190	1360	1350	1360
25	---	---	---	1500	1480	1490	1410	598	1060	1360	1350	1360
26	---	---	---	1510	1490	1500	598	442	476	1360	1350	1350
27	---	---	---	1500	1490	1500	516	401	445	1350	1340	1350
28	---	---	---	1520	1500	1510	823	516	677	1350	1340	1350
29	---	---	---	1520	1510	1510	1210	823	960	1350	1340	1350
30	---	---	---	1520	1510	1510	1300	1200	1250	1360	1350	1360
31	---	---	---	1520	1510	1510	---	---	---	1370	1360	1370
MONTH	---	---	---	---	---	---	1650	401	1350	---	---	---

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1370	1370	1370	1390	1380	1390	---	---	---	1470	1450	1460
2	1380	1370	1370	1400	1380	1390	---	---	---	1480	1460	1470
3	1390	1380	1390	1400	1390	1400	---	---	---	1490	1470	1480
4	1400	1370	1390	1410	1400	1400	---	---	---	1480	1470	1480
5	1390	1370	1380	1410	1390	1410	1420	1110	1280	1470	1450	1460
6	1390	1380	1390	1420	1410	1410	1130	962	1060	1460	1450	1460
7	1400	1390	1390	1420	1410	1410	1280	1060	1180	1460	1450	1450
8	1410	1400	1400	1420	1410	1410	1290	635	898	1450	1420	1440
9	---	---	---	1420	1360	1410	1440	708	1250	1480	1450	1460
10	1410	1400	1410	1360	1060	1260	1440	1440	1440	1500	1430	1480
11	1410	878	1340	1350	1240	1290	1440	1410	1430	1450	1370	1410
12	950	701	793	1380	1270	1340	1420	1390	1410	1390	1360	1370
13	1290	950	1110	1400	1380	1390	1430	1420	1420	1400	1380	1390
14	---	---	---	1390	1380	1380	1440	1430	1430	1380	1340	1360
15	---	---	---	1390	1370	1380	1440	1420	1430	1360	1330	1340
16	---	---	---	1400	1390	1390	1440	1420	1430	1390	1350	1370
17	---	---	---	1410	1400	1400	1440	1420	1430	1410	1380	1400
18	1400	1390	1400	1420	1410	1410	1450	1440	1440	1440	1400	1420
19	1400	1380	1390	1420	1390	1410	1440	1430	1430	1470	1440	1450
20	1400	1380	1390	1430	1420	1430	1440	1420	1430	1470	1360	1410
21	1390	1060	1320	1430	1420	1420	1440	1420	1440	1380	1360	1370
22	1350	1090	1290	1440	1420	1440	1440	1400	1420	1400	1380	1400
23	1360	1320	1340	1450	1430	1450	---	---	---	1400	1390	1400
24	1360	1100	1250	1450	1430	1440	---	---	---	1410	1390	1400
25	1310	1190	1240	1460	1430	1440	---	---	---	1390	1380	1380
26	1360	1310	1330	1460	1400	1430	1450	1420	1440	1400	1370	1390
27	1380	1360	1370	1430	1400	1410	1450	1400	1430	1390	1370	1380
28	1390	1380	1380	1430	1420	1420	1450	1400	1440	1380	1370	1380
29	1400	1370	1390	1450	1400	1420	1450	1380	1410	1420	1380	1410
30	1400	1380	1390	---	---	---	1460	1450	1460	1430	1420	1430
31	---	---	---	---	---	---	1460	1450	1450	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	1500	1330	1420

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.7	8.1	8.3	8.4	8.1	8.3	8.3	8.1	8.2	8.3	8.3	8.3
2	8.7	8.2	8.4	8.3	8.2	8.2	8.3	8.2	8.3	8.4	8.3	8.3
3	8.5	8.2	8.3	---	---	---	8.3	8.2	8.2	8.3	8.3	8.3
4	---	---	---	---	---	---	8.3	8.1	8.2	8.3	8.2	8.3
5	---	---	---	---	---	---	8.3	8.2	8.2	8.3	8.3	8.3
6	---	---	---	---	---	---	8.3	8.1	8.2	8.4	8.3	8.3
7	8.9	8.3	8.6	---	---	---	8.1	7.9	8.0	8.4	8.4	8.4
8	8.8	8.2	8.5	---	---	---	8.2	8.1	8.2	8.4	8.3	8.4
9	8.9	8.2	8.5	---	---	---	8.3	8.2	8.2	8.4	8.3	8.3
10	8.8	8.2	8.5	---	---	---	8.3	8.2	8.3	8.4	8.3	8.3
11	8.8	8.3	8.6	8.1	8.0	8.1	8.4	8.3	8.3	8.4	8.2	8.3
12	8.7	8.2	8.5	8.1	8.1	8.1	8.3	8.3	8.3	8.4	8.3	8.4
13	8.7	8.1	8.4	8.3	8.1	8.2	8.4	8.2	8.3	8.4	8.3	8.4
14	8.6	8.1	8.4	8.2	8.1	8.1	8.3	8.3	8.3	8.4	8.2	8.3
15	8.6	8.1	8.4	8.2	8.1	8.1	8.4	8.3	8.3	8.4	8.4	8.4
16	8.4	8.1	8.2	8.2	8.1	8.1	8.4	8.3	8.3	8.4	8.4	8.4
17	8.5	8.1	8.3	8.2	8.1	8.2	8.4	8.3	8.3	8.4	8.3	8.4
18	8.5	8.1	8.3	8.1	8.1	8.1	8.4	8.3	8.3	8.4	8.4	8.4
19	8.6	8.2	8.4	8.2	8.1	8.1	8.4	8.3	8.3	8.4	8.4	8.4
20	8.4	8.0	8.2	8.3	8.1	8.2	8.4	8.2	8.3	8.4	8.3	8.4
21	8.6	8.1	8.4	8.3	8.2	8.2	8.2	8.2	8.2	8.4	8.3	8.4
22	8.5	8.3	8.4	8.2	8.2	8.2	8.2	8.1	8.1	8.4	8.3	8.4
23	8.4	8.1	8.3	8.2	8.2	8.2	8.2	8.1	8.2	8.3	8.2	8.2
24	8.4	8.2	8.3	8.2	8.2	8.2	8.3	8.2	8.3	8.3	8.2	8.2
25	8.4	8.2	8.3	8.2	8.1	8.2	8.3	8.3	8.3	8.3	8.3	8.3
26	8.4	8.1	8.3	8.2	8.1	8.2	8.3	8.3	8.3	8.3	8.3	8.3
27	8.4	8.1	8.2	8.2	8.2	8.2	8.3	8.3	8.3	8.4	8.2	8.3
28	8.4	8.1	8.2	8.2	8.2	8.2	8.3	8.3	8.3	8.3	8.3	8.3
29	8.4	8.1	8.3	8.2	8.1	8.2	8.3	8.3	8.3	8.4	8.3	8.3
30	8.4	7.9	8.2	8.2	8.2	8.2	8.4	8.3	8.4	8.3	8.2	8.3
31	8.3	7.8	8.1	---	---	---	8.4	8.3	8.3	8.2	8.1	8.2
MAX	---	---	---	---	---	---	8.4	8.3	8.4	8.4	8.4	8.4
MIN	---	---	---	---	---	---	8.1	7.9	8.0	8.2	8.1	8.2

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.3	8.2	8.3	8.6	8.4	8.5	8.7	8.6	8.7	---	---	---
2	8.4	8.3	8.3	8.6	8.4	8.5	8.7	8.5	8.6	---	---	---
3	8.4	8.3	8.4	8.6	8.4	8.5	8.7	8.5	8.6	---	---	---
4	8.5	8.4	8.4	8.5	8.4	8.5	8.6	8.5	8.6	---	---	---
5	8.5	8.4	8.5	8.5	8.4	8.5	8.6	8.4	8.5	---	---	---
6	8.5	8.4	8.4	8.6	8.4	8.5	8.5	8.4	8.4	---	---	---
7	8.5	8.3	8.4	8.5	8.5	8.5	8.5	8.2	8.3	---	---	---
8	8.5	8.4	8.5	8.6	8.4	8.5	8.4	8.3	8.3	---	---	---
9	8.5	8.4	8.4	8.6	8.5	8.5	8.5	8.4	8.4	---	---	---
10	8.4	8.3	8.4	8.6	8.5	8.5	8.5	8.4	8.4	---	---	---
11	8.4	8.3	8.4	8.6	8.5	8.5	8.6	8.4	8.5	---	---	---
12	8.5	8.4	8.4	8.5	8.2	8.5	8.6	8.5	8.5	---	---	---
13	8.5	8.4	8.4	8.2	8.1	8.1	8.5	8.5	8.5	---	---	---
14	8.5	8.5	8.5	8.2	8.1	8.2	8.6	8.5	8.5	---	---	---
15	8.5	8.4	8.5	8.3	8.2	8.3	8.6	8.5	8.6	---	---	---
16	8.5	8.4	8.4	8.4	8.3	8.3	8.6	8.5	8.6	---	---	---
17	8.5	8.4	8.5	8.4	8.3	8.4	8.6	8.6	8.6	---	---	---
18	8.5	8.4	8.4	8.5	8.4	8.4	8.6	8.6	8.6	---	---	---
19	8.6	8.4	8.5	8.5	8.4	8.4	8.6	8.6	8.6	8.6	8.4	8.4
20	8.6	8.5	8.5	8.4	8.3	8.4	8.6	8.5	8.6	8.6	8.5	8.5
21	8.6	8.5	8.5	8.5	8.3	8.4	---	---	---	8.5	8.5	8.5
22	8.6	8.5	8.5	8.6	8.5	8.6	---	---	---	8.5	8.5	8.5
23	8.5	8.4	8.5	8.6	8.5	8.6	---	---	---	8.5	8.5	8.5
24	8.5	8.4	8.5	8.6	8.5	8.6	---	---	---	8.5	8.5	8.5
25	8.5	8.4	8.5	8.7	8.6	8.6	---	---	---	8.5	8.5	8.5
26	8.6	8.4	8.5	8.7	8.6	8.6	---	---	---	8.5	8.5	8.5
27	8.6	8.5	8.6	8.7	8.6	8.6	---	---	---	8.5	8.5	8.5
28	8.6	8.5	8.5	8.7	8.6	8.6	---	---	---	8.5	8.4	8.5
29	---	---	---	8.6	8.6	8.6	---	---	---	8.5	8.4	8.5
30	---	---	---	8.7	8.6	8.6	8.4	8.3	8.4	8.5	8.5	8.5
31	---	---	---	8.7	8.6	8.7	---	---	---	8.5	8.4	8.5
MAX	8.6	8.5	8.6	8.7	8.6	8.7	---	---	---	---	---	---
MIN	8.3	8.2	8.3	8.2	8.1	8.1	---	---	---	---	---	---

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.5	8.4	8.5	8.6	8.6	8.6	8.2	8.0	8.1	8.5	8.3	8.4
2	8.5	8.4	8.4	8.7	8.6	8.6	8.2	8.0	8.1	8.5	8.3	8.4
3	8.5	8.4	8.4	8.7	8.6	8.6	8.1	7.9	8.0	8.5	8.3	8.4
4	8.6	8.5	8.5	8.7	8.6	8.6	8.2	8.0	8.1	8.5	8.3	8.4
5	8.5	8.4	8.5	8.7	8.6	8.6	8.3	7.9	8.2	8.5	8.3	8.4
6	8.5	8.4	8.4	8.7	8.6	8.6	8.5	8.0	8.2	8.5	8.3	8.4
7	8.5	8.4	8.5	8.7	8.6	8.6	8.5	7.9	8.2	8.5	8.3	8.3
8	8.5	8.5	8.5	8.7	8.6	8.6	8.0	7.8	7.9	8.4	8.2	8.3
9	---	---	---	8.6	8.5	8.6	8.2	7.8	8.0	8.4	8.2	8.3
10	---	---	---	8.7	8.5	8.6	8.5	8.1	8.4	8.4	8.2	8.3
11	---	---	---	8.6	8.5	8.5	8.5	8.2	8.3	8.5	8.1	8.3
12	---	---	---	8.7	8.5	8.6	8.5	8.0	8.2	8.5	8.2	8.3
13	---	---	---	8.7	8.6	8.7	8.4	8.1	8.2	8.4	8.3	8.3
14	---	---	---	8.7	8.5	8.6	8.5	8.2	8.4	8.4	8.2	8.3
15	---	---	---	8.6	8.5	8.6	8.5	8.3	8.3	8.4	8.1	8.3
16	---	---	---	8.6	8.5	8.6	8.5	8.3	8.4	8.4	8.1	8.2
17	---	---	---	8.6	8.5	8.6	8.5	8.3	8.4	8.3	8.1	8.2
18	---	---	---	8.6	8.4	8.5	8.5	8.3	8.4	8.4	8.1	8.2
19	8.6	8.5	8.6	8.5	8.4	8.5	8.5	8.3	8.4	8.3	8.1	8.2
20	8.6	8.5	8.6	8.5	8.4	8.5	8.5	8.3	8.4	8.2	7.9	8.1
21	8.5	8.3	8.5	8.5	8.4	8.5	8.6	8.3	8.4	8.1	7.9	8.0
22	8.5	8.3	8.5	8.4	8.3	8.4	8.6	8.3	8.5	8.0	7.9	7.9
23	8.5	8.5	8.5	8.4	8.2	8.3	8.6	8.4	8.5	8.1	7.9	8.0
24	8.5	8.3	8.4	8.3	8.2	8.2	8.6	8.4	8.5	8.1	7.9	7.9
25	8.4	8.4	8.4	8.3	8.1	8.2	8.5	8.4	8.4	8.0	7.7	7.9
26	8.5	8.4	8.5	8.3	8.0	8.1	8.5	8.3	8.4	8.0	7.7	7.8
27	8.6	8.5	8.6	8.3	8.0	8.1	8.5	8.3	8.4	8.0	7.7	7.9
28	8.6	8.6	8.6	8.3	8.0	8.1	8.5	8.3	8.4	8.0	7.8	7.9
29	8.6	8.5	8.5	8.2	8.0	8.1	8.5	8.3	8.4	8.0	7.8	7.9
30	8.6	8.5	8.5	8.2	8.0	8.1	8.4	8.2	8.3	8.0	7.8	7.9
31	---	---	---	8.2	8.0	8.1	8.5	8.2	8.3	---	---	---
MAX	---	---	---	8.7	8.6	8.7	8.6	8.4	8.5	8.5	8.3	8.4
MIN	---	---	---	8.2	8.0	8.1	8.0	7.8	7.9	8.0	7.7	7.8

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	25.0	18.5	22.0	14.0	11.5	12.0	14.5	12.5	13.5	4.0	3.0	3.5
2	21.0	18.0	19.5	11.5	11.0	11.5	14.0	12.5	13.5	3.5	1.0	2.5
3	20.0	18.5	19.5	11.5	11.0	11.5	15.5	13.5	14.5	1.0	.5	.5
4	24.5	20.0	22.0	11.0	10.5	11.0	15.5	14.5	15.0	1.0	.5	.5
5	22.5	17.0	19.5	10.5	10.0	10.0	15.0	13.5	14.5	2.5	.5	1.5
6	20.0	15.0	17.5	10.0	10.0	10.0	14.5	12.0	13.5	5.0	1.0	3.0
7	22.0	15.0	18.0	10.5	10.0	10.5	12.0	9.0	10.0	3.5	1.0	1.5
8	22.5	15.0	18.5	11.0	10.5	11.0	9.0	8.0	8.5	1.0	.5	.5
9	22.0	15.5	18.5	---	---	---	8.5	7.0	8.0	.5	.5	.5
10	23.0	15.5	19.0	---	---	---	9.0	8.5	8.5	1.0	.5	.5
11	24.0	16.5	20.0	12.0	10.0	11.0	9.0	8.5	8.5	3.0	.5	1.5
12	23.5	18.0	20.5	12.0	10.0	11.0	9.0	8.0	8.5	5.0	3.0	4.0
13	24.0	17.5	20.5	12.0	11.0	11.5	8.5	7.5	8.0	5.0	2.5	3.5
14	24.5	18.0	21.0	13.0	12.0	12.5	9.0	7.5	8.0	3.5	2.0	2.5
15	23.0	18.0	20.5	13.5	11.5	12.5	9.0	7.5	8.5	4.5	2.5	3.5
16	20.5	19.0	19.5	14.0	12.0	13.0	9.0	7.5	8.5	5.0	3.0	4.0
17	22.0	18.5	20.0	14.0	12.0	13.0	8.5	7.5	8.0	6.0	4.0	5.0
18	20.0	14.0	17.0	15.5	13.5	14.0	8.0	7.5	7.5	5.5	4.0	5.0
19	20.0	14.0	17.0	14.5	11.5	13.0	8.0	6.5	7.5	6.5	4.5	5.5
20	17.0	15.0	15.5	11.5	10.0	11.0	6.5	5.5	6.0	6.5	4.5	5.5
21	17.5	13.5	15.0	11.5	9.5	10.5	5.5	1.0	3.5	7.5	5.5	6.5
22	17.0	11.5	14.5	12.0	9.5	11.0	1.5	1.0	1.0	7.0	5.0	6.0
23	17.0	11.5	14.0	13.5	11.5	12.5	1.5	1.0	1.0	5.5	4.0	5.0
24	16.0	12.5	14.0	13.5	11.0	12.5	2.0	1.0	1.0	6.0	4.0	5.0
25	18.5	12.0	15.0	13.5	12.0	12.5	2.0	1.0	1.0	5.5	4.5	5.0
26	20.5	14.5	17.0	12.5	10.5	11.5	4.0	1.0	2.5	7.0	4.0	5.5
27	21.0	15.5	18.0	13.5	11.0	12.0	5.0	3.0	3.5	8.5	6.5	7.5
28	21.5	17.5	19.0	15.0	13.0	14.0	5.5	2.5	4.0	8.0	6.0	6.5
29	21.0	16.5	18.5	15.5	14.5	15.0	6.5	4.0	5.0	6.0	4.0	5.0
30	17.5	15.5	16.5	15.5	14.0	14.5	5.0	2.5	4.0	4.0	4.0	4.0
31	17.0	14.0	15.0	---	---	---	4.5	2.5	3.5	4.5	3.5	4.0
MONTH	25.0	11.5	18.1	---	---	---	15.5	1.0	7.4	8.5	.5	3.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.0	4.5	5.5	14.0	10.5	12.0	16.5	13.5	15.0	19.0	18.0	18.5
2	8.0	5.5	7.0	14.0	12.0	12.5	18.5	16.0	17.0	19.5	17.5	18.5
3	8.5	6.0	7.0	12.5	9.5	11.5	18.0	16.5	17.5	20.5	18.0	19.5
4	8.5	6.0	7.5	12.0	9.0	10.5	16.5	14.5	15.5	21.0	20.0	20.5
5	10.5	7.5	8.5	14.0	11.0	12.5	18.0	15.0	16.5	20.0	18.0	19.0
6	11.0	10.5	11.0	13.0	10.5	12.0	18.5	14.0	16.0	19.0	17.0	18.0
7	11.0	9.5	10.5	11.0	8.5	9.5	17.0	15.0	16.5	19.0	17.0	18.0
8	11.0	9.0	10.0	11.0	7.5	9.0	18.0	17.0	17.0	20.5	18.0	19.5
9	11.0	9.5	10.5	11.5	8.0	10.0	18.0	15.5	16.5	21.5	20.0	20.5
10	12.0	10.0	11.0	12.5	9.0	11.0	17.5	16.0	17.0	21.0	20.0	20.5
11	12.0	10.0	11.5	12.0	9.5	10.5	17.5	15.5	16.5	21.0	19.5	20.0
12	10.0	8.0	8.5	9.5	6.0	8.0	17.0	15.5	16.5	20.5	18.0	19.5
13	8.0	6.5	7.5	6.0	4.0	5.0	17.0	16.0	16.5	21.5	18.5	20.0
14	9.0	6.0	7.5	5.5	3.5	4.5	18.0	16.5	17.5	22.0	20.0	21.0
15	10.5	7.0	9.0	8.5	4.5	6.5	16.5	14.0	15.0	---	---	---
16	11.5	9.0	10.0	12.5	7.5	10.0	14.0	12.0	13.5	---	---	---
17	11.0	8.5	10.0	14.0	11.0	12.5	14.0	11.5	13.0	---	---	---
18	10.0	9.0	9.5	13.5	9.5	11.0	15.5	12.5	14.0	---	---	---
19	9.5	8.0	8.5	9.5	8.0	9.0	17.0	14.5	15.5	21.0	20.0	20.5
20	10.0	8.0	9.0	10.5	8.0	9.0	18.5	16.0	17.0	23.5	21.0	22.5
21	9.5	7.5	8.5	13.0	9.5	11.0	19.5	17.5	18.5	24.0	22.0	23.0
22	8.0	6.5	7.5	15.0	12.0	13.5	21.0	18.5	19.5	25.5	23.0	24.0
23	9.5	6.0	7.5	14.5	11.5	12.5	20.0	16.0	18.0	25.0	23.5	24.5
24	11.0	7.0	9.0	11.5	10.0	10.5	16.0	14.0	15.0	24.5	23.0	24.0
25	13.0	9.0	11.0	11.5	9.0	10.5	14.0	13.0	13.5	24.0	22.5	23.0
26	15.5	12.5	14.0	12.5	10.0	11.0	16.0	14.0	15.0	23.5	21.5	22.5
27	14.5	12.0	13.0	12.0	11.0	11.5	18.5	16.0	17.0	23.0	21.5	22.0
28	13.5	10.0	12.0	11.5	10.5	11.0	21.0	18.5	19.5	22.5	21.0	22.0
29	---	---	---	12.5	11.0	11.5	20.5	19.0	19.5	24.0	21.5	22.5
30	---	---	---	13.5	11.5	12.5	19.5	18.0	19.0	26.0	23.0	24.5
31	---	---	---	14.0	12.5	13.5	---	---	---	26.5	24.5	25.5
MONTH	15.5	4.5	9.4	15.0	3.5	10.5	21.0	11.5	16.5	---	---	---

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.0	24.5	25.5	27.5	26.0	27.0	32.5	26.0	29.0	30.5	24.0	27.0
2	27.0	24.5	25.5	28.5	26.0	27.5	32.5	26.5	29.0	29.5	23.5	26.5
3	26.5	25.0	26.0	29.0	26.5	28.0	30.5	26.0	28.0	30.5	23.5	27.0
4	27.5	25.0	26.0	29.0	27.0	28.0	30.5	25.5	28.0	28.5	25.0	26.5
5	27.0	25.0	26.0	29.5	27.0	28.5	29.5	26.5	28.0	28.5	24.0	26.0
6	25.5	24.5	25.0	30.5	27.5	28.5	32.0	25.5	28.5	31.0	23.0	26.5
7	26.0	24.0	25.0	30.5	28.0	29.0	31.5	26.5	29.0	31.0	24.5	27.5
8	27.0	24.5	26.0	30.5	27.5	29.0	32.5	27.5	29.5	29.0	23.0	25.5
9	---	---	---	31.0	28.5	29.5	30.5	28.5	29.5	28.0	21.0	24.5
10	---	---	---	29.5	26.5	27.5	32.0	28.0	30.0	27.5	21.0	24.0
11	25.0	24.0	24.5	27.5	26.0	26.5	32.5	28.5	30.5	27.0	22.0	24.0
12	24.5	23.0	23.5	27.0	25.5	26.0	31.5	27.5	29.5	25.5	21.0	23.5
13	26.0	23.5	24.5	28.0	25.0	26.5	30.0	27.0	28.5	26.0	18.5	22.0
14	---	---	---	29.0	26.5	27.5	29.5	25.0	27.5	26.5	18.0	22.0
15	---	---	---	29.0	27.0	28.0	31.0	25.5	28.0	23.0	20.5	21.5
16	---	---	---	28.0	26.0	27.0	31.0	26.5	28.5	20.5	18.5	19.5
17	---	---	---	28.5	26.0	27.0	31.0	26.0	28.5	25.5	17.5	21.0
18	---	---	---	29.5	27.0	28.0	31.5	26.0	28.5	24.0	20.5	22.0
19	24.5	22.5	23.5	30.0	27.5	29.0	30.5	26.5	28.5	27.5	19.5	23.0
20	25.0	24.0	24.5	30.0	27.5	29.0	30.5	23.5	27.0	23.5	16.5	20.0
21	24.5	23.5	24.0	30.5	27.5	29.0	30.5	24.5	27.0	22.0	14.5	17.5
22	23.5	23.0	23.5	30.5	27.5	29.0	30.5	25.0	27.5	23.5	13.5	18.5
23	25.5	23.0	24.0	31.0	27.5	29.5	32.5	25.5	28.5	23.5	15.0	19.0
24	25.5	24.5	25.0	31.5	28.0	30.0	32.0	25.0	28.5	24.0	16.5	19.5
25	26.0	24.5	25.0	32.0	28.0	30.0	32.0	24.0	28.0	26.0	18.0	21.5
26	28.0	24.5	26.0	32.0	27.5	29.5	32.0	25.0	28.5	28.0	19.5	23.5
27	29.5	26.5	28.0	32.5	27.5	30.0	32.5	25.5	29.0	24.0	17.5	20.0
28	29.5	27.5	28.5	33.0	27.5	30.0	33.0	26.0	29.0	17.5	13.5	15.5
29	28.5	26.0	27.0	32.5	27.5	30.0	33.0	26.5	29.5	21.0	11.5	15.5
30	27.5	26.0	26.5	32.0	26.5	29.0	32.0	25.5	28.5	21.5	12.5	17.0
31	---	---	---	32.5	25.5	29.0	31.0	25.0	27.5	---	---	---
MONTH	---	---	---	33.0	25.0	28.5	33.0	23.5	28.5	31.0	11.5	22.2

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.3	6.8	8.1	8.1	7.2	7.9	9.5	8.7	9.1	11.3	10.8	11.0
2	10.3	6.5	7.7	8.2	7.8	8.0	9.3	8.7	9.0	12.1	10.9	11.5
3	6.7	6.3	6.5	8.3	8.2	8.3	9.0	8.3	8.7	12.5	11.5	11.7
4	6.6	6.2	6.5	8.8	8.3	8.5	8.3	8.0	8.2	12.8	11.2	11.7
5	7.1	6.3	6.8	9.0	8.8	8.9	8.9	8.2	8.5	12.9	11.5	12.0
6	7.8	7.1	7.5	9.2	8.9	9.1	8.7	8.3	8.5	12.0	11.0	11.6
7	10.7	7.4	8.7	9.3	9.1	9.2	9.2	7.9	8.4	12.2	11.2	12.0
8	12.0	7.4	9.0	9.2	9.0	9.1	9.9	9.2	9.7	12.1	11.6	12.0
9	11.6	7.3	8.8	---	---	---	10.3	9.9	10.1	13.2	11.4	12.1
10	13.3	7.3	9.3	---	---	---	10.3	10.0	10.1	13.5	11.0	12.2
11	12.7	6.9	9.2	9.5	9.0	9.3	10.3	10.0	10.1	13.1	11.7	12.3
12	12.3	6.8	8.8	9.4	9.2	9.3	10.3	10.0	10.2	11.8	11.1	11.5
13	11.9	6.9	8.7	9.5	9.2	9.4	10.5	10.1	10.3	11.9	10.9	11.5
14	10.8	6.8	8.2	9.3	9.0	9.1	10.6	10.2	10.4	13.2	11.3	12.2
15	10.6	6.8	8.2	9.3	8.6	9.0	10.7	10.2	10.4	12.6	11.6	12.2
16	8.9	7.0	7.7	9.1	8.5	8.8	10.6	10.1	10.3	12.1	11.3	11.6
17	10.2	7.0	8.0	9.2	8.4	8.8	10.6	10.2	10.4	11.8	11.0	11.4
18	11.1	7.5	9.0	8.6	8.1	8.4	10.3	10.2	10.2	11.9	11.0	11.4
19	10.7	8.1	9.0	9.1	8.2	8.6	10.7	10.1	10.4	11.7	10.9	11.3
20	9.9	8.1	8.7	10.0	9.1	9.6	10.9	10.6	10.8	11.6	10.7	11.1
21	12.0	8.5	9.8	10.1	9.3	9.7	12.0	10.6	11.2	11.3	10.4	10.8
22	11.7	8.4	9.7	10.0	9.1	9.7	12.1	11.6	11.9	10.8	10.3	10.5
23	11.2	8.3	9.4	9.6	9.0	9.3	12.0	11.0	11.7	11.5	10.8	11.1
24	11.4	8.2	9.4	9.8	9.2	9.5	12.5	11.7	12.0	11.6	10.9	11.2
25	11.0	7.6	9.1	9.6	9.1	9.3	12.8	11.5	12.0	---	---	---
26	11.0	7.2	8.7	10.1	9.3	9.7	12.8	11.5	12.0	---	---	---
27	10.9	6.9	8.4	9.9	9.2	9.6	11.6	11.2	11.4	---	---	---
28	10.1	6.6	7.9	9.4	8.6	9.1	11.4	10.8	11.1	---	---	---
29	10.3	6.6	7.9	8.8	8.4	8.6	10.9	10.5	10.7	---	---	---
30	9.9	6.9	8.0	9.2	8.4	8.7	11.5	10.7	11.0	---	---	---
31	7.8	6.3	7.2	---	---	---	11.6	10.8	11.1	---	---	---
MONTH	13.3	6.2	8.4	---	---	---	12.8	7.9	10.3	---	---	---

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	12.4	10.1	11.1	8.7	7.9	8.3	8.8	8.4	8.6
2	---	---	---	11.5	9.6	10.4	8.4	7.5	7.9	8.9	8.6	8.7
3	---	---	---	11.5	9.5	10.3	8.3	7.2	7.7	8.8	8.4	8.7
4	11.5	10.5	11.0	10.9	9.4	10.1	8.6	7.5	8.0	8.4	8.2	8.3
5	11.1	10.2	10.7	10.6	9.1	9.7	7.9	7.2	7.6	9.0	8.3	8.7
6	10.2	9.7	9.9	11.1	9.1	10.0	8.3	7.2	7.8	9.4	8.9	9.2
7	10.9	9.5	10.2	11.0	9.5	10.2	7.4	7.1	7.2	9.3	8.9	9.1
8	11.0	9.9	10.4	10.9	9.6	10.2	7.5	7.3	7.4	9.0	8.7	8.9
9	11.1	9.9	10.3	10.6	9.5	10.0	7.9	7.3	7.6	9.0	8.6	8.8
10	10.5	9.7	10.1	10.4	9.3	9.8	7.8	7.3	7.5	8.6	8.3	8.5
11	10.1	9.3	9.7	10.8	9.1	9.8	7.9	7.4	7.6	8.6	8.3	8.4
12	11.1	10.0	10.6	10.3	9.5	9.9	8.0	7.5	7.8	9.5	8.5	9.0
13	11.8	10.9	11.3	9.8	9.1	9.5	7.7	7.4	7.6	9.7	8.9	9.2
14	11.7	10.8	11.3	10.6	9.8	10.3	7.4	7.2	7.3	9.4	8.6	8.9
15	11.6	10.3	11.0	10.6	9.6	10.2	8.0	7.3	7.6	9.0	8.3	8.6
16	11.6	10.1	10.8	9.7	8.7	9.3	8.3	7.7	8.0	---	---	---
17	11.9	10.3	11.0	8.9	8.6	8.7	8.5	8.0	8.2	---	---	---
18	11.3	10.2	10.8	9.5	8.6	9.1	8.3	7.8	8.1	---	---	---
19	12.1	10.6	11.2	9.8	9.3	9.6	8.0	7.4	7.8	---	---	---
20	12.3	11.0	11.5	9.5	9.0	9.3	7.6	7.1	7.4	---	---	---
21	12.6	11.0	11.7	9.6	8.9	9.2	7.2	6.9	7.1	8.8	7.8	8.2
22	12.8	11.2	11.9	9.7	8.6	9.1	7.0	6.8	6.9	8.7	7.7	8.1
23	12.8	11.4	12.0	9.3	8.3	8.7	6.9	6.4	6.7	8.6	7.4	7.9
24	12.6	10.8	11.8	9.9	8.9	9.4	7.6	6.7	7.2	8.6	7.5	8.0
25	12.6	10.4	11.4	10.2	9.4	9.7	7.6	6.1	6.9	8.5	7.7	8.0
26	12.0	9.8	10.7	9.9	9.1	9.5	6.1	5.1	5.5	8.7	7.8	8.2
27	12.5	9.5	10.8	9.3	8.8	9.1	5.1	4.7	4.9	8.5	7.9	8.2
28	12.5	10.1	11.1	9.6	8.9	9.2	---	---	---	8.5	7.9	8.2
29	---	---	---	9.7	9.0	9.3	8.2	7.3	7.9	8.5	7.8	8.2
30	---	---	---	9.5	8.7	9.1	8.6	8.2	8.4	8.1	7.4	7.8
31	---	---	---	9.0	8.2	8.6	---	---	---	7.9	7.1	7.5
MONTH	---	---	---	12.4	8.2	9.6	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.0	7.1	7.5	7.5	6.5	7.0	8.2	5.7	6.9	12.6	9.5	11.0
2	8.1	7.1	7.6	8.1	6.7	7.3	8.1	5.9	6.9	12.9	10.0	11.4
3	8.1	7.2	7.6	8.3	6.6	7.3	8.5	6.1	7.2	13.1	9.9	11.5
4	8.3	7.2	7.6	8.1	6.6	7.2	8.9	6.2	7.5	13.4	9.9	11.4
5	7.8	7.1	7.4	8.3	6.5	7.3	9.6	6.4	7.6	13.9	10.2	11.9
6	7.9	7.3	7.6	8.4	6.5	7.3	12.3	6.7	9.0	13.4	10.2	11.7
7	8.2	7.4	7.7	8.5	6.6	7.4	13.6	6.1	9.0	13.2	10.2	11.4
8	7.9	7.2	7.5	8.1	6.7	7.3	6.5	5.8	6.3	13.3	10.3	11.7
9	---	---	---	7.5	6.4	6.9	8.5	6.4	7.3	13.9	11.0	12.4
10	---	---	---	7.8	6.1	6.9	9.5	6.9	8.0	14.1	10.6	12.4
11	7.3	6.4	6.9	7.1	6.6	6.9	9.4	6.4	7.7	15.4	10.7	12.8
12	6.7	6.4	6.5	8.2	6.9	7.4	10.2	6.3	7.9	15.3	11.0	12.9
13	7.0	6.5	6.8	8.1	6.8	7.4	9.5	6.6	7.8	15.5	12.2	13.8
14	7.3	6.8	7.1	7.5	6.5	7.0	9.4	7.0	8.0	15.3	11.6	13.5
15	---	---	---	---	---	---	9.2	6.9	7.8	15.9	11.6	13.4
16	---	---	---	---	---	---	9.2	6.7	7.8	16.2	12.3	13.9
17	---	---	---	---	---	---	9.6	6.8	7.9	15.4	10.7	13.5
18	7.6	6.9	7.2	---	---	---	8.8	6.8	7.7	15.2	10.6	12.7
19	7.6	6.5	7.2	---	---	---	8.9	6.8	7.7	14.3	10.4	12.4
20	7.3	6.6	6.9	---	---	---	8.9	7.2	8.0	12.8	9.2	10.5
21	7.2	5.9	6.7	---	---	---	9.2	7.0	8.1	10.7	8.8	9.7
22	7.2	6.1	6.9	---	---	---	9.4	7.3	8.2	10.7	8.4	9.6
23	7.4	6.7	7.1	---	---	---	9.2	7.0	8.0	10.7	8.4	9.4
24	6.7	6.2	6.5	---	---	---	9.1	6.5	7.8	10.6	8.1	9.2
25	7.0	6.5	6.7	---	---	---	10.5	6.5	8.4	10.6	7.5	8.8
26	7.5	6.6	7.0	---	---	---	10.1	8.0	9.0	10.6	7.2	8.4
27	8.0	6.5	7.1	8.1	5.5	6.7	11.1	8.1	9.4	10.7	7.2	8.8
28	8.0	6.3	7.0	8.1	5.9	6.8	11.2	8.4	9.6	10.8	8.8	9.8
29	7.6	6.6	7.0	8.2	5.9	6.7	11.5	8.4	9.8	11.6	9.1	10.5
30	7.7	6.6	7.0	8.0	6.0	6.8	12.0	8.6	10.2	11.5	8.8	10.1
31	---	---	---	7.9	5.8	6.8	12.3	9.1	10.6	---	---	---
MONTH	---	---	---	---	---	---	13.6	5.7	8.2	16.2	7.2	11.4

Canadian River at Calvin May 5, 1941

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 poor. Some regulation by Fort Supply Lake (station 07236500) for period May 1942 to April 1948 and by Canton Lake (station 07238500) thereafter. U.S. Geological Survey's satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 15, 1923, reached an elevation of 1,326.3 ft above mean sea level at railroad bridge 1.1 mi above station, from reports of National Weather Service.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	2070	289	e97	471	261	e740	1090	902	826	120	70
2	e15	1540	285	e89	334	260	e700	1090	891	818	116	68
3	e45	1000	350	e86	345	255	e620	1070	881	798	113	67
4	e80	557	764	e100	376	256	e450	1060	882	771	116	65
5	e90	332	461	e120	367	255	e400	1020	939	759	153	67
6	42	247	432	e130	366	248	e350	980	964	756	142	69
7	47	206	1040	279	373	246	e360	1020	948	751	143	70
8	34	194	672	279	381	263	e700	1010	946	748	189	67
9	e28	172	498	273	369	290	e800	937	939	734	236	64
10	e26	314	531	281	494	290	e1000	1060	934	1530	266	62
11	e24	293	518	265	730	261	e1000	e900	937	1000	267	62
12	e22	188	517	240	697	401	e1000	e710	596	849	258	58
13	e22	258	506	255	517	1210	e1000	e1080	435	794	254	58
14	e22	285	499	305	305	703	e910	e1100	507	774	248	54
15	e21	289	483	300	e290	457	835	e1120	473	790	247	49
16	e20	292	475	e390	e280	336	644	e1140	612	762	243	47
17	25	289	470	e391	e270	352	691	1150	853	717	238	47
18	23	289	466	e391	e350	559	966	1170	888	709	239	47
19	41	280	462	e391	e505	e980	977	1110	937	690	225	46
20	44	276	377	e390	e300	e1120	975	1100	936	673	136	44
21	40	274	e140	e390	e240	e810	976	1090	983	654	109	45
22	32	268	e130	e388	e275	e740	992	1020	1020	637	98	43
23	e30	267	e120	e375	e275	e710	1040	979	1220	572	92	41
24	e29	262	e129	e320	278	e720	1070	967	1180	474	88	40
25	e28	262	e121	e320	283	e740	2310	968	1030	382	84	42
26	e27	257	e120	e310	271	e760	2270	954	951	252	80	40
27	e26	258	e118	e285	269	e750	1890	958	902	214	80	40
28	e28	257	e117	276	262	e740	1200	936	863	192	76	38
29	e31	261	e110	244	---	e740	985	934	854	160	74	38
30	e35	371	e103	536	---	e740	1090	920	843	141	72	38
31	118	---	e100	786	---	e740	---	908	---	129	71	---
TOTAL	1112	12108	11403	9282	10273	17193	28941	31551	26246	20056	4873	1586
MEAN	35.9	404	368	299	367	555	965	1018	875	647	157	52.9
MAX	118	2070	1040	786	730	1210	2310	1170	1220	1530	267	70
MIN	15	172	100	86	240	246	350	710	435	129	71	38
AC-FT	2210	24020	22620	18410	20380	34100	57400	62580	52060	39780	9670	3150

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1999, BY WATER YEAR (WY)

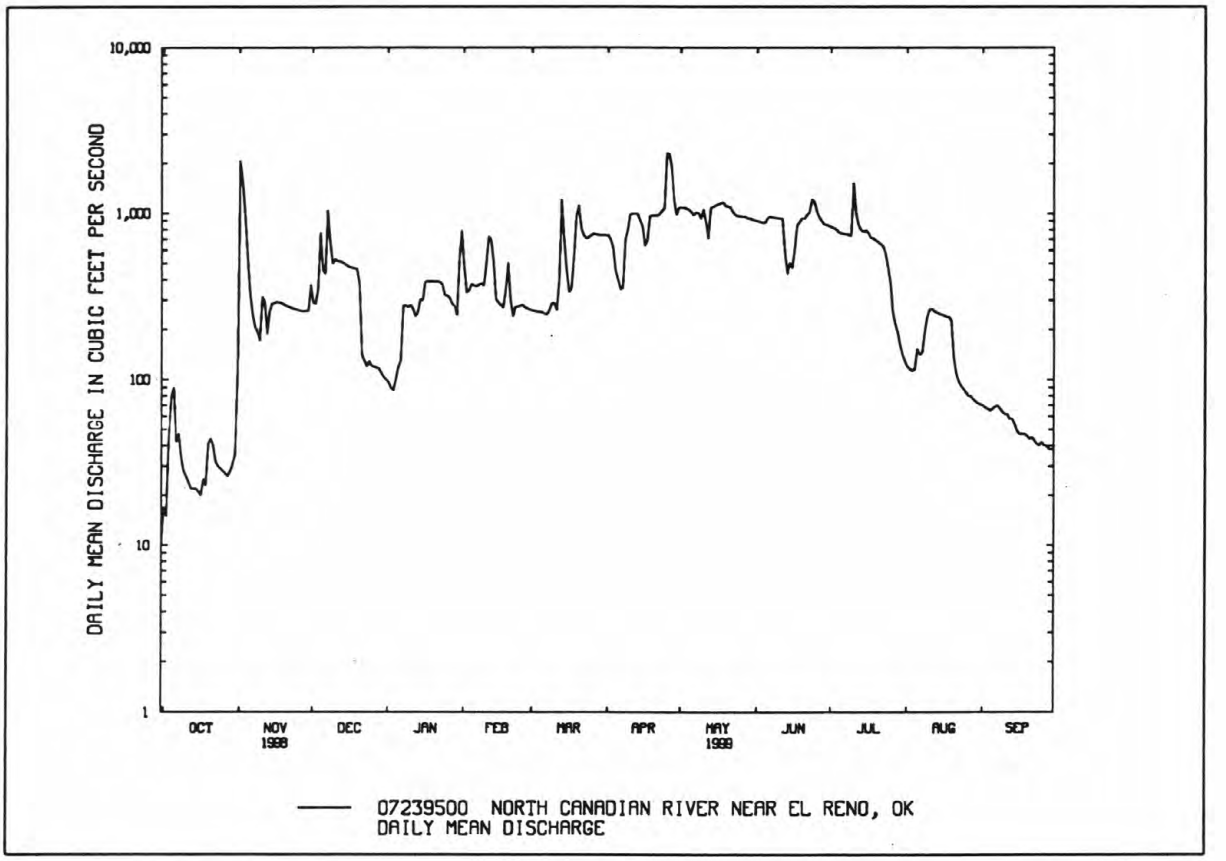
MEAN	192	134	104	110	144	213	270	426	520	278	183	211
MAX	1904	884	489	826	673	971	1129	2354	3121	2597	2460	2786
(WY)	1987	1975	1978	1998	1994	1998	1997	1993	1949	1951	1950	1950
MIN	.000	.000	.000	.000	.000	.000	.000	8.00	.17	.73	.000	.000
(WY)	1953	1955	1955	1955	1955	1955	1955	1953	1953	1952	1954	1952

e Estimated

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1949 - 1999	
ANNUAL TOTAL	162856.8		174624			
ANNUAL MEAN	446		478		[a]232	
HIGHEST ANNUAL MEAN					807	1951
LOWEST ANNUAL MEAN					31.8	1953
HIGHEST DAILY MEAN	3090	Mar 17	2310	Apr 25	13300	May 10 1993
LOWEST DAILY MEAN	9.8	Sep 30	15	Oct 2	.00	Oct 16 1948
ANNUAL SEVEN-DAY MINIMUM	12	Sep 24	22	Oct 12	.00	Jul 3 1952
INSTANTANEOUS PEAK FLOW			3230	Apr 25	15000	Oct 28 1941
INSTANTANEOUS PEAK STAGE			13.28	Apr 25	[b]22.22	Sep 21 1965
ANNUAL RUNOFF (AC-FT)	323000		346400		168200	
10 PERCENT EXCEEDS	1010		1000		694	
50 PERCENT EXCEEDS	300		336		56	
90 PERCENT EXCEEDS	19		45		2.3	

