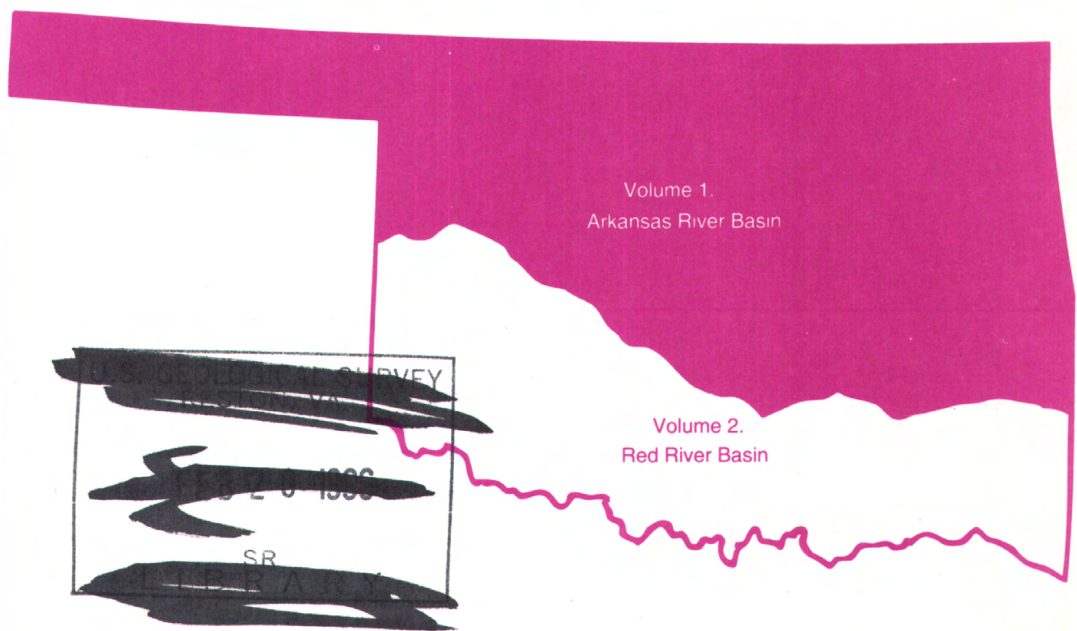


OK-94-1
Oklahoma
1994



Water Resources Data Oklahoma Water Year 1994

Volume 1. Arkansas River Basin



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OK-94-1
Prepared in cooperation with the State of Oklahoma and
with other agencies

1993

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1994

JANUARY							FEBRUARY							MARCH						
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9	10	11	12	13	14	15	13	14	15	16	17	18	19	13	14	15	16	17	18	19
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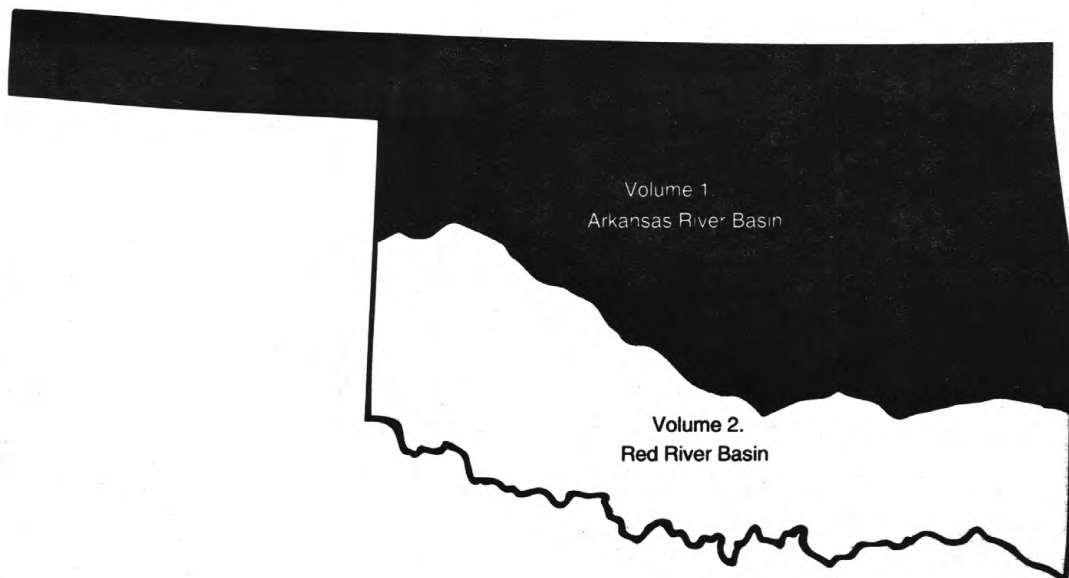
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10	11	12	13	14	15	16	14	15	16	17	18	19	20	11	12	13	14	15	16	17
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31																				



Water Resources Data Oklahoma Water Year 1994

Volume 1. Arkansas River Basin

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



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OK-94-1
Prepared in cooperation with the State of Oklahoma and
with other agencies

U.S. DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, *Secretary*

U.S. GEOLOGICAL SURVEY

Gordon P. Eaton, Director

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

1995

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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R.D. Gist	J.E. May	D.L. Runkle	

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

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

Data for Oklahoma are in three volumes as follows:

Volume 1. Arkansas River Basin

Volume 2. Red River Basin and Ground-Water Records

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MISSISSIPPI RIVER

ARKANSAS RIVER BASIN

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

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[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]

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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]

	Station Number	Page
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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			
Kaw Lake near Ponca City, OK	07148130	46,530	1976-93
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
Great Salt Plains Lake near Jet, OK	07150000	3,200	1941-93
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 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
Keystone Lake near Sand Springs, OK	07164200	74,506	1964-93
Heyburn Lake near Heyburn, OK	07165000	123	1950-93
Polecat Creek below Heyburn Reservoir near Heyburn, OK	07165500	123	1944-79
Arkansas River near Tullahasse, OK	07165600	75,815	1970-72
Oologah Lake near Oologah, OK	07171300	4,339	1963-93
Verdigris River near Oologah, OK	07171400	4,339	1961-92
Verdigris River near Sagecyah, OK	07171500	4,402	1939-45
Hulah Lake near Hulah, OK	07172500	732	1950-93
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
Copan Lake near Copan, OK	07174300	505	1983-93
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 Lake near Barnsdall, OK	07176460	66	1977-93
Birch Creek below Birch Lake near Barnsdall, OK	07176465	66.0	1977-92
Candy Creek near Wolco, OK	07176800	30.6	1970-81
Skiatook Lake near Skiatook, OK	07177400	354	1984-93
Hominy Creek below Skiatook Lake near Skiatook, OK	07177410	354	1985-93
Bird Creek at 66th Street near Tulsa, OK	07177600	967	1987-91
Hominy Creek near Skiatook, OK	07177000	340	1944-81
Flat Rock Creek at U.S. Highway 75 at Tulsa, OK	07177700	22.6	1987-91
Mingo Creek at 36th Street North at Tulsa, OK	07178035	56.0	1987-89
Verdigris River near Inola, OK	07178600	7,911	1945-70
Tar Creek at 22nd Street Bridge at Miami, OK	07185095	44.7	1984-93
Tar Creek at Miami, OK	07185100	52.0	1980-84
Lost Creek at Seneca, MO	07188500	42.0	1949-59
Neosho River near Grove, OK	07189500	9,969	1925-39

DISCONTINUED SURFACE-WATER STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Bent Creek near Seiling, OK	07237800	139	1967-70
Canton Lake near Canton, OK	07238500	12,483	1948-93
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
Arcadia Lake near Arcadia, OK	07242340	105	1986-93
Deep Fork near Arcadia, OK	07242350	105	1970-93
Bellcow Creek at Chandler, OK	07242500	46.0	1949-55
Deep Fork near Dewar, OK	07244000	2,307	1938-50
North Canadian River near Eufaula, OK	07244500	17,657	1960-62
Eufaula Lake near Broken, OK	07244800	47,522	1964-93
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
Wister Lake near Wister, OK	07248000	993	1949-93
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 STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
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
Fort Gibson Lake near Fort Gibson, OK	07193000	12,492	1949-93
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
Tenkiller Ferry Lake near Gore, OK	07197500	1,610	1952-93
Dirty Creek near Warner, OK	07198500	227	1940-46
Deer Creek at Hydro, OK	07228400	274	1961-63 1978-80
Canadian River near Newcastle, OK	07229000	25,763	1939-45
Canadian River near Noble, OK	07229100	25,911	1960-61 1964-75
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
Optima Lake near Hardesty, OK	07233200	5,029	1978-93
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
Fort Supply Lake near Fort Supply, OK	07236500	1,735	1942-93
Wolf Creek near Fort Supply, OK	07237000	1,739	1938-93

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 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
Bluff Ck Ab Bethany/Warr Ac Swg Trmt Plt near Edmond, OK	07159639		1983-84
Deer Creek Blw Waste Wtr Trmt Fac near Edmond, OK	07159645		1983-84
Cottonwood Creek near Navina, OK	07159720	247	1977-80, 1982-89
Cottonwood Creek near Seward, OK	07159750	320	1973-82, 1989-91