[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), 1,750 microsiemens, Feb. 18, 19, 21; minimum recorded, 154 microsiemens, Nov. 1.
WATER TEMPERATURE: Maximum, 33.5°C, July 28; minimum, 0.5°C, on several days during winter months.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	349	154	212	---	---	---	---	---	---
2	1280	1120	1190	214	162	184	1430	1350	1410	---	---	---
3	1320	596	1140	---	---	---	1450	1340	1420	---	---	---
4	658	430	556	---	---	---	1390	701	963	---	---	---
5	545	393	464	---	---	---	1340	526	1100	---	---	---
6	675	423	521	---	---	---	---	---	---	---	---	---
7	876	594	687	---	---	---	---	---	---	---	---	---
8	969	876	950	---	---	---	---	---	---	---	---	---
9	956	923	944	---	---	---	---	---	---	---	---	---
10	971	928	948	---	---	---	---	---	---	---	---	---
11	1040	971	1010	---	---	---	---	---	---	---	---	---
12	1140	1040	1110	---	---	---	---	---	---	---	---	---
13	1240	1140	1200	---	---	---	---	---	---	---	---	---
14	1300	1150	1260	---	---	---	---	---	---	---	---	---
15	1340	1300	1330	---	---	---	---	---	---	---	---	---
16	1360	1320	1340	---	---	---	---	---	---	---	---	---
17	1340	1220	1290	---	---	---	---	---	---	---	---	---
18	1320	1240	1290	---	---	---	---	---	---	---	---	---
19	1340	1300	1320	---	---	---	---	---	---	---	---	---
20	1330	964	1240	---	---	---	---	---	---	---	---	---
21	964	733	804	---	---	---	---	---	---	---	---	---
22	1220	864	1070	---	---	---	---	---	---	---	---	---
23	1230	1120	1190	---	---	---	---	---	---	---	---	---
24	1120	1050	1070	---	---	---	---	---	---	---	---	---
25	1210	1100	1180	---	---	---	---	---	---	---	---	---
26	1220	1180	1200	---	---	---	---	---	---	---	---	---
27	1210	1190	1200	---	---	---	---	---	---	---	---	---
28	1220	1180	1200	---	---	---	---	---	---	---	---	---
29	1290	1230	1260	---	---	---	---	---	---	---	---	---
30	1300	1090	1180	---	---	---	---	---	---	---	---	---
31	1200	260	841	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	---	---	---	1330	1270	1290
2	---	---	---	---	---	---	---	---	---	1340	1320	1330
3	---	---	---	1570	1510	1560	---	---	---	1390	1310	1360
4	1690	1610	1660	1570	1530	1560	---	---	---	1390	1340	1360
5	1690	1670	1680	1570	1510	1550	1190	1000	1140	1410	1380	1390
6	1680	1670	1670	1570	1510	1560	1130	1000	1070	1430	1380	1390
7	1680	1670	1670	1570	1510	1560	1150	593	949	---	---	---
8	1690	1660	1670	1550	1520	1530	1140	630	963	1400	1350	1370
9	1700	1680	1690	1540	1510	1520	1180	1090	1150	1370	1260	1350
10	1720	1690	1700	1510	1460	1490	1310	1070	1180	---	---	---
11	1720	1660	1710	1550	1460	1520	---	---	---	---	---	---
12	1730	1660	1720	1560	854	1440	---	---	---	1350	1290	1310
13	1730	1710	1730	1060	555	748	---	---	---	1390	1320	1360
14	1730	1710	1720	---	---	---	---	---	---	1390	1320	1360
15	1730	1700	1720	---	---	---	---	---	---	1430	1350	1380
16	1730	1720	1730	---	---	---	---	---	---	1410	1260	1360
17	1740	1720	1730	---	---	---	---	---	---	1350	1260	1320
18	1750	1700	1720	---	---	---	---	---	---	1320	1240	1280
19	1750	1720	1750	---	---	---	---	---	---	---	---	---
20	1740	1700	1730	---	---	---	1540	1510	1530	---	---	---
21	1750	1700	1730	---	---	---	1520	1510	1510	1360	1310	1340
22	---	---	---	---	---	---	1520	1510	1510	1420	1340	1370
23	---	---	---	---	---	---	1520	1060	1480	1420	1370	1390
24	---	---	---	---	---	---	1310	781	1050	1410	1360	1380
25	---	---	---	---	---	---	1330	480	840	1380	1330	1350
26	---	---	---	---	---	---	480	378	410	1370	1320	1340
27	---	---	---	---	---	---	439	383	404	1350	1320	1330
28	---	---	---	---	---	---	736	456	578	1340	1310	1320
29	---	---	---	---	---	---	1020	736	855	1380	1310	1340
30	---	---	---	---	---	---	1280	1050	1200	1430	1350	1390
31	---	---	---	---	---	---	---	---	---	1450	1390	1420
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1470	1400	1430	1410	1390	1400	1460	1410	1430	1450	1440	1440
2	1470	1400	1430	1420	1390	1410	1510	1350	1440	1450	1440	1450
3	1470	1410	1440	1420	1400	1410	1480	1450	1460	1460	1440	1450
4	1500	1430	1460	1440	1400	1420	1460	1440	1450	1470	1440	1450
5	1470	1420	1440	1450	1420	1430	1440	1220	1370	1460	1430	1440
6	1440	1390	1410	1440	1420	1430	1320	987	1140	1440	1430	1430
7	1450	1380	1410	1450	1420	1440	1240	1060	1140	1440	1420	1430
8	1470	1400	1440	1440	1420	1430	1290	801	1150	1430	1400	1420
9	1480	1420	1450	1440	1310	1420	1400	668	956	1430	1400	1410
10	1430	1360	1400	1310	471	756	1440	1400	1420	1450	1380	1430
11	---	---	---	1260	1030	1180	1510	1400	1440	1420	1320	1360
12	---	---	---	1360	1220	1290	1510	1310	1380	1370	1330	1350
13	---	---	---	1400	1290	1370	1350	1290	1330	1360	1340	1350
14	---	---	---	1430	1390	1420	1400	1150	1350	1350	1330	1340
15	---	---	---	1440	1400	1430	---	---	---	1340	1280	1310
16	---	---	---	1440	1420	1430	1360	1300	1340	1310	1280	1290
17	1450	1350	1410	---	---	---	1350	1300	1330	1320	1300	1310
18	1440	1250	1400	---	---	---	1330	1290	1310	1340	1300	1320
19	1430	1400	1420	---	---	---	1320	1290	1300	1360	1330	1340
20	1420	1390	1410	---	---	---	---	---	---	1430	1350	1390
21	1420	1280	1390	---	---	---	---	---	---	1430	1410	1420
22	1370	1080	1240	---	---	---	---	---	---	1440	1410	1420
23	1390	859	1190	---	---	---	---	---	---	1440	1430	1430
24	1260	952	1120	---	---	---	---	---	---	1440	1410	1430
25	1250	1150	1200	---	---	---	---	---	---	1410	1390	1390
26	1320	1250	1290	---	---	---	1450	1440	1440	1420	1400	1400
27	1360	1260	1320	1420	1410	1410	1450	1400	1420	1420	1390	1400
28	1390	1350	1380	1430	1420	1420	1450	1420	1430	1410	1390	1400
29	1400	1350	1380	1430	1420	1420	1450	1370	1410	1410	1380	1390
30	1410	1390	1400	1430	1410	1420	1450	1400	1420	1440	1410	1420
31	---	---	---	1430	1400	1420	1450	1430	1440	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	1470	1280	1390

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	13.5	11.0	11.5	13.5	12.5	13.0	4.0	3.5	4.0
2	21.0	18.0	19.0	11.0	10.5	10.5	13.5	12.0	13.0	4.0	1.5	2.5
3	20.0	18.5	19.5	11.0	10.5	11.0	15.0	13.0	14.0	1.5	.5	1.0
4	24.0	19.5	21.5	11.0	10.0	10.5	14.5	14.0	14.5	1.5	.5	1.0
5	21.5	16.5	19.0	10.0	9.5	10.0	14.5	13.5	14.0	1.5	.5	1.0
6	19.0	15.0	17.0	10.0	9.5	9.5	14.0	11.5	13.0	4.5	.5	2.0
7	20.5	14.5	17.0	10.5	9.5	10.0	11.5	8.5	10.0	4.0	1.5	2.5
8	21.0	14.5	17.5	11.0	10.0	10.5	8.5	7.5	8.0	1.5	.5	1.0
9	21.0	15.0	17.5	13.5	10.5	11.5	8.0	6.5	7.5	.5	.5	.5
10	22.5	15.0	18.0	---	---	---	8.5	7.5	8.0	1.0	.5	.5
11	23.0	16.0	19.0	11.5	10.0	11.0	8.5	8.0	8.0	3.5	.5	1.5
12	23.5	17.5	20.0	11.0	9.5	10.5	8.0	7.5	8.0	5.5	3.0	4.0
13	23.0	17.0	19.5	12.0	11.0	11.5	8.0	7.0	7.5	5.0	3.0	4.0
14	---	---	---	12.5	11.5	12.0	8.5	7.0	7.5	4.0	2.5	3.0
15	---	---	---	13.0	11.0	12.0	8.5	7.0	8.0	4.5	3.0	3.5
16	---	---	---	13.5	12.0	12.5	8.5	7.5	8.0	5.5	3.5	4.5
17	---	---	---	13.5	11.5	12.5	8.0	7.0	7.5	6.5	4.5	5.5
18	19.5	13.5	16.0	15.0	13.5	14.0	7.5	7.0	7.5	6.0	4.5	5.5
19	17.0	12.5	14.5	14.5	11.5	13.5	7.5	6.5	7.0	6.5	5.0	5.5
20	15.5	14.0	14.0	11.5	10.0	10.5	6.5	5.5	6.0	7.0	5.0	6.0
21	16.0	12.5	14.0	11.0	9.5	10.5	5.5	1.0	3.5	8.0	6.5	7.0
22	17.0	11.0	13.5	12.0	9.0	10.5	1.0	.5	.5	7.5	5.5	6.5
23	16.5	11.5	13.5	13.0	11.5	12.0	1.0	.5	1.0	6.0	4.5	5.5
24	16.0	12.5	13.5	13.0	11.0	12.0	1.5	.5	1.0	6.5	4.5	5.5
25	18.5	12.0	15.0	13.0	12.0	12.5	1.5	.5	1.0	5.5	4.5	5.0
26	19.5	14.5	17.0	12.0	10.0	11.5	3.0	.5	2.0	7.5	4.5	5.5
27	21.5	16.0	18.0	13.5	10.5	11.5	5.0	3.0	3.5	9.0	7.0	8.0
28	21.5	17.5	18.5	14.5	13.0	14.0	5.0	3.0	4.0	9.0	6.5	7.5
29	21.0	16.0	18.0	15.5	14.0	15.0	6.0	4.0	5.0	6.5	4.5	5.5
30	17.5	14.5	16.0	15.0	13.5	14.5	5.0	3.0	4.0	4.5	4.5	4.5
31	17.0	13.5	15.5	---	---	---	4.5	2.5	3.5	4.5	4.0	4.5
MONTH	---	---	---	---	---	---	15.0	.5	7.1	9.0	.5	4.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.0	4.5	5.5	14.0	10.5	12.5	17.0	13.5	15.0	19.0	17.5	18.0
2	8.0	6.0	7.0	13.5	11.5	12.5	18.5	16.5	17.0	19.0	17.5	18.0
3	8.0	6.0	7.0	12.0	9.5	11.0	18.0	16.5	17.5	20.0	18.0	19.0
4	8.0	6.0	7.0	11.5	8.5	10.5	16.5	15.0	16.0	21.0	19.5	20.0
5	10.0	7.0	8.5	13.5	11.0	12.0	18.0	15.5	16.5	19.5	18.0	19.0
6	10.5	9.5	10.5	12.5	10.0	11.5	19.0	14.5	16.5	18.5	16.5	17.5
7	11.0	9.0	10.0	11.0	8.0	9.0	17.0	15.5	16.0	19.0	16.5	18.0
8	11.0	9.0	10.0	11.0	7.5	9.0	18.5	16.5	17.5	20.5	17.5	19.0
9	11.0	9.5	10.0	11.0	8.0	9.5	---	---	---	21.5	19.0	20.5
10	12.0	10.0	11.0	12.0	9.0	10.5	17.5	16.5	17.0	21.0	19.5	20.5
11	11.5	9.5	11.0	11.5	9.5	10.0	18.0	16.0	17.0	20.5	19.0	20.0
12	9.5	8.0	8.5	9.5	5.5	8.0	17.5	16.0	16.5	20.5	18.0	19.0
13	8.0	6.5	7.5	6.0	4.0	5.0	17.0	16.0	16.5	21.5	18.5	20.0
14	8.5	6.5	7.5	6.0	3.5	4.5	18.5	14.5	17.5	21.5	20.0	20.5
15	10.0	7.0	8.5	8.0	4.5	6.0	17.0	14.0	15.5	24.0	21.0	22.5
16	11.0	9.0	10.0	11.5	7.5	9.5	14.5	12.5	14.0	24.5	22.0	23.0
17	10.5	8.5	9.5	13.5	10.5	12.0	14.5	12.0	13.5	23.5	22.0	23.0
18	10.5	9.0	9.5	13.5	10.0	11.5	16.0	13.0	14.5	23.0	20.5	21.5
19	9.0	8.0	8.5	10.0	8.5	9.0	17.5	14.5	16.0	23.0	20.5	22.0
20	10.0	8.0	9.0	10.0	8.0	9.0	19.0	16.0	17.5	23.5	21.5	22.5
21	9.5	7.5	8.5	12.5	9.5	11.0	19.5	17.5	18.5	24.5	22.5	23.5
22	8.0	6.5	7.5	15.0	12.0	13.5	21.5	19.0	20.0	25.5	23.0	24.0
23	9.5	6.0	7.5	14.5	11.5	13.0	20.5	16.5	18.5	25.5	23.5	24.5
24	11.0	7.0	9.0	11.5	10.5	11.0	16.5	14.0	15.0	25.0	23.0	24.0
25	13.0	9.0	11.0	11.5	9.5	10.5	14.5	13.0	14.0	24.0	22.5	23.0
26	15.5	12.0	13.5	12.5	10.0	11.0	16.0	14.5	15.0	23.5	21.5	22.5
27	14.5	12.5	13.5	12.0	11.0	11.5	18.5	16.0	17.0	23.0	22.0	22.5
28	13.5	10.0	12.0	11.5	10.5	11.0	20.0	18.0	19.0	22.5	21.5	22.0
29	---	---	---	12.5	11.0	11.5	20.0	18.5	19.0	24.0	21.5	22.5
30	---	---	---	13.5	11.5	12.5	19.5	18.0	18.5	26.0	23.0	24.5
31	---	---	---	14.5	13.0	13.5	---	---	---	26.5	24.5	25.5
MONTH	15.5	4.5	9.2	15.0	3.5	10.4	---	---	---	26.5	16.5	21.4

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.0	24.5	26.0	27.5	26.0	26.5	32.5	26.5	29.5	30.5	24.0	27.0
2	27.0	24.5	26.0	29.0	26.5	27.5	33.0	27.0	29.5	29.0	24.0	26.5
3	27.0	25.5	26.5	29.5	27.0	28.0	30.5	26.0	28.5	30.5	24.0	27.0
4	27.5	25.0	26.5	29.5	27.0	28.0	30.0	26.0	28.0	28.5	25.5	27.0
5	26.5	25.5	26.0	30.0	27.0	28.5	30.0	26.5	28.0	29.0	25.0	26.5
6	25.5	24.5	25.0	30.5	27.5	29.0	32.0	25.5	28.5	31.0	23.5	27.0
7	26.0	24.0	25.0	31.0	28.0	29.5	32.5	26.5	29.5	31.5	25.0	27.5
8	27.0	24.5	26.0	30.5	28.0	29.5	32.5	27.5	30.0	29.0	23.5	26.0
9	28.0	25.5	26.5	31.0	28.5	29.5	30.5	28.0	29.5	28.0	21.5	24.5
10	27.0	25.0	25.5	29.0	23.5	25.5	33.0	28.0	30.0	28.0	21.5	24.5
11	25.5	24.0	25.0	27.0	25.5	26.5	32.5	28.0	30.5	26.5	22.0	24.5
12	---	---	---	26.5	25.0	26.0	31.5	27.5	29.5	25.0	22.0	23.5
13	---	---	---	28.0	25.0	26.0	30.5	27.0	28.5	27.5	19.0	22.5
14	---	---	---	29.5	26.0	27.5	29.5	25.0	27.5	26.0	19.0	22.5
15	---	---	---	29.5	27.0	28.0	31.0	25.5	28.0	23.0	21.0	21.5
16	---	---	---	28.0	26.0	27.0	31.0	26.5	28.5	21.0	19.0	20.0
17	---	---	---	28.5	26.0	27.5	31.0	26.0	28.5	25.0	17.5	21.0
18	24.0	23.0	23.5	30.0	27.0	28.5	31.0	26.0	28.5	24.0	21.0	22.0
19	24.5	22.5	23.5	30.5	27.5	29.0	30.5	27.0	28.5	27.5	20.0	23.5
20	25.0	24.0	24.5	30.5	28.0	29.0	30.0	23.5	27.0	24.5	17.5	21.0
21	24.5	24.0	24.0	30.0	27.5	28.5	30.5	24.5	27.0	22.0	15.0	18.0
22	24.0	23.0	23.5	---	---	---	30.5	24.5	27.0	23.0	14.0	18.5
23	25.5	22.5	24.0	---	---	---	---	---	---	23.0	16.0	19.5
24	25.5	25.0	25.0	---	---	---	---	---	---	22.5	17.0	20.0
25	26.5	24.5	25.0	---	---	---	---	---	---	25.5	18.5	21.5
26	28.0	25.0	26.5	---	---	---	32.0	25.5	28.5	28.0	20.0	23.5
27	29.5	26.5	28.0	33.0	28.0	30.5	32.0	26.0	29.0	24.0	18.5	21.0
28	29.5	27.5	28.5	33.5	28.0	30.5	32.5	26.0	29.0	18.5	14.5	16.0
29	28.5	26.0	27.0	33.0	27.5	30.5	32.5	26.5	29.5	20.5	12.0	16.0
30	27.5	26.0	27.0	32.5	26.5	29.5	32.0	26.0	28.5	21.5	13.5	17.0
31	---	---	---	32.5	26.0	29.5	31.0	25.5	28.0	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	31.5	12.0	22.5

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.

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.

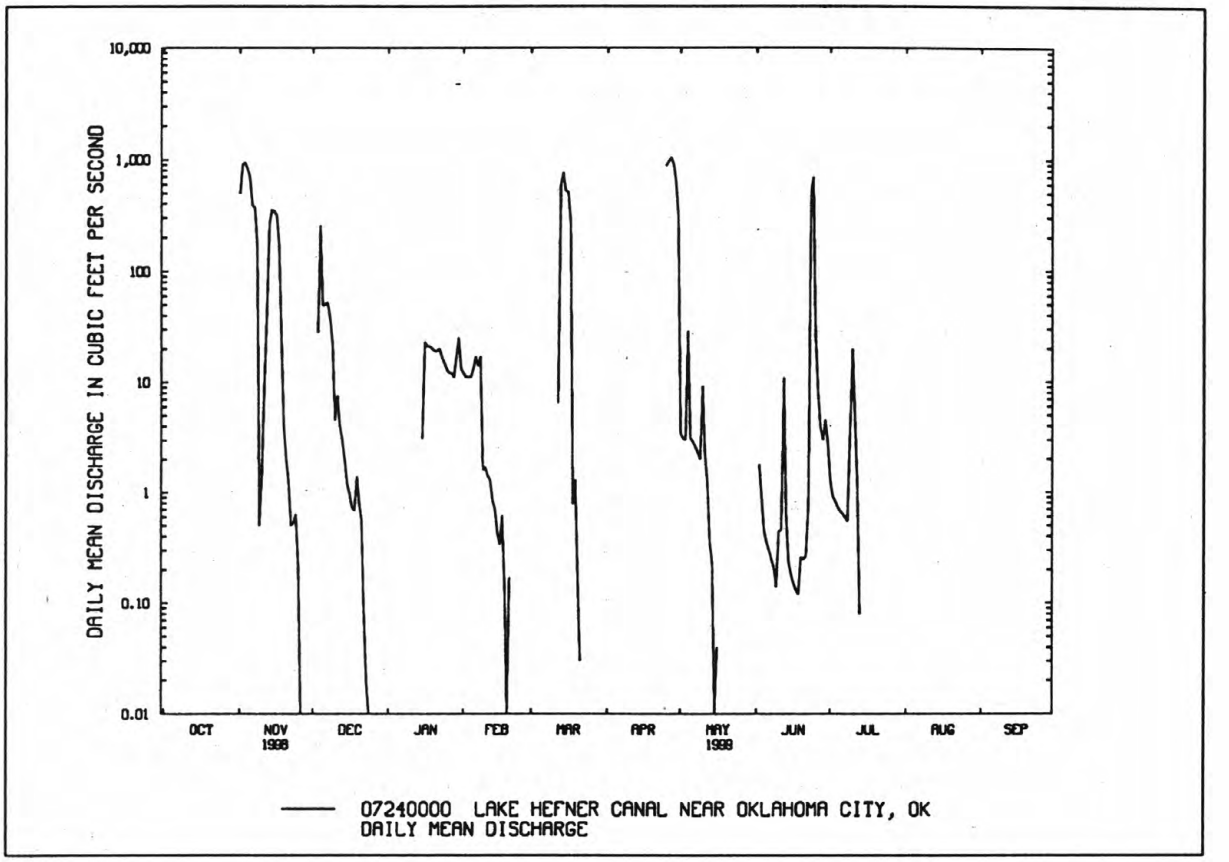
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	497	e.00	.00	12	.00	.00	3.4	e.00	e1.3	e.00	e.00
2	.00	910	.00	.00	11	.00	.00	3.1	e1.8	e.93	.00	e.00
3	.00	946	28	.00	11	.00	.00	3.0	e.90	e.84	e.00	e.00
4	.00	e825	253	.00	11	.00	.00	29	e.45	e.74	e.00	e.00
5	.00	695	49	.00	13	.00	.00	3.1	e.36	e.68	.00	e.00
6	.00	389	50	.00	17	.00	.00	e2.9	e.30	e.64	e.00	e.00
7	.00	371	52	.00	14	.00	.00	e2.6	e.25	e.59	e.00	e.00
8	.00	168	38	.00	17	.00	.00	e2.3	.21	e.55	e.00	e.00
9	.00	.50	22	.00	1.6	.00	.00	e2	.14	3.9	.00	e.00
10	e.00	1.4	4.5	.00	1.7	.00	.00	9.2	.44	20	e.00	e.00
11	e.00	e10	7.5	.00	1.4	.00	.00	e2.2	.46	4.5	e.00	e.00
12	e.00	e42	4.0	.00	1.3	6.4	.00	e1.2	11	e1.1	e.00	e.00
13	e.00	265	3.0	.00	.84	596	.00	e.35	.64	e.08	e.00	e.00
14	.00	355	2.0	.00	.71	763	.00	e.23	.24	e.00	e.00	e.00
15	.00	343	1.2	3.1	.43	523	.00	e.01	e.18	e.00	e.00	e.00
16	.00	317	.97	23	.34	514	.00	e.04	e.15	e.00	e.00	e.00
17	.00	171	.73	21	.62	266	.00	e.00	e.13	e.00	e.00	e.00
18	.00	23	.68	21	.15	.78	.00	e.00	e.12	e.00	e.00	e.00
19	.00	e3.8	1.4	20	.01	1.3	.00	e.00	.26	e.00	e.00	e.00
20	.00	e2	.79	19	.17	.17	.00	e.00	.25	e.00	e.00	e.00
21	.00	e1.2	.56	19	.00	.03	.00	e.00	.26	e.00	e.00	e.00
22	.00	e.5	.09	20	.00	.00	.00	e.00	.71	e.00	e.00	e.00
23	.00	.53	.02	17	.00	.97	.00	e.00	504	e.00	e.00	e.00
24	.00	.63	.01	15	.00	.00	.00	e.00	698	e.00	e.00	e.00
25	.00	e.22	.00	13	.00	e.00	882	e.00	26	e.00	e.00	e.00
26	.00	e.01	.00	12	.00	e.00	975	e.00	8.0	e.00	e.00	e.00
27	.00	e.00	.00	12	.00	e.00	1040	e.00	3.9	e.00	e.00	e.00
28	.00	e.00	.00	11	.00	e.00	929	e.00	3.0	e.00	e.00	e.00
29	.00	e.00	.00	17	---	e.00	639	e.00	4.6	e.00	e.00	e.00
30	.00	.00	.00	25	---	.00	311	e.00	e2.8	e.00	e.00	e.00
31	.00	---	.00	13	---	.00	---	e.00	---	e.00	e.00	---
TOTAL	0.00	6337.79	519.45	281.10	115.27	2671.65	4776.00	64.63	1269.55	35.85	0.00	0.00
MEAN	.000	211	16.8	9.07	4.12	86.2	159	2.08	42.3	1.16	.000	.000
MAX	.00	946	253	25	17	763	1040	29	698	20	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	12570	1030	558	229	5300	9470	128	2520	71	.00	.00

CAL YR 1998 TOTAL 16593.95 MEAN 45.5 MAX 1080 MIN .00 AC-FT 32910
WTR YR 1999 TOTAL 16071.29 MEAN 44.0 MAX 1040 MIN .00 AC-FT 31880

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, October 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,194.66 ft above sea level. Prior to Oct. 1, 1961, at datum 10.00 ft higher. Prior to March 24, 1971, gage located at current site. March 25, 1971, to Sept. 30, 1987, gage located 200 ft upstream.

REMARKS.--Records 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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	1230	317	234	e640	e255	724	887	e549	e763	e220	e152
2	90	2900	396	300	485	e350	749	834	553	e767	e210	e156
3	139	1360	393	225	376	359	695	820	565	e731	e183	e161
4	128	48	699	219	320	234	640	1520	e540	e746	181	e148
5	146	34	648	138	345	e285	539	1270	e526	e648	e198	e149
6	262	26	545	139	440	e320	465	856	e610	e652	e230	e151
7	46	24	732	139	471	336	300	782	e650	e631	e210	e144
8	14	23	902	191	434	368	e310	848	e490	e574	e218	e140
9	17	186	611	229	427	339	e450	912	e552	e603	e220	e138
10	43	250	490	228	403	392	e750	1880	590	1730	e230	e137
11	63	23	552	274	749	403	e720	1690	e650	1920	e255	e176
12	51	21	530	300	e640	439	e750	965	e670	926	e247	e135
13	26	28	543	351	e620	e950	907	737	e562	679	e244	e118
14	15	20	538	375	e480	e680	1010	693	e338	700	e240	e106
15	15	20	528	392	e380	e150	1180	774	e317	807	e234	e100
16	22	20	548	501	e300	52	578	836	e299	750	e230	e92
17	201	153	590	475	e310	230	612	962	e401	763	e228	e85
18	182	400	517	443	e290	450	600	1040	e559	e690	e224	e79
19	42	351	549	484	e315	672	736	949	e574	e670	e218	e77
20	28	304	519	481	e440	1150	834	612	e680	e640	e212	e74
21	50	306	523	418	e360	1060	838	627	e702	e595	e204	e71
22	45	308	299	530	283	864	877	e690	795	e560	e202	e70
23	44	368	168	502	328	e650	914	e715	1450	e520	e201	e70
24	44	288	166	450	388	e620	1040	e674	2530	e460	e199	e69
25	45	323	221	441	365	e600	1860	e750	2070	e465	e190	e84
26	45	337	218	445	336	e590	3910	e678	1080	402	e186	e82
27	47	310	206	443	356	603	2430	e619	777	e269	e180	e77
28	58	310	177	442	423	553	1100	e609	e652	e258	e174	e71
29	58	312	176	361	---	593	416	e592	e555	266	e166	66
30	e60	316	178	706	---	743	632	e582	e566	e245	e160	66
31	118	---	193	e800	---	734	---	e559	---	e230	e156	---
TOTAL	2170	10599	13672	11656	11704	16024	27566	26962	21852	20660	6450	3244
MEAN	70.0	353	441	376	418	517	919	870	728	666	208	108
MAX	262	2900	902	800	749	1150	3910	1880	2530	1920	255	176
MIN	14	20	166	138	283	52	300	559	299	230	156	66
AC-FT	4300	21020	27120	23120	23210	31780	54680	53480	43340	40980	12790	6430

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1999, BY WATER YEAR (WY)

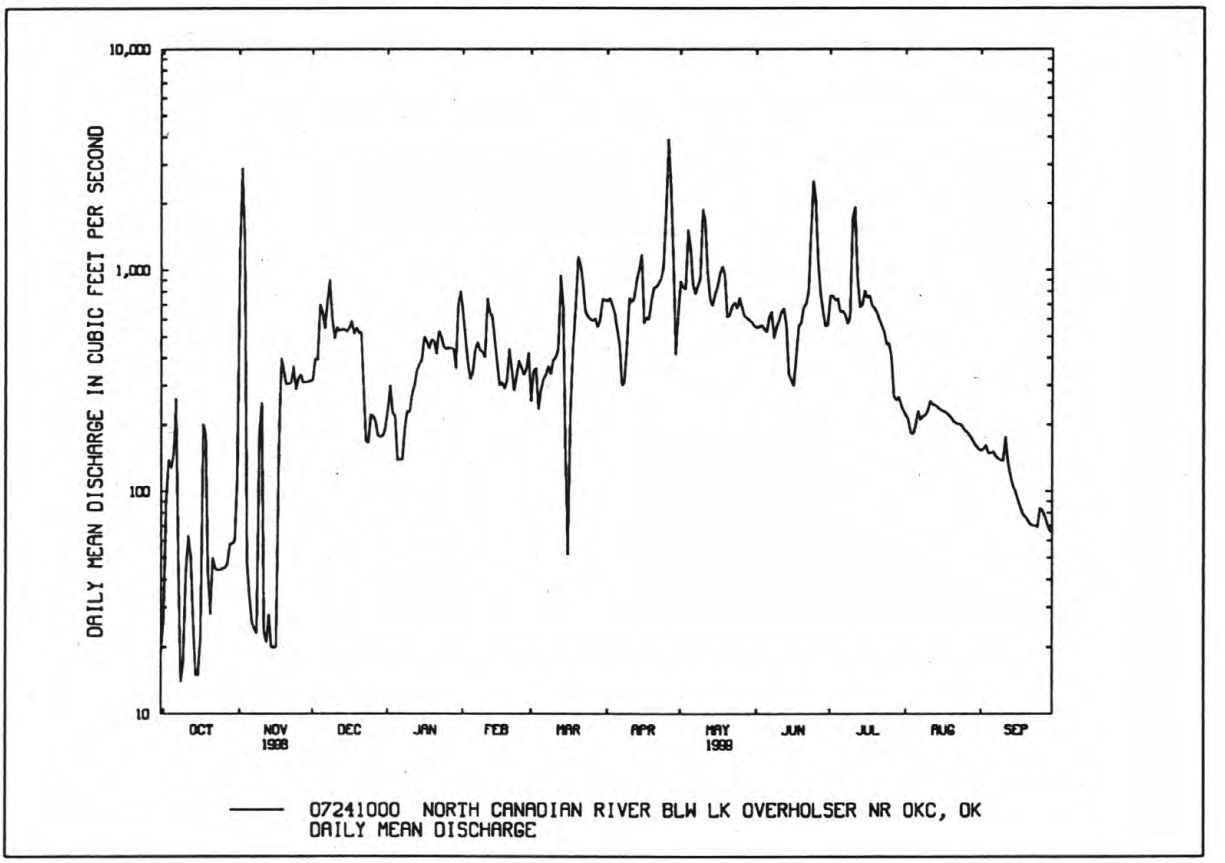
MEAN	187	132	110	106	136	187	175	350	443	168	106	109
MAX	2426	1489	563	922	708	1487	1149	2922	2774	1749	884	826
(WY)	1987	1975	1993	1998	1997	1990	1997	1993	1995	1957	1957	1989
MIN	.000	.000	.016	.045	.061	.000	.027	.45	.013	.039	.000	.000
(WY)	1953	1955	1957	1955	1955	1954	1954	1956	1953	1954	1953	1954

e Estimated

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1953 - 1999	
ANNUAL TOTAL	176209		172559			
ANNUAL MEAN	483		473		184	
HIGHEST ANNUAL MEAN					749	1987
LOWEST ANNUAL MEAN					.42	1954
HIGHEST DAILY MEAN	5330	Mar 17	3910	Apr 26	13300	May 10 1993
LOWEST DAILY MEAN	14	Oct 8	14	Oct 8	[a].00	Oct 1 1952
ANNUAL SEVEN-DAY MINIMUM	20	Aug 11	33	Oct 8	.00	Oct 1 1952
INSTANTANEOUS PEAK FLOW			5790	Nov 2	19500	Jun 11 1995
INSTANTANEOUS PEAK STAGE			16.50	Nov 2	[b]29.85	May 28 1987
ANNUAL RUNOFF (AC-FT)	349500		342300		133400	
10 PERCENT EXCEEDS	1010		851		513	
50 PERCENT EXCEEDS	317		392		18	
90 PERCENT EXCEEDS	28		66		.70	

[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, -0.5°C, Dec. 22, 23, 24, 1998.
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), 1,530 microsiemens, Mar. 6, 7, 30, 31, Apr. 2; minimum recorded, 180 microsiemens, Nov. 3, Sept. 11.
WATER TEMPERATURE: Maximum, 33.5°C, Aug. 29; minimum, -0.5°C, Dec. 22, 23, 24.
DISSOLVED OXYGEN: Maximum recorded (more than 20 percent missing record), 13.4 mg/l, Jan. 3, 4, 9, 10; minimum recorded, 6.1 mg/l, June 13.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
29...	1401	5.00	21.0	740	1028	1028	67	7.06	1320	9.3	8.4
29...	1402	10.0	21.0	740	1028	1028	67	7.06	1310	9.6	8.5
29...	1403	15.0	21.0	740	1028	1028	67	7.06	1320	9.3	8.5
29...	1404	20.0	21.0	740	1028	1028	67	7.06	1290	9.9	8.5
29...	1405	25.0	21.0	740	1028	1028	67	7.06	1290	9.9	8.5
29...	1409	45.0	21.0	740	1028	1028	67	7.06	1280	9.2	8.5
29...	1410	50.0	21.0	740	1028	1028	67	7.06	1280	9.2	8.5
29...	1411	55.0	21.0	740	1028	1028	67	7.06	1290	9.2	8.5
29...	1412	60.0	21.5	740	1028	1028	67	7.06	1280	9.6	8.5
29...	1413	65.0	21.5	740	1028	1028	67	7.06	1280	9.7	8.5

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT												
06...	1210	1028	80020	283	321	7.9	19.5	18.0	260	736	8.7	96
NOV												
03...	1215	1028	80020	545	224	7.8	12.5	11.5	220	734	10.2	97
DEC												
01...	1223	1028	80020	316	1160	8.4	25.0	15.5	28	742	9.6	99
JAN												
05...	1215	1028	80020	138	1490	7.7	3.0	1.0	4.1	733	13.1	96
FEB												
23...	1230	1028	80020	362	1470	8.3	19.5	8.0	22	739	12.4	108
MAR												
17...	0840	1028	80020	50	759	8.1	10.0	9.5	50	735	10.1	92
APR												
07...	1135	1028	80020	270	1310	8.4	19.0	18.0	42	747	8.3	90
MAY												
26...	0900	1028	80020	701	1340	8.4	18.5	21.5	80	755	8.4	96
JUN												
22...	0850	1028	80020	799	1300	8.3	24.0	23.5	89	732	8.5	105
JUL												
07...	0915	1028	80020	631	1390	8.2	31.0	28.5	150	740	7.6	101
AUG												
04...	1245	1028	80020	183	1360	8.4	32.5	31.5	18	745	8.6	121
SEP												
01...	1315	1028	80020	160	1410	8.4	31.5	29.5	46	742	8.6	117

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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 06...	--	6.0	3700	6400	--	--	--	--	--	--	--	--
NOV 03...	1.2	4.5	5200	3900	73	20	20	5.5	13	26	.6	5.2
DEC 01...	1.3	1.5	4300	7500	--	--	--	--	--	--	--	--
JAN 05...	1.8	6.9	K49	800	--	--	--	--	--	--	--	--
FEB 23...	.59	3.7	K46	120	490	270	120	48	140	38	3	6.4
MAR 17...	1.5	2.0	K180	310	--	--	--	--	--	--	--	--
APR 07...	.77	4.7	480	290	--	--	--	--	--	--	--	--
MAY 26...	1.2	3.6	320	1800	420	210	100	39	115	37	2	6.7
JUN 22...	1.3	11	5400	24000	--	--	--	--	--	--	--	--
JUL 07...	--	13	210	7200	--	--	--	--	--	--	--	--
AUG 04...	--	--	1100	>2000	410	180	91	45	137	42	3	6.7
SEP 01...	1.1	7.3	990	K12000	--	--	--	--	--	--	--	--

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 06...	85	0	70	1.7	--	--	--	--	--	--	--	--
NOV 03...	65	0	53	2.2	33	11	.17	4.6	144	127	.20	212
DEC 01...	146	24	160	1.2	--	--	--	--	--	--	--	--
JAN 05...	414	0	339	13	--	--	--	--	--	--	--	--
FEB 23...	266	0	218	2.2	300	170	.66	15	962	934	1.31	940
MAR 17...	187	0	153	2.1	--	--	--	--	--	--	--	--
APR 07...	284	5	241	1.9	--	--	--	--	--	--	--	--
MAY 26...	255	*0	209	1.6	260	150	.58	10	854	811	1.16	1620
JUN 22...	210	0	172	2.1	--	--	--	--	--	--	--	--
JUL 07...	267	0	219	3.1	--	--	--	--	--	--	--	--
AUG 04...	281	*0	230	2.0	250	150	.66	22	950	838	1.29	469
SEP 01...	271	*0	222	1.9	--	--	--	--	--	--	--	--

*filtered pH <8.3; therefore no carbonate value.

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
06...	508	.883	3.9	.057	.19	.940	.280	.36	--	--	.140
NOV											
03...	252	.468	2.1	.019	.06	.487	.173	.22	.57	.75	.214
DEC											
01...	57	.371	1.6	.011	.04	.382	.128	.16	.76	.89	.146
JAN											
05...	2	.911	4.0	.012	.04	.923	.499	.64	.42	.92	.261
FEB											
23...	48	--	--	<.010	--	.056	.042	.05	.49	.54	E.030
MAR											
17...	65	.547	2.4	.026	.09	.573	.366	.47	.55	.92	.096
APR											
07...	90	--	--	<.010	--	.284	.092	.12	.40	.49	.062
MAY											
26...	203	--	--	<.010	--	.474	.100	.13	.62	.72	.126
JUN											
22...	156	--	--	<.010	--	.196	.107	.14	.97	1.1	.239
JUL											
07...	193	--	--	<.010	--	<.050	.101	.13	.90	1.0	.212
AUG											
04...	84	--	--	<.010	--	<.050	<.020	--	--	.43	<.050
SEP											
01...	152	.091	.40	.016	.05	.107	.115	.15	.87	.98	.132

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											
06...	.130	.40	--	--	--	--	--	--	--	--	--
NOV											
03...	.199	.61	2	41	<1.6	<8.0	<14	<7.0	<10	30	<100
DEC											
01...	.115	.35	--	--	--	--	--	--	--	--	--
JAN											
05...	.244	.75	--	--	--	--	--	--	--	--	--
FEB											
23...	.032	.10	4	135	<1.6	<8.0	<14	<7.0	<10	<10	<100
MAR											
17...	.104	.32	--	--	--	--	--	--	--	--	--
APR											
07...	.053	.16	--	--	--	--	--	--	--	--	--
MAY											
26...	.085	.26	5	123	<1.6	<8.0	<14	<7.0	<10	<10	<100
JUN											
22...	.201	.62	--	--	--	--	--	--	--	--	--
JUL											
07...	.197	.60	--	--	--	--	--	--	--	--	--
AUG											
04...	.038	.12	7	127	<1.6	<8.0	<14	<7.0	E7.6	<10	<100
SEP											
01...	.135	.41	--	--	--	--	--	--	--	--	--

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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 06...	--	--	--	--	--	--	--	--	--	--	--
NOV 03...	E5	E1.7	<.1	<50	<40	--	<4.0	149	E5	E15	12
DEC 01...	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	--	--	--	--	--	--	--	--	--	--	--
FEB 23...	39	E1.9	<.1	<50	<40	--	<4.0	1200	E9	E14	8.6
MAR 17...	--	--	--	--	--	--	--	--	--	--	--
APR 07...	--	--	--	--	--	--	--	--	--	--	--
MAY 26...	33	25	<.1	<50	<40	<1	<4.0	966	E7	E9.8	11
JUN 22...	--	--	--	--	--	--	--	--	--	--	--
JUL 07...	--	--	--	--	--	--	--	--	--	--	--
AUG 04...	48	33	<.1	<50	<40	<1	E2.5	1100	14	<20	--
SEP 01...	--	--	--	--	--	--	--	--	--	--	--

DATE	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 03...	1028	80020	E23.0	<.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)	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)
NOV 03...	<.200	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.100	<.100	<.200

DATE	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)	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)	DEF TOTAL (UG/L) (39040)	DI-AZINON, TOTAL (UG/L) (39570)	DI-ELDRIN TOTAL (UG/L) (39380)
NOV 03...	<.200	<.100	<.010	<.200	.033	<.001	<.001	<.001	<.060	<.020	<.001

DATE	2,4-DP TOTAL (UG/L) (82183)	ENDO-SULFAN I TOTAL (UG/L) (39388)	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA-CHLOR, TOTAL (UG/L) (39410)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	METH-OXY-CHLOR, TOTAL (UG/L) (39480)	METHYL PARA-THION, TOTAL (UG/L) (39600)	MIREX, TOTAL (UG/L) (39755)	PARA-THION, TOTAL (UG/L) (39540)
NOV 03...	<.010	<.001	<.001	<.020	<.001	<.001	<.001	<.010	<.020	<.010	<.010

DATE	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)	TOTAL TRI-THION (UG/L) (39786)
NOV 03...	<.100	<.200	<.100	<.100	<.010	.110	<.100	<.010	<1.00	<.100	<.050

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	561	182	293	---	---	---	1410	1050	1360
2	---	---	---	516	192	287	1300	1120	1230	1300	912	1150
3	852	824	840	518	180	332	1320	476	1200	1400	1200	1340
4	852	636	734	602	358	483	1020	576	828	1450	1330	1430
5	---	---	---	---	---	---	945	639	803	1450	1420	1430
6	---	---	---	---	---	---	1130	780	1000	1420	1380	1410
7	---	---	---	---	---	---	1230	1060	1160	1400	1340	1360
8	---	---	---	---	---	---	1060	618	749	1460	1400	1440
9	---	---	---	---	---	---	905	720	838	1470	1430	1450
10	570	449	505	---	---	---	1250	905	1110	1460	1430	1450
11	520	460	486	---	---	---	1330	1250	1300	1470	1440	1460
12	626	520	575	---	---	---	1360	1290	1340	1440	1380	1420
13	---	---	---	---	---	---	1370	1320	1350	1460	1360	1420
14	---	---	---	---	---	---	1390	1350	1370	1460	1400	1450
15	---	---	---	---	---	---	1390	1380	1380	1480	1420	1460
16	805	378	600	---	---	---	1390	1320	1380	1480	1400	1460
17	773	380	646	---	---	---	1390	1360	1380	1480	1440	1460
18	883	468	655	---	---	---	1390	1370	1380	1480	1470	1480
19	516	329	466	---	---	---	1390	1350	1370	1480	1440	1460
20	1130	353	610	---	---	---	1400	1370	1380	1480	1450	1470
21	868	530	697	---	---	---	1390	1180	1300	1480	1430	1460
22	681	586	623	---	---	---	1410	1090	1330	1470	1260	1390
23	874	599	762	---	---	---	1420	1370	1400	1480	1360	1450
24	933	738	803	---	---	---	1430	1390	1410	1480	1390	1460
25	1100	933	1020	---	---	---	1440	1410	1430	1470	1430	1460
26	1090	1010	1070	---	---	---	1460	1420	1450	1470	1440	1460
27	1060	1010	1040	---	---	---	1440	1390	1420	1480	1460	1470
28	1010	724	947	---	---	---	1440	1380	1420	1470	1420	1450
29	966	790	899	---	---	---	1420	1310	1400	1460	1140	1400
30	981	810	902	---	---	---	1430	1370	1410	1190	900	1050
31	902	561	865	---	---	---	1410	1320	1370	1120	956	1040
MONTH	---	---	---	---	---	---	---	---	---	1480	900	1400

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1080	846	926	---	---	---	1520	1460	1510	1210	1080	1170
2	1110	625	934	---	---	---	1530	1510	1520	1270	1200	1240
3	1250	1110	1170	---	---	---	1520	1470	1490	1300	1270	1280
4	1370	1250	1310	1520	1510	1510	1490	1470	1480	1300	556	963
5	1430	1370	1400	1520	1500	1510	1480	1290	1440	1160	759	969
6	1450	1380	1420	1530	1520	1530	1490	1390	1460	1250	1150	1210
7	1430	1340	1390	1530	1490	1520	1390	1260	1320	1260	1240	1240
8	1440	1270	1410	1520	1210	1420	1430	840	1330	1260	1240	1250
9	1450	1270	1420	1470	1340	1440	1480	832	1250	1250	1110	1230
10	1470	1280	1440	1490	1460	1480	1480	1470	1480	1110	693	829
11	1500	1150	1380	1480	1460	1470	1490	1450	1470	934	752	851
12	1520	1470	1500	1460	748	1210	1490	1480	1490	978	921	945
13	1510	1470	1500	1020	699	866	1480	1380	1450	1030	978	1010
14	1510	1460	1500	711	607	655	1450	1110	1340	---	---	---
15	1490	1440	1480	722	642	683	1410	1100	1280	---	---	---
16	1490	1440	1480	737	687	709	1410	1260	1370	---	---	---
17	1500	1430	1480	942	605	744	1340	1220	1260	---	---	---
18	1490	1240	1430	1130	942	1030	1460	1340	1400	---	---	---
19	1510	1440	1490	1330	1120	1260	1480	1460	1470	---	---	---
20	1510	1460	1500	1150	931	1060	1480	1480	1480	---	---	---
21	1500	1450	1490	983	852	934	1480	1470	1480	---	---	---
22	1490	1360	1460	1190	956	1050	1470	1460	1460	---	---	---
23	1460	1370	1420	1340	1170	1240	1470	1460	1460	---	---	---
24	---	---	---	---	---	---	1460	822	1280	---	---	---
25	---	---	---	---	---	---	890	525	719	---	---	---
26	---	---	---	---	---	---	710	594	640	---	---	---
27	---	---	---	---	---	---	673	432	604	---	---	---
28	---	---	---	---	---	---	525	437	473	---	---	---
29	---	---	---	---	---	---	658	525	609	---	---	---
30	---	---	---	1530	1520	1520	1080	658	832	---	---	---
31	---	---	---	1530	1490	1510	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	1530	432	1260	---	---	---

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	1410	1360	1390	1360	1300	1330
2	---	---	---	1330	1290	1310	1400	1330	1370	1340	1300	1320
3	1360	1310	1340	1340	1320	1330	1380	1310	1350	1330	1280	1300
4	1370	1190	1340	1350	1330	1340	1380	1330	1360	1310	1260	1290
5	1380	1360	1370	1360	1320	1350	1400	1340	1380	1290	1220	1270
6	1380	1240	1340	1380	1340	1350	1390	1160	1310	1320	1250	1270
7	1390	1360	1380	1370	1340	1350	1220	1040	1140	1280	1030	1250
8	1400	1380	1390	1370	1330	1360	1180	1050	1110	1240	1000	1200
9	1410	1390	1400	1370	1300	1350	1200	1120	1170	1270	1240	1250
10	1410	1140	1350	1300	468	682	1360	951	1110	1260	440	1190
11	1380	1290	1340	922	462	677	1400	1320	1390	998	180	528
12	1390	901	1200	1070	922	1010	1410	914	1290	1040	681	929
13	918	488	688	1180	1070	1140	1330	682	734	1130	989	1080
14	1180	853	1030	1180	1130	1160	---	---	---	1140	1070	1110
15	1350	1180	1300	1240	1170	1200	---	---	---	1150	1090	1120
16	1350	1160	1320	1260	1220	1250	---	---	---	1200	1120	1160
17	---	---	---	1300	1260	1280	---	---	---	1240	1180	1220
18	---	---	---	1330	1290	1310	---	---	---	1370	1210	1280
19	1390	1280	1350	1360	1320	1340	---	---	---	1370	1130	1250
20	1390	1360	1370	1390	1350	1370	---	---	---	1340	1090	1250
21	1370	1220	1320	1400	1370	1390	---	---	---	1350	1300	1330
22	1320	995	1190	1410	1380	1400	---	---	---	1370	1320	1340
23	1060	380	623	1410	1390	1400	---	---	---	1340	1310	1330
24	747	473	568	1410	1390	1400	---	---	---	1360	1110	1320
25	876	603	738	1410	1390	1400	1330	1290	1310	1300	1030	1180
26	1100	876	975	1420	1370	1390	1340	1160	1300	1280	1180	1250
27	---	---	---	1400	1360	1380	1360	1180	1260	1290	1250	1270
28	---	---	---	1400	1360	1380	1350	1260	1320	1280	1230	1260
29	---	---	---	1400	1380	1390	1340	1290	1320	1280	1220	1250
30	---	---	---	1400	1370	1390	1350	1290	1320	1270	1210	1240
31	---	---	---	1420	1370	1400	1340	1250	1300	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	1370	180	1210

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.5	19.5	22.0	17.0	12.0	13.0	15.5	14.0	14.5	3.5	2.5	3.5
2	23.5	19.5	22.0	13.0	11.0	11.5	15.0	14.0	14.5	2.5	1.0	2.0
3	23.5	21.5	22.5	13.0	11.0	12.0	17.0	15.0	16.0	1.0	.0	.0
4	24.0	21.0	22.5	11.0	10.0	10.5	17.0	16.0	16.5	1.0	.0	.5
5	23.5	19.0	20.5	10.0	9.5	9.5	16.0	15.0	15.5	1.5	.5	1.0
6	19.0	17.5	18.0	9.5	9.0	9.0	16.0	13.5	15.0	2.5	1.0	1.5
7	---	---	---	---	---	---	13.5	10.5	12.0	1.5	1.0	1.5
8	---	---	---	10.5	9.5	10.0	10.5	8.5	9.0	2.0	1.0	1.5
9	---	---	---	12.0	9.5	10.5	8.5	7.0	8.0	1.0	.0	.5
10	19.0	15.0	17.0	13.0	9.5	11.5	8.0	8.0	8.0	1.0	.5	.5
11	20.0	17.5	18.5	---	---	---	8.0	7.5	8.0	1.0	.5	1.0
12	21.5	18.5	19.5	---	---	---	8.5	8.0	8.0	3.5	1.0	2.0
13	---	---	---	12.0	10.0	11.0	8.0	7.5	7.5	4.0	3.0	3.5
14	---	---	---	14.0	10.5	12.0	8.0	7.5	8.0	3.5	2.5	3.0
15	---	---	---	16.0	9.0	12.0	8.5	7.5	8.0	4.5	3.0	4.0
16	21.5	20.0	20.5	---	---	---	8.5	8.0	8.5	5.5	4.5	5.0
17	21.5	20.0	20.5	---	---	---	8.5	7.5	8.0	6.5	5.5	6.0
18	20.0	18.0	19.0	14.5	13.0	14.0	8.0	7.5	8.0	7.0	6.0	6.5
19	---	---	---	14.5	12.5	14.0	8.0	7.0	7.5	7.0	6.0	6.5
20	---	---	---	12.5	11.0	11.5	7.0	6.0	6.5	7.5	7.0	7.5
21	18.0	16.0	17.0	11.0	10.0	10.5	6.0	1.0	4.0	9.0	7.5	8.5
22	18.0	14.5	16.0	11.0	9.0	10.0	1.0	-.5	.0	9.0	6.5	8.0
23	17.0	14.5	15.0	12.5	10.5	11.5	.0	-.5	.0	7.0	5.5	6.5
24	16.0	14.5	15.0	12.5	11.5	12.0	.5	-.5	.0	7.0	6.0	6.5
25	17.0	14.0	15.0	13.0	11.5	12.5	.5	.0	.5	6.5	6.0	6.0
26	17.5	15.0	16.0	12.0	11.5	12.0	1.0	.0	.5	8.0	5.5	6.5
27	19.0	16.0	17.0	12.5	11.0	11.5	2.0	.5	1.0	10.5	8.0	9.5
28	19.5	17.0	18.5	14.0	12.5	13.5	4.0	2.0	3.0	10.5	9.0	10.0
29	21.0	18.0	19.0	15.5	14.0	15.0	5.0	3.5	4.0	9.0	6.0	7.5
30	19.0	18.0	18.5	15.5	14.5	15.0	4.5	3.5	4.0	6.0	5.5	6.0
31	19.5	17.0	19.0	---	---	---	4.5	3.0	3.5	5.5	5.0	5.0
MONTH	---	---	---	---	---	---	17.0	-.5	7.3	10.5	.0	4.4

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.5	5.0	6.0	16.5	12.5	13.5	17.0	14.0	15.5	20.0	18.5	19.5
2	8.0	6.5	7.5	14.0	13.0	13.5	19.0	17.0	18.0	19.5	18.5	19.0
3	8.0	7.0	8.0	13.0	11.0	12.0	19.0	17.5	18.5	21.0	19.0	20.0
4	9.0	8.0	8.5	12.5	10.5	12.0	17.5	16.0	17.0	21.0	16.5	19.5
5	11.0	8.5	9.5	14.5	12.5	13.5	18.0	17.0	17.5	20.5	18.5	19.5
6	13.0	11.0	12.5	14.0	12.5	13.5	18.0	16.5	17.5	19.5	18.0	19.0
7	12.5	11.5	12.0	12.5	9.5	11.0	18.0	17.5	17.5	19.5	17.5	18.5
8	13.0	11.5	12.5	11.0	9.0	9.5	19.0	17.5	18.5	21.0	18.5	19.5
9	13.0	12.5	13.0	11.5	10.0	11.0	18.5	17.5	18.0	22.0	20.0	21.0
10	15.5	13.0	14.0	12.0	11.0	11.5	19.0	17.0	18.0	21.5	19.5	20.5
11	16.0	11.5	14.0	12.0	11.5	11.5	18.5	16.5	17.5	21.0	19.5	20.5
12	11.5	9.5	10.0	11.5	7.0	9.0	18.0	17.0	17.5	21.0	18.0	19.5
13	10.0	8.5	9.0	7.0	4.5	6.0	18.0	17.0	17.5	22.0	19.5	20.5
14	9.5	7.5	8.5	6.0	3.5	5.0	18.5	17.0	17.5	22.0	20.0	21.0
15	10.5	8.0	9.5	11.5	4.5	7.5	17.0	14.5	15.5	24.5	21.5	23.0
16	12.0	10.5	11.0	---	---	---	15.0	13.0	14.0	25.0	23.5	24.5
17	11.0	10.0	10.5	---	---	---	14.5	12.5	13.5	24.5	22.0	23.0
18	11.0	10.0	10.5	---	---	---	15.0	13.0	14.0	23.0	21.0	22.0
19	10.0	9.0	9.5	11.5	10.0	10.5	17.5	15.0	16.0	23.5	21.0	22.0
20	10.5	9.0	9.5	11.0	9.0	10.0	19.5	17.0	18.0	23.0	21.0	22.5
21	10.0	8.0	9.0	13.0	10.5	11.5	20.5	18.5	19.5	25.0	22.5	23.5
22	8.5	7.0	8.0	16.5	12.5	14.5	22.0	19.5	20.5	25.5	24.0	24.5
23	8.5	6.5	7.5	16.5	13.5	14.0	22.0	17.5	20.0	25.0	24.0	24.5
24	10.0	7.5	9.0	---	---	---	17.5	15.0	16.0	25.0	23.5	24.5
25	13.0	10.0	11.5	---	---	---	16.0	14.5	15.0	24.5	23.0	23.5
26	15.5	13.0	14.5	---	---	---	16.5	15.5	16.0	24.0	21.5	22.5
27	15.5	14.0	14.5	12.0	11.5	11.5	18.5	16.5	17.0	23.0	22.0	22.5
28	14.0	12.5	13.5	11.5	11.0	11.0	20.0	17.5	19.0	23.0	21.5	22.5
29	---	---	---	13.0	11.0	12.0	20.5	18.5	19.5	24.0	21.5	22.5
30	---	---	---	14.0	12.0	13.0	20.5	19.0	19.5	26.0	23.0	24.0
31	---	---	---	14.5	13.5	14.0	---	---	---	26.5	24.0	25.5
MONTH	16.0	5.0	10.5	---	---	---	22.0	12.5	17.3	26.5	16.5	21.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.5	24.5	26.0	26.5	25.5	26.0	32.5	27.0	29.5	31.0	24.5	27.5
2	28.0	25.0	26.5	29.0	26.0	27.5	33.0	27.0	30.0	30.5	24.5	27.0
3	28.0	25.5	27.0	29.5	27.0	28.0	33.0	27.5	29.5	31.0	24.5	27.5
4	27.5	25.5	26.5	29.5	27.0	28.5	32.0	27.0	29.5	30.0	25.0	27.0
5	30.0	25.5	27.0	30.0	27.5	28.5	33.0	27.0	29.0	30.0	25.0	27.0
6	26.0	24.5	25.0	31.0	28.0	29.5	31.5	26.5	29.0	31.5	24.5	27.5
7	27.0	24.5	25.5	31.5	28.5	30.0	32.0	26.5	29.5	31.5	25.0	27.5
8	27.5	25.0	26.0	31.5	28.5	30.0	33.5	28.0	30.5	30.0	23.5	26.0
9	28.0	25.5	26.5	31.0	28.0	29.5	33.0	28.5	30.5	29.0	22.0	25.0
10	27.0	24.5	25.5	29.0	24.5	25.5	33.0	28.5	30.5	28.5	21.5	24.5
11	26.0	24.0	25.0	26.5	24.0	25.0	33.0	28.5	30.5	24.5	20.5	23.0
12	25.5	23.0	24.5	26.5	25.0	26.0	32.0	27.0	29.5	26.5	21.5	23.5
13	25.5	22.5	24.0	27.5	24.5	26.0	30.5	27.5	29.0	27.0	19.5	22.5
14	26.5	23.0	24.5	29.0	25.5	27.5	30.0	25.5	27.5	27.0	19.0	22.5
15	27.0	23.0	25.0	29.0	26.5	28.0	31.0	25.5	28.0	24.0	21.0	22.5
16	26.0	23.5	24.5	28.0	26.0	27.0	31.0	26.0	28.5	21.5	19.5	20.5
17	25.0	22.5	24.0	29.0	26.0	27.5	30.5	26.0	28.5	24.0	19.0	21.0
18	24.5	23.0	24.0	30.0	26.5	28.5	30.5	26.0	28.0	22.5	21.0	22.0
19	24.5	22.0	23.5	30.5	27.5	29.0	30.0	26.5	28.5	25.0	20.0	22.5
20	25.5	23.5	24.5	30.5	28.0	29.0	30.0	25.0	27.0	24.5	18.0	21.5
21	24.5	23.5	24.0	31.0	27.5	29.5	30.0	25.0	27.0	22.5	15.5	18.5
22	24.0	23.5	23.5	31.0	27.5	29.5	30.0	24.5	27.0	24.0	15.0	19.0
23	24.0	21.0	23.0	31.0	28.0	29.5	33.0	26.0	29.0	23.0	16.0	19.0
24	25.5	23.5	24.5	31.5	28.0	30.0	32.0	25.5	28.5	24.5	16.5	19.5
25	26.0	23.0	24.5	32.0	28.5	30.0	32.0	25.0	28.5	25.0	18.0	21.5
26	28.0	25.0	26.5	32.0	28.0	30.0	32.5	25.5	28.5	28.0	19.5	23.0
27	29.0	26.5	28.0	32.5	28.0	30.0	31.5	24.5	28.0	24.5	19.0	21.5
28	28.5	27.0	28.0	33.0	27.5	30.5	33.0	26.0	29.5	19.0	15.0	16.5
29	28.0	25.5	27.0	33.0	28.0	30.5	33.5	27.0	30.0	22.0	12.5	16.5
30	26.5	25.5	26.0	32.0	26.5	29.5	32.5	27.0	29.0	22.5	13.5	17.5
31	---	---	---	32.5	26.5	29.0	32.0	25.5	28.5	---	---	---
MONTH	30.0	21.0	25.3	33.0	24.0	28.5	33.5	24.5	28.9	31.5	12.5	22.7

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

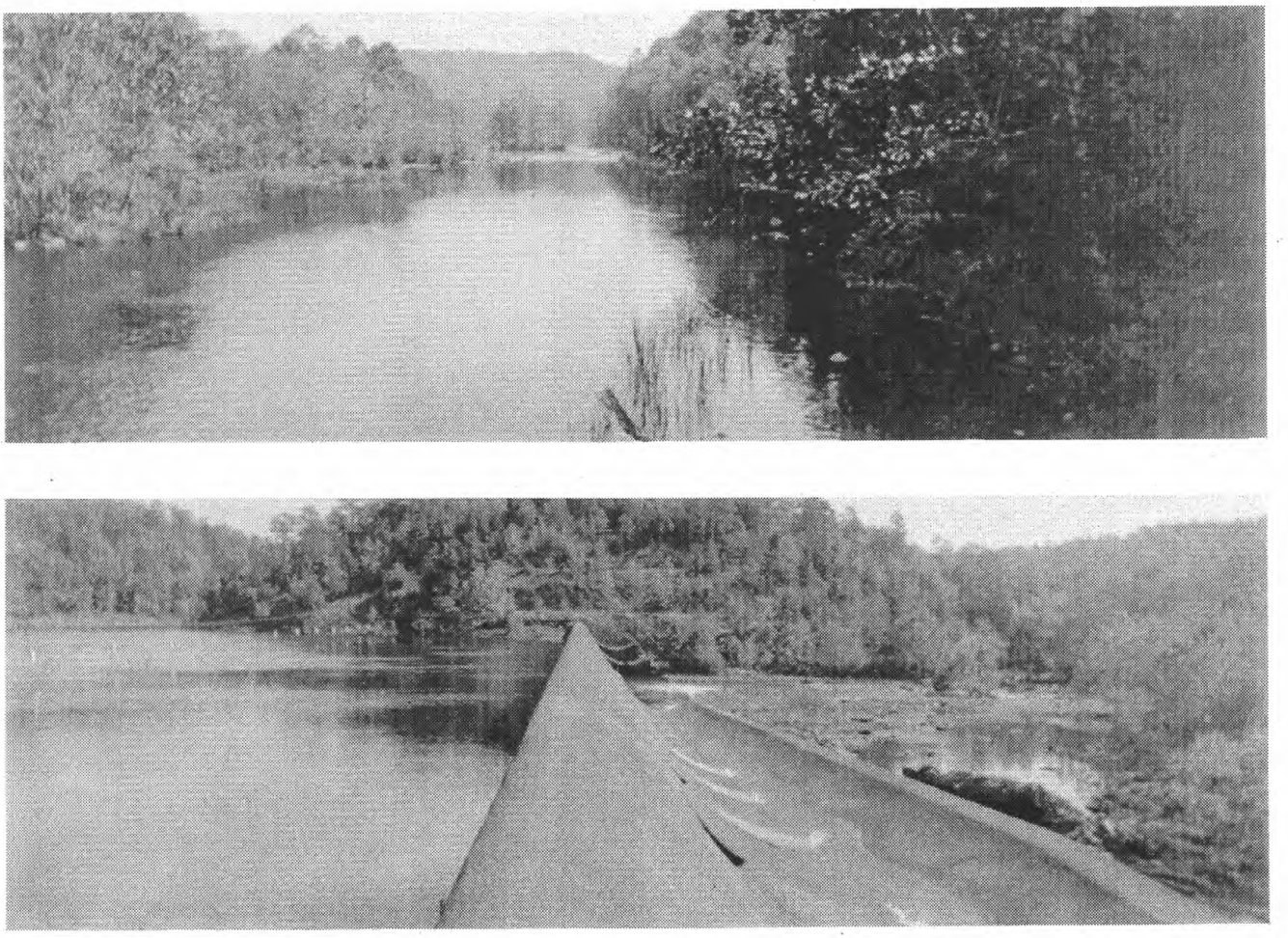
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	9.2	8.3	8.9	9.7	8.8	9.3	11.8	11.6	11.7
2	---	---	---	10.0	9.2	9.6	9.7	9.3	9.5	12.5	11.8	12.2
3	---	---	---	10.2	9.1	9.7	9.3	8.7	9.1	13.4	12.5	13.1
4	---	---	---	9.1	8.7	8.9	9.0	8.7	8.8	13.4	12.7	13.1
5	---	---	---	8.8	8.3	8.7	9.2	8.5	9.0	13.1	12.6	12.8
6	---	---	---	8.8	8.3	8.5	9.4	8.9	9.1	13.0	12.4	12.7
7	---	---	---	9.7	8.8	9.4	10.3	9.4	9.9	12.7	12.3	12.5
8	---	---	---	9.3	8.8	9.0	10.7	10.3	10.6	12.8	12.2	12.4
9	---	---	---	10.0	9.3	9.5	10.9	10.6	10.9	13.4	12.8	13.1
10	9.1	7.4	8.2	---	---	---	10.9	10.7	10.8	13.4	13.0	13.1
11	8.0	7.6	7.7	---	---	---	10.9	10.8	10.8	13.3	12.8	13.0
12	8.8	7.4	7.9	---	---	---	10.9	10.7	10.8	12.8	11.3	12.3
13	8.7	7.1	7.6	---	---	---	11.0	10.8	10.9	12.3	11.8	12.1
14	8.6	7.1	7.9	---	---	---	11.1	10.9	11.0	12.7	12.2	12.4
15	8.7	7.3	8.0	---	---	---	11.1	10.7	10.9	12.3	11.6	12.0
16	8.3	6.7	7.8	---	---	---	10.8	10.7	10.7	11.8	11.1	11.4
17	8.6	6.7	7.6	---	---	---	11.0	10.7	10.8	11.7	11.3	11.5
18	9.5	7.7	8.2	---	---	---	10.7	10.6	10.6	11.8	11.1	11.5
19	---	---	---	---	---	---	11.1	10.5	10.8	11.4	10.5	11.1
20	---	---	---	---	---	---	11.3	11.1	11.2	11.3	10.4	10.8
21	8.9	8.2	8.4	10.3	9.4	9.9	12.7	11.3	11.8	10.5	10.1	10.3
22	9.2	8.4	8.7	10.6	10.1	10.3	13.3	12.5	13.0	11.2	10.4	10.7
23	9.6	8.5	8.8	10.3	9.8	10.1	13.0	12.9	12.9	11.7	11.2	11.4
24	9.7	8.5	8.9	10.1	9.2	9.9	13.0	12.8	12.9	11.9	11.2	11.5
25	11.1	8.5	9.4	10.2	9.7	9.9	13.0	12.7	12.8	11.9	11.0	11.6
26	11.2	8.3	9.3	10.4	9.9	10.1	13.0	12.7	12.8	11.8	11.0	11.5
27	11.8	8.1	9.3	10.3	9.8	10.1	12.8	12.3	12.6	11.0	10.3	10.7
28	10.2	7.5	8.4	11.0	9.4	9.8	12.3	11.6	11.9	10.7	10.2	10.4
29	10.3	7.5	8.3	9.5	9.1	9.3	11.8	11.5	11.7	11.3	10.7	11.0
30	8.8	7.4	7.9	9.7	9.1	9.4	11.8	11.5	11.7	11.8	11.3	11.5
31	8.8	7.5	7.9	---	---	---	12.1	11.5	11.8	12.0	11.7	11.9
MONTH	---	---	---	---	---	---	13.3	8.5	11.0	13.4	10.1	11.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.9	11.1	11.6	---	---	---	---	---	---	9.7	9.3	9.5
2	11.5	11.0	11.2	---	---	---	---	---	---	9.8	9.3	9.5
3	11.3	10.7	11.0	---	---	---	---	---	---	9.5	9.0	9.3
4	11.0	10.7	10.8	10.8	10.3	10.5	---	---	---	9.8	8.9	9.2
5	10.8	10.2	10.6	10.5	10.0	10.2	---	---	---	9.3	8.5	9.0
6	10.2	9.7	9.9	10.7	10.0	10.4	---	---	---	9.7	9.0	9.4
7	10.2	9.7	9.9	11.0	10.4	10.7	---	---	---	9.8	9.1	9.4
8	9.9	9.5	9.8	11.5	10.7	11.0	---	---	---	9.6	7.8	9.1
9	9.7	9.2	9.5	11.2	10.6	10.9	---	---	---	8.8	7.3	8.3
10	9.4	8.7	9.2	10.8	10.4	10.6	9.1	8.8	8.9	9.4	8.7	9.1
11	9.4	8.4	9.0	10.8	10.4	10.6	9.5	8.9	9.2	9.3	8.7	9.0
12	9.7	9.4	9.6	11.6	10.5	10.9	9.5	9.1	9.3	9.6	8.6	9.2
13	9.9	9.5	9.6	12.2	11.6	11.9	9.5	9.2	9.3	8.8	7.2	8.5
14	9.7	9.1	9.4	12.5	11.8	12.1	9.3	9.0	9.1	---	---	---
15	9.2	8.7	9.0	11.9	10.5	11.3	10.0	9.3	9.8	---	---	---
16	8.9	8.5	8.7	10.9	9.9	10.4	10.3	9.8	10.0	---	---	---
17	8.8	8.4	8.6	11.0	9.9	10.2	10.8	10.2	10.5	9.3	8.5	8.9
18	8.6	8.2	8.4	10.5	9.9	10.2	10.5	9.9	10.2	9.5	7.3	9.1
19	8.8	8.4	8.5	10.8	10.5	10.7	10.1	9.5	9.8	9.5	8.3	9.2
20	8.7	8.3	8.4	11.1	10.3	10.7	9.7	9.1	9.4	9.5	9.0	9.2
21	8.8	8.3	8.5	10.9	10.2	10.6	9.3	8.8	9.0	9.3	8.7	9.0
22	8.6	8.3	8.4	10.4	9.6	10.0	9.0	8.5	8.8	9.0	8.7	8.8
23	---	---	---	10.2	9.6	10.0	9.5	8.5	9.0	9.1	8.7	8.9
24	---	---	---	---	---	---	10.4	9.5	10.0	9.1	8.8	8.9
25	---	---	---	---	---	---	10.6	9.5	10.2	9.3	8.7	9.0
26	---	---	---	---	---	---	10.5	10.0	10.3	---	---	---
27	---	---	---	---	---	---	10.3	9.0	10.0	---	---	---
28	---	---	---	---	---	---	9.6	8.0	9.0	---	---	---
29	---	---	---	---	---	---	9.2	8.7	9.0	---	---	---
30	---	---	---	---	---	---	9.6	9.0	9.3	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	---	---	---	9.2	7.8	8.4
2	---	---	---	7.8	7.4	7.6	---	---	---	9.3	7.8	8.4
3	---	---	---	7.8	7.3	7.5	---	---	---	9.2	7.6	8.3
4	---	---	---	7.7	7.2	7.5	---	---	---	9.6	7.5	8.4
5	---	---	---	7.6	7.2	7.3	---	---	---	9.8	6.8	8.4
6	7.8	7.6	7.7	7.5	7.0	7.2	---	---	---	8.9	6.4	7.7
7	8.1	7.5	7.7	7.4	7.0	7.2	---	---	---	---	---	---
8	7.8	7.3	7.5	7.4	7.0	7.2	---	---	---	---	---	---
9	7.6	7.3	7.4	7.5	6.9	7.2	---	---	---	---	---	---
10	7.8	7.3	7.6	8.1	6.9	7.7	---	---	---	---	---	---
11	7.8	7.6	7.7	8.0	7.2	7.6	---	---	---	---	---	---
12	7.9	7.6	7.7	7.8	7.4	7.6	---	---	---	---	---	---
13	7.9	6.1	7.3	7.9	7.4	7.7	---	---	---	---	---	---
14	7.5	6.4	7.2	7.8	7.1	7.4	---	---	---	---	---	---
15	7.8	7.2	7.5	7.5	7.1	7.3	---	---	---	---	---	---
16	7.7	7.4	7.5	7.7	7.1	7.4	---	---	---	---	---	---
17	8.1	7.7	8.0	7.8	7.3	7.5	---	---	---	---	---	---
18	8.2	7.8	8.0	7.7	7.3	7.4	---	---	---	---	---	---
19	8.1	7.8	7.9	7.6	7.1	7.4	---	---	---	---	---	---
20	7.9	7.7	7.8	7.8	7.2	7.4	---	---	---	---	---	---
21	8.0	7.8	7.9	7.8	6.9	7.5	---	---	---	---	---	---
22	8.2	7.9	8.0	7.9	7.3	7.5	---	---	---	---	---	---
23	8.5	7.9	8.1	7.8	6.8	7.5	---	---	---	---	---	---
24	8.0	7.7	7.9	7.7	6.8	7.4	---	---	---	---	---	---
25	8.1	7.4	7.9	---	---	---	8.8	7.9	8.3	9.8	8.2	8.9
26	---	---	---	---	---	---	8.8	7.4	8.1	9.4	7.5	8.5
27	---	---	---	---	---	---	---	---	---	9.6	7.7	8.6
28	---	---	---	---	---	---	---	---	---	10.3	8.5	9.3
29	---	---	---	---	---	---	---	---	---	10.5	8.7	9.6
30	---	---	---	---	---	---	9.0	7.5	8.2	10.4	8.6	9.4
31	---	---	---	---	---	---	9.1	7.6	8.3	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---



07338920 Mountain Fork Re-regulation Dam near Broken Bow, OK. October, 1995.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	528	4240	e560	e270	e760	462	746	e1050	e630	1030	e232	e198
2	460	1230	386	e290	590	293	746	e1340	e640	941	e215	e198
3	401	3320	516	e320	e460	439	893	e1240	e620	886	206	e215
4	247	e380	1690	e250	e370	378	659	e1900	e590	833	e220	e204
5	3090	e125	1210	e210	e420	357	635	e2780	e470	787	e240	e198
6	452	e102	1080	e185	e700	338	491	e1530	e440	764	e260	e196
7	323	e102	1120	e180	e920	367	418	e1200	e690	746	e280	e192
8	117	e170	e1200	e220	e580	790	323	e1090	e760	725	e275	e208
9	65	e300	e960	e240	e490	e440	464	e1140	832	708	220	e198
10	50	e460	678	e260	e460	e420	811	e2140	e1320	2210	e235	e199
11	69	e220	558	297	e540	e470	773	e2380	e1900	2840	e250	e212
12	90	e140	637	368	e810	1540	775	e1800	e900	1460	254	e248
13	77	e115	589	396	e640	1820	971	e1100	e1400	1080	e250	e232
14	56	e170	629	383	625	1360	e1300	e940	e670	918	e250	e210
15	40	e120	602	378	507	703	e1480	e880	e570	863	e247	e186
16	46	e100	592	415	329	288	e960	e980	e535	868	e242	e181
17	576	e260	588	545	331	e200	e600	e1090	e505	831	e240	e170
18	1210	e535	579	412	325	453	e620	e1180	e610	838	e240	e155
19	211	e610	524	470	347	821	e730	e1120	e680	767	e239	e145
20	75	e490	588	488	496	1100	e830	e940	e840	681	e239	e135
21	51	e460	e520	486	527	1350	873	760	e810	644	e235	e120
22	57	e440	e420	405	e290	965	871	e790	e1100	622	e232	e107
23	52	e500	e320	646	267	1110	972	e800	3830	594	e224	e103
24	49	e560	e240	497	e380	e920	1050	e860	2830	561	e220	e102
25	47	e430	e240	454	e470	e760	7780	e810	3970	493	e218	e101
26	46	e490	e270	452	368	756	5890	e890	2010	437	e224	e180
27	44	e460	e270	450	372	801	4500	e810	1440	357	e214	e135
28	139	e430	e215	452	411	811	2550	e760	1210	318	e208	e125
29	210	e410	200	615	---	722	1670	e730	1000	294	e210	e115
30	92	e960	200	1710	---	752	1060	e700	1060	266	e199	96
31	92	---	e220	e1050	---	752	---	e670	---	e248	e197	---
TOTAL	9062	18329	18401	13794	13785	22738	42441	36400	34862	25610	7215	5064
MEAN	292	611	594	445	492	733	1415	1174	1162	826	233	169
MAX	3090	4240	1690	1710	920	1820	7780	2780	3970	2840	280	248
MIN	40	100	200	180	267	200	323	670	440	248	197	96
AC-FT	17970	36360	36500	27360	27340	45100	84180	72200	69150	50800	14310	10040

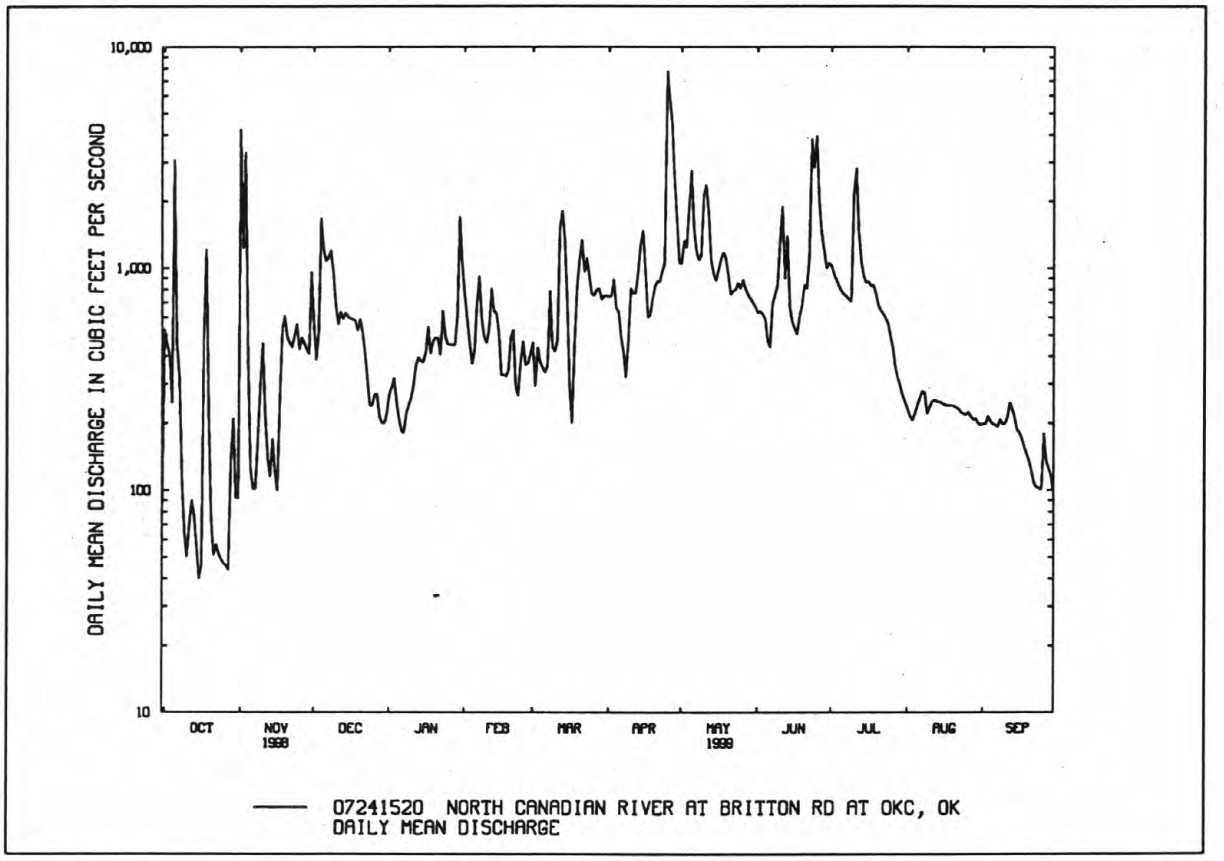
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1999, BY WATER YEAR (WY)

MEAN	301	359	424	362	405	664	636	1059	1214	452	370	418
MAX	860	928	968	1162	879	2011	1415	4095	3662	1044	966	1350
(WY)	1997	1997	1992	1998	1997	1998	1999	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 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1989 - 1999	
ANNUAL TOTAL	250140		247701			
ANNUAL MEAN	685		679		555	
HIGHEST ANNUAL MEAN					835	1993
LOWEST ANNUAL MEAN					167	1991
HIGHEST DAILY MEAN	8660	Mar 17	7780	Apr 25	22700	May 9 1993
LOWEST DAILY MEAN	40	Oct 15	40	Oct 15	28	Jul 28 1991
ANNUAL SEVEN-DAY MINIMUM	47	Aug 30	49	Oct 21	32	Jul 22 1991
INSTANTANEOUS PEAK FLOW			15300	Apr 25	38100	May 9 1993
INSTANTANEOUS PEAK STAGE			20.47	Apr 25	24.80	May 9 1993
ANNUAL RUNOFF (AC-FT)	496200		491300		402300	
10 PERCENT EXCEEDS	1290		1220		1100	
50 PERCENT EXCEEDS	460		488		256	
90 PERCENT EXCEEDS	53		140		76	



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 23.3 mg/L, Sept. 19, 1999; minimum 0.6 mg/L, Aug. 30, 1999.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,570 microsiemens, Apr. 10; minimum, 153 microsiemens, Sept. 11.
WATER TEMPERATURE: Maximum, 35.0°C, Aug. 10; minimum, 0.0°C, Jan. 8, 9, 10.
DISSOLVED OXYGEN: Maximum recorded (greater then 20 percent missing record), 23.3 mg/L, Sept. 19; minimum recorded, 0.6 mg/L, Aug. 30.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
24...	0842	20.0	7.0	738	1028	1028	418	9.57	1480	11.6	8.1
24...	0844	40.0	7.0	738	1028	1028	418	9.57	1490	11.8	8.1
24...	0846	60.0	7.0	738	1028	1028	418	9.57	1480	11.7	8.1
24...	0848	80.0	7.0	738	1028	1028	418	9.57	1480	11.8	8.1
24...	0850	100	7.0	738	1028	1028	418	9.57	1480	11.8	8.1
24...	0854	210	7.0	738	1028	1028	418	9.57	1480	11.5	8.1
24...	0856	220	7.0	738	1028	1028	418	9.57	1480	11.5	8.1

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...	0800	1028	80020	375	406	8.1	14.0	16.0	240	738	8.0	84
NOV												
04...	0900	1028	80020	380	406	7.9	6.0	11.0	160	737	9.3	87
DEC												
02...	0910	1028	80020	393	1160	8.6	14.5	13.0	22	736	9.2	91
JAN												
06...	0945	1028	80020	189	1420	8.1	4.5	.5	5.0	738	13.4	97
FEB												
24...	0920	1028	80020	418	1480	8.1	13.5	7.0	33	738	11.7	100
MAR												
16...	0830	1028	80020	288	691	8.0	8.0	8.5	68	740	10.2	90
APR												
06...	1045	1028	80020	504	1440	8.4	19.0	15.0	50	747	9.6	97
MAY												
25...	0950	1028	80020	810	1320	8.3	21.0	23.0	90	726	7.6	94
JUN												
23...	0945	1028	80020	1870	883	8.0	24.0	22.7	150	727	7.2	88
JUL												
06...	1027	1028	80020	765	1400	8.5	34.5	28.3	150	745	7.6	100
AUG												
03...	1457	1028	80020	208	1400	8.5	31.5	31.5	22	746	13.6	190
SEP												
01...	1430	1028	80020	198	1510	9.0	33.5	29.2	14	744	16.1	217

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	NITRO-GEN DIS-SOLVED (MG/L AS N) (00602)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT 07...	--	12	10000	8000	--	--	--	--	--	--	--	--
NOV 04...	1.5	5.5	4100	K9500	130	38	33	11	30	33	1	5.2
DEC 02...	1.4	3.8	4200	700	--	--	--	--	--	--	--	--
JAN 06...	2.8	6.9	83	700	--	--	--	--	--	--	--	--
FEB 24...	1.2	6.0	380	470	470	250	110	46	136	38	3	5.7
MAR 16...	2.6	6.9	2100	890	--	--	--	--	--	--	--	--
APR 06...	.97	7.6	300	K170	--	--	--	--	--	--	--	--
MAY 25...	1.3	6.9	270	460	410	200	100	38	115	37	2	6.4
JUN 23...	.94	5.4	4700	7600	--	--	--	--	--	--	--	--
JUL 06...	1.4	18	180	4100	--	--	--	--	--	--	--	--
AUG 03...	--	12	K33	K21000	390	170	82	44	146	44	3	8.6
SEP 01...	--	16	3400	4100	--	--	--	--	--	--	--	--

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)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)
OCT 07...	116	0	95	1.8	--	--	--	--	--	--	--	--
NOV 04...	111	0	91	2.3	51	31	.27	6.1	242	227	.33	248
DEC 02...	173	24	182	.9	--	--	--	--	--	--	--	--
JAN 06...	390	0	320	5.5	--	--	--	--	--	--	--	--
FEB 24...	280	0	229	3.8	280	160	.66	14	942	898	1.28	1060
MAR 16...	174	0	143	2.9	--	--	--	--	--	--	--	--
APR 06...	276	5	234	1.8	--	--	--	--	--	--	--	--
MAY 25...	245	5	208	2.0	250	150	.58	9.7	844	801	1.15	2240
JUN 23...	181	0	148	3.4	--	--	--	--	--	--	--	--
JUL 06...	246	10	217	2.4	--	--	--	--	--	--	--	--
AUG 03...	245	12	221	1.1	230	180	.64	20	880	844	1.20	494
SEP 01...	215	28	222	.6	--	--	--	--	--	--	--	--

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
07...	344	.947	4.2	.049	.16	.996	.221	.28	--	--	.171
NOV											
04...	232	.736	3.3	.019	.06	.755	.142	.18	.56	.70	.191
DEC											
02...	46	.629	2.8	.011	.04	.640	.078	.10	.70	.78	.258
JAN											
06...	6	1.36	6.0	.033	.11	1.39	.587	.76	.84	1.4	.349
FEB											
24...	32	.245	1.1	.011	.04	.256	.080	.10	.83	.91	.080
MAR											
16...	78	1.27	5.6	.060	.20	1.33	.324	.42	.91	1.2	.221
APR											
06...	226	.302	1.3	.012	.04	.314	.051	.07	.61	.66	.141
MAY											
25...	187	--	--	<.010	--	.299	.219	.28	.79	1.0	.132
JUN											
23...	231	.331	1.5	.011	.04	.342	.038	.05	.56	.60	.156
JUL											
06...	196	.975	4.3	.013	.04	.988	.024	.03	.42	.45	.188
AUG											
03...	93	--	--	<.010	--	<.050	.047	.06	.93	.98	.068
SEP											
01...	43	--	--	<.010	--	<.050	.086	.11	1.2	1.3	.266

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											
07...	.163	.50	--	--	--	--	--	--	--	--	--
NOV											
04...	.176	.54	2	84	<1.6	<8.0	<14	<7.0	<10	<10	<100
DEC											
02...	.210	.64	--	--	--	--	--	--	--	--	--
JAN											
06...	.316	.97	--	--	--	--	--	--	--	--	--
FEB											
24...	.090	.28	4	154	<1.6	<8.0	<14	<7.0	<10	<10	<100
MAR											
16...	.219	.67	--	--	--	--	--	--	--	--	--
APR											
06...	.110	.34	--	--	--	--	--	--	--	--	--
MAY											
25...	.084	.26	5	136	<1.6	<8.0	<14	<7.0	11	<10	<100
JUN											
23...	.136	.42	--	--	--	--	--	--	--	--	--
JUL											
06...	.179	.55	--	--	--	--	--	--	--	--	--
AUG											
03...	.070	.21	6	150	<1.6	<8.0	<14	<7.0	E6.2	<10	<100
SEP											
01...	.294	.90	--	--	--	--	--	--	--	--	--

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
07...	--	--	--	--	--	--	--	--	--	--	--
NOV											
04...	9	<3.0	<.1	<50	<40	--	<4.0	290	E6	<20	11
DEC											
02...	--	--	--	--	--	--	--	--	--	--	--
JAN											
06...	--	--	--	--	--	--	--	--	--	--	--
FEB											
24...	38	E1.9	<.1	<50	<40	<1	<4.0	1180	E8	<20	9.7
MAR											
16...	--	--	--	--	--	--	--	--	--	--	--
APR											
06...	--	--	--	--	--	--	--	--	--	--	--
MAY											
25...	33	E2.5	<.1	<50	<40	<1	<4.0	964	E10	E19	52
JUN											
23...	--	--	--	--	--	--	--	--	--	--	--
JUL											
06...	--	--	--	--	--	--	--	--	--	--	--
AUG											
03...	49	3.6	<.1	<50	<40	<1	<4.0	1110	13	E11	--
SEP											
01...	--	--	--	--	--	--	--	--	--	--	--

DATE	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)	METOLA-CHLOR WATER WHOLE TOT.REC (UG/L) (82612)
NOV												
04...	1028	80020	E.250	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200	<.200
FEB												
24...	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200	<.200
MAY												
25...	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200	<.200
JUN												
23...	1028	80020	--	--	--	--	--	--	--	--	--	--
JUL												
06...	1028	80020	--	--	--	--	--	--	--	--	--	--
AUG												
03...	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200	<.200
SEP												
01...	1028	80020	--	--	--	--	--	--	--	--	--	--

DATE	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)	CHLOR-DANE, TECH-NICAL TOTAL (UG/L) (39350)
NOV												
04...	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.100	<.100	<.200	<.200	<.100
FEB												
24...	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.100	.520	<.200	<.200	<.100
MAY												
25...	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.100	E.090	<.200	<.200	<.100
JUN												
23...	--	<.010	--	--	--	--	--	--	--	--	--	--
JUL												
06...	--	<.010	--	--	--	--	--	--	--	--	--	--
AUG												
03...	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.100	<.100	<.200	<.200	<.100
SEP												
01...	--	<.010	--	--	--	--	--	--	--	--	--	--

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	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'-DDE, TOTAL (UG/L) (39365)	P,P'-DDT UNFILT RECOVER (UG/L) (39370)	DEF TOTAL (UG/L) (39040)	DI-AZINON, TOTAL (UG/L) (39570)	DI-ELDRIN TOTAL (UG/L) (39380)	DISUL-FOTON UNFILT RECOVER (UG/L) (39011)	2,4-DP TOTAL (UG/L) (82183)	ENDO-SULFAN I TOTAL (UG/L) (39388)
NOV 04...	<.010	<.200	.044	<.001	<.001	<.001	<.060	<.020	.001	--	<.010	<.001
FEB 24...	<.010	<.200	<.010	<.001	<.001	<.001	<.010	<.010	<.001	<.030	<.010	<.001
MAY 25...	<.010	<.200	.068	<.001	<.001	<.001	<.010	<.010	<.001	<.010	<.010	<.001
JUN 23...	<.010	--	--	--	--	--	<.010	.044	--	<.010	--	--
JUL 06...	<.010	--	--	--	--	--	<.010	.017	--	<.010	--	--
AUG 03...	<.010	<.200	<.010	<.001	<.001	<.001	<.010	<.010	<.001	<.010	<.010	<.001
SEP 01...	<.010	--	--	--	--	--	<.010	.013	--	<.010	--	--

DATE	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA-CHLOR, TOTAL (UG/L) (39410)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA-THION, TOTAL (UG/L) (39530)	METH-OXY-CHLOR, TOTAL (UG/L) (39480)	METHYL PARA-THION, TOTAL (UG/L) (39600)	MIREX, TOTAL (UG/L) (39755)	PARA-THION, TOTAL (UG/L) (39540)	PER-THANE TOTAL (UG/L) (39034)
NOV 04...	<.001	<.020	<.001	<.001	.001	--	<.010	<.020	<.010	<.010	<.100
FEB 24...	<.001	<.010	<.001	<.001	<.001	<.020	<.010	<.010	<.010	<.010	<.100
MAY 25...	<.001	<.010	<.001	<.001	<.001	<.010	<.010	<.010	<.010	<.010	<.100
JUN 23...	--	<.010	--	--	--	<.010	--	<.010	--	<.010	--
JUL 06...	--	<.010	--	--	--	<.010	--	<.010	--	<.010	--
AUG 03...	<.001	<.010	<.001	<.001	.001	<.010	<.010	<.010	<.010	<.010	<.100
SEP 01...	--	<.010	--	--	--	<.010	--	<.010	--	<.010	--

DATE	PHORATE TOTAL (UG/L) (39023)	PROME-TONE TOTAL (UG/L) (39056)	PROME-TRYNE TOTAL (UG/L) (39057)	PRO-PAZINE TOTAL (UG/L) (39024)	SILVEX, TOTAL (UG/L) (39760)	SIMA-ZINE TOTAL (UG/L) (39055)	SIME-TRYNE TOTAL (UG/L) (39054)	2,4,5-T TOTAL (UG/L) (39740)	TOX-APHENE, TOTAL (UG/L) (39400)	TRI-FLURA-LIN TOTAL RECOVER (UG/L) (39030)	TOTAL TRI-THION (UG/L) (39786)
NOV 04...	--	<.200	<.100	<.100	<.010	.190	<.100	<.010	<1.00	<.100	<.050
FEB 24...	<.010	<.200	<.100	<.100	<.010	.100	<.100	<.010	<1.00	<.100	<.010
MAY 25...	<.010	<.200	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<.100	<.010
JUN 23...	<.010	--	--	--	--	--	--	--	--	--	<.010
JUL 06...	<.010	--	--	--	--	--	--	--	--	--	<.010
AUG 03...	<.010	<.200	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<.100	<.010
SEP 01...	<.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 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1280	380	827	824	351	597	---	---	---	1420	1390	1400
2	477	393	434	351	270	289	---	---	---	1420	1240	1400
3	---	---	---	536	319	478	---	---	---	1270	1100	1200
4	---	---	---	471	430	445	---	---	---	1370	1140	1250
5	---	---	---	668	471	567	---	---	---	1460	1360	1380
6	469	258	340	848	668	766	---	---	---	1470	1350	1410
7	473	370	412	970	848	911	---	---	---	1430	1350	1410
8	671	473	565	1080	967	1040	---	---	---	1420	1410	1420
9	980	671	842	1130	1040	1090	---	---	---	1500	1420	1450
10	1150	980	1080	1120	418	712	---	---	---	1450	1350	1410
11	1250	1050	1190	748	615	701	1320	1060	1210	1400	1360	1380
12	1050	825	867	927	748	844	1400	1320	1370	1390	1360	1380
13	932	837	867	1080	927	1010	1420	1400	1410	1390	1360	1380
14	---	---	---	1170	1070	1130	1420	1400	1410	1410	1340	1390
15	---	---	---	1180	1130	1150	1430	1380	1420	1420	1360	1400
16	---	---	---	1270	1160	1220	1440	1420	1430	1440	1370	1420
17	---	---	---	1290	1240	1260	1430	1410	1420	1440	1400	1420
18	---	---	---	1440	1020	1250	1430	1420	1430	1400	1370	1390
19	---	---	---	1220	989	1180	1430	1390	1400	1420	1380	1410
20	---	---	---	1240	1200	1220	1440	1380	1410	1420	1400	1410
21	---	---	---	1240	1160	1220	1430	1400	1420	1430	1400	1420
22	---	---	---	1260	1220	1240	1400	1250	1320	1430	1410	1420
23	---	---	---	1240	1190	1230	1400	1310	1380	1420	1320	1360
24	978	918	953	1220	1160	1200	1440	1310	1380	1400	1350	1390
25	1090	939	1040	1200	1170	1190	1440	1340	1390	1390	1370	1380
26	1120	1050	1080	1200	1090	1180	1410	1400	1400	1380	1370	1380
27	1210	1110	1160	1220	1200	1210	1420	1400	1410	1410	1380	1390
28	---	---	---	1220	1200	1210	1410	1340	1390	---	---	---
29	---	---	---	1220	1180	1210	1460	1340	1410	1400	1030	1320
30	845	594	705	---	---	---	1460	1420	1450	1070	380	568
31	820	680	748	---	---	---	1450	1410	1440	979	536	863
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1040	926	977	---	---	---	1510	1490	1500	1120	737	948
2	931	811	857	---	---	---	1520	1480	1510	1210	1120	1170
3	1040	844	939	---	---	---	1520	1260	1420	1250	1210	1230
4	1170	1040	1100	---	---	---	1480	1380	1440	1210	536	940
5	1250	1170	1220	1520	1470	1500	1500	1420	1480	835	535	730
6	---	---	---	1510	1470	1500	1480	1360	1440	1170	835	1040
7	---	---	---	1520	1490	1510	1500	1420	1480	1260	1170	1200
8	1240	1060	1180	1490	1200	1390	1420	1360	1390	1300	1250	1280
9	1280	1230	1250	1280	1090	1180	1500	991	1350	1310	1260	1300
10	1310	1270	1300	1390	1270	1340	1570	1000	1410	1260	614	854
11	1340	1280	1310	1450	1240	1420	1440	1380	1400	939	644	700
12	1360	1170	1270	1430	419	1140	1460	1370	1400	821	723	785
13	1370	1360	1360	780	343	548	1440	1140	1370	---	---	---
14	1380	1360	1370	801	509	693	1300	757	1040	---	---	---
15	1390	1360	1380	---	---	---	1220	1020	1130	---	---	---
16	---	---	---	---	---	---	1370	1140	1300	---	---	---
17	---	---	---	---	---	---	1360	1200	1310	---	---	---
18	---	---	---	---	---	---	1260	1150	1190	---	---	---
19	---	---	---	---	---	---	1330	1260	1300	---	---	---
20	1400	1360	1390	---	---	---	1390	1320	1360	---	---	---
21	1410	1390	1400	---	---	---	1490	1390	1440	---	---	---
22	1400	1380	1390	---	---	---	1490	1480	1490	1280	1270	1270
23	1400	1380	1390	---	---	---	1540	1440	1460	1280	1010	1160
24	1390	1380	1390	---	---	---	1460	1360	1440	1240	1130	1180
25	1400	1380	1390	---	---	---	1360	201	459	1250	1040	1210
26	1400	1390	1400	---	---	---	631	259	499	1220	1040	1160
27	1410	1390	1400	1450	1420	1430	640	501	592	1260	1220	1240
28	1400	1330	1370	1450	1430	1440	655	471	543	1270	1250	1260
29	---	---	---	1470	1450	1460	616	506	554	1270	1190	1250
30	---	---	---	1500	1470	1480	835	616	718	1280	1200	1250
31	---	---	---	1510	1490	1500	---	---	---	1300	1280	1290
MONTH	---	---	---	---	---	---	1570	201	1210	---	---	---

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1310	905	1150	1220	1170	1190	---	---	---	1410	1140	1220
2	1310	1200	1270	1230	1210	1220	---	---	---	1380	1340	1360
3	1320	1300	1310	1220	1180	1190	---	---	---	1390	1300	1350
4	1340	1310	1320	1190	1160	1170	---	---	---	1360	1290	1330
5	1350	1320	1330	1170	1150	1160	---	---	---	1350	1140	1260
6	1440	1170	1310	1170	1160	1170	---	---	---	1270	1210	1240
7	1340	1100	1210	1170	1150	1160	---	---	---	1320	1250	1280
8	1360	1330	1350	1170	1140	1160	---	---	---	1250	300	550
9	1430	1370	1390	1160	1140	1150	---	---	---	1070	422	774
10	1440	322	1170	1150	423	660	1150	1090	1120	1280	909	1180
11	1090	349	860	688	443	497	1300	854	1030	924	153	272
12	1150	562	1020	828	524	683	1380	1300	1350	536	219	394
13	758	475	638	946	828	884	1390	1350	1370	998	536	778
14	774	529	646	1160	946	1050	1370	1310	1340	1170	998	1090
15	1120	774	974	1220	1160	1190	1380	1320	1350	1290	1170	1250
16	1220	1070	1170	1250	1210	1230	1500	1360	1380	1400	1270	1330
17	1310	1150	1270	1260	1240	1250	1500	1450	1470	1420	1280	1350
18	1310	1250	1290	1270	1240	1260	1460	1390	1430	1300	1140	1200
19	1300	890	1170	1270	1250	1260	1420	1390	1410	1250	1170	1210
20	1260	935	1170	1250	1240	1250	1420	1390	1410	1280	1200	1240
21	1260	681	884	1280	1240	1250	1410	1370	1390	1290	1180	1230
22	1010	711	892	1260	1220	1250	1450	1340	1410	1300	1240	1270
23	855	285	534	1250	1210	1230	1410	1330	1370	1320	1300	1310
24	503	294	401	1240	1150	1210	1390	1340	1360	1340	1310	1330
25	607	468	545	1200	1020	1150	1370	1300	1340	1330	827	1140
26	844	607	747	---	---	---	1350	1280	1310	1040	827	911
27	1050	844	955	---	---	---	1320	1240	1280	1210	1040	1150
28	1140	1050	1090	1310	1280	1300	1280	1030	1180	1260	1210	1230
29	1210	1140	1190	1310	1280	1300	1300	1250	1280	1300	1040	1160
30	1270	1160	1220	1330	1280	1310	1290	1220	1250	1300	1090	1220
31	---	---	---	1320	1270	1290	1260	1150	1220	---	---	---
MONTH	1440	285	1050	---	---	---	---	---	---	1420	153	1120

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	26.0	22.0	23.5	19.5	13.5	15.0	15.0	13.0	14.0	4.5	3.5	4.0
2	22.0	20.0	20.5	13.5	12.5	13.0	15.5	13.0	14.5	4.0	.5	2.5
3	21.5	20.5	21.0	13.5	12.5	13.0	17.0	15.0	16.0	.5	.5	.5
4	25.0	21.5	23.0	12.5	10.5	11.5	16.5	15.5	16.0	1.0	.5	.5
5	23.5	18.0	20.5	10.5	10.0	10.0	15.5	14.0	15.0	2.5	.5	1.0
6	19.0	17.0	18.0	10.5	9.5	10.0	15.5	12.5	15.0	4.0	.5	1.5
7	20.5	16.5	18.5	10.5	10.0	10.5	12.5	9.5	10.5	3.5	1.0	2.5
8	21.5	16.5	19.0	11.5	10.5	11.0	10.5	8.0	9.5	2.0	.0	1.0
9	22.0	17.5	19.5	15.0	11.5	13.0	9.5	7.5	8.5	1.0	.0	.5
10	22.5	17.0	19.5	14.5	11.5	12.5	9.0	7.5	8.0	.5	.0	.5
11	22.5	18.0	20.5	12.5	10.0	11.0	8.0	6.5	7.5	---	---	---
12	23.5	20.0	21.5	11.5	10.5	11.0	8.5	7.0	8.0	---	---	---
13	23.5	19.0	21.5	12.5	11.0	12.0	8.5	6.5	7.5	---	---	---
14	24.0	19.5	21.5	14.5	12.5	13.5	9.0	7.0	8.0	---	---	---
15	23.5	19.0	21.0	15.5	12.0	13.5	9.0	7.0	8.0	---	---	---
16	21.5	20.0	20.5	16.0	12.5	14.0	9.0	7.0	8.0	---	---	---
17	21.5	20.0	21.0	16.0	12.5	14.0	8.5	6.5	8.0	---	---	---
18	20.0	17.5	19.0	17.0	14.5	16.0	8.0	7.0	7.5	---	---	---
19	20.0	16.0	18.0	16.5	11.5	14.0	8.0	6.0	7.0	---	---	---
20	18.5	16.0	16.5	12.0	8.5	10.5	6.0	5.5	6.0	---	---	---
21	18.5	15.0	16.5	12.0	10.0	11.5	6.0	.5	3.5	---	---	---
22	18.0	13.5	16.0	13.0	9.0	11.0	.5	.5	.5	10.0	5.5	8.0
23	17.0	13.5	15.5	14.0	12.0	13.0	.5	.5	.5	8.0	5.5	6.5
24	16.0	13.5	15.0	13.5	10.5	12.5	1.5	.5	.5	8.5	5.5	7.0
25	19.0	13.5	16.5	14.0	12.5	13.5	2.0	.5	1.0	8.0	5.5	6.5
26	21.0	16.5	19.0	13.0	10.5	12.0	4.0	1.0	2.5	10.5	5.5	8.0
27	22.0	18.0	20.0	15.0	11.5	13.0	6.0	3.5	4.5	11.5	9.5	10.5
28	20.5	19.0	20.0	16.5	14.5	15.5	6.0	3.5	5.0	11.5	8.0	9.5
29	22.0	19.0	20.5	17.0	15.5	16.0	7.0	4.5	5.5	8.0	6.5	7.0
30	20.0	17.5	18.5	16.0	15.0	15.5	5.0	2.5	4.0	6.5	5.5	6.0
31	20.0	18.0	19.0	---	---	---	4.5	2.0	3.5	6.5	5.5	6.0
MONTH	26.0	13.5	19.4	19.5	8.5	12.8	17.0	.5	7.5	---	---	---

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.5	5.5	7.0	15.5	11.0	13.5	19.5	14.0	16.5	21.5	18.0	20.0
2	8.5	6.0	7.5	15.0	11.5	13.5	20.5	17.5	19.0	21.0	18.5	19.5
3	9.5	6.0	8.0	13.0	9.0	11.0	20.0	17.5	18.5	23.0	19.0	21.0
4	10.0	6.5	8.5	12.0	9.0	11.0	18.5	15.0	17.0	22.0	18.5	21.0
5	12.0	8.0	9.5	16.0	12.0	13.5	19.0	17.0	18.0	20.5	18.5	19.0
6	13.5	12.0	13.0	13.5	10.0	12.0	20.0	14.5	17.5	21.0	17.5	19.0
7	13.5	11.0	12.5	11.0	8.0	8.5	19.5	16.5	17.5	21.5	17.0	19.0
8	13.5	10.5	12.0	10.0	7.5	9.0	21.5	18.0	19.5	23.5	18.0	20.5
9	13.5	11.5	12.5	12.5	7.5	10.0	20.5	15.5	18.0	24.0	20.0	22.0
10	16.0	12.5	14.0	12.0	9.5	10.5	20.5	17.0	19.0	23.0	19.5	21.0
11	16.0	10.0	13.5	11.5	9.5	10.5	20.0	15.5	18.0	21.5	19.5	20.5
12	10.5	8.0	9.5	10.0	5.5	8.0	20.0	16.5	18.5	22.0	18.0	20.0
13	10.0	7.5	9.0	5.5	4.5	5.0	19.5	16.5	17.5	23.5	18.5	21.0
14	10.0	7.0	9.0	7.0	3.5	5.5	18.5	17.0	18.0	23.0	19.5	21.5
15	11.5	7.5	9.5	10.0	5.0	7.5	17.5	13.0	15.0	26.5	21.5	24.0
16	12.0	9.5	11.0	13.0	7.5	10.5	15.0	12.5	14.0	25.5	23.5	24.5
17	11.5	8.5	10.0	15.5	11.0	13.5	16.0	10.5	13.5	25.0	22.0	23.0
18	11.0	8.5	10.0	14.5	9.0	11.0	18.0	12.0	15.0	24.0	20.0	22.0
19	10.0	7.0	8.5	10.5	9.0	10.0	20.5	15.0	17.5	25.0	21.0	23.0
20	11.0	8.0	9.5	12.5	9.5	11.0	22.0	17.0	19.5	24.0	21.0	23.0
21	9.5	7.0	8.5	13.0	9.5	11.5	22.0	18.5	20.0	27.0	22.0	24.5
22	9.0	6.0	7.0	15.5	10.5	13.0	24.0	19.5	21.5	27.5	23.5	25.5
23	10.5	5.5	8.0	---	---	---	23.0	17.5	19.5	26.5	23.0	25.0
24	12.0	7.5	9.5	---	---	---	17.5	15.5	16.0	26.0	22.0	24.5
25	14.5	10.0	12.0	---	---	---	16.0	14.5	15.5	25.5	22.5	23.5
26	16.5	13.5	15.0	---	---	---	17.0	16.0	16.5	24.5	21.5	23.0
27	15.0	12.5	14.0	14.0	11.0	11.5	19.5	16.0	17.5	23.5	21.5	22.5
28	14.5	10.5	12.5	11.5	10.0	11.0	21.0	17.5	19.0	24.0	21.5	23.0
29	---	---	---	15.0	11.0	12.5	20.5	17.5	19.0	24.5	21.5	23.0
30	---	---	---	16.0	12.0	14.0	22.0	18.0	20.0	27.0	23.0	25.0
31	---	---	---	16.0	13.5	15.0	---	---	---	27.5	24.0	25.5
MONTH	16.5	5.5	10.4	---	---	---	24.0	10.5	17.7	27.5	17.0	22.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	28.0	24.0	26.0	26.5	25.0	26.0	33.5	26.5	30.0	31.0	24.0	27.5
2	29.5	25.0	27.5	30.0	25.0	27.5	34.0	27.0	30.5	30.5	24.0	27.5
3	28.5	25.5	27.5	30.5	26.0	28.0	33.0	27.0	30.0	31.0	24.5	27.5
4	28.5	25.5	27.0	30.5	26.5	28.5	31.5	27.5	29.5	28.5	25.5	27.0
5	27.5	25.0	26.0	31.0	27.0	29.0	31.5	26.5	29.0	29.5	24.5	26.5
6	26.0	23.5	24.5	32.0	28.0	30.0	32.5	26.5	29.5	31.5	24.5	27.5
7	28.0	23.5	25.5	33.0	28.5	30.5	32.5	26.5	29.5	31.0	25.5	28.0
8	29.0	25.0	27.0	32.5	28.5	30.5	34.0	27.5	30.0	27.0	21.5	23.5
9	28.5	25.5	27.0	32.5	28.0	30.0	33.0	27.5	30.5	28.0	21.5	24.5
10	27.5	22.0	24.5	31.0	25.0	26.5	35.0	28.5	31.5	28.5	21.5	25.0
11	27.0	22.0	24.5	26.5	24.0	25.0	33.0	28.0	31.0	23.0	21.5	22.5
12	26.5	23.5	24.5	27.0	24.5	25.5	32.0	26.5	29.5	24.0	21.5	22.5
13	26.0	23.0	24.0	28.5	24.0	26.0	31.0	26.5	28.5	25.0	20.0	22.5
14	26.0	22.5	24.5	30.0	25.5	27.5	30.0	24.0	27.0	25.5	19.5	22.5
15	27.5	22.0	24.5	30.0	26.5	28.0	32.0	25.0	28.5	24.0	21.0	22.5
16	27.0	24.0	25.0	28.5	25.5	27.0	31.5	25.5	28.5	22.0	20.0	21.0
17	25.5	21.0	23.5	30.5	25.5	28.0	31.5	25.5	28.5	24.5	18.5	21.0
18	25.0	22.0	23.5	31.0	27.0	29.0	32.5	25.5	29.0	23.5	21.5	22.5
19	24.0	22.0	23.0	31.5	27.0	29.5	30.5	26.5	28.5	26.5	20.0	23.0
20	26.0	23.0	24.5	31.5	27.5	29.5	30.0	23.0	26.5	25.0	19.5	22.5
21	25.0	23.5	23.5	31.5	27.5	29.5	29.5	24.0	27.0	21.5	16.0	19.0
22	24.0	23.0	23.5	32.0	27.5	29.5	30.0	24.5	27.0	22.5	15.5	19.0
23	24.0	21.5	23.0	32.5	27.5	30.0	32.0	25.0	28.5	22.0	17.5	20.0
24	25.0	23.5	24.0	32.5	28.0	30.5	31.5	25.5	28.5	23.0	17.5	20.0
25	25.5	23.5	24.5	32.5	28.0	30.5	32.0	24.0	28.0	22.0	19.0	20.5
26	29.0	25.0	26.5	33.0	27.5	30.5	32.0	25.5	29.0	26.5	20.0	23.0
27	30.0	27.0	28.5	33.5	28.0	30.5	30.5	25.0	28.0	24.5	21.5	23.0
28	30.5	27.0	28.5	33.5	27.5	30.5	32.5	26.0	29.0	21.5	16.0	18.5
29	29.5	25.0	27.0	33.0	27.5	30.5	33.0	26.0	29.5	20.5	13.5	16.5
30	27.0	25.0	26.0	32.5	26.5	29.5	32.0	26.0	29.0	21.5	15.0	18.5
31	---	---	---	33.0	25.5	29.0	31.5	25.5	28.5	---	---	---
MONTH	30.5	21.0	25.3	33.5	24.0	28.8	35.0	23.0	29.0	31.5	13.5	22.8

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	6.0	5.1	5.7	---	---	---	12.2	11.9	12.0
2	---	---	---	6.9	6.0	6.6	---	---	---	13.1	11.9	12.7
3	---	---	---	7.5	6.9	7.2	---	---	---	13.6	12.8	13.2
4	---	---	---	7.8	7.5	7.7	---	---	---	13.5	12.4	12.9
5	---	---	---	8.0	7.8	7.9	---	---	---	13.3	12.2	12.8
6	7.8	6.5	7.3	8.0	7.9	8.0	---	---	---	13.2	12.5	12.8
7	7.8	7.2	7.5	8.0	7.8	7.9	---	---	---	12.7	12.0	12.4
8	7.8	7.0	7.5	7.8	7.4	7.5	---	---	---	13.6	12.7	13.1
9	7.6	6.9	7.2	7.4	6.7	7.2	---	---	---	13.9	13.0	13.4
10	7.7	6.8	7.3	---	---	---	---	---	---	13.9	13.3	13.5
11	9.3	6.7	7.7	---	---	---	---	---	---	13.3	12.1	13.0
12	11.1	6.8	8.4	---	---	---	---	---	---	12.3	11.7	12.1
13	11.8	6.8	8.8	---	---	---	---	---	---	13.8	11.7	13.0
14	12.8	6.4	9.0	---	---	---	---	---	---	14.2	12.9	13.8
15	15.3	6.4	9.8	---	---	---	---	---	---	13.5	12.3	13.0
16	12.9	6.0	8.5	---	---	---	---	---	---	13.2	12.2	12.6
17	7.1	4.1	5.5	---	---	---	---	---	---	12.7	11.9	12.3
18	6.4	4.6	5.6	---	---	---	---	---	---	13.1	11.9	12.4
19	9.2	6.3	7.5	---	---	---	---	---	---	12.8	11.9	12.3
20	8.0	6.2	7.1	---	---	---	---	---	---	12.7	11.7	12.2
21	8.5	6.9	7.5	---	---	---	---	---	---	12.6	11.4	11.9
22	9.0	7.2	8.0	---	---	---	---	---	---	12.9	11.5	12.1
23	8.9	7.2	8.0	---	---	---	---	---	---	13.2	12.5	12.8
24	8.9	7.3	8.0	---	---	---	---	---	---	13.4	12.4	12.8
25	9.2	7.1	8.0	---	---	---	---	---	---	13.7	12.4	13.1
26	11.0	6.5	8.3	---	---	---	---	---	---	13.4	11.8	12.8
27	15.1	5.9	9.5	---	---	---	---	---	---	12.8	11.6	12.1
28	11.3	5.5	7.0	---	---	---	---	---	---	12.9	11.4	12.1
29	6.2	4.7	5.3	---	---	---	---	---	---	13.1	11.7	12.4
30	7.1	5.4	6.0	---	---	---	12.5	11.7	12.1	---	---	---
31	6.1	5.2	5.6	---	---	---	12.7	11.9	12.3	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	13.1	9.2	10.7	10.7	8.9	9.9	8.5	7.6	8.2
2	---	---	---	11.8	8.5	9.9	10.2	8.7	9.3	8.6	7.9	8.3
3	11.5	10.6	11.0	13.3	9.6	11.1	8.9	7.7	8.5	8.4	7.7	8.2
4	11.8	10.6	11.1	11.9	9.6	10.6	10.3	8.7	9.4	7.7	6.1	7.1
5	11.6	10.2	10.9	12.6	9.2	10.5	10.2	8.5	9.3	7.5	6.9	7.3
6	10.5	7.9	9.7	12.9	9.1	10.8	10.9	8.8	9.7	8.5	7.2	8.1
7	9.8	8.1	9.2	12.9	9.9	11.3	10.9	8.5	9.6	---	---	---
8	11.1	9.6	10.2	11.0	9.3	10.1	9.9	8.4	9.0	---	---	---
9	11.4	9.5	10.2	11.6	9.4	10.5	11.0	8.4	9.4	---	---	---
10	11.7	9.0	10.2	12.5	9.3	10.7	9.5	8.3	8.9	---	---	---
11	11.2	8.8	10.0	12.4	9.3	10.8	10.0	8.6	9.3	---	---	---
12	11.9	10.2	11.0	10.6	9.8	10.1	9.8	8.7	9.2	---	---	---
13	12.2	10.9	11.5	10.6	10.3	10.4	9.3	6.9	8.6	---	---	---
14	12.2	10.9	11.5	10.9	10.1	10.6	8.3	6.4	7.5	---	---	---
15	12.0	10.4	11.2	10.4	9.1	9.9	9.7	8.2	9.3	---	---	---
16	11.8	10.1	10.9	---	---	---	10.2	9.4	9.8	---	---	---
17	12.5	10.4	11.2	---	---	---	10.2	9.3	9.7	---	---	---
18	12.5	10.1	11.1	---	---	---	10.1	8.2	9.3	---	---	---
19	13.0	10.6	11.7	---	---	---	---	---	---	---	---	---
20	12.9	10.6	11.5	---	---	---	---	---	---	---	---	---
21	13.2	10.9	11.9	---	---	---	---	---	---	---	---	---
22	13.1	11.0	11.9	---	---	---	---	---	---	8.6	7.6	8.0
23	13.0	11.0	11.9	---	---	---	---	---	---	8.2	6.4	7.3
24	13.2	10.4	11.7	---	---	---	9.7	8.9	9.4	9.3	7.4	8.3
25	13.5	9.9	11.3	---	---	---	9.2	7.1	8.0	9.1	7.3	7.9
26	13.1	9.1	10.7	---	---	---	8.5	7.6	8.2	9.0	7.3	8.1
27	13.2	8.9	10.8	11.5	10.1	10.8	8.8	8.2	8.6	8.8	7.8	8.3
28	13.6	9.6	11.2	11.4	10.5	10.9	8.5	7.4	7.9	8.5	7.8	8.1
29	---	---	---	11.9	10.2	11.0	8.2	7.4	7.8	8.1	7.4	7.8
30	---	---	---	11.6	9.8	10.6	8.1	7.6	7.9	8.0	7.1	7.5
31	---	---	---	11.0	9.6	10.2	---	---	---	7.9	7.1	7.4
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.2	5.4	6.6	7.7	6.3	7.0	13.6	5.6	9.3	19.9	4.2	11.0
2	7.6	6.5	7.0	8.8	6.5	7.4	14.4	5.6	9.5	18.6	5.2	11.0
3	7.4	6.5	6.9	9.2	6.3	7.5	14.9	5.3	9.2	16.1	2.6	9.1
4	7.7	6.6	7.1	9.6	6.2	7.7	14.7	4.3	9.0	12.7	1.1	6.4
5	8.0	6.8	7.4	9.4	6.1	7.6	15.7	4.9	9.0	14.0	1.2	5.9
6	7.6	6.6	7.0	9.1	6.1	7.4	---	---	---	16.7	.8	7.2
7	8.4	6.7	7.5	9.0	5.9	7.2	---	---	---	14.9	1.1	7.4
8	8.2	7.1	7.6	9.1	5.8	7.2	---	---	---	6.7	5.3	5.3
9	8.4	7.1	7.6	8.9	5.9	7.2	---	---	---	16.5	6.6	10.3
10	7.8	5.8	7.0	6.4	4.0	4.8	17.2	4.8	10.2	20.2	6.1	12.1
11	7.6	5.8	6.9	5.6	4.8	5.3	---	---	---	8.7	6.0	6.9
12	7.7	6.2	7.1	6.8	5.5	6.1	---	---	---	8.7	6.9	7.9
13	7.1	5.8	6.6	6.9	6.2	6.5	---	---	---	12.6	8.1	10.2
14	7.3	6.6	6.9	8.9	6.0	7.3	---	---	---	21.7	8.1	13.6
15	7.6	6.7	7.3	8.9	6.1	7.4	---	---	---	20.3	6.1	13.0
16	8.1	6.9	7.4	8.5	6.2	7.2	---	---	---	22.9	7.3	14.0
17	9.2	7.3	8.1	8.8	6.3	7.4	---	---	---	22.4	7.6	14.2
18	9.2	7.3	8.2	8.7	6.1	7.3	---	---	---	20.7	6.3	12.3
19	7.7	6.2	7.0	8.7	5.9	7.2	---	---	---	23.3	6.6	13.5
20	7.9	6.5	7.3	8.4	5.8	7.0	---	---	---	21.6	.8	10.3
21	7.1	6.0	6.6	---	---	---	---	---	---	19.1	1.4	11.0
22	7.5	6.5	6.9	---	---	---	---	---	---	20.7	8.3	14.4
23	6.8	5.6	6.3	---	---	---	---	---	---	22.2	8.1	14.6
24	6.1	5.6	5.9	---	---	---	16.4	6.3	10.4	19.2	7.8	13.1
25	6.1	5.8	6.0	---	---	---	17.8	6.6	10.9	14.8	7.3	10.5
26	6.1	5.4	5.9	---	---	---	16.2	5.8	9.9	16.0	6.5	10.7
27	5.8	5.6	5.7	---	---	---	16.3	4.4	9.1	16.7	4.5	10.0
28	5.8	5.4	5.7	10.5	6.5	8.2	9.0	2.2	5.0	---	---	---
29	7.8	5.4	6.5	10.0	6.4	8.0	11.5	.9	5.2	---	---	---
30	7.7	5.8	6.7	11.1	6.5	8.3	14.4	.6	6.9	---	---	---
31	---	---	---	12.7	6.5	9.1	16.5	4.0	10.0	---	---	---
MONTH	9.2	5.4	6.9	---	---	---	---	---	---	---	---	---

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 poor. Flow regulated by Canton Lake (station 07238500) and by Lake Overholser (station 07240500) where diversions are made into Lake Hefner Canal (station 07240000). Low flow sustained in part by sewage effluent from Oklahoma City. U.S. Geological Survey's satellite telemeter located at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	271	2740	722	306	1190	492	e920	1100	955	1460	e320	e232
2	471	2930	526	339	1020	402	e930	1390	989	e1200	e307	e235
3	434	3900	553	372	783	370	e1000	1290	841	1160	302	e247
4	240	1650	1390	310	693	489	e930	1950	826	1090	e295	e257
5	2280	654	1340	341	589	379	e880	2830	797	984	291	e251
6	1050	472	1050	322	648	366	797	1580	563	957	e370	e246
7	576	414	1070	299	1660	405	e640	1250	986	935	e376	e241
8	436	367	960	273	862	540	e520	1140	959	893	308	e240
9	e355	340	1170	245	662	919	e513	1190	902	886	e295	e239
10	e320	514	863	297	611	502	e800	2190	922	1670	e300	e239
11	e290	870	693	408	577	476	e1100	2430	2170	2720	e305	e260
12	e262	375	715	372	804	788	e1040	1840	1040	1940	e310	e310
13	216	290	716	416	787	2700	e1120	1300	1840	e1250	e310	e260
14	196	269	705	435	795	1750	e1850	1090	962	1040	e307	e255
15	169	251	721	497	730	1360	e1840	1050	665	e960	e303	e235
16	153	235	699	487	555	699	e1520	1110	626	e930	e295	e222
17	190	228	695	587	471	443	e950	1220	594	e890	e290	e205
18	1170	219	694	651	460	419	e890	1370	638	e870	e288	e190
19	662	504	667	538	468	825	e907	1350	889	811	e270	e180
20	322	605	669	603	493	1240	e995	1250	1150	e810	e268	e162
21	220	510	663	609	737	1490	1180	925	1190	e750	e264	e157
22	197	493	648	574	581	1350	e1220	928	1630	e710	e262	e148
23	191	491	509	631	413	1200	1220	1080	2800	e685	261	e135
24	185	508	373	717	402	1020	1300	1190	3690	e645	e258	e130
25	177	574	312	585	459	911	7300	1010	3850	e630	e256	e200
26	171	438	354	568	480	1000	7990	1230	2620	622	261	e247
27	168	540	357	570	437	e960	5540	1010	1840	562	e247	e215
28	167	487	351	571	436	e1050	3120	928	1600	462	e257	e190
29	338	494	321	579	---	e1000	1820	928	1410	428	e248	e175
30	337	845	305	1430	---	e980	1090	955	1200	e385	e250	e165
31	267	---	308	1450	---	e940	---	885	---	e350	e235	---
TOTAL	12481	23207	21119	16382	18803	27465	51922	40989	41144	29685	8909	6468
MEAN	403	774	681	528	672	886	1731	1322	1371	958	287	216
MAX	2280	3900	1390	1450	1660	2700	7990	2830	3850	2720	376	310
MIN	153	219	305	245	402	366	513	885	563	350	235	130
AC-FT	24760	46030	41890	32490	37300	54480	103000	81300	81610	58880	17670	12830
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1999, BY WATER YEAR (WY)												
MEAN	443	401	337	325	384	601	591	974	947	398	283	325
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

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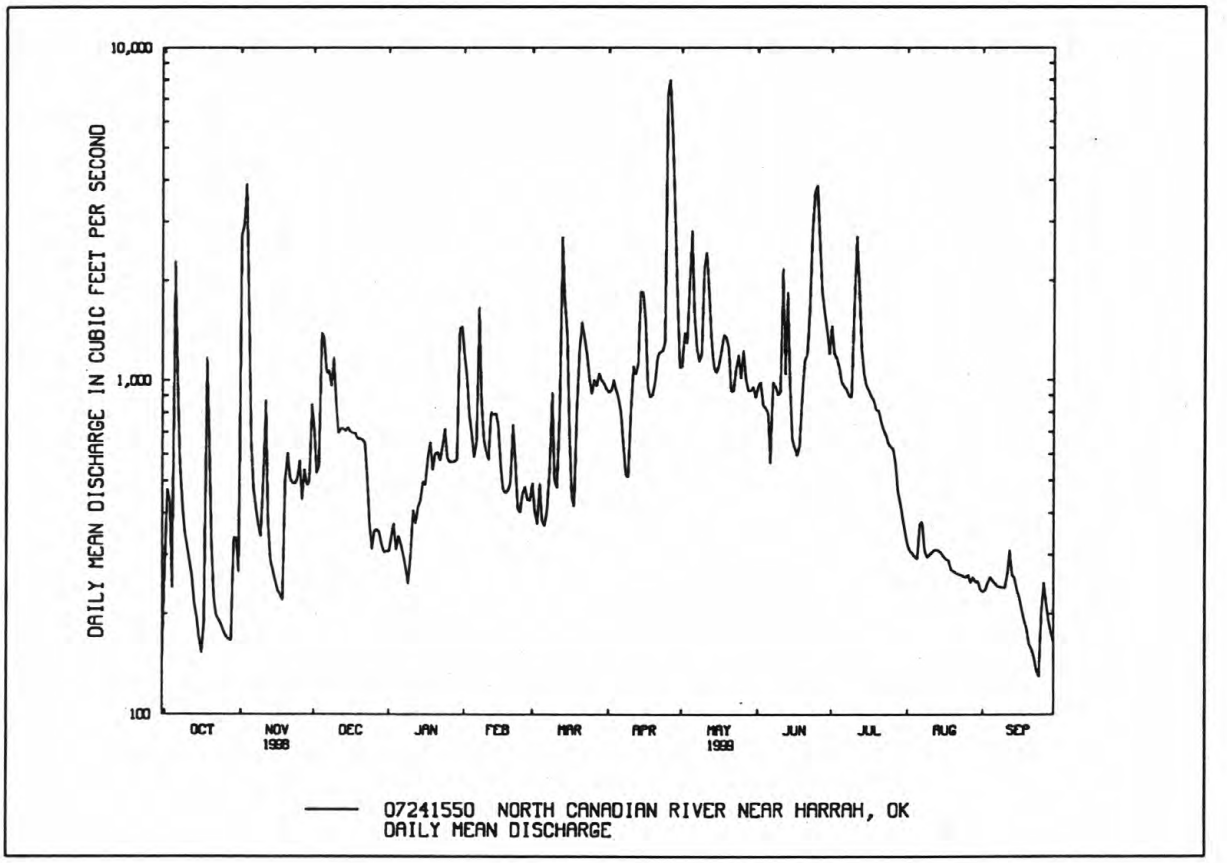
SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1969 - 1999	
ANNUAL TOTAL	306703		298574			
ANNUAL MEAN	840		818		501	
HIGHEST ANNUAL MEAN					1322	1987
LOWEST ANNUAL MEAN					93.0	1972
HIGHEST DAILY MEAN	10300	Mar 17	7990	Apr 26	20000	May 29 1987
LOWEST DAILY MEAN	93	Sep 7	130	Sep 24	28	Aug 8 1972
ANNUAL SEVEN-DAY MINIMUM	104	Sep 6	157	Sep 18	31	Jul 30 1972
INSTANTANEOUS PEAK FLOW			13300	Apr 25	27200	May 29 1987
INSTANTANEOUS PEAK STAGE			17.02	Apr 25	[a]22.64	May 29 1987
ANNUAL RUNOFF (AC-FT)	608300		592200		362900	
10 PERCENT EXCEEDS	1470		1450		1090	
50 PERCENT EXCEEDS	606		609		225	
90 PERCENT EXCEEDS	132		240		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, Sept. 3, 1999; 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, 22.9 mg/L, Sept. 24, 1999; minimum, 1.0 mg/L, July 3, 1991.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded (greater than 20% missing record), 1,550 microsiemens, July 29; minimum recorded, 171 microsiemens, Apr. 26.
pH: Maximum recorded (greater than 20% missing record), 9.5 units, Sept. 3; minimum recorded, 7.6 units, Oct. 30, 31, Nov. 1.
WATER TEMPERATURE: Maximum, 35.0°C, Aug. 10; minimum, 0.0°C Jan. 3, 4.
DISSOLVED OXYGEN: Maximum recorded (greater than 20% missing record), 22.9 mg/L, Sept. 24; minimum recorded, 3.2 mg/L, July 10.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
23...	1334	3.00	20.5	745	1028	1028	135	5.63	987	18.5	8.9
23...	1335	13.0	20.5	745	1028	1028	135	5.63	988	18.6	8.9
23...	1336	23.0	20.5	745	1028	1028	135	5.63	988	18.6	8.9
23...	1337	33.0	20.5	745	1028	1028	135	5.63	986	18.7	8.9
23...	1338	43.0	20.5	745	1028	1028	135	5.63	987	18.8	8.9
23...	1339	53.0	20.5	745	1028	1028	135	5.63	986	19.0	8.9
23...	1340	63.0	20.5	745	1028	1028	135	5.63	986	19.1	8.9
23...	1341	73.0	20.5	745	1028	1028	135	5.63	985	19.0	8.9
23...	1342	83.0	20.5	745	1028	1028	135	5.63	985	18.9	8.9
23...	1343	93.0	20.5	745	1028	1028	135	5.63	986	18.5	8.9

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...	1000	1028	80020	682	441	7.8	16.5	17.5	160	742	7.4	79
NOV												
04...	1045	1028	80020	1640	489	7.8	7.0	12.5	160	741	9.6	93
DEC												
02...	1100	1028	80020	526	1180	8.2	14.5	19.5	30	740	9.9	112
JAN												
06...	1120	1028	80020	324	1070	8.1	11.5	3.5	9.0	740	12.6	98
FEB												
24...	1025	1028	80020	391	1360	8.3	10.0	7.5	37	741	11.7	101
MAR												
16...	1040	1028	80020	710	690	7.8	10.5	9.0	88	742	10.1	91
APR												
06...	1215	1028	80020	797	1340	8.0	20.5	16.5	50	749	9.5	99
MAY												
25...	1215	1028	80020	1020	1270	8.4	21.5	23.5	90	728	7.6	94
JUN												
23...	1100	1028	80020	1990	1060	7.9	23.0	21.0	190	736	5.9	69
JUL												
06...	1225	1028	80020	1040	1320	8.5	27.5	29.0	150	745	8.3	110
AUG												
03...	1330	1028	80020	302	1180	8.5	28.5	30.5	21	751	14.3	196
SEP												
01...	1530	1028	80020	232	1180	8.8	35.0	30.0	14	746	20.0	272

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	NITRO-GEN DIS-SOLVED (MG/L AS N) (00602)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT												
07...	--	16	K640	4700	--	--	--	--	--	--	--	--
NOV												
04...	1.7	6.3	K7500	K9100	150	45	37	13	41	36	1	6.9
DEC												
02...	2.5	6.5	2000	290	--	--	--	--	--	--	--	--
JAN												
06...	3.9	7.9	940	160	--	--	--	--	--	--	--	--
FEB												
24...	2.7	7.9	350	210	420	200	100	40	126	39	3	9.4
MAR												
16...	3.1	5.1	310	220	--	--	--	--	--	--	--	--
APR												
06...	2.1	6.4	220	770	--	--	--	--	--	--	--	--
MAY												
25...	1.7	6.7	440	K27000	390	190	97	36	111	38	2	6.4
JUN												
23...	1.4	9.8	6500	12000	--	--	--	--	--	--	--	--
JUL												
06...	1.1	14	220	710	--	--	--	--	--	--	--	--
AUG												
03...	2.1	15	200	2900	300	130	63	35	124	46	3	8.0
SEP												
01...	2.1	14	3600	>10000	--	--	--	--	--	--	--	--

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)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)
OCT												
07...	120	0	99	3.2	--	--	--	--	--	--	--	--
NOV												
04...	122	0	100	3.6	65	45	.33	5.9	293	278	.40	1300
DEC												
02...	220	0	180	2.3	--	--	--	--	--	--	--	--
JAN												
06...	308	0	252	3.9	--	--	--	--	--	--	--	--
FEB												
24...	254	5	216	2.1	230	160	.77	13	850	817	1.16	897
MAR												
16...	159	0	131	4.3	--	--	--	--	--	--	--	--
APR												
06...	260	0	213	3.9	--	--	--	--	--	--	--	--
MAY												
25...	242	4	204	1.8	230	140	.63	9.6	798	759	1.09	2200
JUN												
23...	209	0	171	4.8	--	--	--	--	--	--	--	--
JUL												
06...	261	7	226	1.6	--	--	--	--	--	--	--	--
AUG												
03...	182	16	175	1.2	180	150	.81	13	732	690	1.00	597
SEP												
01...	127	37	166	.5	--	--	--	--	--	--	--	--

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
07...	248	1.65	7.3	.044	.14	1.69	.234	.30	--	--	.219
NOV											
04...	316	.909	4.0	.018	.06	.927	.166	.21	.56	.73	.282
DEC											
02...	90	1.31	5.8	.039	.13	1.35	.167	.22	.97	1.1	.446
JAN											
06...	19	2.37	10	.057	.19	2.43	.773	1.0	.73	1.5	.247
FEB											
24...	76	--	--	<.010	--	1.77	.086	.11	.87	.95	.241
MAR											
16...	142	1.93	8.6	.032	.11	1.97	.307	.40	.78	1.1	.198
APR											
06...	104	1.32	5.9	.013	.04	1.34	.037	.05	.68	.72	.293
MAY											
25...	224	.580	2.6	.014	.05	.594	.052	.07	1.0	1.1	.192
JUN											
23...	319	.571	2.5	.017	.06	.588	.102	.13	.75	.86	.212
JUL											
06...	160	.079	.35	.014	.05	.093	.082	.11	.93	1.0	.125
AUG											
03...	91	1.52	6.7	.040	.13	1.56	<.020	--	--	.50	.435
SEP											
01...	45	1.55	6.8	.043	.14	1.59	<.020	--	--	.51	.841

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											
07...	.203	.62	--	--	--	--	--	--	--	--	--
NOV											
04...	.260	.80	2	110	<1.6	<8.0	<14	<7.0	<10	E6.0	<100
DEC											
02...	.312	.96	--	--	--	--	--	--	--	--	--
JAN											
06...	.228	.70	--	--	--	--	--	--	--	--	--
FEB											
24...	.233	.71	3	140	<1.6	<8.0	<14	<7.0	<10	<10	<100
MAR											
16...	.239	.73	--	--	--	--	--	--	--	--	--
APR											
06...	.255	.78	--	--	--	--	--	--	--	--	--
MAY											
25...	.121	.37	5	147	<1.6	<8.0	<14	<7.0	<10	E5.3	<100
JUN											
23...	.156	.48	--	--	--	--	--	--	--	--	--
JUL											
06...	.104	.32	--	--	--	--	--	--	--	--	--
AUG											
03...	.428	1.3	5	125	<1.6	<8.0	<14	<7.0	<10	<10	<100
SEP											
01...	.814	2.5	--	--	--	--	--	--	--	--	--

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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 07...	--	--	--	--	--	--	--	--	--	--	--
NOV 04...	11	E2.0	<.1	<50	<40	<1	<4.0	349	E7	E10	13
DEC 02...	--	--	--	--	--	--	--	--	--	--	--
JAN 06...	--	--	--	--	--	--	--	--	--	--	--
FEB 24...	33	3.6	<.1	<50	<40	1	<4.0	1070	E8	26	9.3
MAR 16...	--	--	--	--	--	--	--	--	--	--	--
APR 06...	--	--	--	--	--	--	--	--	--	--	--
MAY 25...	31	E1.7	<.1	<50	<40	<1	<4.0	944	E9	<20	52
JUN 23...	--	--	--	--	--	--	--	--	--	--	--
JUL 06...	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	36	E2.9	<.1	<50	<40	<1	<4.0	910	14	E12	--
SEP 01...	--	--	--	--	--	--	--	--	--	--	--

DATE	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)	METOLA-CHLOR WATER WHOLE TOT.REC (UG/L) (82612)
NOV 04...	1028	80020	E.280	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200	<.200
FEB 24...	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200	<.200
MAY 25...	1028	80020	E.180	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200	<.200
JUN 23...	1028	80020	--	--	--	--	--	--	--	--	--	--
JUL 06...	1028	80020	--	--	--	--	--	--	--	--	--	--
AUG 03...	1028	80020	<.200	<.100	<.100	<.200	<.100	<.100	<.100	<.100	<.200	<.200
SEP 01...	1028	80020	--	--	--	--	--	--	--	--	--	--

DATE	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)	CHLOR-DANE, TECH-NICAL TOTAL (UG/L) (39350)
NOV 04...	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.100	<.100	<.200	<.200	<.100
FEB 24...	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.100	.156	<.200	<.200	<.100
MAY 25...	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.100	E.150	<.200	<.200	<.100
JUN 23...	--	<.010	--	--	--	--	--	--	--	--	--	--
JUL 06...	--	<.010	--	--	--	--	--	--	--	--	--	--
AUG 03...	<.100	<.010	<.100	<.200	<.100	<.100	<.001	<.100	<.100	<.200	<.200	<.200
SEP 01...	--	<.010	--	--	--	--	--	--	--	--	--	--

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	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'-DDE, TOTAL (UG/L) (39365)	P,P'-DDT UNFILT RECOVER (UG/L) (39370)	DEF TOTAL (UG/L) (39040)	DI-AZINON, TOTAL (UG/L) (39570)	DI-ELDRIN TOTAL (UG/L) (39380)	DISUL-FOTON UNFILT RECOVER (UG/L) (39011)	2,4-DP TOTAL (UG/L) (82183)	ENDO-SULFAN I TOTAL (UG/L) (39388)
NOV												
04...	<.010	<.200	--	<.001	<.001	.001	<.060	<.020	.001	--	--	<.001
FEB												
24...	<.010	<.200	.020	<.001	<.001	<.001	<.010	E.009	.001	<.030	<.010	<.001
MAY												
25...	<.010	<.200	.090	<.001	<.001	<.001	<.010	.017	.001	<.010	<.010	<.001
JUN												
23...	<.010	--	--	--	--	--	<.010	.045	--	<.010	--	--
JUL												
06...	<.010	--	--	--	--	--	<.010	<.010	--	<.010	--	--
AUG												
03...	<.010	<.200	.010	<.001	<.001	<.001	<.010	.029	<.001	<.010	<.010	<.001
SEP												
01...	<.010	--	--	--	--	--	<.010	.056	--	<.010	--	--

DATE	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA-CHLOR, TOTAL (UG/L) (39410)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA-THION, TOTAL (UG/L) (39530)	METH-OXY-CHLOR, TOTAL (UG/L) (39480)	METHYL PARA-THION, TOTAL (UG/L) (39600)	MIREX, TOTAL (UG/L) (39755)	PARA-THION, TOTAL (UG/L) (39540)	PER-THANE TOTAL (UG/L) (39034)
NOV											
04...	<.001	<.020	<.001	<.001	<.001	--	<.010	<.020	<.010	<.010	<.100
FEB											
24...	<.001	<.010	<.001	<.001	.004	<.020	<.010	<.010	<.010	<.010	<.100
MAY											
25...	<.001	<.010	<.001	<.001	.001	<.010	<.010	<.010	<.010	<.010	<.100
JUN											
23...	--	<.010	--	--	--	<.010	--	<.010	--	<.010	--
JUL											
06...	--	<.010	--	--	--	<.010	--	<.010	--	<.010	--
AUG											
03...	<.001	<.010	<.001	<.001	.004	<.010	<.010	<.010	<.010	<.010	<.100
SEP											
01...	--	<.010	--	--	--	<.010	--	<.010	--	<.010	--

DATE	PHORATE TOTAL (UG/L) (39023)	PROME-TONE TOTAL (UG/L) (39056)	PROME-TRYNE TOTAL (UG/L) (39057)	PRO-PAZINE TOTAL (UG/L) (39024)	SILVEX, TOTAL (UG/L) (39760)	SIMA-ZINE TOTAL (UG/L) (39055)	SIME-TRYNE TOTAL (UG/L) (39054)	2,4,5-T TOTAL (UG/L) (39740)	TOX-APHENE, TOTAL (UG/L) (39400)	TRI-FLURA-LIN TOTAL RECOVER (UG/L) (39030)	TOTAL TRI-THION (UG/L) (39786)
NOV											
04...	--	<.200	<.100	<.100	--	.210	<.100	--	<1.00	<.100	<.050
FEB											
24...	<.010	<.200	<.100	<.100	<.010	.106	<.100	<.010	<1.00	<.100	<.010
MAY											
25...	<.010	<.200	<.100	<.100	<.010	E.080	<.100	<.010	<1.00	<.100	<.010
JUN											
23...	<.010	--	--	--	--	--	--	--	--	--	<.010
JUL											
06...	<.010	--	--	--	--	--	--	--	--	--	<.010
AUG											
03...	<.010	<.200	<.100	<.100	<.010	<.100	<.100	<.010	<1.00	<.100	<.010
SEP											
01...	<.010	--	--	--	--	--	--	--	--	--	<.010

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	968	895	929	---	---	---	1110	735	907	---	---	---
2	918	477	663	---	---	---	1220	1110	1180	---	---	---
3	536	485	516	---	---	---	1210	1130	1160	---	---	---
4	---	---	---	522	409	490	1290	521	987	---	---	---
5	---	---	---	535	469	494	884	493	606	---	---	---
6	---	---	---	635	535	574	833	743	772	---	---	---
7	---	---	---	741	635	693	855	757	797	---	---	---
8	---	---	---	821	741	788	1040	714	849	---	---	---
9	---	---	---	922	821	863	1040	694	859	---	---	---
10	---	---	---	1060	878	918	766	621	692	---	---	---
11	---	---	---	1050	445	590	888	766	808	---	---	---
12	---	---	---	748	632	691	---	---	---	---	---	---
13	---	---	---	854	748	795	---	---	---	---	---	---
14	---	---	---	978	854	922	---	---	---	---	---	---
15	---	---	---	1060	973	1010	---	---	---	---	---	---
16	---	---	---	1090	1040	1060	---	---	---	---	---	---
17	---	---	---	1080	1000	1040	---	---	---	---	---	---
18	---	---	---	1170	1080	1130	---	---	---	---	---	---
19	---	---	---	1380	990	1150	---	---	---	---	---	---
20	---	---	---	1240	1060	1200	---	---	---	---	---	---
21	---	---	---	1220	1160	1200	---	---	---	---	---	---
22	---	---	---	1260	1170	1220	---	---	---	---	---	---
23	---	---	---	1320	1240	1270	---	---	---	---	---	---
24	---	---	---	1310	1230	1270	---	---	---	---	---	---
25	---	---	---	1340	1240	1310	---	---	---	---	---	---
26	---	---	---	1270	1160	1220	---	---	---	---	---	---
27	---	---	---	1330	1240	1290	---	---	---	---	---	---
28	---	---	---	1360	1320	1340	---	---	---	---	---	---
29	---	---	---	1410	1330	1370	---	---	---	---	---	---
30	---	---	---	1360	763	1200	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	1370	1230	1290	461	363	396
2	---	---	---	---	---	---	1410	1320	1370	634	460	552
3	---	---	---	---	---	---	1410	1350	1370	695	211	574
4	---	---	---	---	---	---	1350	1140	1240	---	---	---
5	---	---	---	---	---	---	1360	1260	1310	---	---	---
6	---	---	---	---	---	---	1340	1260	1300	---	---	---
7	---	---	---	---	---	---	1330	1210	1280	---	---	---
8	---	---	---	---	---	---	1350	1250	1310	---	---	---
9	---	---	---	---	---	---	1300	1150	1220	---	---	---
10	---	---	---	---	---	---	1300	1010	1190	---	---	---
11	---	---	---	---	---	---	1460	1250	1380	---	---	---
12	---	---	---	---	---	---	1460	1360	1410	---	---	---
13	---	---	---	---	---	---	1430	1380	1400	---	---	---
14	---	---	---	---	---	---	1380	1000	1180	---	---	---
15	---	---	---	---	---	---	1100	772	915	---	---	---
16	---	---	---	---	---	---	1150	966	1050	---	---	---
17	---	---	---	---	---	---	1210	1140	1170	---	---	---
18	---	---	---	---	---	---	1180	1110	1150	---	---	---
19	---	---	---	---	---	---	1340	1140	1230	---	---	---
20	---	---	---	---	---	---	1490	1300	1380	---	---	---
21	---	---	---	---	---	---	1500	1400	1450	---	---	---
22	---	---	---	---	---	---	1540	1420	1480	---	---	---
23	---	---	---	---	---	---	1510	1330	1420	---	---	---
24	---	---	---	---	---	---	1340	1140	1260	---	---	---
25	---	---	---	---	---	---	1140	224	603	1300	1230	1270
26	---	---	---	1160	1040	1090	426	171	257	1280	1100	1200
27	---	---	---	1120	1100	1110	340	199	269	1310	1210	1260
28	---	---	---	1100	1070	1090	360	232	320	1360	1280	1310
29	---	---	---	1200	1080	1130	302	271	286	1380	1300	1340
30	---	---	---	1250	1150	1200	368	297	329	1380	1280	1340
31	---	---	---	1280	1220	1250	---	---	---	1400	1140	1250
MONTH	---	---	---	---	---	---	1540	171	1090	---	---	---

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1270	1170	1210	---	---	---	1450	1300	1390	1080	1010	1060
2	1240	925	1090	---	---	---	1390	1280	1340	1100	1040	1080
3	1300	1220	1250	---	---	---	1390	1280	1350	1130	941	1050
4	1310	1230	1270	---	---	---	1350	1270	1320	1110	968	1050
5	1290	1230	1260	---	---	---	1460	1260	1360	1110	1020	1070
6	1270	1160	1220	---	---	---	---	---	---	1120	955	1040
7	1290	1110	1190	---	---	---	1100	791	932	1030	940	987
8	1360	1120	1260	---	---	---	1230	1090	1160	---	---	---
9	1380	1310	1340	---	---	---	1250	1060	1170	---	---	---
10	1340	1240	1300	---	---	---	1220	1100	1160	---	---	---
11	1300	397	656	---	---	---	1200	1000	1130	829	187	522
12	1130	789	1040	---	---	---	1340	914	1110	283	190	238
13	1140	307	687	---	---	---	1400	1270	1340	424	283	363
14	674	522	585	---	---	---	1410	1250	1320	610	424	519
15	868	579	679	---	---	---	1370	1250	1310	674	618	649
16	1040	868	944	---	---	---	1360	1230	1300	777	674	747
17	1120	984	1030	---	---	---	1380	1220	1310	797	736	773
18	1120	1020	1080	---	---	---	1400	1240	1340	804	749	773
19	1120	1030	1080	---	---	---	1470	1260	1360	785	631	723
20	1080	779	911	---	---	---	1430	1280	1360	719	644	680
21	1020	733	918	---	---	---	1400	1280	1340	1020	677	812
22	841	589	681	---	---	---	1340	1250	1300	1030	962	998
23	873	364	705	---	---	---	1280	942	1180	1050	977	1010
24	416	317	353	---	---	---	1160	1050	1130	1060	985	1020
25	591	416	499	---	---	---	1200	1120	1170	---	---	---
26	770	527	625	---	---	---	1260	1150	1180	---	---	---
27	975	770	864	---	---	---	1180	1100	1130	---	---	---
28	1130	975	1050	1510	1440	1460	1160	1080	1120	---	---	---
29	1210	1100	1140	1550	1430	1490	1120	983	1040	---	---	---
30	---	---	---	1520	1410	1470	1100	987	1070	1030	871	963
31	---	---	---	1530	1380	1450	1110	988	1060	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	8.1	7.6	7.7	---	---	---	---	---	---
2	---	---	---	8.2	8.0	8.1	---	---	---	---	---	---
3	---	---	---	8.1	7.9	8.0	---	---	---	---	---	---
4	---	---	---	8.0	8.0	8.0	---	---	---	---	---	---
5	---	---	---	8.0	7.9	7.9	---	---	---	---	---	---
6	---	---	---	8.0	7.9	7.9	---	---	---	---	---	---
7	---	---	---	8.0	7.9	8.0	---	---	---	---	---	---
8	---	---	---	8.0	7.9	7.9	---	---	---	---	---	---
9	---	---	---	8.0	7.9	8.0	---	---	---	---	---	---
10	---	---	---	8.0	7.8	8.0	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	8.8	8.3	8.5	---	---	---	---	---	---	---	---	---
16	8.7	8.3	8.5	---	---	---	---	---	---	---	---	---
17	8.5	8.2	8.4	---	---	---	---	---	---	---	---	---
18	8.3	7.7	7.9	---	---	---	---	---	---	---	---	---
19	8.2	7.9	8.0	---	---	---	---	---	---	---	---	---
20	8.4	8.2	8.2	---	---	---	---	---	---	---	---	---
21	8.3	8.1	8.1	---	---	---	---	---	---	---	---	---
22	8.2	8.1	8.1	---	---	---	---	---	---	---	---	---
23	8.3	8.1	8.2	---	---	---	---	---	---	---	---	---
24	8.2	8.1	8.1	---	---	---	---	---	---	---	---	---
25	8.2	8.0	8.1	---	---	---	---	---	---	---	---	---
26	8.3	8.0	8.1	---	---	---	---	---	---	---	---	---
27	8.7	8.1	8.4	---	---	---	---	---	---	---	---	---
28	8.9	8.3	8.5	---	---	---	---	---	---	---	---	---
29	8.6	7.8	8.3	---	---	---	---	---	---	---	---	---
30	7.8	7.6	7.7	---	---	---	---	---	---	---	---	---
31	7.7	7.6	7.6	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	8.7	8.5	8.6	8.3	8.1	8.2	8.0	7.8	7.9
2	---	---	---	8.7	8.5	8.6	8.1	7.9	8.1	8.1	8.0	8.0
3	---	---	---	8.6	8.4	8.5	8.1	7.9	8.0	8.1	8.1	8.1
4	---	---	---	8.5	8.4	8.4	8.1	7.9	8.0	8.1	7.8	8.1
5	---	---	---	8.6	8.3	8.4	8.2	7.9	8.0	8.0	7.7	7.8
6	8.4	8.3	8.4	8.6	8.3	8.4	8.1	8.0	8.1	8.0	7.8	7.9
7	8.3	8.0	8.0	8.5	8.3	8.4	8.2	8.0	8.1	8.1	8.0	8.1
8	8.3	8.1	8.2	8.5	8.2	8.4	8.3	8.1	8.2	8.2	8.1	8.1
9	8.4	8.3	8.4	8.2	7.8	7.9	8.4	8.1	8.3	8.2	8.2	8.2
10	8.6	8.3	8.4	8.4	8.1	8.2	8.5	8.3	8.4	8.2	7.8	8.1
11	8.6	8.4	8.5	8.5	8.3	8.4	8.3	8.2	8.2	7.9	7.8	7.9
12	8.6	8.5	8.5	8.5	8.2	8.4	8.4	8.3	8.4	8.0	7.9	8.0
13	8.5	8.4	8.5	8.2	8.0	8.0	8.3	8.2	8.3	8.1	8.0	8.1
14	8.6	8.4	8.5	8.1	8.0	8.1	8.3	8.0	8.1	8.3	8.1	8.2
15	8.6	8.5	8.5	8.0	7.9	8.0	8.2	8.0	8.1	8.2	8.2	8.2
16	8.6	8.4	8.5	8.0	8.0	8.0	8.4	8.2	8.3	8.3	8.2	8.3
17	8.6	8.4	8.5	8.0	7.9	7.9	8.4	8.2	8.3	8.3	8.2	8.3
18	8.6	8.5	8.5	8.1	7.9	8.0	8.3	8.2	8.3	8.3	8.2	8.2
19	8.7	8.5	8.6	8.2	8.0	8.1	8.3	8.3	8.3	8.2	8.1	8.2
20	8.7	8.5	8.6	8.2	8.0	8.1	8.3	8.2	8.2	8.3	8.2	8.2
21	8.7	8.6	8.6	8.1	8.0	8.1	8.2	8.2	8.2	8.4	8.2	8.3
22	8.7	8.5	8.6	8.1	8.0	8.0	8.3	8.2	8.3	8.5	8.3	8.4
23	8.5	8.4	8.5	8.1	8.0	8.1	8.4	8.2	8.3	8.5	8.4	8.4
24	8.6	8.4	8.5	8.2	8.1	8.1	8.4	8.3	8.3	8.4	8.1	8.3
25	8.7	8.4	8.6	8.4	8.2	8.3	8.3	7.8	8.0	8.3	8.2	8.3
26	8.8	8.4	8.6	8.4	8.2	8.3	8.0	7.7	7.8	8.3	8.1	8.2
27	8.8	8.5	8.6	8.3	8.3	8.3	7.9	7.8	7.8	8.3	8.2	8.3
28	8.8	8.5	8.6	8.3	8.2	8.3	7.9	7.7	7.9	8.3	8.2	8.3
29	---	---	---	8.4	8.3	8.3	7.8	7.7	7.7	8.3	8.2	8.2
30	---	---	---	8.3	8.2	8.3	7.8	7.8	7.8	8.2	8.2	8.2
31	---	---	---	8.3	8.2	8.3	---	---	---	8.3	8.2	8.2
MAX	---	---	---	8.7	8.5	8.6	8.5	8.3	8.4	8.5	8.4	8.4
MIN	---	---	---	8.0	7.8	7.9	7.8	7.7	7.7	7.9	7.7	7.8

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.3	8.0	8.2	8.1	8.1	8.1	---	---	---	9.0	8.4	8.8
2	8.2	8.0	8.1	8.3	8.1	8.2	---	---	---	9.3	8.3	8.8
3	8.2	8.2	8.2	8.4	8.2	8.3	---	---	---	9.5	8.6	9.1
4	8.2	8.2	8.2	8.4	8.2	8.3	---	---	---	9.4	8.5	9.1
5	8.3	8.2	8.3	8.4	8.2	8.4	---	---	---	9.2	8.4	8.8
6	8.3	8.2	8.2	8.4	8.2	8.4	---	---	---	9.2	8.3	8.9
7	8.2	8.2	8.2	8.4	8.1	8.2	---	---	---	9.0	8.0	8.7
8	8.3	8.2	8.3	---	---	---	---	---	---	---	---	---
9	8.4	8.3	8.3	---	---	---	9.3	8.5	8.9	---	---	---
10	8.4	8.3	8.3	---	---	---	9.3	8.2	8.9	---	---	---
11	8.3	7.8	7.9	---	---	---	9.3	8.1	9.0	8.4	7.8	8.1
12	8.2	8.0	8.2	---	---	---	9.1	8.1	8.3	8.2	7.9	7.9
13	8.2	7.8	7.9	---	---	---	8.5	8.1	8.2	8.0	7.9	7.9
14	8.1	7.9	8.0	---	---	---	8.5	8.3	8.4	8.5	7.9	8.2
15	8.1	7.8	8.0	---	---	---	8.6	8.2	8.4	9.0	8.3	8.8
16	8.2	8.1	8.2	---	---	---	8.7	8.3	8.5	9.0	8.2	8.5
17	8.3	8.2	8.3	---	---	---	8.6	8.3	8.4	9.1	8.3	8.7
18	8.4	8.3	8.3	---	---	---	8.6	8.2	8.4	8.8	8.1	8.6
19	8.4	8.3	8.3	---	---	---	9.0	8.2	8.4	9.0	7.8	8.4
20	8.3	8.1	8.2	---	---	---	8.9	8.6	8.8	9.0	7.8	8.6
21	8.3	8.2	8.3	---	---	---	8.8	8.4	8.6	9.4	8.1	8.6
22	8.2	8.0	8.1	---	---	---	9.0	8.5	8.6	9.4	8.7	9.1
23	8.2	7.8	8.1	---	---	---	9.1	8.2	8.6	9.3	8.6	9.1
24	7.9	7.8	7.8	---	---	---	9.2	8.2	8.9	9.3	8.6	9.0
25	7.9	7.8	7.8	---	---	---	9.3	8.4	8.8	9.3	8.2	8.8
26	8.0	7.8	7.9	---	---	---	9.4	8.3	8.9	---	---	---
27	8.1	8.0	8.0	---	---	---	9.2	8.2	8.8	---	---	---
28	8.2	8.1	8.1	---	---	---	9.0	8.2	8.7	---	---	---
29	8.2	8.0	8.2	---	---	---	9.0	8.1	8.7	---	---	---
30	8.1	8.1	8.1	---	---	---	9.0	8.1	8.6	8.4	7.9	8.2
31	---	---	---	---	---	---	8.9	8.2	8.5	---	---	---
MAX	8.4	8.3	8.3	---	---	---	---	---	---	---	---	---
MIN	7.9	7.8	7.8	---	---	---	---	---	---	---	---	---

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	26.5	22.5	24.0	20.0	14.0	16.5	16.5	14.5	15.5	6.5	5.5	6.0
2	22.5	21.0	21.5	14.0	14.0	14.0	16.5	14.0	15.5	6.0	2.5	4.5
3	22.0	21.5	21.5	14.0	12.5	13.0	18.0	16.0	17.0	2.5	.0	1.0
4	25.5	22.0	23.5	13.0	12.0	12.5	17.5	16.5	17.0	4.0	.0	2.0
5	---	---	---	12.0	11.5	11.5	17.0	15.5	16.5	4.5	1.0	3.0
6	---	---	---	12.0	11.5	12.0	16.5	14.5	16.0	7.0	2.5	5.0
7	---	---	---	12.0	11.5	12.0	14.5	11.5	13.0	6.5	4.0	5.0
8	---	---	---	13.5	12.0	13.0	11.5	10.0	10.5	4.5	2.5	3.5
9	---	---	---	15.5	13.0	14.0	10.5	9.0	9.5	4.0	.5	2.5
10	---	---	---	15.5	13.0	14.0	10.0	9.0	9.5	5.5	3.0	4.0
11	---	---	---	13.0	11.5	12.5	9.5	8.5	9.0	6.5	2.0	4.5
12	---	---	---	12.5	11.5	12.0	9.5	8.5	9.0	9.5	6.5	8.0
13	---	---	---	14.0	12.5	13.5	9.5	7.5	8.5	9.0	4.5	6.5
14	---	---	---	16.0	14.0	15.0	10.0	8.0	9.0	6.0	3.5	4.5
15	23.5	19.5	21.5	16.5	13.5	15.0	10.5	8.0	9.0	7.5	4.0	5.5
16	23.0	20.5	21.5	16.5	14.0	15.5	10.5	8.5	9.5	8.5	5.5	7.0
17	22.0	20.5	21.5	16.5	14.0	15.5	10.0	8.0	9.0	9.5	6.5	8.0
18	20.5	19.0	19.5	18.5	16.0	17.0	9.0	8.0	8.5	9.0	6.5	8.0
19	20.0	17.0	18.5	17.5	14.0	16.0	9.0	8.0	8.5	10.0	7.0	8.5
20	19.0	17.0	17.5	14.0	12.0	13.0	8.0	6.5	7.0	10.5	7.5	9.0
21	19.5	16.0	17.5	13.0	11.0	12.0	6.5	2.5	5.0	11.5	9.5	10.5
22	19.5	15.0	17.0	13.5	11.0	12.5	2.5	.5	1.5	11.5	7.5	9.5
23	18.5	15.0	16.5	15.0	13.0	14.0	2.0	1.0	1.5	8.5	6.5	7.5
24	17.5	15.0	16.5	15.0	13.0	14.0	3.5	1.5	2.5	9.5	6.5	8.0
25	20.0	15.0	17.5	15.0	13.5	14.5	5.0	1.5	3.0	9.0	7.0	8.0
26	21.5	17.5	19.5	15.0	12.0	13.5	5.5	2.5	4.0	10.5	6.5	8.5
27	22.0	18.5	20.5	15.5	12.0	14.0	7.5	4.5	6.0	13.0	10.5	11.5
28	22.0	19.5	20.5	17.0	15.5	16.0	8.0	5.5	6.5	12.5	10.0	11.5
29	23.0	20.0	21.5	18.0	16.5	17.5	9.0	6.5	7.5	10.0	7.5	8.5
30	20.5	19.0	19.5	17.5	16.0	16.5	7.5	5.0	6.5	7.5	7.0	7.5
31	21.0	19.0	20.0	---	---	---	7.0	5.0	6.0	7.0	6.5	6.5
MONTH	---	---	---	20.0	11.0	14.1	18.0	.5	8.9	13.0	.0	6.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	16.5	12.0	14.5	19.0	14.5	16.5	21.5	18.5	20.0
2	9.5	7.5	8.5	16.0	13.5	15.0	20.0	17.5	19.0	21.5	19.0	20.0
3	10.0	7.0	8.5	14.0	11.0	12.5	20.0	18.0	19.0	22.5	19.5	21.0
4	11.0	7.5	9.0	13.0	9.5	11.5	18.5	16.0	17.5	22.0	21.0	21.5
5	12.5	9.0	10.5	16.5	12.5	14.0	19.5	17.5	18.5	21.0	18.5	19.5
6	14.0	12.5	13.5	15.0	12.0	13.5	20.0	16.0	18.0	20.5	18.5	19.5
7	14.0	12.5	13.5	13.0	9.5	10.5	19.0	17.0	18.0	21.5	18.5	20.0
8	14.5	12.0	13.0	12.0	8.0	9.5	21.0	18.5	19.5	23.0	19.0	21.0
9	15.0	13.0	14.0	12.5	8.5	10.5	20.5	16.5	18.5	24.0	21.0	22.5
10	17.0	13.0	15.0	12.5	10.0	11.0	21.0	17.0	19.0	23.0	21.5	21.5
11	16.5	12.0	15.0	12.0	10.0	11.5	20.0	17.0	18.5	21.5	20.0	21.0
12	12.0	9.5	10.5	11.5	7.5	9.5	20.0	17.0	18.5	21.5	19.0	20.5
13	11.0	8.5	10.0	7.5	4.5	5.5	19.0	17.5	18.0	23.0	19.5	21.0
14	11.5	8.5	10.0	7.0	4.0	5.5	18.5	17.0	18.0	23.5	21.0	22.0
15	12.5	9.0	10.5	9.5	6.0	7.5	17.5	14.5	15.5	26.0	22.0	23.5
16	13.5	11.0	12.0	13.0	8.0	10.5	15.5	13.5	14.5	25.5	24.0	25.0
17	13.0	10.0	11.5	15.5	12.0	14.0	16.5	12.5	14.0	24.5	22.0	23.0
18	13.0	10.5	11.5	15.5	11.0	12.5	17.5	12.5	15.0	24.0	20.5	22.0
19	11.5	9.0	10.0	11.5	10.0	11.0	20.5	15.0	17.5	24.5	22.0	23.0
20	12.5	9.0	10.5	13.5	10.5	12.0	22.0	18.0	20.0	24.0	22.5	23.0
21	11.0	9.0	10.0	14.0	11.5	13.0	22.0	19.0	20.5	26.5	23.0	24.0
22	9.5	7.5	8.0	16.0	12.0	14.0	24.0	20.0	21.5	27.5	24.0	25.5
23	11.0	7.0	9.0	15.5	12.5	14.0	23.0	18.0	20.5	26.5	24.5	25.5
24	13.0	8.5	10.5	13.5	11.5	12.5	18.0	15.5	16.5	25.5	23.0	24.5
25	16.0	11.0	13.5	15.0	11.5	13.0	16.0	15.0	15.5	24.5	23.0	24.0
26	18.0	14.5	16.0	15.0	11.5	13.0	17.0	16.0	16.5	24.0	21.5	22.5
27	17.0	15.0	16.0	13.5	11.5	12.5	18.5	16.5	17.5	24.0	22.0	23.0
28	16.0	12.0	14.0	11.5	10.5	11.0	20.5	18.0	19.0	24.5	22.0	23.0
29	---	---	---	14.5	11.0	12.5	20.0	19.0	19.5	25.0	22.0	23.5
30	---	---	---	16.0	13.0	14.5	22.0	18.0	19.5	26.5	23.0	24.5
31	---	---	---	16.5	14.5	15.5	---	---	---	27.5	24.0	25.5
MONTH	---	---	---	16.5	4.0	11.9	24.0	12.5	18.0	27.5	18.5	22.5

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	28.5	24.5	26.5	---	---	---	33.0	27.0	30.0	30.5	24.5	27.5
2	29.0	25.0	27.0	---	---	---	33.0	27.5	30.5	29.5	24.5	27.0
3	29.0	26.0	27.5	---	---	---	33.5	28.0	30.5	31.0	24.5	27.5
4	28.5	26.0	27.0	---	---	---	31.5	27.5	29.5	28.0	25.5	27.0
5	27.5	25.5	26.5	---	---	---	31.5	27.0	29.0	28.5	25.0	26.5
6	26.5	24.0	25.0	---	---	---	---	---	---	31.5	24.5	27.5
7	27.5	24.0	25.5	---	---	---	32.5	27.5	30.0	31.0	25.0	28.0
8	29.0	25.5	27.0	---	---	---	33.0	28.0	30.5	---	---	---
9	28.5	26.5	27.5	32.0	28.5	30.5	34.5	28.5	32.0	---	---	---
10	27.5	24.5	25.5	29.5	25.5	27.5	35.0	29.0	32.0	---	---	---
11	25.0	21.5	23.5	26.0	25.0	25.5	33.5	29.0	31.5	24.0	22.5	23.0
12	25.5	24.5	25.0	26.0	24.5	25.5	32.0	27.5	30.0	23.5	22.0	22.5
13	25.0	23.5	24.0	28.0	24.5	26.5	31.5	27.5	29.5	25.5	21.5	23.0
14	26.0	23.5	24.5	30.0	25.5	28.0	30.5	25.5	28.0	26.0	21.0	23.5
15	26.5	22.5	24.5	30.0	26.0	28.0	32.0	25.5	28.5	24.0	22.0	23.5
16	27.0	24.0	25.5	28.5	26.0	27.0	31.5	26.5	29.0	23.0	21.0	22.0
17	26.0	22.5	24.0	30.0	26.0	28.0	31.5	26.5	29.0	25.0	20.0	22.0
18	24.5	22.5	23.5	31.0	27.5	29.0	32.0	26.0	29.0	24.0	22.5	23.0
19	24.0	22.0	23.0	31.5	27.5	29.5	31.5	27.0	29.0	26.5	21.0	23.5
20	25.5	22.5	24.0	31.5	28.0	29.5	30.0	24.5	27.5	24.5	21.0	23.5
21	24.5	24.0	24.5	31.5	28.0	29.5	30.0	25.5	27.5	23.0	18.0	20.0
22	24.0	23.0	23.5	32.0	28.0	30.0	30.0	25.5	27.5	23.5	17.0	20.5
23	24.5	22.5	23.5	32.0	28.0	30.0	31.5	26.0	28.5	22.5	18.5	20.5
24	24.5	22.5	23.5	32.5	28.5	30.5	31.0	25.5	28.5	23.5	18.0	21.0
25	25.5	24.0	24.5	32.5	28.5	30.5	31.0	24.5	27.5	---	---	---
26	28.0	24.5	26.0	32.5	28.0	30.5	31.5	25.0	28.0	---	---	---
27	29.5	27.5	28.5	32.5	28.5	30.5	30.5	25.0	27.5	---	---	---
28	30.0	27.5	28.5	29.0	28.0	28.0	32.0	25.5	28.5	---	---	---
29	---	---	---	33.0	27.5	30.5	32.0	26.0	29.0	---	---	---
30	---	---	---	32.0	26.5	29.5	31.5	26.0	28.5	22.0	16.0	19.0
31	---	---	---	32.5	26.5	29.5	31.5	25.5	28.5	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

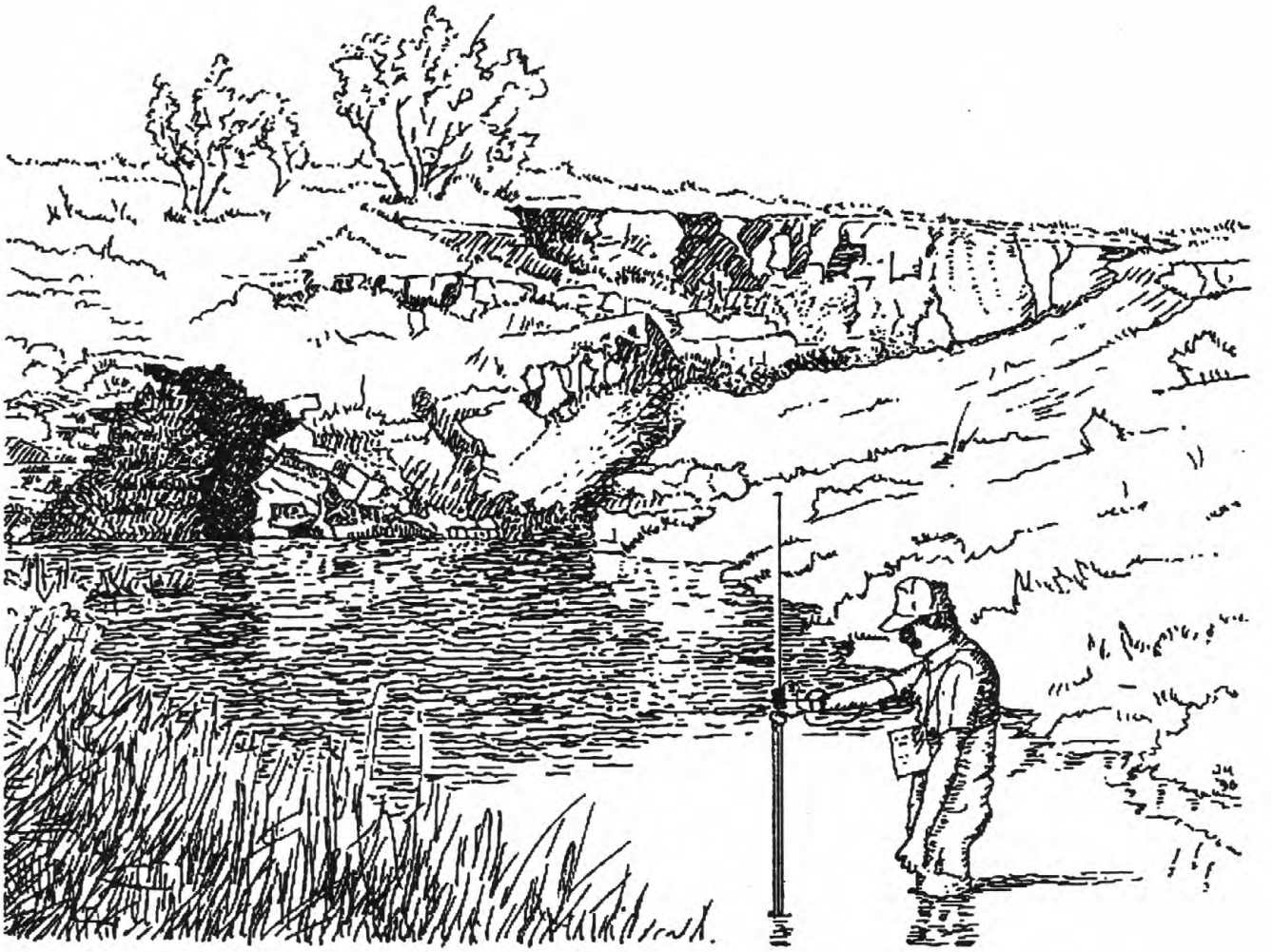
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	10.0	7.0	9.2	---	---	---
2	---	---	---	---	---	---	11.6	10.0	10.7	---	---	---
3	---	---	---	---	---	---	10.7	9.6	10.2	---	---	---
4	---	---	---	---	---	---	10.1	7.1	8.8	---	---	---
5	---	---	---	---	---	---	9.7	8.0	9.0	---	---	---
6	---	---	---	---	---	---	10.0	9.3	9.6	---	---	---
7	---	---	---	---	---	---	11.7	10.0	10.8	---	---	---
8	---	---	---	---	---	---	12.6	11.6	12.3	---	---	---
9	---	---	---	---	---	---	12.9	12.6	12.7	---	---	---
10	---	---	---	---	---	---	13.1	12.8	12.9	---	---	---
11	---	---	---	9.8	8.9	9.5	13.5	13.1	13.3	---	---	---
12	---	---	---	9.9	9.6	9.8	13.6	13.3	13.5	---	---	---
13	---	---	---	9.6	9.1	9.4	14.0	13.6	13.9	---	---	---
14	---	---	---	9.1	9.0	9.1	14.1	13.6	13.9	---	---	---
15	---	---	---	10.5	9.1	10.3	14.1	13.5	13.8	---	---	---
16	---	---	---	10.3	9.6	10.0	13.7	12.7	13.5	---	---	---
17	---	---	---	10.1	9.6	9.9	14.0	13.4	13.8	---	---	---
18	---	---	---	9.9	9.0	9.5	13.8	13.5	13.6	---	---	---
19	---	---	---	10.5	8.8	9.6	14.2	13.5	13.8	---	---	---
20	---	---	---	11.8	10.5	11.3	14.9	14.0	14.5	---	---	---
21	---	---	---	12.1	11.4	11.7	17.0	14.9	15.6	---	---	---
22	---	---	---	12.1	11.0	11.7	---	---	---	---	---	---
23	---	---	---	11.8	11.0	11.3	---	---	---	---	---	---
24	---	---	---	11.8	10.7	11.3	---	---	---	---	---	---
25	---	---	---	11.5	10.6	11.0	---	---	---	---	---	---
26	---	---	---	12.2	10.7	11.4	---	---	---	---	---	---
27	---	---	---	12.2	10.9	11.5	---	---	---	---	---	---
28	---	---	---	11.8	10.3	10.9	---	---	---	---	---	---
29	---	---	---	11.2	9.7	10.3	---	---	---	---	---	---
30	---	---	---	10.7	6.6	9.2	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	12.8	9.9	11.0	---	---	---	7.9	7.3	7.6
2	---	---	---	12.6	9.4	10.6	---	---	---	8.1	7.8	8.0
3	---	---	---	13.7	9.7	11.1	---	---	---	8.1	7.6	7.9
4	---	---	---	12.3	10.1	11.1	---	---	---	7.9	6.3	7.3
5	---	---	---	12.7	9.6	10.8	---	---	---	7.5	6.9	7.2
6	10.4	9.3	10.0	13.2	9.5	11.0	---	---	---	8.3	7.5	7.9
7	9.3	7.2	8.4	12.3	9.7	10.9	---	---	---	8.7	8.3	8.5
8	10.0	8.9	9.6	11.6	9.5	10.7	---	---	---	8.8	8.5	8.6
9	10.5	9.8	10.1	9.5	8.4	9.0	---	---	---	8.7	8.1	8.5
10	11.3	9.6	10.2	11.0	9.3	9.9	---	---	---	8.5	6.3	7.6
11	11.3	8.9	10.0	11.5	9.3	10.3	---	---	---	7.6	7.0	7.3
12	11.5	10.4	10.9	9.8	9.3	9.6	---	---	---	8.5	7.4	8.1
13	11.8	11.1	11.4	9.3	8.7	9.0	---	---	---	8.7	8.5	8.6
14	11.8	11.2	11.4	9.4	9.3	9.4	---	---	---	9.0	8.0	8.6
15	11.8	11.0	11.3	9.3	8.9	9.1	---	---	---	8.6	7.8	8.2
16	11.6	10.5	11.0	9.2	8.1	8.7	---	---	---	8.5	7.7	8.1
17	12.3	10.4	11.1	8.1	7.2	7.7	---	---	---	8.7	8.0	8.3
18	12.3	10.4	11.2	8.2	7.0	7.5	---	---	---	9.1	8.3	8.7
19	13.1	10.7	11.7	8.6	7.4	8.2	---	---	---	9.2	8.2	8.7
20	13.2	11.1	12.0	8.5	7.7	8.1	---	---	---	9.2	8.7	8.9
21	12.8	11.0	11.7	8.1	7.7	7.9	---	---	---	9.2	8.0	8.6
22	12.9	11.5	12.0	7.9	7.3	7.5	---	---	---	9.0	7.8	8.4
23	13.0	11.4	12.1	7.5	7.0	7.2	---	---	---	9.1	7.8	8.4
24	13.2	11.0	11.9	8.0	7.2	7.5	9.4	8.4	8.9	---	---	---
25	13.9	10.4	11.8	8.4	7.3	7.8	9.4	6.5	8.2	---	---	---
26	13.7	9.6	11.2	8.1	7.4	7.7	7.3	6.3	6.7	---	---	---
27	13.9	9.0	11.1	7.5	6.9	7.3	7.5	7.0	7.3	---	---	---
28	13.5	9.7	11.3	7.5	6.9	7.3	7.6	7.0	7.4	---	---	---
29	---	---	---	7.6	6.8	7.1	7.4	6.9	7.1	---	---	---
30	---	---	---	---	---	---	7.6	7.3	7.5	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	8.3	7.7	8.0	---	---	---	---	---	---
2	---	---	---	9.5	7.8	8.5	---	---	---	---	---	---
3	---	---	---	10.1	7.5	8.6	---	---	---	19.3	6.2	12.0
4	---	---	---	10.7	7.6	8.9	---	---	---	18.0	6.1	11.7
5	---	---	---	10.9	7.4	9.1	---	---	---	18.5	6.5	12.2
6	---	---	---	10.1	7.4	8.7	---	---	---	21.0	5.7	12.1
7	---	---	---	10.1	7.3	8.4	---	---	---	18.4	4.4	10.4
8	---	---	---	9.1	6.6	7.9	---	---	---	---	---	---
9	---	---	---	9.1	5.8	7.5	---	---	---	---	---	---
10	7.4	6.7	7.0	7.2	3.2	5.2	22.5	6.8	13.7	---	---	---
11	6.9	4.1	5.6	6.1	4.1	5.4	20.1	7.4	13.2	---	---	---
12	7.1	6.3	6.7	7.9	6.1	7.2	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	7.2	6.6	7.0	---	---	---	---	---	---	---	---	---
17	8.3	7.0	7.7	---	---	---	---	---	---	---	---	---
18	9.3	7.4	8.1	---	---	---	---	---	---	---	---	---
19	8.0	7.2	7.7	---	---	---	---	---	---	---	---	---
20	7.5	6.3	6.9	---	---	---	---	---	---	---	---	---
21	7.3	6.7	7.0	---	---	---	---	---	---	---	---	---
22	6.9	6.3	6.6	---	---	---	---	---	---	---	---	---
23	7.1	5.6	6.5	---	---	---	---	---	---	---	---	---
24	6.1	5.4	5.8	---	---	---	15.6	5.3	10.1	22.9	8.0	13.7
25	6.2	5.6	5.9	---	---	---	16.1	5.4	9.8	21.9	7.1	13.4
26	6.2	5.7	6.0	---	---	---	17.4	5.0	10.0	---	---	---
27	6.2	5.9	6.0	---	---	---	17.2	5.6	9.9	---	---	---
28	6.3	6.0	6.2	---	---	---	16.6	5.1	10.2	---	---	---
29	7.1	6.0	6.4	---	---	---	---	---	---	---	---	---
30	7.9	6.8	7.2	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---



Measuring runoff into a sinkhole in the Blaine aquifer

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 September 1999 (discontinued). 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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	567	1140	811	e337	1610	568	e2370	2930	2200	6220	e545	e310
2	625	1570	725	e442	1750	564	e2330	2080	1580	3260	e532	e300
3	781	2420	671	e475	1520	526	e2400	1600	1300	2330	e487	e290
4	960	2340	2700	e420	1350	524	e2360	5780	1270	1870	e490	e285
5	3570	2930	2400	e450	1200	552	2280	3530	1220	1590	e487	e330
6	6360	1750	1500	e405	1400	465	1890	2600	1140	1400	e537	e391
7	3350	1200	1660	e365	7590	497	1500	2850	1130	1270	e512	e326
8	2230	980	1450	e350	3510	689	1200	2050	1120	1180	e489	e314
9	1360	823	1230	e340	2540	1060	1090	1720	1020	1110	e464	e310
10	984	888	1160	e375	1810	822	973	2550	1140	1060	e450	e306
11	759	904	1120	e445	1370	725	867	3010	1610	1010	e440	e755
12	573	737	1250	e410	1150	1370	771	3190	1680	1310	e435	e1270
13	450	609	e900	e470	1010	4340	809	2780	2450	2390	e431	e890
14	376	777	e910	e500	927	3780	1250	2220	2030	1820	e428	e1720
15	329	677	e920	e558	988	3510	2870	1810	2060	1440	e424	e1060
16	307	525	e925	e540	1030	2560	2190	1520	1520	1530	e421	e780
17	321	461	e900	e640	983	1980	1890	1590	1230	1370	e418	e556
18	735	426	859	e760	944	1440	1630	1500	1070	e1230	e417	e426
19	643	398	e850	e620	832	1110	1410	1460	1030	e1180	415	e366
20	635	370	e800	e658	715	950	1120	1510	1510	e1110	e397	e331
21	779	352	e820	660	665	859	1060	1450	1330	e1050	e384	e316
22	827	340	e823	680	628	1040	1080	e1420	1410	e1000	e374	e296
23	534	469	e700	702	623	1510	1580	e1380	2130	e971	e354	e271
24	392	552	e580	743	731	1920	1930	e1330	2850	e939	e342	e266
25	316	531	e500	738	770	1440	7790	e1290	5620	e906	e340	e321
26	282	512	e442	682	625	1320	18200	e1590	4480	e865	e339	e316
27	262	508	e473	758	545	1210	22900	e1350	4180	e840	e338	e296
28	246	534	e450	744	541	1710	16700	e1300	2840	e766	e336	e281
29	238	548	e430	696	---	2350	10400	e1410	2200	e717	e334	e271
30	227	771	e338	1600	---	e2550	4810	e1220	3900	e635	e330	e251
31	221	---	e337	1970	---	e2430	---	1780	---	e578	e320	---
TOTAL	30239	27042	29634	19533	39357	46371	119650	63800	60250	44947	13010	14201
MEAN	975	901	956	630	1406	1496	3988	2058	2008	1450	420	473
MAX	6360	2930	2700	1970	7590	4340	22900	5780	5620	6220	545	1720
MIN	221	340	337	337	541	465	771	1220	1020	578	320	251
AC-FT	59980	53640	58780	38740	78060	91980	237300	126500	119500	89150	25810	28170

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1999, BY WATER YEAR (WY)

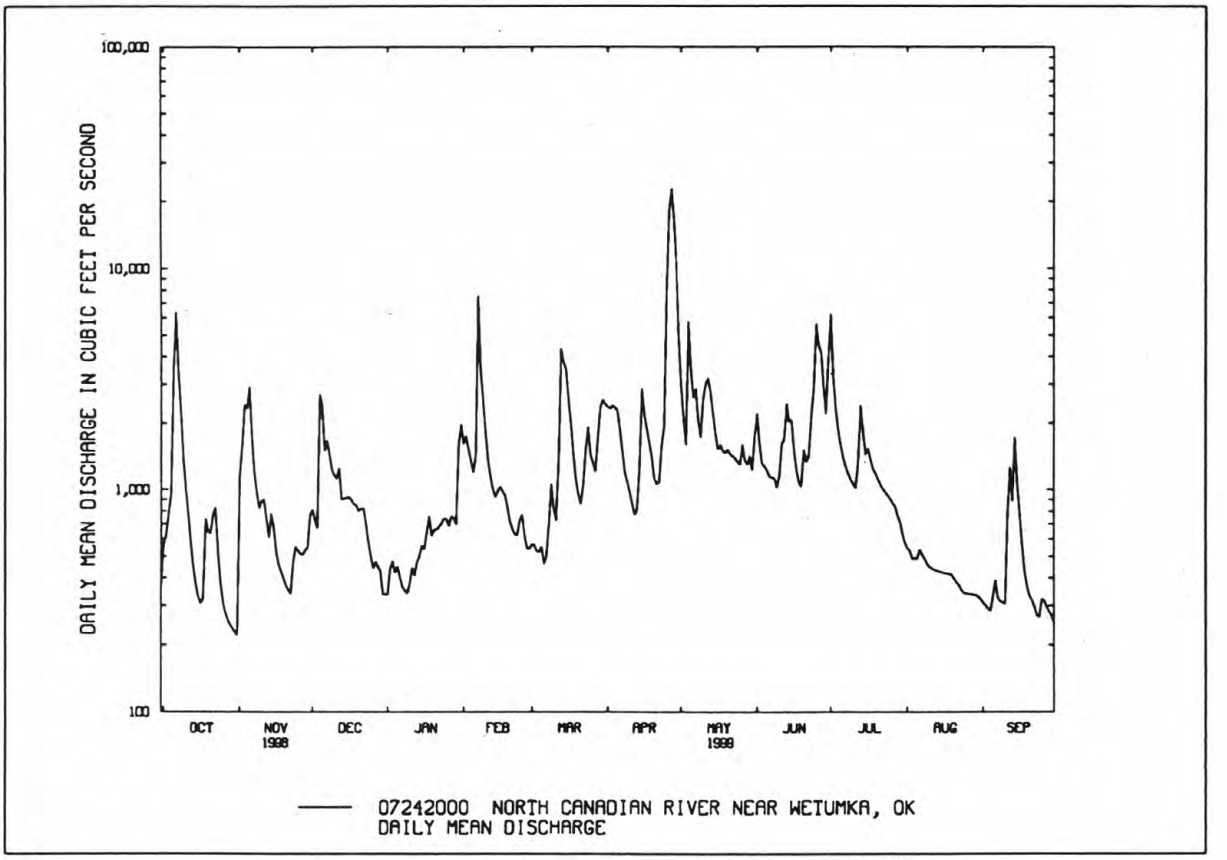
MEAN	704	670	503	459	611	887	1180	1759	1588	681	385	479
MAX	4914	4580	3225	2825	3037	5684	6643	6989	6081	3230	2667	3894
(WY)	1987	1942	1993	1998	1985	1990	1945	1993	1957	1951	1950	1950
MIN	4.25	16.7	43.8	44.3	56.6	43.5	72.8	85.3	73.4	42.5	8.71	.000
(WY)	1957	1955	1955	1940	1957	1940	1955	1940	1953	1954	1956	1954

e Estimated

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1938 - 1999	
ANNUAL TOTAL	530716		508034			
ANNUAL MEAN	1454		1392		826	
HIGHEST ANNUAL MEAN					2229	1993
LOWEST ANNUAL MEAN					156	1956
HIGHEST DAILY MEAN	14800	Mar 17	22900	Apr 27	55800	Apr 15 1945
LOWEST DAILY MEAN	93	Sep 9	221	Oct 31	.00	Aug 27 1954
ANNUAL SEVEN-DAY MINIMUM	106	Sep 5	256	Oct 25	.00	[a]Aug 27 1954
INSTANTANEOUS PEAK FLOW			24300	Apr 27	66000	Apr 15 1945
INSTANTANEOUS PEAK STAGE			19.40	Apr 27	26.40	Apr 15 1945
ANNUAL RUNOFF (AC-FT)	1053000		1008000		598100	
10 PERCENT EXCEEDS	2730		2540		1890	
50 PERCENT EXCEEDS	920		906		312	
90 PERCENT EXCEEDS	162		338		70	

[a]No flow Aug. 27 to Oct. 11, 1954, Aug. 25 to Oct. 22, 1956.



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 September 1999 (discontinued).

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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	3980	e209	65	146	48	72	712	103	642	29	e22
2	115	1310	e176	74	343	45	68	492	139	289	29	e22
3	99	e720	e152	e62	332	45	78	346	122	187	28	e22
4	43	e520	e279	e65	e260	46	76	2290	66	145	28	e22
5	3510	e445	e152	e64	177	43	74	1390	43	121	28	e22
6	571	e380	e130	192	100	43	138	586	43	121	29	e22
7	e360	e310	e192	157	130	41	122	175	56	266	27	23
8	e207	e270	e290	98	85	111	56	469	46	250	e26	51
9	e105	e229	e327	e88	181	168	49	770	40	245	e26	40
10	e90	e466	200	e82	181	158	45	2360	39	620	e26	30
11	72	e330	111	e81	171	144	40	665	51	e367	e26	486
12	65	e247	79	81	83	1090	41	278	45	e239	e25	93
13	58	e167	76	78	59	1340	108	e171	53	e163	e25	50
14	54	e136	73	74	59	854	754	e450	51	e109	e25	37
15	50	e126	71	74	58	719	401	e765	164	77	e25	32
16	48	e115	72	74	57	867	201	e786	165	64	e24	31
17	99	e113	68	71	55	663	165	e815	149	60	e24	30
18	320	e124	71	70	55	600	149	743	81	56	24	30
19	e133	e238	79	72	54	e330	141	638	260	53	e24	30
20	e288	e131	72	68	53	e230	135	315	221	52	e24	28
21	e293	e111	e72	70	50	175	77	e285	958	49	e24	27
22	e287	e98	e70	67	51	153	49	e280	382	47	e24	e27
23	e138	e86	e71	67	51	371	45	e285	1510	45	e24	e26
24	e108	e79	e70	65	49	340	56	e280	5020	43	e24	e26
25	e80	e72	e73	62	49	e330	8190	280	2760	40	e23	29
26	e61	e71	71	138	50	220	4510	278	937	38	e23	e29
27	e53	e72	70	154	50	94	2190	81	515	37	e23	e26
28	e60	e79	70	70	48	97	1320	56	e500	35	e23	e26
29	e147	e98	67	70	---	85	1050	54	e640	35	e22	e25
30	e688	e131	65	210	---	77	875	105	1800	32	e22	e25
31	413	---	64	154	---	73	---	135	---	30	e22	---
TOTAL	8655	11254	3642	2817	3037	9600	21275	17335	16959	4557	776	1389
MEAN	279	375	117	90.9	108	310	709	559	565	147	25.0	46.3
MAX	3510	3980	327	210	343	1340	8190	2360	5020	642	29	486
MIN	40	71	64	62	48	41	40	54	39	30	22	22
AC-FT	17170	22320	7220	5590	6020	19040	42200	34380	33640	9040	1540	2760

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1999, BY WATER YEAR (WY)

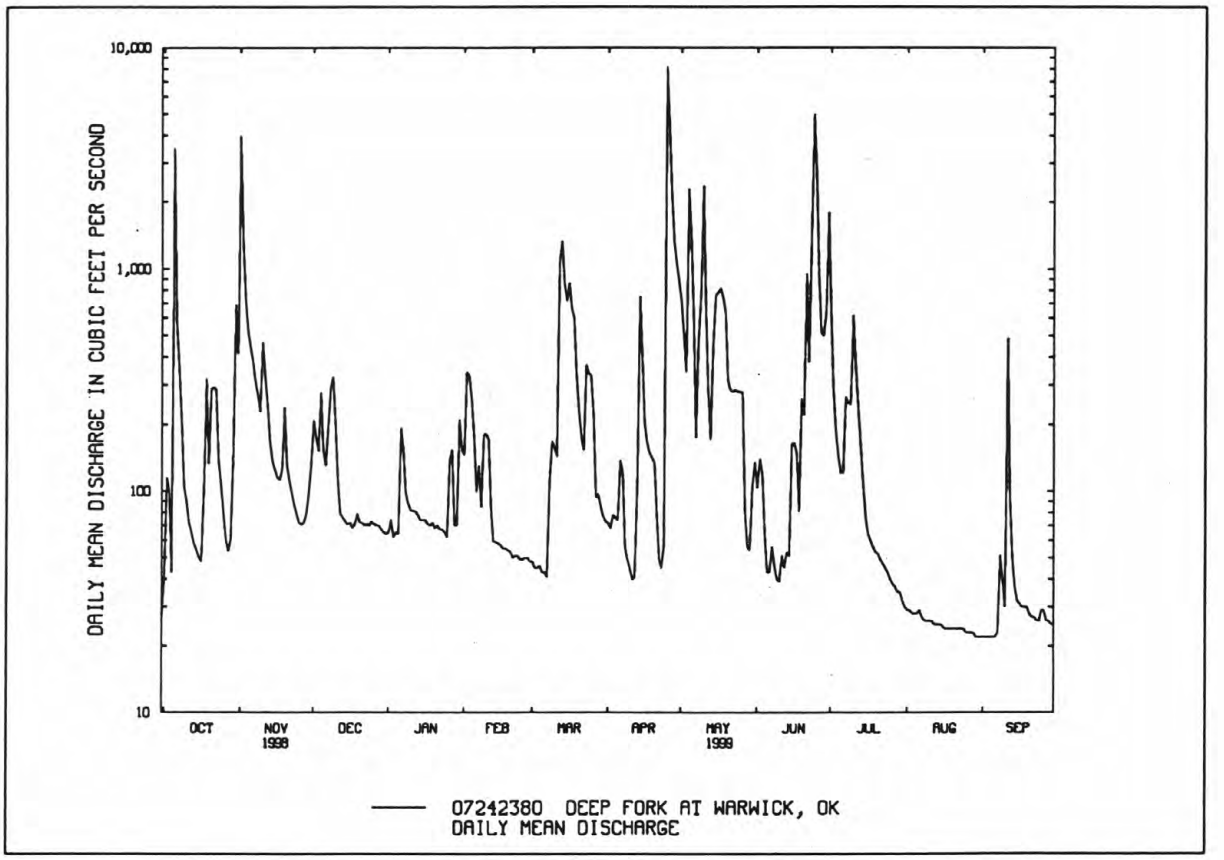
MEAN	154	220	209	173	186	435	503	685	631	224	162	248
MAX	591	539	683	699	516	1249	1435	2494	2978	738	630	1527
(WY)	1998	1997	1993	1998	1993	1998	1990	1993	1995	1995	1989	1989
MIN	46.7	64.9	60.7	55.8	47.0	59.3	101	56.3	70.5	31.2	22.7	39.5
(WY)	1993	1996	1989	1997	1996	1991	1989	1996	1988	1990	1998	1998

e Estimated

07242380 DEEP FORK NEAR WARWICK, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1988 - 1999	
ANNUAL TOTAL	133113		101296			
ANNUAL MEAN	365		278		319	
HIGHEST ANNUAL MEAN					574	1995
LOWEST ANNUAL MEAN					119	1991
HIGHEST DAILY MEAN	8570	Mar 16	8190	Apr 25	19000	May 9 1993
LOWEST DAILY MEAN	15	Sep 8	22	Aug 29-Sep 6	[a]3.9	Dec 13 1987
ANNUAL SEVEN-DAY MINIMUM	16	Sep 6	22	Aug 29	8.2	Sep 15 1997
INSTANTANEOUS PEAK FLOW			14500	Apr 25	34600	Jun 9 1995
INSTANTANEOUS PEAK STAGE			19.12	Apr 25	[b]21.28	Jun 9 1995
ANNUAL RUNOFF (AC-FT)	264000		200900		231300	
10 PERCENT EXCEEDS	904		639		715	
50 PERCENT EXCEEDS	99		79		95	
90 PERCENT EXCEEDS	24		26		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 September 1999 (discontinued).

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.--No estimated daily discharge. 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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	318	1680	1100	225	3880	263	839	14800	2070	7550	96	33
2	1200	3740	742	217	3620	247	761	10600	2320	7480	89	31
3	1370	4000	511	212	2690	233	763	8300	1660	6490	85	31
4	1160	3970	2030	199	1470	217	854	7300	1060	5740	81	30
5	4790	3990	3360	187	1140	207	910	7310	793	5630	76	31
6	8230	4430	3280	177	1480	201	1130	7660	647	5340	76	32
7	9070	4970	3110	181	4770	198	1000	6820	517	4090	74	43
8	8910	4900	2600	189	4800	644	830	6590	422	1840	73	43
9	9480	3800	1500	214	4870	1970	752	6850	392	1090	70	53
10	9420	2480	1090	261	4560	1550	672	6540	587	917	68	55
11	8090	2130	928	240	4260	1080	548	5690	2170	798	65	323
12	6490	1630	789	242	3390	1260	455	4790	1550	945	62	1610
13	4330	1210	695	224	1740	4200	393	4030	1280	992	57	1270
14	1710	863	556	218	1130	4650	442	3690	1350	774	54	995
15	1050	697	440	207	839	5150	1710	3340	1500	655	51	463
16	765	561	377	197	676	5510	2400	2240	1220	581	49	224
17	588	464	332	192	578	6290	2470	1760	969	490	46	143
18	847	394	306	183	509	6950	2600	2000	747	339	44	106
19	1670	341	319	178	460	6550	2170	2040	725	254	41	85
20	2000	307	359	172	420	5600	1250	1950	955	219	39	78
21	2060	280	375	173	386	4260	943	1670	1750	198	39	75
22	1360	272	353	178	349	2570	779	1300	2150	179	38	84
23	854	269	315	212	321	1780	728	3060	3140	165	38	75
24	683	238	271	304	305	1400	682	3810	3990	154	36	62
25	535	218	239	316	281	1330	2640	2310	4420	146	34	59
26	367	207	223	264	270	1320	7370	1490	5030	138	33	62
27	259	199	225	223	276	1130	14000	1160	5330	135	35	76
28	215	191	228	209	278	1060	16700	963	5280	132	39	70
29	190	186	239	220	---	1180	19000	825	5820	122	42	76
30	177	576	247	1330	---	1160	18600	653	6890	110	38	68
31	500	---	236	3930	---	965	---	1130	---	102	35	---
TOTAL	88688	49193	27375	11474	49748	71125	104391	132671	66734	53795	1703	6386
MEAN	2861	1640	883	370	1777	2294	3480	4280	2224	1735	54.9	213
MAX	9480	4970	3360	3930	4870	6950	19000	14800	6890	7550	96	1610
MIN	177	186	223	172	270	198	393	653	392	102	33	30
AC-FT	175900	97570	54300	22760	98680	141100	207100	263200	132400	106700	3380	12670

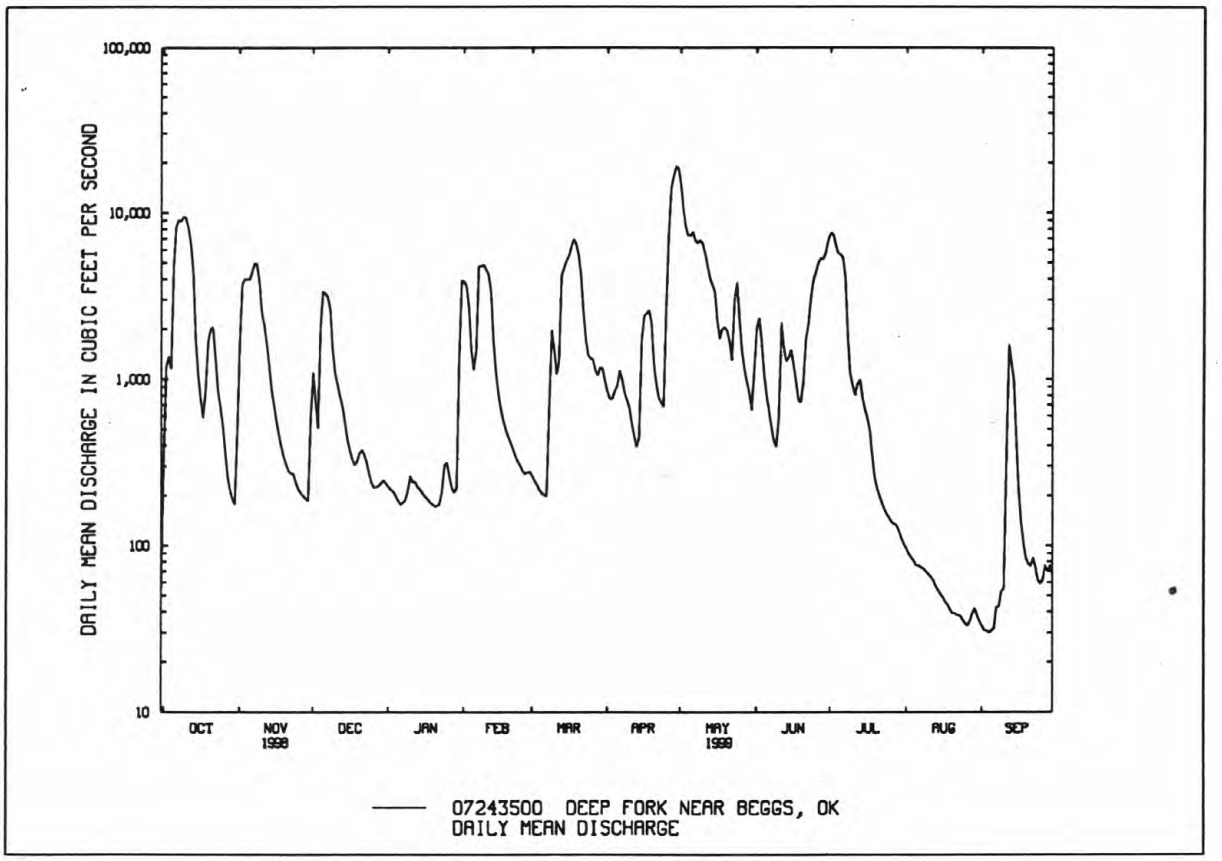
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1999, BY WATER YEAR (WY)

MEAN	738	784	570	441	677	1241	1578	2382	1928	615	250	374
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

07243500 DEEP FORK NEAR BEGGS, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1939 - 1999	
ANNUAL TOTAL	610832.0		663283			
ANNUAL MEAN	1674		1817		965	
HIGHEST ANNUAL MEAN					2645	1993
LOWEST ANNUAL MEAN					114	1956
HIGHEST DAILY MEAN	18300	Mar 21	19000	Apr 29	55600	May 11 1943
LOWEST DAILY MEAN	6.6	Sep 10	30	Sep 4	[a].00	Sep 20 1939
ANNUAL SEVEN-DAY MINIMUM	7.0	Sep 6	32	Aug 31	.00	Sep 29 1939
INSTANTANEOUS PEAK FLOW			19600	Apr 29	66800	May 11 1943
INSTANTANEOUS PEAK STAGE			27.06	Apr 29	34.55	May 11 1943
ANNUAL RUNOFF (AC-FT)	1212000		1316000		698800	
10 PERCENT EXCEEDS	4890		5330		2690	
50 PERCENT EXCEEDS	533		697		174	
90 PERCENT EXCEEDS	24		69		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.--No estimated daily discharge. 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.

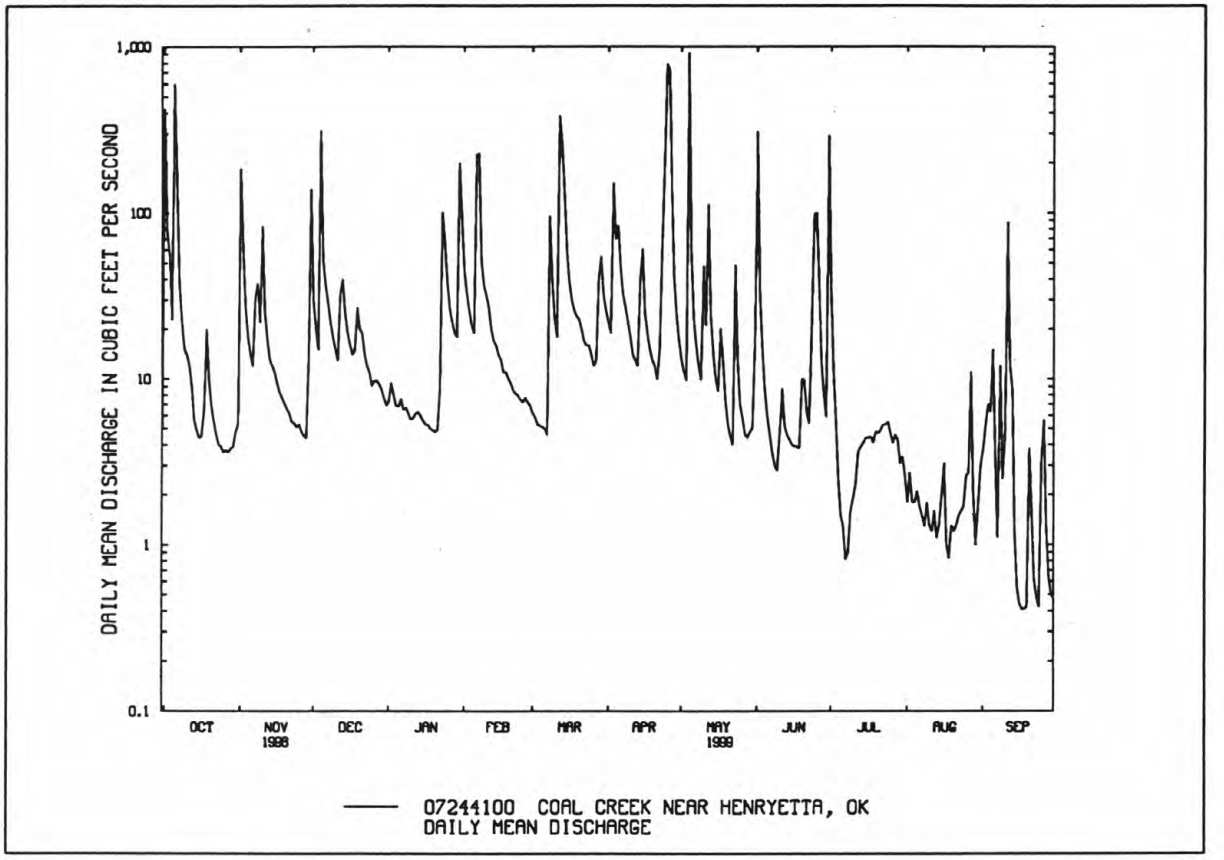
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	426	184	30	7.3	45	6.2	22	13	308	34	1.8	3.7
2	77	66	20	9.5	33	5.9	19	11	32	11	2.7	5.2
3	56	27	15	8.0	26	5.3	152	9.8	15	5.5	1.8	7.0
4	23	18	313	6.8	21	5.2	70	910	8.5	2.5	1.8	6.3
5	600	14	52	6.8	19	5.1	84	58	5.9	1.5	2.1	15
6	149	12	37	7.6	225	5.0	46	23	4.6	1.3	1.7	3.4
7	38	31	29	6.5	228	4.6	32	16	3.6	.81	1.5	1.1
8	22	38	22	6.7	51	96	27	12	3.0	.89	1.3	12
9	15	22	18	6.2	37	41	22	9.9	2.8	1.6	1.8	2.5
10	14	83	15	5.7	32	23	18	48	4.7	1.9	1.3	4.5
11	12	25	13	5.8	27	18	14	21	8.7	2.3	1.2	88
12	8.9	17	33	6.2	20	387	13	112	5.2	3.6	1.6	12
13	5.6	13	40	6.3	17	261	12	24	4.6	3.9	1.1	8.6
14	4.9	12	25	6.0	16	132	40	14	4.3	4.1	1.3	1.2
15	4.4	11	19	5.6	14	59	61	10	4.0	4.4	2.0	.56
16	4.5	9.4	16	5.3	13	39	25	8.4	3.9	4.4	3.1	.44
17	6.4	8.3	14	5.3	11	30	19	20	3.9	4.5	1.0	.41
18	20	7.7	15	5.0	11	26	15	13	3.8	4.1	.83	.41
19	9.9	7.1	27	4.9	10	24	13	7.4	10	4.8	1.3	.42
20	6.8	6.6	20	4.8	9.4	23	12	5.3	9.9	4.7	1.2	3.8
21	5.5	6.2	19	4.9	8.5	20	10	4.5	6.2	4.9	1.3	1.6
22	4.6	5.5	14	8.8	8.2	17	15	4.0	5.4	5.3	1.5	.63
23	4.0	5.4	12	101	7.9	16	62	49	21	5.3	1.6	.48
24	3.9	5.1	11	68	7.5	16	203	13	99	5.5	1.7	.42
25	3.6	5.3	9.1	39	7.2	14	785	6.9	100	4.7	2.6	3.4
26	3.7	4.8	9.7	27	7.7	12	724	5.8	37	4.1	2.7	5.6
27	3.6	4.5	9.8	22	7.2	13	134	4.6	13	4.6	11	1.3
28	3.8	4.4	9.3	19	6.9	41	40	4.4	7.9	4.3	2.1	.65
29	3.9	13	8.7	18	---	55	24	4.8	5.9	3.1	1.0	.50
30	4.8	139	7.7	200	---	32	17	5.0	291	3.4	1.7	.48
31	5.3	---	6.9	96	---	26	---	17	---	2.6	3.0	---
TOTAL	1550.1	805.3	890.2	730.0	926.5	1458.3	2730	1464.8	1032.8	149.60	62.63	191.60
MEAN	50.0	26.8	28.7	23.5	33.1	47.0	91.0	47.3	34.4	4.83	2.02	6.39
MAX	600	184	313	200	228	387	785	910	308	34	11	88
MIN	3.6	4.4	6.9	4.8	6.9	4.6	10	4.0	2.8	.81	.83	.41
AC-FT	3070	1600	1770	1450	1840	2890	5410	2910	2050	297	124	380
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1999, BY WATER YEAR (WY)												
MEAN	23.6	24.8	33.6	44.0	31.0	41.6	33.9	23.8	18.4	7.55	2.06	11.0
MAX	50.0	30.2	64.7	105	48.3	65.1	91.0	47.3	34.4	16.0	2.85	32.0
(WY)	1999	1997	1998	1998	1997	1998	1999	1999	1999	1996	1997	1996
MIN	6.36	17.2	7.28	2.86	11.7	12.7	10.2	6.93	5.21	2.06	1.64	1.94
(WY)	1997	1998	1997	1997	1998	1997	1998	1997	1996	1998	1996	1997

ARKANSAS RIVER BASIN

07244100 COAL CREEK NEAR HENRYETTA, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1996 - 1999	
ANNUAL TOTAL	10470.66		11991.83			
ANNUAL MEAN	28.7		32.9		25.0	
HIGHEST ANNUAL MEAN					32.9	1999
LOWEST ANNUAL MEAN					14.3	1997
HIGHEST DAILY MEAN	846 -	Jan 4	910	May 4	910	May 4 1999
LOWEST DAILY MEAN	.97	Sep 27	.41	Sep 17,18	.41	Sep 17 1999
ANNUAL SEVEN-DAY MINIMUM	1.1	Sep 4	1.0	Sep 14	.92	Jul 2 1996
INSTANTANEOUS PEAK FLOW			2370	May 4	2370	May 4 1999
INSTANTANEOUS PEAK STAGE			23.15	May 4	23.15	May 4 1999
ANNUAL RUNOFF (AC-FT)	20770		23790		18120	
10 PERCENT EXCEEDS	39		58		38	
50 PERCENT EXCEEDS	6.9		8.8		5.2	
90 PERCENT EXCEEDS	1.4		1.7		1.4	



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, -0.5°C, Jan. 3, 4, 9, 1999.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 32.0°C, Aug. 10; minimum, -0.5°C, Jan. 3, 4, 9.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.0	22.0	22.0	19.0	16.5	18.0	15.0	13.0	14.0	4.0	2.5	3.5
2	22.0	20.5	21.5	16.5	15.5	16.0	15.0	12.5	14.0	4.0	1.5	2.5
3	21.5	20.5	21.0	16.0	14.5	15.0	16.0	14.0	14.5	1.5	-.5	.5
4	23.0	21.0	22.0	14.5	13.0	14.0	15.0	14.0	14.5	2.0	-.5	.5
5	23.0	19.0	20.5	13.0	12.0	12.5	15.5	13.5	14.5	3.0	.5	1.5
6	19.5	18.0	18.5	13.0	11.0	12.0	16.0	14.5	15.5	4.0	1.5	3.0
7	19.0	17.0	18.0	12.5	10.0	11.0	14.5	12.0	13.0	3.5	2.0	2.5
8	19.5	16.5	18.0	11.5	10.0	10.5	12.0	10.0	11.0	3.5	1.0	2.5
9	19.0	16.5	18.0	13.5	10.5	11.5	10.5	8.5	9.5	1.5	-.5	1.0
10	19.5	16.5	18.0	13.5	11.0	12.0	10.0	7.5	9.0	3.0	.5	1.5
11	20.0	17.0	18.5	12.0	10.0	11.0	9.0	7.5	8.5	4.5	1.0	2.5
12	21.0	18.5	19.5	12.0	10.0	11.0	8.5	6.0	7.5	7.5	4.5	5.5
13	19.5	16.5	18.0	12.5	10.0	11.0	8.0	5.0	6.5	7.0	2.5	4.5
14	20.0	17.5	19.0	13.0	10.5	11.5	8.5	5.0	6.5	4.0	2.0	3.0
15	20.5	18.5	19.5	12.5	10.5	11.5	8.0	4.5	6.5	5.5	2.5	4.0
16	21.0	19.0	20.0	13.5	11.0	12.5	8.5	5.5	6.5	6.0	4.0	5.0
17	21.0	20.0	21.0	13.5	10.5	12.0	8.5	5.0	6.5	7.5	5.0	6.0
18	20.0	17.5	19.0	16.0	12.5	14.0	7.5	6.0	6.5	7.0	5.0	6.0
19	18.5	16.5	17.5	15.0	12.0	14.0	8.0	6.0	7.0	8.0	5.0	6.5
20	17.5	15.5	16.5	12.0	10.5	11.5	7.0	5.5	6.0	8.0	5.0	7.0
21	18.0	16.0	17.0	12.0	10.0	11.0	7.0	3.0	5.0	10.5	8.0	9.5
22	16.5	14.5	15.5	12.5	10.0	11.0	4.0	1.5	2.5	10.5	4.0	8.0
23	15.5	13.5	14.5	13.5	11.5	12.5	3.0	1.5	2.5	5.0	3.0	4.0
24	15.0	13.5	14.5	13.5	11.0	12.5	3.0	1.0	2.0	6.0	3.5	4.5
25	16.5	13.5	15.0	14.0	12.5	13.5	2.5	.0	1.5	6.0	4.5	5.0
26	18.0	15.5	16.5	12.5	10.0	11.5	3.5	.5	2.0	7.5	4.0	6.0
27	18.5	16.5	17.5	13.5	10.5	12.0	4.5	1.0	3.0	9.0	7.0	8.0
28	18.5	17.5	18.0	15.5	13.5	14.5	5.0	2.0	3.0	9.0	8.0	8.5
29	20.5	18.0	19.0	16.5	15.0	15.5	5.0	2.5	3.5	8.0	7.0	7.5
30	19.0	18.0	18.5	15.0	14.0	14.5	4.5	1.5	3.0	7.5	6.5	7.0
31	19.5	17.5	18.5	---	---	---	3.5	2.0	3.0	7.5	6.0	6.5
MONTH	23.0	13.5	18.4	19.0	10.0	12.7	16.0	.0	7.4	10.5	-.5	4.6

07244100 COAL CREEK NEAR HENRYETTA, OK --Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.0	6.0	7.0	14.0	10.0	12.0	15.5	13.5	14.5	20.5	16.5	18.0
2	8.5	6.5	7.5	13.5	11.0	12.0	16.5	15.0	16.0	19.5	17.5	18.0
3	9.0	6.5	7.5	11.0	8.0	9.5	16.5	14.5	15.5	20.5	17.5	18.5
4	9.5	6.5	7.5	11.5	8.0	10.0	17.0	13.5	15.0	19.5	17.0	17.5
5	10.0	7.5	8.5	14.0	11.0	12.5	17.0	15.5	16.5	19.0	17.0	18.0
6	11.5	9.0	10.5	13.0	10.5	11.5	18.0	15.0	16.5	19.0	16.5	17.5
7	11.0	9.0	10.0	11.0	8.5	9.0	17.5	15.5	16.5	19.5	16.0	17.5
8	10.5	8.5	9.5	9.0	7.0	8.5	19.5	17.0	18.0	21.0	16.5	19.0
9	12.0	10.0	11.0	11.0	7.5	9.5	19.5	16.0	17.5	23.0	18.0	20.0
10	14.5	11.0	12.5	10.5	8.5	9.5	20.5	16.5	18.0	21.0	18.5	19.5
11	14.5	11.0	13.5	12.0	8.5	10.0	20.5	15.0	17.5	20.5	19.0	20.0
12	11.0	9.0	10.0	10.5	5.5	7.5	20.5	15.0	17.5	20.0	18.0	18.5
13	10.5	8.0	9.0	5.5	4.0	5.0	18.0	16.5	17.0	20.0	17.0	19.0
14	10.5	7.5	9.0	6.5	3.5	4.5	17.0	15.0	16.0	21.0	18.0	19.5
15	11.5	8.0	9.5	8.0	5.0	6.5	15.0	13.5	14.0	22.5	19.5	20.5
16	11.5	9.5	10.5	10.5	6.5	8.5	14.5	11.5	13.0	22.5	21.0	22.0
17	11.5	8.0	9.5	12.5	9.0	11.0	15.5	11.0	13.0	22.0	20.0	20.5
18	10.5	9.0	9.5	12.5	10.0	11.0	17.0	11.0	13.5	22.0	18.5	20.0
19	10.5	8.5	9.5	11.0	10.0	10.5	19.5	13.5	16.0	23.5	18.5	20.5
20	11.5	8.0	9.5	11.0	9.5	10.0	21.0	15.0	17.5	24.0	19.0	21.0
21	9.5	7.5	8.0	13.0	9.0	10.5	19.5	17.0	18.0	24.0	20.0	21.5
22	8.0	6.0	6.5	15.0	9.5	12.0	21.5	17.5	18.5	24.5	20.5	22.5
23	9.5	6.0	7.5	13.0	10.5	12.0	18.5	17.0	18.0	22.5	17.5	20.5
24	10.5	6.0	8.0	14.0	10.0	12.0	17.0	14.0	16.0	23.0	19.5	21.0
25	13.0	8.5	11.0	15.0	11.0	12.5	15.5	14.0	14.5	21.0	20.0	20.5
26	15.0	11.5	13.0	15.0	9.5	12.0	17.0	15.5	16.0	22.5	19.5	20.5
27	15.0	13.0	14.0	12.0	10.5	11.0	17.5	15.5	16.5	24.0	18.5	21.0
28	13.5	10.0	12.0	10.5	9.5	10.0	18.5	16.5	17.5	23.0	19.5	21.0
29	---	---	---	12.0	9.0	10.5	18.0	16.5	17.0	23.0	19.5	21.0
30	---	---	---	13.0	10.0	11.5	19.5	16.5	18.0	24.0	21.0	22.0
31	---	---	---	14.5	12.0	13.0	---	---	---	23.0	20.0	22.0
MONTH	15.0	6.0	9.7	15.0	3.5	10.2	21.5	11.0	16.3	24.5	16.0	20.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.5	21.0	22.0	24.5	23.0	23.5	31.5	27.0	29.0	28.0	24.0	26.0
2	25.5	22.5	24.0	27.0	23.5	25.0	30.0	27.0	28.5	27.0	25.0	26.0
3	26.5	24.0	25.0	29.0	25.5	26.5	30.5	26.5	28.5	28.0	24.5	26.5
4	27.0	24.5	25.5	29.5	25.5	27.0	29.5	26.0	28.0	29.0	25.5	27.0
5	27.5	24.0	25.5	30.0	25.5	27.5	30.0	26.0	28.0	27.5	23.0	25.5
6	26.5	24.5	25.0	30.5	26.0	28.0	30.0	26.0	28.0	28.0	24.5	26.0
7	28.0	23.0	25.0	30.0	26.0	28.0	31.0	26.5	28.5	28.5	25.0	26.5
8	28.5	23.5	26.0	30.0	25.5	28.0	31.0	27.0	29.0	26.5	23.5	25.0
9	27.5	24.0	26.0	30.5	26.0	28.5	31.5	27.5	29.5	26.0	22.5	24.0
10	26.0	23.0	24.5	29.0	25.5	26.5	32.0	27.5	29.5	24.0	19.0	22.5
11	26.5	23.0	24.5	26.0	23.5	25.0	31.5	27.5	29.5	22.0	19.0	21.0
12	26.5	23.0	24.5	26.0	23.0	24.5	31.5	27.5	29.5	22.0	20.5	21.5
13	26.5	23.5	24.5	26.5	21.5	24.0	31.0	27.5	29.0	23.0	20.0	21.5
14	26.5	22.5	24.5	28.0	23.5	25.5	28.5	24.5	27.0	23.0	19.0	21.0
15	24.0	21.5	23.0	29.0	25.5	27.0	28.5	23.5	26.0	22.5	19.5	21.0
16	24.0	22.0	23.0	28.0	25.0	26.5	29.0	24.5	26.5	22.5	20.0	21.0
17	24.0	20.5	22.0	29.5	25.0	27.0	29.0	23.5	26.0	22.0	19.0	20.5
18	23.5	20.5	22.0	30.0	26.0	27.5	28.5	23.5	26.0	21.5	20.0	20.5
19	22.5	20.0	21.5	30.0	26.0	28.0	29.0	24.5	26.5	22.0	20.0	21.0
20	24.5	21.5	23.0	30.0	26.5	28.0	27.5	23.0	25.0	23.0	20.0	21.0
21	25.0	22.5	24.0	30.0	26.0	28.0	26.5	23.0	24.5	20.5	18.5	19.5
22	25.0	23.0	24.0	30.5	26.0	28.0	27.0	23.5	25.0	19.5	16.0	18.0
23	24.0	22.0	23.0	31.0	26.5	28.5	29.0	25.0	26.5	19.0	16.5	18.0
24	25.0	22.5	23.5	31.5	27.0	29.0	29.0	25.0	26.5	20.5	17.0	19.0
25	23.5	22.0	23.0	31.5	27.0	29.0	27.5	23.0	25.5	20.0	19.0	19.5
26	26.0	23.0	24.5	31.5	27.5	29.0	29.0	24.0	26.0	22.0	19.0	20.5
27	28.0	25.0	26.0	31.5	27.0	29.0	27.0	21.5	25.0	23.5	20.0	21.5
28	28.0	26.0	27.0	31.5	27.0	29.0	29.5	25.0	27.0	22.0	18.0	20.0
29	26.5	24.5	25.0	31.5	27.0	29.0	29.0	25.5	27.0	19.0	16.5	17.5
30	25.0	21.0	23.0	31.5	27.0	29.0	29.0	25.5	27.0	18.5	15.0	17.0
31	---	---	---	31.5	27.0	29.0	28.5	25.0	26.5	---	---	---
MONTH	28.5	20.0	24.1	31.5	21.5	27.4	32.0	21.5	27.2	29.0	15.0	21.9
YEAR	32.0	-.5	16.7									

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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	4170	6700	5720	6480	4410	13500	30700	17200	521	6880	3920
2	161	6970	7760	3690	9660	6370	13500	29900	17300	6390	6630	4090
3	105	14300	7060	e4780	9620	5450	13100	24900	20500	13300	6460	4860
4	67	11400	2870	e4720	9590	5370	12000	16900	26200	13300	6910	2440
5	641	903	1450	e8740	10300	5500	12000	2820	26400	13200	6540	588
6	785	725	183	6270	10200	1760	17600	20200	26500	16900	6270	583
7	198	1450	5890	3690	10100	621	25900	27400	24000	23400	1690	3530
8	107	1590	10800	2160	9720	5370	26000	26400	21700	26700	910	3350
9	142	1620	e6770	365	8680	7040	22800	32100	21500	26600	2190	2300
10	160	1830	e7430	278	9570	10700	20200	32300	19800	26800	3270	2270
11	153	1720	e17200	3290	11200	10800	20100	33900	14200	26800	3340	644
12	147	3690	17600	1900	14400	12600	16800	23400	14100	24800	4170	169
13	2800	4080	e16900	3260	16100	14500	7130	24300	14000	20100	4280	1770
14	4340	2620	e17800	3640	16200	14000	2960	32200	12700	19900	977	1690
15	4120	2660	e17800	4210	16200	16200	4030	36300	5580	20300	386	2600
16	3670	3440	15800	1150	14600	24500	12200	35400	5580	21700	3150	2070
17	3470	2850	15700	258	10700	28500	9630	31000	5890	21700	5440	553
18	3880	3920	14100	933	10200	24900	8680	31000	4170	21600	5320	134
19	8120	9410	11700	2130	10300	21300	7080	33700	3720	21600	5260	1080
20	9990	3750	9700	2890	6200	21200	4110	34600	3760	21900	5310	2930
21	10400	9290	e9000	3200	6370	21200	5710	28100	6470	17400	1360	1640
22	10000	10200	e4790	e1400	9160	21100	5070	25700	8920	13600	326	386
23	7330	9630	5240	e350	9800	22400	4110	16700	4950	10700	3130	1220
24	4910	7970	e5500	e250	8000	23400	3230	9320	1330	6420	5090	1200
25	4600	7220	e4660	e3000	7530	13300	5470	22900	2740	5230	5380	325
26	4180	6850	e4450	3960	7350	15200	4980	22800	1000	7920	6100	110
27	3580	6990	4730	4110	5530	7580	322	20400	3510	8750	5660	1610
28	3720	7250	6350	4470	4540	8780	11700	16900	6860	6340	4100	2220
29	4210	7080	3780	4200	---	9640	31900	16800	11700	6610	4440	371
30	3810	6980	4160	4070	---	13500	31100	16700	1380	7210	4420	107
31	4030	---	4450	4570	---	11400	---	16800	---	6710	4700	---
TOTAL	104026	162558	268323	97654	278300	408591	372912	772540	353660	484401	130089	50760
MEAN	3356	5419	8656	3150	9939	13180	12430	24920	11790	15630	4196	1692
MAX	10400	14300	17800	8740	16200	28500	31900	36300	26500	26800	6910	4860
MIN	67	725	183	250	4540	621	322	2820	1000	521	326	107
AC-FT	206300	322400	532200	193700	552000	810400	739700	1532000	701500	960800	258000	100700

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1999, BY WATER YEAR (WY)

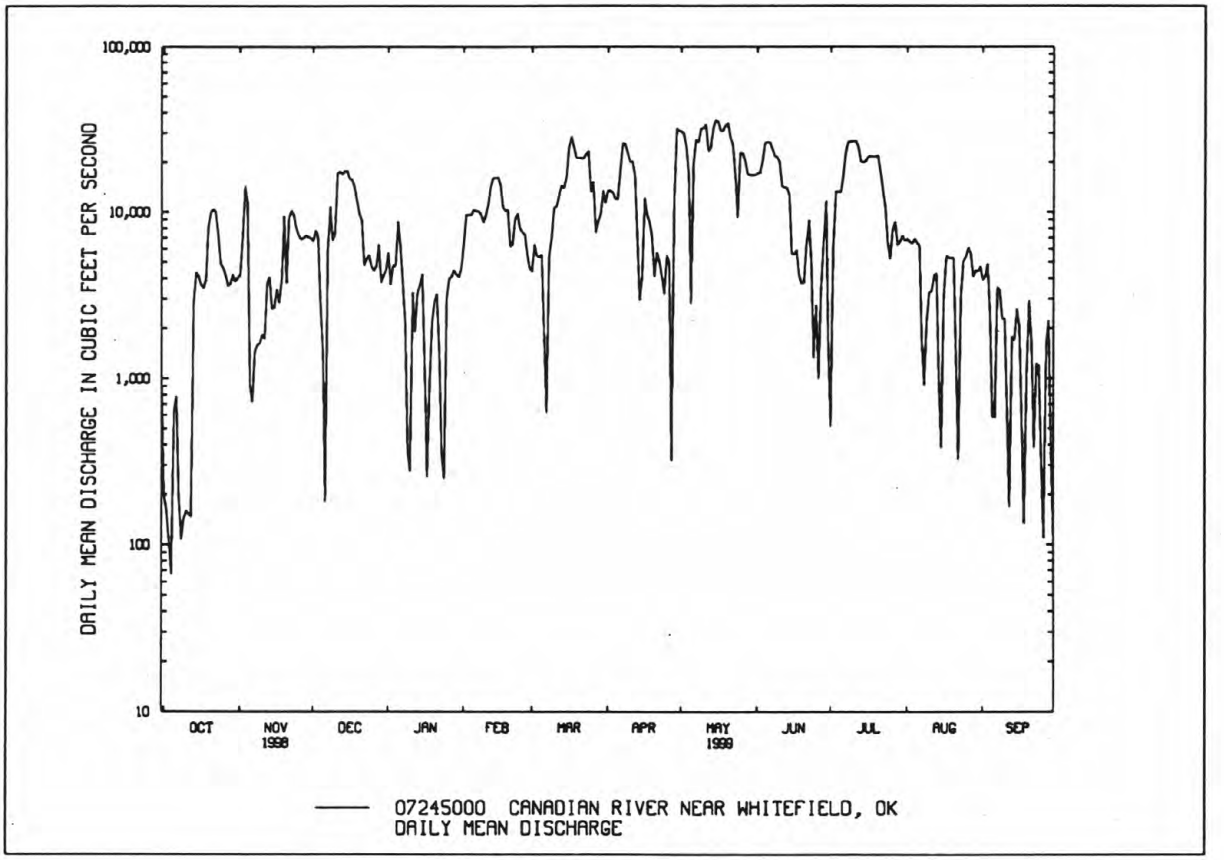
MEAN	2933	5756	7025	6535	6347	9605	9467	13520	11210	5108	3636	2576
MAX	13100	21930	29600	32030	19480	30340	37980	64970	35550	15630	20050	13910
(WY)	1987	1975	1993	1998	1993	1985	1990	1990	1982	1999	1992	1992
MIN	241	248	247	119	127	129	81.5	148	600	259	692	558
(WY)	1979	1983	1981	1981	1981	1981	1981	1981	1988	1988	1985	1985

e Estimated

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1968 - 1999	
ANNUAL TOTAL	3686749		3483814			
ANNUAL MEAN	10100		9545		[a]6978	
HIGHEST ANNUAL MEAN					15200	1993
LOWEST ANNUAL MEAN					1012	1981
HIGHEST DAILY MEAN	55900	Jan 21	36300	May 15	226000	May 5 1990
LOWEST DAILY MEAN	67	Oct 4	67	Oct 4	[b]17	Dec 1 1980
ANNUAL SEVEN-DAY MINIMUM	175	Aug 10	242	Oct 6	39	Oct 7 1985
INSTANTANEOUS PEAK FLOW			37600	May 16	[c]241000	May 3 1990
INSTANTANEOUS PEAK STAGE			12.64	May 16	[d]25.32	May 3 1990
ANNUAL RUNOFF (AC-FT)	7313000		6910000		5056000	
10 PERCENT EXCEEDS	25600		23400		17600	
50 PERCENT EXCEEDS	5200		6460		3800	
90 PERCENT EXCEEDS	350		907		152	

[a]Prior to regulation, water years 1939-63, 6,005 ft^3/s.
[b]Maximum daily discharge for period of record 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 ¼ SW ¼ 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.

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 sediment storage capacity.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1935 reached a stage of 27.4 ft, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

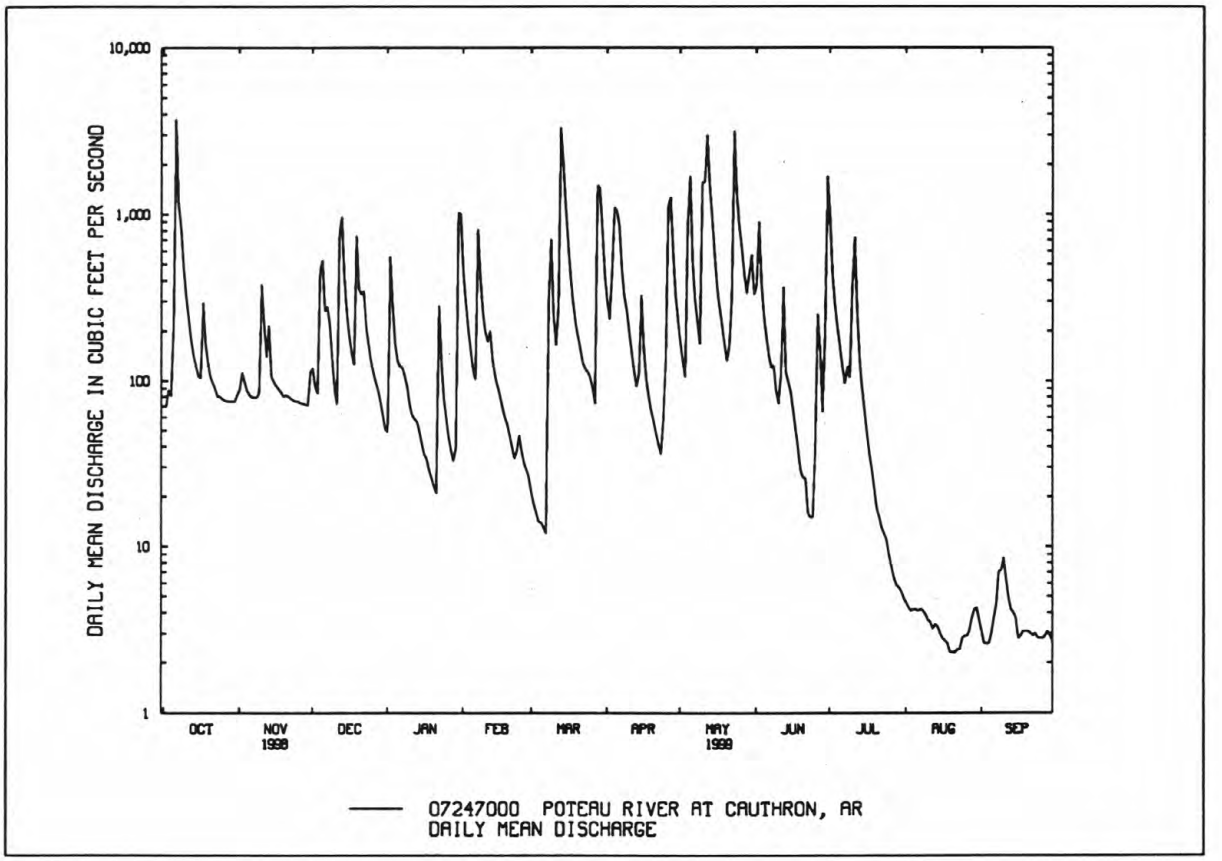
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	88	119	49	454	21	304	170	370	999	4.6	3.1
2	73	112	92	555	294	18	234	131	899	441	4.3	2.8
3	88	99	84	279	207	16	439	106	380	286	4.1	2.6
4	81	87	460	167	155	14	1100	877	244	211	4.2	2.6
5	222	82	528	132	116	14	1050	1700	184	162	4.2	3.0
6	3710	79	263	122	102	13	854	521	143	122	4.1	3.7
7	1140	79	279	120	816	12	469	305	120	96	4.2	4.5
8	830	79	218	107	419	306	325	223	123	121	4.1	7.1
9	486	84	136	92	259	708	265	167	87	105	3.9	7.2
10	329	378	89	72	198	244	197	1550	73	372	3.6	8.6
11	243	221	72	62	173	164	150	1580	109	726	3.5	6.4
12	181	140	789	59	199	275	115	2980	363	254	3.2	4.9
13	144	216	959	57	134	3310	93	1490	112	132	3.4	4.2
14	124	106	419	50	108	2030	110	952	99	89	3.3	4.0
15	107	99	256	42	94	1090	324	580	85	66	3.0	3.7
16	104	93	188	36	82	672	155	367	67	48	2.8	2.8
17	293	89	147	34	70	419	102	276	51	36	2.7	2.9
18	167	85	125	29	61	297	80	219	39	29	2.6	3.1
19	127	83	744	26	55	222	66	168	29	22	2.3	3.1
20	105	82	354	23	47	185	57	132	26	17	2.3	3.1
21	97	80	329	21	40	156	48	163	26	15	2.3	3.0
22	89	78	344	283	34	128	41	315	16	13	2.4	2.9
23	83	76	213	136	37	118	36	3150	15	12	2.4	3.3
24	80	75	168	80	47	114	59	1320	15	11	2.8	2.8
25	77	75	133	60	38	105	139	851	37	8.9	2.9	2.8
26	76	73	113	46	32	91	1120	635	250	7.6	2.9	2.8
27	75	73	99	38	29	73	1260	438	155	6.5	3.1	2.9
28	75	72	88	33	26	1490	601	335	65	5.9	3.7	3.1
29	75	71	75	39	---	1440	328	435	188	5.7	4.2	2.9
30	75	113	62	1020	---	834	232	570	1680	5.4	4.3	2.7
31	82	---	51	1010	---	436	---	329	---	4.9	3.6	---
TOTAL	9508	3167	7996	4879	4326	15015	10353	23035	6050	4429.9	105.0	112.6
MEAN	307	102	258	157	154	484	345	743	202	143	3.39	3.75
MAX	3710	378	959	1020	816	3310	1260	3150	1680	999	4.6	8.6
MIN	70	71	51	21	26	12	36	106	15	4.9	2.3	2.6
AC-FT	18860	6080	15860	9680	8580	29780	20540	45690	12000	8790	208	223
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1999, BY WATER YEAR (WY)												
MEAN	115	297	360	302	377	429	345	481	214	61.3	20.6	23.5
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

ARKANSAS RIVER BASIN

07247000 POTEAU RIVER AT CAUTHRON, AR--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1975 - 1999	
ANNUAL TOTAL	106834.47		88876.5			
ANNUAL MEAN	293		243		[a]252	
HIGHEST ANNUAL MEAN					432	1985
LOWEST ANNUAL MEAN					48.7	1976
HIGHEST DAILY MEAN	10000	Jan 5	3710	Oct 6	16900	May 3 1990
LOWEST DAILY MEAN	.91	Jul 9	2.3	Aug 19	.00	Aug 30 1976
ANNUAL SEVEN-DAY MINIMUM	1.2	Jul 5	2.4	Aug 17	.00	Oct 7 1978
INSTANTANEOUS PEAK FLOW			6040	Oct 6	[b]24000	May 3 1990
INSTANTANEOUS PEAK STAGE			13.88	Oct 6	[c]22.17	May 3 1990
INSTANTANEOUS LOW FLOW			2.2	Aug 19-21	.00	at times
ANNUAL RUNOFF (AC-FT)	211900		176300		182200	
10 PERCENT EXCEEDS	742		650		613	
50 PERCENT EXCEEDS	81		92		55	
90 PERCENT EXCEEDS	1.8		3.5		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.



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 poor. Some regulation by small flood-retarding structures. U.S. Geological Survey's satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	e112	152	92	622	51	491	e360	e600	1700	6.4	4.0
2	36	e130	124	403	398	47	392	e290	e1100	501	6.0	4.1
3	44	e118	108	432	288	43	621	e230	e880	298	5.6	4.8
4	44	e106	334	241	220	41	1500	e1200	e640	216	5.3	5.6
5	207	e97	851	188	170	39	1630	e1900	e340	166	5.0	6.8
6	5420	e95	381	171	156	38	1370	777	e230	126	5.1	7.1
7	1690	e94	342	164	1040	37	726	441	e170	97	5.1	8.9
8	801	e93	302	154	669	88	520	330	156	87	5.0	12
9	508	e98	232	138	386	951	438	256	123	106	5.2	12
10	344	e580	153	118	e330	361	354	1300	93	140	5.5	12
11	260	e350	126	101	246	234	281	2930	91	1230	5.5	13
12	209	e220	545	95	266	353	227	3060	281	331	5.3	13
13	163	e330	1510	91	211	4010	188	2140	229	177	5.2	11
14	140	e170	604	85	166	3070	180	1060	198	105	4.8	8.2
15	123	e135	364	78	143	1410	384	646	120	72	4.0	6.6
16	118	118	266	70	129	811	323	432	92	54	4.0	5.7
17	682	109	211	66	114	559	210	342	71	42	4.1	5.2
18	336	103	180	62	101	417	182	289	56	34	4.2	5.0
19	224	99	711	57	91	333	e170	228	45	29	4.7	4.7
20	164	96	539	54	82	284	e150	178	38	25	4.3	4.5
21	138	94	489	52	73	248	e138	224	34	21	3.5	4.7
22	122	93	549	140	67	210	e128	305	33	18	3.5	4.7
23	e100	90	345	233	67	189	e118	4460	30	16	3.7	4.9
24	e95	88	266	127	69	188	e110	1960	29	15	3.5	4.8
25	e93	87	215	95	73	178	e350	e1250	28	14	2.9	4.6
26	e92	86	180	79	65	162	e1300	e1000	90	12	2.7	4.3
27	e91	85	159	69	59	136	e1400	e830	250	11	3.6	4.4
28	e90	85	142	67	55	1880	e1200	e550	112	9.5	3.6	4.8
29	e90	84	128	73	---	2880	e600	e650	120	8.1	3.2	4.7
30	e89	105	109	707	---	1180	e450	e780	2110	7.4	3.6	4.4
31	e98	---	95	1590	---	677	---	e640	---	6.6	3.7	---
TOTAL	12645	4150	10712	6092	6356	21105	16131	31038	8389	5674.6	137.8	200.5
MEAN	408	138	346	197	227	681	538	1001	280	183	4.45	6.68
MAX	5420	580	1510	1590	1040	4010	1630	4460	2110	1700	6.4	13
MIN	34	84	95	52	55	37	110	178	28	6.6	2.7	4.0
AC-FT	25080	8230	21250	12080	12610	41860	32000	61560	16640	11260	273	398

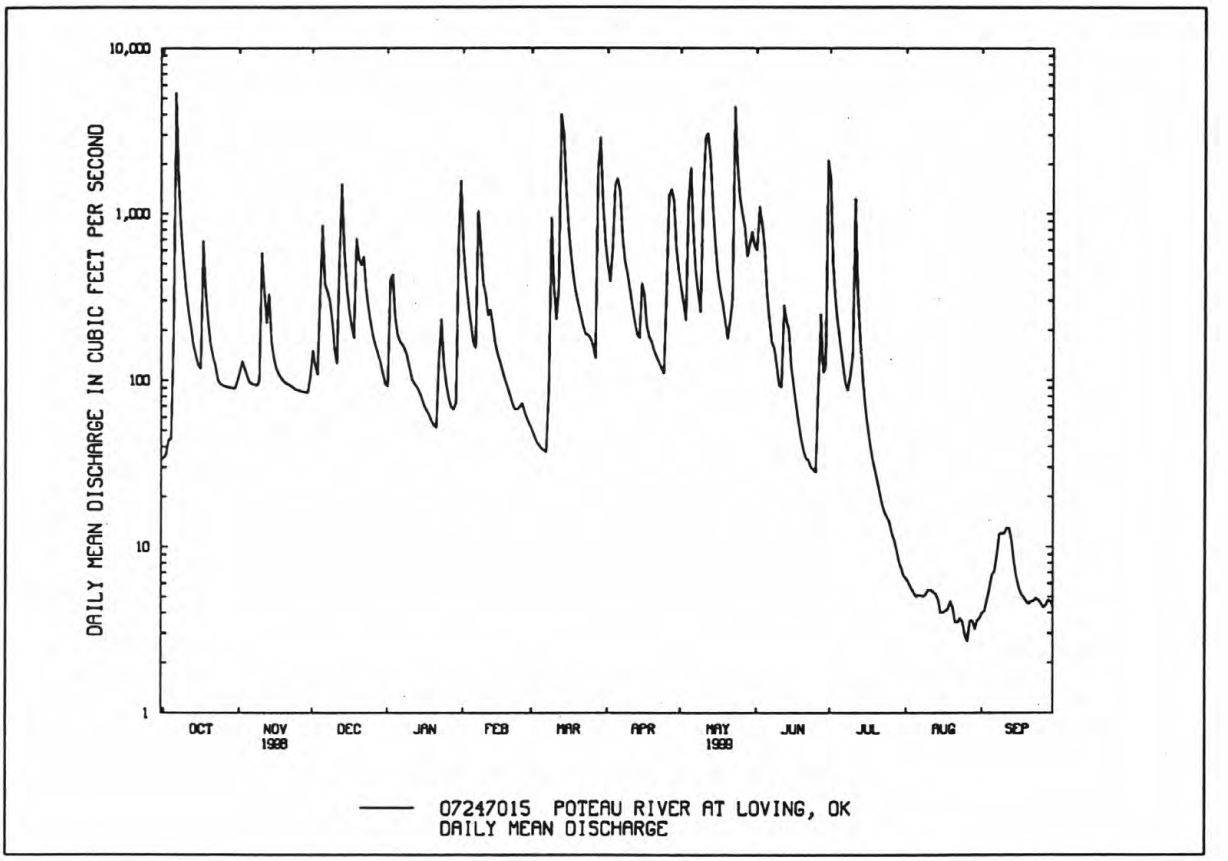
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1999, BY WATER YEAR (WY)

MEAN	119	606	578	616	470	526	367	464	219	48.4	14.3	52.3
MAX	408	2217	800	1289	1172	907	627	1001	600	183	66.1	190
(WY)	1999	1997	1994	1998	1997	1998	1996	1999	1992	1999	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 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1992 - 1999	
ANNUAL TOTAL	132534.25		122630.9			
ANNUAL MEAN	363		336		342	
HIGHEST ANNUAL MEAN					469	1997
LOWEST ANNUAL MEAN					139	1996
HIGHEST DAILY MEAN	8390	Jan 5	5420	Oct 6	12500	Nov 25 1996
LOWEST DAILY MEAN	.88	Sep 11	2.7	Aug 26	.36	Sep 21 1994
ANNUAL SEVEN-DAY MINIMUM	1.0	Sep 5	3.3	Aug 24	.51	Sep 16 1994
INSTANTANEOUS PEAK FLOW			8170	Oct 6	13200	Nov 25 1996
INSTANTANEOUS PEAK STAGE			23.14	Oct 6	28.66	Nov 25 1996
ANNUAL RUNOFF (AC-FT)	262900		243200		247500	
10 PERCENT EXCEEDS	715		819		801	
50 PERCENT EXCEEDS	96		126		69	
90 PERCENT EXCEEDS	3.2		5.1		4.1	



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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
24...	1315	10.0	27.0	747	1028	1028	29	9.07	80	6.2	7.1
24...	1317	25.0	27.0	747	1028	1028	29	9.07	80	6.2	7.1
24...	1319	40.0	27.0	747	1028	1028	29	9.07	81	6.3	7.1
24...	1321	55.0	27.0	747	1028	1028	29	9.07	81	6.4	7.1
24...	1323	70.0	27.0	747	1028	1028	29	9.07	81	6.3	7.1
24...	1325	85.0	27.0	747	1028	1028	29	9.07	81	6.3	7.1
24...	1327	100	27.0	747	1028	1028	29	9.07	81	6.3	7.1

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...	0750	1028	80020	1550	49	6.3	10.0	18.5	41	760	7.6	82
NOV												
30...	1400	1028	80020	104	72	6.8	20.0	15.5	3.8	756	8.3	83
FEB												
11...	0800	1028	80020	245	75	6.6	25.0	15.0	22	750	8.5	86
APR												
13...	1300	1028	80020	188	66	6.7	18.5	18.5	9.6	758	7.7	82
JUN												
01...	1340	1028	80020	428	58	6.8	28.5	22.5	--	747	6.8	80
SEP												
08...	1145	1028	80020	6.0	100	7.1	27.0	25.5	3.6	752	4.9	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)
OCT											
07...	6200	2100	K30000	13	5	2.3	1.7	2.9	28	.3	2.7
NOV											
30...	K340	260	K680	17	--	2.9	2.3	6.2	41	.7	2.0
FEB											
11...	110	110	1100	18	5	3.1	2.5	6.0	39	.6	1.8
APR											
13...	56	K29	70	16	4	2.7	2.2	5.4	39	.6	1.6
JUN											
01...	110	64	470	15	3	2.7	2.0	4.3	34	.5	2.4
SEP											
08...	380	180	240	26	--	3.7	4.1	8.8	38	.7	3.5

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...	9	0	8	4.4	2.5	52	25	.07	218	92	.739
NOV											
30...	24	0	20	7.6	6.1	46	39	.06	12.9	8	--
FEB											
11...	15	0	12	9.9	5.3	56	37	.08	37.0	7	--
APR											
13...	15	0	13	8.2	4.1	48	32	.07	24.4	10	--
JUN											
01...	15	0	13	6.2	3.5	56	29	.08	64.7	12	--
SEP											
08...	38	0	31	5.4	6.1	61	50	.08	.99	2	--

07247015 POTEAU RIVER AT LOVING, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
07...	3.3	.011	.04	.750	.071	.09	.77	.85	1.6	.246	.165
NOV											
30...	--	--	--	--	--	--	--	--	--	--	--
FEB											
11...	--	<.010	--	.242	.036	.05	.42	.46	.70	.100	.094
APR											
13...	--	<.010	--	.144	<.020	--	--	.37	.52	.082	<.050
JUN											
01...	--	<.010	--	.155	.025	.03	.41	.44	.59	.064	<.050
SEP											
08...	--	<.010	--	<.050	<.020	--	--	.48	--	E.046	E.039

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											
07...	.156	.48	77	100	418	91	<1.00	7.00	1.00	<1.00	<1.00
NOV											
30...	--	--	36	15	4.2	84	<1.00	4.00	1.00	<1.00	<1.00
FEB											
11...	.076	.23	34	27	18	90	1.00	<1.00	2.00	<1.00	<1.00
APR											
13...	.029	.09	36	81	41	100	<1.00	8.00	4.00	<1.00	<1.00
JUN											
01...	.039	.12	26	28	32	94	<1.00	4.00	<1.00	<1.00	<1.00
SEP											
08...	<.010	--	62	17	.28	83	<1.00	6.00	4.00	<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.--Records good. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES 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)
Oct 6	0245	22,100	20.53	May 4	2130	5,650	12.53

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	46	e69	83	467	56	127	181	290	537	e.63	.00
2	2.8	121	53	185	339	54	114	140	1240	280	e.47	.00
3	17	78	51	159	252	51	296	117	413	177	e.49	.00
4	37	64	593	135	195	48	524	1710	245	122	.44	.00
5	1320	60	554	120	154	47	940	1410	169	89	.49	.00
6	8060	56	361	117	157	65	783	522	123	67	.50	.00
7	946	54	308	105	1150	60	464	323	94	66	.54	.00
8	424	55	253	97	542	292	340	216	74	52	.44	.00
9	255	61	201	86	378	505	252	153	54	43	.45	.00
10	168	359	170	78	287	300	192	939	42	36	.44	.00
11	120	289	145	72	299	215	146	621	173	48	.31	.00
12	89	200	605	69	300	402	114	1780	79	e39	.17	.00
13	70	157	643	66	234	1950	96	777	58	e28	.05	.00
14	58	131	413	62	201	1020	100	439	56	e24	.00	.00
15	48	111	297	58	173	592	142	288	49	e22	.00	.00
16	46	94	229	56	150	417	98	208	42	e21	.00	.00
17	949	81	182	55	128	316	81	155	45	e20	.00	.00
18	758	70	156	52	111	241	71	132	35	e19	.00	.00
19	490	66	427	49	99	192	64	101	29	e18	.00	.00
20	316	62	290	47	87	166	57	81	27	e17	.00	.00
21	227	57	377	48	76	141	51	146	23	e14	.00	.00
22	164	53	390	77	68	120	46	121	20	e8.9	.00	.00
23	125	50	318	72	92	147	45	469	25	e7.1	.00	.00
24	102	49	252	61	84	140	684	243	36	e6.4	.00	.00
25	83	47	204	56	72	136	668	129	35	e4.9	.00	.00
26	71	45	173	54	67	121	1420	105	216	e3.7	.00	.00
27	62	43	150	52	64	110	1180	83	167	e2.8	.00	.00
28	56	42	129	53	60	124	566	65	101	e2.2	.00	.00
29	51	40	112	77	---	167	359	65	85	e1.5	.00	.00
30	48	67	95	840	---	156	247	96	651	e.99	.00	.00
31	45	---	85	763	---	142	---	249	---	e.73	.00	---
TOTAL	15210.7	2708	8285	3904	6286	8493	10267	12064	4696	1778.22	5.42	0.00
MEAN	491	90.3	267	126	224	274	342	389	157	57.4	.17	.000
MAX	8060	359	643	840	1150	1950	1420	1780	1240	537	.63	.00
MIN	2.8	40	51	47	60	47	45	65	20	.73	.00	.00
AC-FT	30170	5370	16430	7740	12470	16850	20360	23930	9310	3530	11	.00

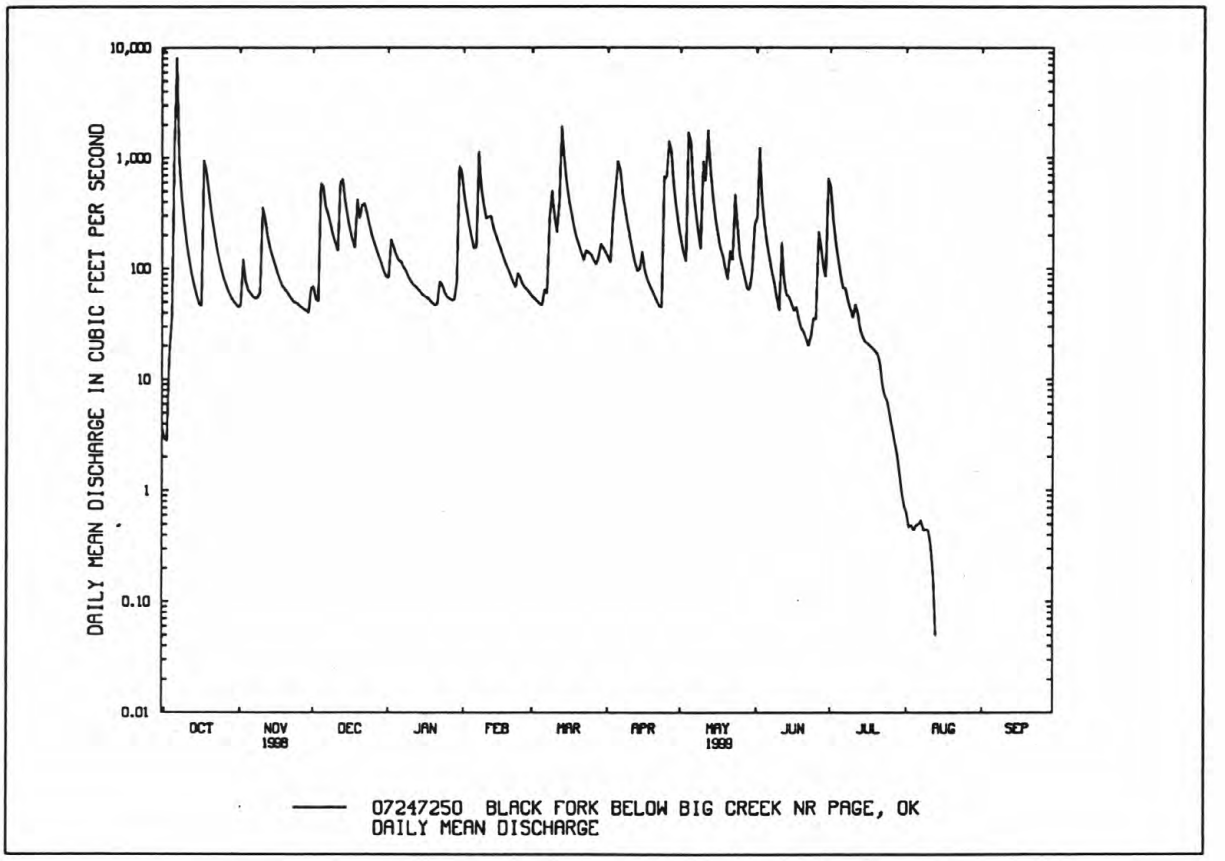
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1999, BY WATER YEAR (WY)

MEAN	127	304	290	340	243	240	206	237	72.4	23.5	8.67	57.9
MAX	491	1215	489	594	613	405	401	553	176	77.4	36.2	378
(WY)	1999	1997	1993	1998	1997	1998	1993	1993	1992	1996	1996	1992
MIN	1.41	1.03	24.0	126	30.2	90.2	87.8	37.4	16.0	.46	.000	.000
(WY)	1996	1996	1996	1999	1996	1995	1998	1997	1994	1998	1998	1995

e Estimated

07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1992 - 1999	
ANNUAL TOTAL	74170.12		73697.34			
ANNUAL MEAN	203		202		180	
HIGHEST ANNUAL MEAN					246	1997
LOWEST ANNUAL MEAN					66.9	1996
HIGHEST DAILY MEAN	8060	Oct 6	8060	Oct 6	9640	Nov 24 1996
LOWEST DAILY MEAN	.00	at times	.00	at times	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 20	.00	Aug 14	.00	Sep 20 1994
INSTANTANEOUS PEAK FLOW			22100	Oct 6	19600	Nov 5 1994
INSTANTANEOUS PEAK STAGE			20.53	Oct 6	19.61	Nov 5 1994
ANNUAL RUNOFF (AC-FT)	147100		146200		130700	
10 PERCENT EXCEEDS	423		477		371	
50 PERCENT EXCEEDS	62		79		51	
90 PERCENT EXCEEDS	.00		.00		.50	



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 Sept. 9.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
25...	0755	4.00	25.0	749	1028	1028	36	4.52	37	5.9	6.3
25...	0756	7.00	25.0	749	1028	1028	36	4.52	37	5.9	6.3
25...	0757	10.0	25.5	749	1028	1028	36	4.52	37	5.7	6.4
25...	0759	13.0	25.5	749	1028	1028	36	4.52	37	5.8	6.4
25...	0800	16.0	25.5	749	1028	1028	36	4.52	37	6.1	6.4
25...	0802	19.0	25.5	749	1028	1028	36	4.52	37	6.2	6.4
25...	0803	22.0	25.0	749	1028	1028	36	4.52	37	6.2	6.4
25...	0805	25.0	25.0	749	1028	1028	36	4.52	38	6.2	6.4
25...	0806	28.0	25.0	749	1028	1028	36	4.52	38	5.9	6.4
25...	0808	31.0	25.0	749	1028	1028	36	4.52	39	5.9	6.4

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)
OCT											
06...	1335	1028	80020	4300	23	6.3	17.5	19.0	26	753	7.8
DEC											
02...	1230	1028	80020	53	34	6.8	21.5	14.5	3.3	753	8.9
FEB											
11...	0935	1028	80020	240	27	6.6	20.0	16.0	11	745	8.7
APR											
13...	1350	1028	80020	95	28	6.4	17.5	16.5	5.2	752	8.9
JUN											
02...	1305	1028	80020	900	28	6.5	30.0	20.0	--	748	8.8

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											
06...	85	1200	420	330	7	1	1.2	.83	1.3	26	.2
DEC											
02...	88	34	22	K7	9	1	1.5	1.2	2.7	37	.4
FEB											
11...	90	43	48	400	6	5	1.0	.95	2.2	40	.4
APR											
13...	93	67	46	570	7	1	1.1	1.0	2.3	40	.4
JUN											
02...	98	1100	K50	1200	8	3	1.4	.99	2.2	36	.3

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											
06...	1.1	7	0	5	2.6	1.1	36	13	.05	418	53
DEC											
02...	.91	10	0	8	2.9	2.6	28	17	.04	4.01	<1
FEB											
11...	.60	2	0	1	3.5	2.0	27	12	.04	17.5	<1
APR											
13...	.60	7	0	6	3.2	1.9	27	14	.04	6.93	2
JUN											
02...	.86	6	0	5	3.4	1.7	40	15	.05	97.2	12

07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	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)
OCT										
06...	<.010	.365	.025	.03	.42	.44	.81	.055	.025	.023
DEC										
02...	<.010	.072	<.020	--	--	.25	.32	.023	.020	.014
FEB										
11...	<.010	.121	.024	.03	.15	.17	.29	E.032	<.050	<.010
APR										
13...	<.010	.109	<.020	--	--	.11	.22	<.050	<.050	<.010
JUN										
02...	<.010	.282	.035	.05	.69	.73	1.0	.154	.092	.087

DATE	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										
06...	.07	18	56	650	94	<1.00	4.00	<1.00	<1.00	<1.00
DEC										
02...	.04	7.3	9	1.3	89	<1.00	<1.00	<1.00	<1.00	<1.00
FEB										
11...	--	4.7	10	6.5	76	<1.00	<1.00	<1.00	<1.00	<1.00
APR										
13...	--	9.7	8	2.1	89	<1.00	2.00	<1.00	<1.00	<1.00
JUN										
02...	.27	9.1	25	61	94	<1.00	1.00	<1.00	<1.00	<1.00

07247345 BLACK FORK AT HODGEN, OK

LOCATION.--Lat 3450¢35, long 9437¢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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
25...	0956	10.0	26.0	753	1028	1028	61	9.65	45	6.8	6.5
25...	0958	13.0	26.0	753	1028	1028	61	9.65	45	7.3	6.5
25...	0959	16.0	26.0	753	1028	1028	61	9.65	45	7.2	6.5
25...	1001	19.0	26.0	753	1028	1028	61	9.65	45	7.2	6.5
25...	1003	22.0	26.0	753	1028	1028	61	9.65	45	7.2	6.5
25...	1004	25.0	26.0	753	1028	1028	61	9.65	45	7.2	6.5
25...	1006	28.0	26.0	753	1028	1028	61	9.65	45	7.2	6.5
25...	1008	31.0	26.0	753	1028	1028	61	9.65	45	7.2	6.5
25...	1010	34.0	26.0	753	1028	1028	61	9.65	45	7.1	6.5

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											
05...	1440	1028	80020	12	55	6.6	23.5	25.0	23	747	7.3
DEC											
01...	1340	1028	80020	66	41	6.5	21.0	16.0	2.3	763	9.6
FEB											
10...	1345	1028	80020	522	35	6.4	27.0	14.5	14	750	10.2
APR											
14...	0835	1028	80020	161	37	6.4	17.0	18.0	5.7	749	8.4
JUN											
03...	1300	1028	80020	841	32	6.4	33.5	22.0	--	752	7.8
SEP											
09...	0905	1028	80020	.28	55	6.8	22.0	26.5	2.4	758	3.0

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)
OCT											
05...	90	>3000	>4000	K76	15	1	2.6	2.1	3.5	31	.4
DEC											
01...	97	40	K36	K48	12	0	2.1	1.6	3.1	34	.4
FEB											
10...	102	54	22	2100	9	3	1.4	1.2	2.7	38	.4
APR											
14...	90	55	56	63	10	1	1.6	1.4	2.8	37	.4
JUN											
03...	91	280	K42	210	9	5	1.6	1.2	2.4	33	.3
SEP											
09...	38	4500	K33	510	17	--	2.7	2.4	4.0	32	.4

07247345 BLACK FORK AT HODGEN, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
05...	1.5	17	0	14	4.2	3.0	43	26	.06	1.45	1
DEC											
01...	1.1	14	0	12	3.5	3.2	34	22	.05	6.06	2
FEB											
10...	.75	7	0	5	4.5	2.4	30	17	.04	42.3	1
APR											
14...	.72	10	0	8	4.2	2.4	31	19	.04	13.5	5
JUN											
03...	.97	5	0	4	3.7	1.9	44	15	.06	99.9	13
SEP											
09...	1.5	27	0	22	2.1	3.0	39	29	.05	.03	2

DATE	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	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)
OCT										
05...	<.010	.092	.056	.07	.49	.54	.64	.027	.011	<.010
DEC										
01...	<.010	<.050	.024	.03	.15	.18	--	.014	.011	.014
FEB										
10...	<.010	.178	.022	.03	.24	.26	.44	E.048	<.050	.015
APR										
14...	<.010	.131	<.020	--	--	.21	.34	<.050	<.050	.017
JUN										
03...	<.010	.153	.021	.03	.39	.41	.56	E.042	<.050	.025
SEP										
09...	<.010	.050	.055	.07	.46	.51	.56	E.043	E.041	<.010

DATE	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										
05...	--	7.5	10	.34	100	<1.00	20.0	10.0	<1.00	<1.00
DEC										
01...	.04	29	12	2.1	88	<1.00	2.00	<1.00	<1.00	<1.00
FEB										
10...	.05	6.3	12	17	85	<1.00	<1.00	<1.00	<1.00	<1.00
APR										
14...	.05	24	8	3.5	78	<1.00	1.00	<1.00	<1.00	<1.00
JUN										
03...	.08	9.8	19	43	100	<1.00	4.00	2.00	<1.00	<1.00
SEP										
09...	--	77	--	--	--	<1.00	10.0	6.00	<1.00	<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.

- WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to April 1991, October 1991 to current year.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1631: 1940.

GAGE.--Water-stage recorder. Datum of gage is 540.80 ft above sea level. Prior to April 25, 1939, nonrecording gage at same site and datum.

REMARKS.--Records fair. Some regulation by several flood-retarding structures. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1935 reached a stage of 25.4 ft, from floodmarks.

EXTREMES 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)
Oct 6	1000	3,610	16.22	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	183	164	60	269	26	296	229	634	863	1.2	.85
2	8.9	670	109	168	188	21	213	136	295	568	.98	.95
3	194	317	89	148	145	19	1120	115	178	345	.84	1.1
4	118	160	850	129	117	16	1500	833	121	237	.69	4.3
5	757	114	960	e101	94	15	1010	1650	91	182	.52	6.0
6	3280	88	620	e95	106	12	851	991	71	110	.44	4.7
7	1630	74	339	82	593	10	571	803	55	93	.49	3.2
8	1050	82	214	71	412	412	324	626	44	84	.44	7.2
9	951	71	163	62	230	739	210	383	31	71	.41	9.7
10	829	104	134	51	175	383	159	387	35	60	.51	19
11	683	91	115	45	148	204	129	423	182	49	.92	34
12	549	79	449	42	134	494	108	294	163	40	.89	42
13	336	64	816	40	110	1610	92	260	142	33	.64	46
14	119	55	445	34	93	1210	138	176	126	26	.64	33
15	72	46	259	30	83	914	724	129	72	20	.64	23
16	52	38	186	26	72	735	438	105	42	15	.55	17
17	46	31	155	25	62	525	266	575	27	11	.45	8.7
18	468	25	141	23	54	256	177	1630	20	8.6	.37	5.0
19	282	21	279	20	47	173	128	806	15	7.3	.30	5.0
20	148	17	227	18	41	153	107	640	13	6.0	.20	6.6
21	104	16	210	17	34	134	92	412	10	5.0	.16	6.6
22	75	14	180	23	29	115	79	242	8.9	4.2	.12	5.6
23	57	11	147	38	52	145	69	549	162	3.8	.09	3.7
24	43	10	128	40	57	148	114	658	278	3.4	.09	2.6
25	31	9.6	111	34	48	133	534	305	576	2.9	.06	2.1
26	24	9.2	99	28	39	114	974	194	535	2.6	.07	1.7
27	19	8.4	91	33	35	99	1490	140	214	2.4	.24	1.7
28	15	8.6	80	30	31	432	894	109	123	2.1	.50	1.6
29	12	8.2	70	25	---	1070	737	657	466	1.7	.57	1.8
30	10	165	59	147	---	801	522	547	1140	1.5	.62	1.5
31	9.0	---	50	453	---	548	---	492	---	1.5	.76	---
TOTAL	11973.9	2590.0	7939	2138	3498	11666	14066	15496	5869.9	2860.0	15.40	306.20
MEAN	386	86.3	256	69.0	125	376	469	500	196	92.3	.50	10.2
MAX	3280	670	960	453	593	1610	1500	1650	1140	863	1.2	46
MIN	2.0	8.2	50	17	29	10	69	105	8.9	1.5	.06	.85
AC-FT	23750	5140	15750	4240	6940	23140	27900	30740	11640	5670	31	607

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1999, BY WATER YEAR (WY)

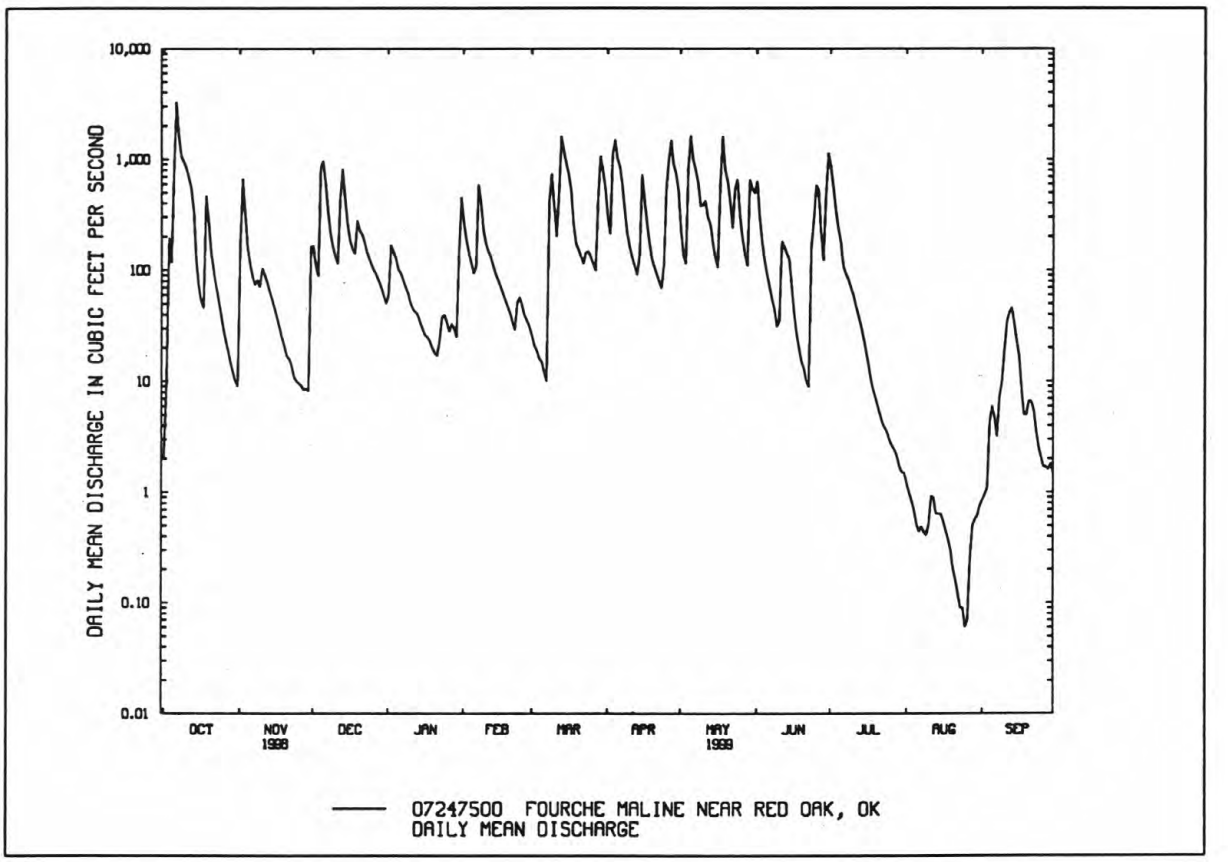
MEAN	74.2	129	138	112	183	228	267	275	119	55.6	17.1	46.3
MAX	675	811	726	762	715	1100	1224	1377	695	847	189	547
(WY)	1971	1986	1972	1998	1945	1945	1957	1960	1945	1950	1964	1950
MIN	.000	.000	.000	.000	1.75	2.42	18.6	8.85	.91	.042	.000	.000
(WY)	1939	1957	1964	1964	1967	1967	1950	1988	1963	1955	1943	1939

e Estimated

07247500 FOURCHE MALINE NEAR RED OAK, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1939 - 1999	
ANNUAL TOTAL	71339.13		78418.40			
ANNUAL MEAN	195		215		137	
HIGHEST ANNUAL MEAN					317	1945
LOWEST ANNUAL MEAN					18.3	1956
HIGHEST DAILY MEAN	4240	Jan 5	3280	Oct 6	18900	May 19 1960
LOWEST DAILY MEAN	.24	Sep 6	.06	Aug 25	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.25	Sep 6	.11	Aug 20	.00	Oct 1 1938
INSTANTANEOUS PEAK FLOW			3610	Oct 6	[a]41500	May 19 1960
INSTANTANEOUS PEAK STAGE			16.22	Oct 6	[b]24.79	May 19 1960
ANNUAL RUNOFF (AC-FT)	141500		155500		99290	
10 PERCENT EXCEEDS	565		657		320	
50 PERCENT EXCEEDS	75		82		18	
90 PERCENT EXCEEDS	.62		1.5		.28	

[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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
24...	1058	10.0	24.5	750	1028	1028	535	10.60	83	6.1	6.7
24...	1059	20.0	24.5	750	1028	1028	535	10.60	83	6.2	6.7
24...	1100	30.0	24.5	750	1028	1028	535	10.60	84	6.2	6.7
24...	1101	40.0	24.5	750	1028	1028	535	10.60	84	6.3	6.7
24...	1102	50.0	24.5	750	1028	1028	535	10.60	85	6.3	6.8
24...	1104	60.0	24.5	750	1028	1028	535	10.60	84	6.2	6.8
24...	1105	70.0	24.5	750	1028	1028	535	10.60	85	6.1	6.8
24...	1107	80.0	24.5	750	1028	1028	535	10.60	85	6.1	6.8

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...	1115	1028	80020	4150	46	6.2	20.5	18.0	48	762	6.4	68
DEC												
01...	1100	1028	80020	296	134	6.7	17.0	15.0	24	767	7.3	72
FEB												
09...	1150	1028	80020	690	77	6.8	23.5	13.5	48	756	9.5	92
APR												
12...	1230	1028	80020	194	82	6.6	26.5	18.5	25	762	7.7	82
JUN												
03...	1040	1028	80020	487	70	6.6	29.5	23.5	--	755	6.8	81
SEP												
08...	0915	1028	80020	2.6	128	7.0	25.0	25.5	10	754	4.8	59

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...	2100	790	9900	14	2	3.1	1.4	2.3	23	.3	2.4
DEC											
01...	5800	4900	K21000	39	8	8.4	4.3	10	34	.7	2.8
FEB											
09...	620	K270	410	21	4	4.6	2.3	5.8	36	.6	1.3
APR											
12...	K110	K61	320	23	2	5.1	2.6	6.1	35	.6	1.3
JUN											
03...	130	55	220	21	2	4.9	2.2	4.8	31	.4	1.6
SEP											
08...	100	510	4600	38	--	7.3	4.8	10	35	.7	2.4

07247650 FOURCHE MALINE NEAR LEFLORE, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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 DIS-SOLVED (MG/L AS SO4) (00945)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS,. SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITROGEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)
OCT											
07...	14	0	11	4.1	1.8	52	23	.07	583	91	.172
DEC											
01...	37	0	30	17	6.3	92	68	.13	73.5	32	--
FEB											
09...	20	0	16	11	4.5	58	40	.08	108	44	--
APR											
12...	26	0	21	11	3.3	63	43	.09	33.0	20	--
JUN											
03...	24	0	20	7.9	3.0	63	37	.09	82.8	41	--
SEP											
08...	51	0	41	7.6	5.9	78	64	.11	.55	16	--

DATE	NITROGEN, NITRATE DIS-SOLVED (MG/L AS NO3) (71851)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DIS-SOLVED (MG/L AS P) (00666)
OCT											
07...	.76	.011	.04	.183	.037	.05	.81	.85	1.0	.123	.047
DEC											
01...	--	<.010	--	.113	<.020	--	--	.56	.67	.070	.020
FEB											
09...	--	<.010	--	.108	.021	.03	.41	.43	.54	.068	<.050
APR											
12...	--	<.010	--	.138	.022	.03	.42	.44	.58	.059	<.050
JUN											
03...	--	<.010	--	.158	.074	.10	.54	.61	.77	.118	<.050
SEP											
08...	--	<.010	--	<.050	.027	.03	.53	.56	--	.050	E.041

DATE	PHOSPHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	SEDIMENT, SUS-PENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUS-PENDED (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...	.033	.10	49	78	874	95	<1.00	7.00	<1.00	<1.00	<1.00
DEC											
01...	.018	.06	59	53	42	88	<1.00	4.00	<1.00	<1.00	<1.00
FEB											
09...	<.010	--	31	59	110	97	1.00	<1.00	2.00	<1.00	<1.00
APR											
12...	.015	.05	58	29	15	100	<1.00	4.00	2.00	<1.00	<1.00
JUN											
03...	.027	.08	37	54	71	94	<1.00	4.00	1.00	<1.00	<1.00
SEP											
08...	<.010	--	173	29	.20	95	<1.00	6.00	2.00	<1.00	<1.00

07247800 HOLSON CREEK AT SUMMERFIELD, OK

LOCATION.--Lat 34°52'46", long 94°51'11", in SW 1/4 NW 1/4, sec. 26, T.5 N., R.23 E., LeFlore County, Hydrologic Unit 11110105, at county road bridge, 1.4 mi east of Summerfield, OK.

DRAINAGE AREA.--71.6 mi^2.

PERIOD OF RECORD.--December 1991 to current year.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
24...	0905	56.0	25.0	750	1028	1028	21	21.27	47	6.4	6.6
24...	0906	51.0	25.0	750	1028	1028	21	21.27	47	6.8	6.6
24...	0907	46.0	25.0	750	1028	1028	21	21.27	46	6.8	6.6
24...	0908	41.0	25.0	750	1028	1028	21	21.27	46	6.8	6.6
24...	0909	36.0	25.0	750	1028	1028	21	21.27	46	6.7	6.6
24...	0910	31.0	25.0	750	1028	1028	21	21.27	47	6.4	6.6
24...	0911	26.0	25.0	750	1028	1028	21	21.27	47	6.5	6.6
24...	0912	21.0	25.0	750	1028	1028	21	21.27	47	6.7	6.6
24...	0913	16.0	25.0	750	1028	1028	21	21.27	47	6.4	6.6
24...	0914	11.0	25.0	750	1028	1028	21	21.27	47	6.4	6.6
24...	0915	6.00	25.0	750	1028	1028	21	21.27	47	6.4	6.6

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											
05...	1300	1028	80020	13	*55	6.8	28.0	24.0	3.0	747	7.7
DEC											
01...	0810	1028	80020	20	50	6.3	6.5	15.0	2.6	766	9.0
FEB											
09...	1320	1028	80020	130	38	6.4	26.5	13.5	13	752	9.8
APR											
12...	1345	1028	80020	49	38	6.4	24.5	17.0	7.4	760	9.3
JUN											
03...	0815	1028	80020	141	38	6.5	23.5	21.0	--	755	7.7
SEP											
08...	0755	1028	80020	.04	57	7.2	23.0	24.0	41	755	5.2

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											
05...	93	92	K55	50	13	4	2.1	1.8	4.1	39	.5
DEC											
01...	89	75	61	100	13	3	2.1	2.0	3.8	36	.5
FEB											
09...	95	K40	K17	96	9	3	1.4	1.4	3.0	40	.4
APR											
12...	97	K18	K11	K22	10	3	1.5	1.4	3.5	41	.5
JUN											
03...	88	130	K16	270	9	1	1.4	1.4	3.4	42	.5
SEP											
08...	63	510	350	3500	16	--	2.6	2.4	4.6	36	.5

*Specific Conductance, Lab (us/cm)

07247800 HOLSON CREEK AT SUMMERFIELD, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
05...	1.1	11	0	9	5.5	4.5	41	25	.06	1.44	1
DEC											
01...	1.1	12	0	10	5.1	4.5	36	25	.05	1.92	1
FEB											
09...	.68	7	0	6	5.7	2.6	32	19	.04	11.2	<1
APR											
12...	1.4	8	0	7	5.6	2.6	33	21	.04	4.40	1
JUN											
03...	.81	10	0	8	5.4	2.4	44	20	.06	16.8	13
SEP											
08...	1.5	22	0	18	3.0	3.2	37	28	.05	.00	34

DATE	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	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)
OCT										
05...	<.010	.167	.034	.04	.19	.22	.39	.010	<.050	<.010
DEC										
01...	<.010	<.050	<.020	--	--	<.10	--	<.050	<.050	<.010
FEB										
09...	<.010	.162	<.020	--	--	.19	.35	<.050	<.050	<.010
APR										
12...	<.010	.119	.026	.03	.15	.17	.29	<.050	<.050	.012
JUN										
03...	<.010	.121	.026	.03	.18	.21	.33	<.050	<.050	.023
SEP										
08...	<.010	.077	.021	.03	.60	.62	.70	.065	<.050	<.010

DATE	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										
05...	--	5.8	10	.35	100	<1.00	2.00	<1.00	<1.00	<1.00
DEC										
01...	--	11	11	.59	92	<1.00	2.00	<1.00	<1.00	<1.00
FEB										
09...	--	5.7	10	3.5	97	<1.00	<1.00	<1.00	<1.00	<1.00
APR										
12...	.04	12	8	1.1	97	<1.00	<1.00	<1.00	<1.00	<1.00
JUN										
03...	.07	12	18	6.9	100	<1.00	<1.00	<1.00	<1.00	<1.00
SEP										
08...	--	5.7	62	.01	99	<1.00	14.0	7.00	<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.

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.--No estimated daily discharge. 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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	388	973	1030	1540	2750	637	5630	2340	4060	19300	68	156
2	386	1860	656	2440	2290	613	5550	2280	7520	15000	65	165
3	310	1790	639	2740	2790	425	6460	2260	5300	6870	61	164
4	278	1620	1640	1790	2760	354	9850	2760	4980	2220	59	169
5	713	2000	3450	1560	2620	345	7870	5470	5310	1810	59	177
6	9840	2020	1830	1510	2570	339	7420	3670	5200	1620	58	189
7	12700	1870	1590	1540	5770	330	5980	2460	5080	1510	60	185
8	5570	1990	2030	1520	5730	1060	5990	2200	5460	2460	59	193
9	2860	2010	2640	1450	3800	4150	5890	2140	6200	2340	56	189
10	2560	2410	2610	1360	3200	1930	5480	2640	6520	2380	53	173
11	2290	2730	2480	1300	3100	1940	5230	5390	8480	3250	52	174
12	2240	2350	3760	1280	3280	2760	5050	3980	6950	2970	54	175
13	2140	2000	8490	867	3500	11100	4890	3700	5600	2460	53	173
14	2770	2000	5650	756	3500	13200	3550	3140	7710	2360	49	167
15	3570	2190	3670	585	3410	8350	3220	4450	6260	3280	49	163
16	4120	2050	3130	393	3320	5160	3350	5060	5080	4100	47	160
17	4140	1970	2880	377	3230	5880	3150	6190	4680	4240	73	156
18	6100	2000	2760	356	2470	6240	3080	14000	4450	4190	170	154
19	4750	1780	3460	337	2000	6130	3000	12500	3230	4140	171	153
20	3630	1290	3550	322	1090	5950	2950	6200	2750	4040	165	160
21	4210	693	3370	316	750	5750	2820	5840	2750	2870	163	154
22	4300	476	3870	667	716	5520	1610	7190	1580	1570	164	146
23	4190	535	3280	933	726	5520	1220	6560	1730	1250	162	132
24	4100	541	2980	647	739	5750	1920	6390	3030	596	159	67
25	3990	467	2800	516	714	5300	4210	3860	5940	242	157	42
26	3920	373	2690	560	691	3870	3380	4980	7120	209	162	31
27	3860	325	2610	654	680	1900	7620	5420	3340	214	170	25
28	3760	487	2540	637	658	2620	4430	5300	1970	92	165	21
29	2540	387	2470	630	---	10000	2800	5230	2270	82	159	17
30	1840	678	2400	1520	---	6930	2440	5700	10700	77	157	14
31	1020	---	2280	4550	---	5120	---	5490	---	72	157	---
TOTAL	109085	43865	89235	35653	68854	135173	136040	154790	151250	97814	3256	4044
MEAN	3519	1462	2879	1150	2459	4360	4535	4993	5042	3155	105	135
MAX	12700	2730	8490	4550	5770	13200	9850	14000	10700	19300	171	193
MIN	278	325	639	316	658	330	1220	2140	1580	72	47	14
AC-FT	216400	87010	177000	70720	136600	268100	269800	307000	300000	194000	6460	8020

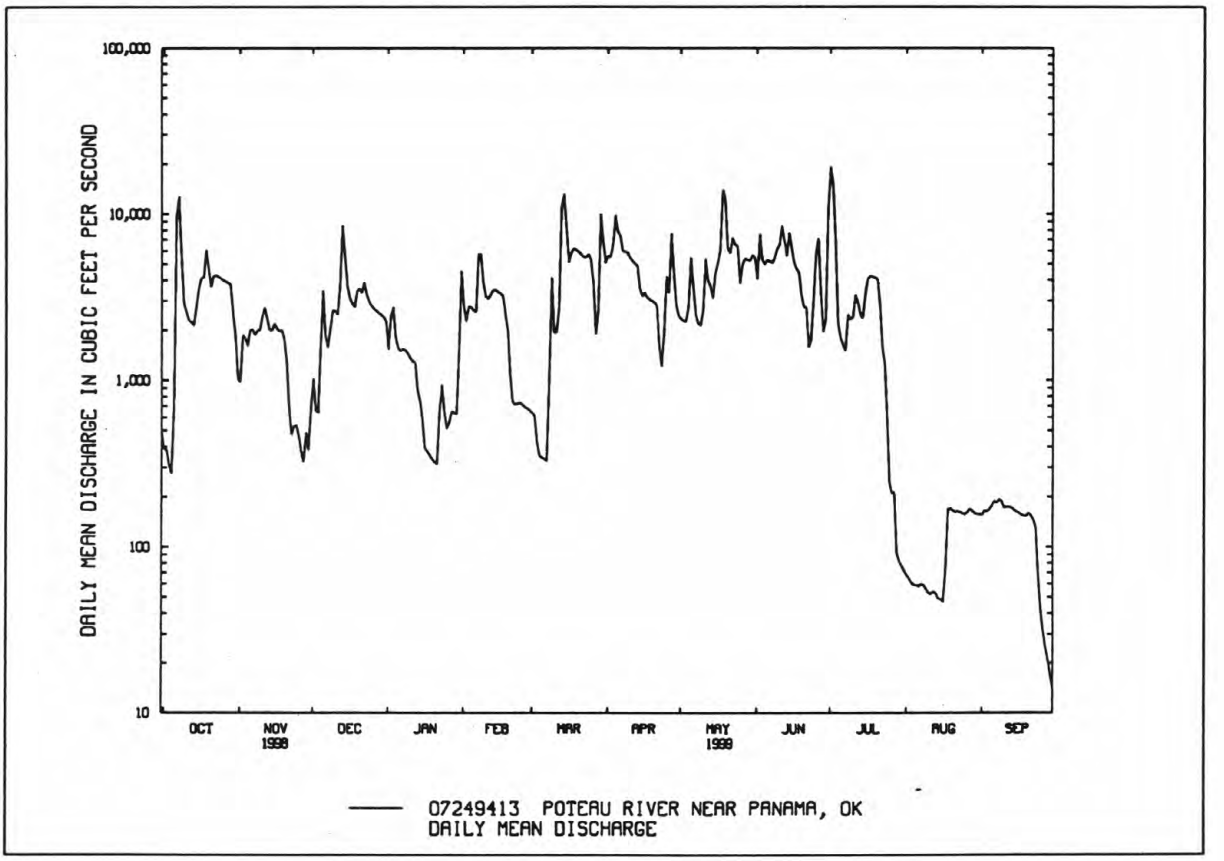
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1999, BY WATER YEAR (WY)

MEAN	827	2613	3738	4167	4022	4332	4027	5056	2683	683	265	658
MAX	3519	9861	8135	10930	7467	8242	8000	16670	5531	3155	818	2678
(WY)	1999	1997	1997	1998	1990	1997	1990	1990	1990	1999	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

07249413 POTEAU RIVER NEAR PANAMA, OK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1989 - 1999	
ANNUAL TOTAL	1071725.0		1029059			
ANNUAL MEAN	2936		2819		2783	
HIGHEST ANNUAL MEAN					3907	1990
LOWEST ANNUAL MEAN					1149	1996
HIGHEST DAILY MEAN	35000	Jan 6	19300	Jul 1	67000	May 3 1990
LOWEST DAILY MEAN	16	Aug 18	14	Sep 30	6.8	Dec 4 1989
ANNUAL SEVEN-DAY MINIMUM	22	Aug 27	31	Sep 24	7.4	Dec 2 1989
INSTANTANEOUS PEAK FLOW			20300	Jul 1	74600	May 3 1990
INSTANTANEOUS PEAK STAGE			36.00	Jul 1	[a]46.59	May 3 1990
ANNUAL RUNOFF (AC-FT)	2126000		2041000		2016000	
10 PERCENT EXCEEDS	7770		5980		7480	
50 PERCENT EXCEEDS	1840		2340		972	
90 PERCENT EXCEEDS	28		157		35	

[a]At present datum.



07249455 ARKANSAS RIVER NEAR FORT SMITH, AR

LOCATION.--Lat 35°23'30", long 94°25'56", in NW 1/4, SW 1/4 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 fair above 50,000 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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e11500	e33400	81400	26200	71900	e26700	e61000	e141000	137000	163000	e35800	19000
2	e12500	e44600	72200	e24000	e45700	e26700	e62400	e141000	144000	150000	e32000	e12200
3	e14200	83900	e62000	e28000	e39100	e26500	e74400	e150000	e153000	116000	e29900	e13200
4	e18500	106000	e55000	e22800	e63400	e26400	e98000	e150000	e143000	114000	e28600	e10400
5	e38000	129000	e55800	e12000	73800	e22700	e68200	e165000	e143000	115000	e18000	e8290
6	153000	129000	56800	e21900	73700	e24000	69500	e164000	e144000	115000	18300	e4320
7	120000	124000	e32700	e23900	113000	e14500	67300	e155000	e145000	113000	19100	e12300
8	108000	129000	e53000	26400	118000	20300	e67000	e152000	147000	122000	e10300	e9500
9	126000	128000	e68900	e24100	92100	48700	e73000	e150000	147000	122000	15500	e6500
10	132000	133000	e47700	e21100	81200	e37000	e61000	e152000	148000	121000	e19300	e6000
11	131000	138000	e64000	e20400	78400	e44700	e58000	e160000	e151000	122000	e22700	e2330
12	e131000	135000	77900	e18600	74900	49500	e62000	e164000	e148000	124000	e23600	e6040
13	125000	125000	99300	e18200	81100	136000	e51100	151000	e126000	123000	e23600	e6580
14	126000	135000	96400	e16000	83700	145000	e31800	143000	e110000	122000	e22000	e11300
15	130000	142000	84300	e17300	80600	116000	e35000	134000	e108000	119000	e10800	e12900
16	108000	137000	77600	e22400	73600	99500	49600	143000	e96000	120000	e14500	e6920
17	83200	135000	69100	e23900	64000	123000	74800	148000	e80800	121000	e16500	e10500
18	75600	125000	e59600	e12500	e39700	142000	81400	e166000	e89400	121000	e14200	e12700
19	79400	117000	e55500	e8860	31500	146000	85400	e164000	e87000	121000	e19800	e16000
20	79500	111000	39700	e7970	29400	e140000	88000	144000	e74600	119000	e12100	e10200
21	83000	84300	34800	e7140	e28500	e133000	82900	137000	e94800	113000	e18100	e12600
22	83800	76400	33200	e20600	e31000	e127000	82400	149000	e107000	93700	e22800	e9020
23	83400	81000	e32700	e24300	e41300	e122000	82300	153000	e117000	93500	e21300	e7700
24	79400	81700	29500	e22200	38600	e120000	81900	159000	e130000	81000	e25300	e8050
25	e59600	77600	e34900	e20500	26600	86000	e82200	148000	e142000	68400	e17000	e4470
26	e54000	72800	35500	16700	32800	87800	e110000	144000	e147000	66300	e14400	e8930
27	e52400	71600	e31900	e17200	e33000	89600	e151000	141000	e125000	52100	e11200	e10900
28	e39700	82000	26800	e16300	31200	60900	e157000	144000	e114000	e35700	e5590	e16000
29	e37200	77900	e29300	e17600	---	78100	e145000	145000	111000	33600	e8630	e14700
30	37400	80600	e30300	e28400	---	e71800	e141000	145000	133000	e33500	e17900	e19500
31	e36400	---	e30200	e66100	---	e65100	---	143000	---	33100	e12500	---
TOTAL	2448700	3125800	1658000	653570	1671800	2456500	2434600	4645000	3742600	3166900	581320	309050
MEAN	78990	104200	53480	21080	59710	79240	81150	149800	124800	102200	18750	10300
MAX	153000	142000	99300	66100	118000	146000	157000	166000	153000	163000	35800	19500
MIN	11500	33400	26800	7140	26600	14500	31800	134000	74600	33100	5590	2330
AC-FT	4857000	6200000	3289000	1296000	3316000	4872000	4829000	9213000	7423000	6282000	1153000	613000

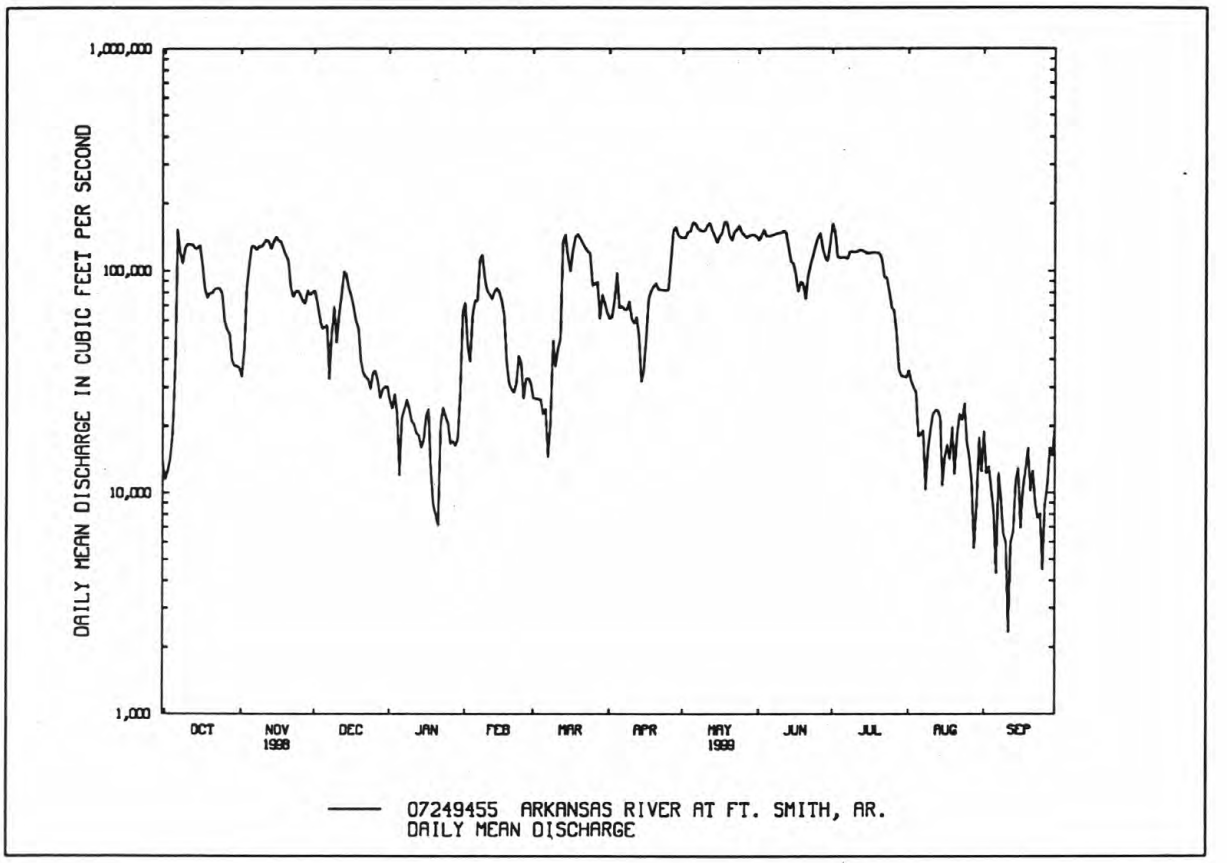
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1999, BY WATER YEAR (WY)

MEAN	51280	58020	48990	74930	50510	87010	88150	81210	60440	53670	20450	12580
MAX	78990	104200	53480	128800	59710	94770	95150	149800	124800	102200	32240	17250
(WY)	1999	1999	1999	1998	1999	1998	1998	1999	1999	1999	1997	1997
MIN	23580	11850	44500	21080	41310	79240	81150	34300	15460	14950	10360	10190
(WY)	1998	1998	1998	1999	1998	1999	1999	1997	1998	1998	1998	1998

e Estimated

07249455 ARKANSAS RIVER NEAR FORT SMITH, AR--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1997 - 1999	
ANNUAL TOTAL	21572518		26893840			
ANNUAL MEAN	59100		73680		59860	
HIGHEST ANNUAL MEAN					73680	1999
LOWEST ANNUAL MEAN					46040	1998
HIGHEST DAILY MEAN	198000	Jan 5	166000	May 18	198000	Jan 5 1998
LOWEST DAILY MEAN	45	Sep 10	2330	Sep 11	45	Sep 10 1998
ANNUAL SEVEN-DAY MINIMUM	1430	Sep 7	6710	Sep 6	1430	Sep 7 1998
INSTANTANEOUS PEAK FLOW			unknown		206000	Jan 5 1998
INSTANTANEOUS PEAK STAGE			unknown		25.82	Jan 5 1998
ANNUAL RUNOFF (AC-FT)	42790000		53340000		43370000	
10 PERCENT EXCEEDS	134000		144000		135000	
50 PERCENT EXCEEDS	39700		72200		37200	
90 PERCENT EXCEEDS	8310		12700		9500	



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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
02...	0828	1150	23.0	755	1028	1028	148000	20.77	397	7.0	7.6
02...	0842	1050	22.5	755	1028	1028	148000	--	361	7.5	7.7
02...	0850	950	23.0	755	1028	1028	148000	--	517	8.0	7.7
02...	0903	850	23.0	755	1028	1028	148000	--	522	8.1	7.7
02...	0913	750	23.0	755	1028	1028	148000	--	523	8.2	7.7
02...	0920	650	22.5	755	1028	1028	148000	--	520	8.3	7.7
02...	0928	550	22.5	755	1028	1028	148000	--	522	8.4	7.7
02...	0934	450	22.5	755	1028	1028	148000	--	519	8.5	7.8
02...	0938	350	22.5	755	1028	1028	148000	--	519	8.4	7.8
02...	0940	250	22.5	755	1028	1028	148000	20.88	520	8.4	7.8

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT												
06...	0920	1028	80020	176000	428	7.8	16.5	23.0	25	760	6.3	74
DEC												
02...	0925	1028	80020	73200	533	*8.0	10.5	14.5	32	765	9.6	94
FEB												
10...	0900	1028	80020	73900	508	8.0	20.5	11.5	58	758	10.2	94
APR												
13...	0900	1028	80020	53500	497	7.9	19.0	18.0	30	763	8.6	91
JUN												
02...	0905	1028	80020	148000	491	7.7	24.5	22.5	--	755	8.3	97
SEP												
07...	1200	1028	80020	E100	605	8.2	32.0	27.5	4.4	757	6.7	86

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											
06...	110	K60	7100	130	31	36	8.4	31	34	1	3.9
DEC											
02...	K27	K13	K2000	130	42	38	8.4	53	46	2	4.3
FEB											
10...	550	420	4000	130	37	35	9.4	46	44	2	3.1
APR											
13...	K9	K5	98	120	43	33	9.3	47	45	2	2.7
JUN											
02...	K87	K20	280	130	46	38	9.1	43	41	2	3.2
SEP											
07...	140	130	54	170	52	47	13	55	41	2	4.2

*pH, Lab (standard units)

07249455 ARKANSAS RIVER AT FORT SMITH, AR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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											
06...	115	0	94	44	40	247	221	.34	117000	45	.155
DEC											
02...	106	0	87	44	74	298	276	.41	58900	34	--
FEB											
10...	109	0	89	49	65	288	264	.39	57500	53	--
APR											
13...	96	0	79	53	66	284	260	.39	41000	46	--
JUN											
02...	104	0	86	54	58	296	259	.40	118000	51	--
SEP											
07...	141	0	116	71	69	340	328	.46	--	11	.112

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											
06...	.69	.026	.09	.181	.076	.10	.76	.84	1.0	.146	.061
DEC											
02...	--	<.010	--	.665	.024	.03	.48	.50	1.2	.173	.063
FEB											
10...	--	<.010	--	.507	.052	.07	.61	.66	1.2	.148	.064
APR											
13...	--	<.010	--	.426	.020	.03	.71	.73	1.2	.101	<.050
JUN											
02...	--	<.010	--	.672	.024	.03	.67	.70	1.4	.153	.076
SEP											
07...	.50	.035	.12	.147	<.020	--	--	.59	.74	.094	.057

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											
06...	.054	.17	<3.0	108	51300	85	<1.00	23.0	14.0	<1.00	<1.00
DEC											
02...	.087	.27	E2.0	91	18000	99	<1.00	3.00	1.00	<1.00	<1.00
FEB											
10...	.052	.16	3.0	96	19200	99	<1.00	7.00	4.00	<1.00	<1.00
APR											
13...	.024	.07	18	84	12100	98	<1.00	22.0	11.0	<1.00	<1.00
JUN											
02...	.073	.22	3.4	108	43200	91	<1.00	7.00	2.00	<1.00	<1.00
SEP											
07...	.028	.09	3.4	53	--	95	6.00	29.0	24.0	<1.00	1.00

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.

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	1996-99	10-05-98 01-30.99 02-06-99 04-25-99 05-04-99 05-17-99 05-23-99 06-16-99 09-10-99	10.49 9.49 9.15 9.44 10.15 9.78 9.54 9.51 10.01
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	1994-99	10-05-98 04-25-99 05-04-99 05-17-99	7.58 7.75 7.37 7.26
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	1996-99	10-05-98 01-30-99 02-06-99 03-12-99 04-25-99 05-04-99	6.11 2.62 2.15 2.00 4.81 3.47
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 and 600 ft north of Admiral Rd. and Hwy. 169 bridge crossing. Datum of gage is 614.978 ft mean sea level.	6.14	1996-99	10-05-98 01-30-99 03-12-99 04-25-99 09-10-99	5.65 2.70 2.56 5.00 2.45

Miscellaneous Sites

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 1993-99	05-26-99 06-28-99 07-21-99 08-17-99 09-09-99	24 16 6.5 2.4 5.0
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.	1993-99	05-27-99 07-20-99 08-11-99 08-25-99 09-09-99	39 21 11 7.9 5.2
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.	1993-99	05-27-99 06-28-99 07-28-99 08-17-99 09-10-99	64 126 21 18 13
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.	1993-99	05-26-99 06-30-99 07-27-99 08-18-99 09-09-99	12 9.5 .45 1.2 3.2
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.	1993-99	05-27-99 06-29-99 07-27-99 08-18-99 09-10-99	16 14 6.1 6.5 6.7

Miscellaneous Sites

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, 0.9 mi northeast of Pedro, Ar.	1996-99	10-20-98 11-05-98 12-09-98 01-12-99 02-02-99 03-16-99 04-06-99 05-05-99 06-09-99 08-12-99	89 83 285 123 510 1200 1210 3030 148 46
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.	1996-99	11-17-98 01-12-99 07-29-99 08-19-99 09-15-99	376 323 356 221 273
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.	1996-99	11-05-98 01-12-99 07-29-99 08-19-99 09-15-99	422 378 411 264 335
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.	1996-99	10-20-98 11-05-98 12-16-98 01-06-99 02-02-99 03-15-99 04-06-99 05-04-99 06-24-99 07-05-99 08-13-99	358 426 775 590 1320 4660 3600 3240 1610 23300 282
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.	1996-99	11-04-98 01-06-99 07-29-99 08-18-99 09-14-99	544 653 439 277 445
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.	1996-99	11-04-98 01-06-99 07-29-99 08-18-99 09-15-99	622 647 449 276 382
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.	1996-99	11-04-98 01-06-99 07-27-99 08-08-99 09-14-99	638 670 496 266 394

Miscellaneous Sites

Station number	Station name	Location	Period of record	Measurements	
				Date	Discharge (ft^3/s)
		ARKANSAS RIVER BASIN			
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.	1996-99	08-11-99	304
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.	1996-99	11-03-98 01-06-99 07-27-99 08-10-99 09-13-99	500 722 529 350 356
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.	1996-99	10-19-98 11-03-98 12-15-98 01-04-99 02-01-99 03-15-99 04-06-99 05-05-99 06-08-99 08-10-99	160 130 543 229 571 2460 1940 4790 376 63
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.	1992-99	10-05-98 12-01-98 02-10-99 04-14-99 06-03-99 06-25-99 09-09-99	12 66 522 161 841 61 .28
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.	1992-99	10-07-98 12-01-98 02-09-99 04-12-99 06-03-99 06-24-99 09-08-99	4150 296 690 194 487 535 2.6
07247800	Holson Creek at Summerfield, OK.	Lat 34°52'46", long 94°51'11", n 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.	1992-99	10-05-98 12-01-98 02-09-99 04-12-99 06-03-99 06-24-99 09-08-99	13 20 130 49 141 21 .04

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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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