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

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

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

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

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

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

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Flat Rock Creek at Us Hwy 75 at Tulsa, OK	07177700	22.6	1988-90
Bird Creek near Owasso, OK	07178000	1,022	1948-50, 1987-90
Bird Creek near Catoosa, OK	07178050	1,080	1963-90
Verdigris River near Inola, OK	07178600	7,911	1940-71, 1976-79
Verdigris River (Newt Graham L&D) near Inola, OK	07178620	7,911	1971-86
Verdigris River near Okay, OK	07178670		1959-63
Neosho River near Commerce, OK	07185000	5,876	1944-54, 1959-73, 1975-83, 1985-89
Tar Creek at 22nd Street Bridge at Miami, OK	07185095	44.7	1988-89, 1989-92
Spring River near Quapaw, OK	07188000	2,510	1944-64, 1975-80, 1986, 1988-89
Neosho River near Langley, OK	07190500	10,335	1944-47, 1949-51, 1956-59, 1975-80, 1988
Big Cabin Creek near Welch, OK	07190590	28.1	1979-83
Big Cabin Creek Tributary Blw Wolfe Ck near Welch, OK	07190597		1980-83
West Fork Big Cabin Creek near Centralia, OK	07190620	13.1	1979-83
Middle Fork Big Cabin Creek near Centralia, OK	07190622		1979-80
Middle Fork Big Cabin Creek near Pyramid Corners, OK	07190625	13.4	1979-83
Big Cabin Creek near Vinita, OK	07190650		1944, 1949-51, 1980
Little Cabin Creek near Vinita, OK	07190850		1948-51
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

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Spavinaw Creek near Spavinaw, OK	07191310		1944, 1948-51
Salina Creek near Salina, OK	07191350		1948-53, 1958-59
Ncosho 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
Ncosho River near Wagoner, OK	07192500	12,307	1930-31, 1938-50
Ncosho 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 near Silo, AR	07195400	509	1978-79, 1981, 1983-91
Illinois River South of Siloam Springs, AR	07195430		1972-81
Flint Creek at Springtown, AR	07195800	14.2	1975-79
Flint Creek North of Siloam Springs, AR	07195850		1972-81
Tahlequah Creek at Tahlequah, OK	07196510	13.4	1976-77
Peacheater Creek at Christie, OK	07196973	25	1991-93
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

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

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

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Salt Creek near Dewright, OK	07230800	210	1959-63
Little River near Sasakwa, OK	07231000	865	1951-92
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
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
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

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

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

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

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

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
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
Poteau River East Of Waldron, Ar	07246940	15	1983-90
Poteau River Northwest Of Waldron, Ar	07246950	46.1	1983-90
Poteau River South Of Bates, Ar	07247012		1972-83
Poteau River at Hontubby	07247025	301	1992
Fourche Maline near Wilburton, OK	07247450	56.2	1978-81
Red Oak Creek near Red Oak, OK	07247550	12.8	1978-81
Poteau River near Wister, OK	07248500	993	1938-40, 1942, 1944-50, 1954-60, 1975-80, 1986
Caston Creek at Wister, OK	07248600	72.9	1975, 1977-81
Morris Creek at Howe, OK	07248620	19.4	1908, 1978-81
Sugarloaf Creek near Monroe, OK	07248700	53.6	1978-81

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Poteau River at Poteau, OK	07249000	1,240	1938, 1940-42, 1944
Brazil Creek near Red Oak, OK	07249060	2.74	1978-81
Rock Creek near Red Oak, OK	07249070	12	1978-81
Brazil Creek near Lodi, OK	07249073		1980-81
Brazil Creek near Walls, OK	07249080	69.1	1978-81, 1984-86
Owl Creek near McCurtain, OK	07249100	27.9	1978-81
Brazil Creek near Panama, OK	07249200		1959-61
James Fork near Williams, OK	07249410	198	1976-81
Coal Creek Tributary near Bokoshe, OKla.	07249415	1.26	1976-79
Coal Creek near Panama, OK	07249419	6.67	1976-79
Holi-tuska Creek near Panama, OK	07249422	4.39	1978-81
Poteau River near Braden, OK	07249438		1958-59, 1961-63
Poteau River near Fort Smith, Ar	07249440		1972-79
Lee Creek near Short, OK	07249800	236	1958-61, 1975-77
Little Lee Creek near Short, OK	07249900		1960, 1977-79
Arkansas River at L&d #13 near Van Buren, Ar	07250550	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

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
North Canadian River Above Lake Eufaula, OK	352305095531001		1983-84
N Canadian River near Prague, OK	352359096401201		1983-84
North Canadian River West of Okemah, OK	352546096242701		1983-84
North Canadian River at 63rd St Bridge, OK City, OK	353211097222501		1983-84
Sallisaw Creek at Bunch, OK	354035094452001		1958-59
Bear Creek near Fallis, OK	354512097075301		1953-55
Eagle Creek near Hectorville, OK	355032095580401		1907, 1979
Tributary to Campbell Creek near Cashion, OK	355032097431501	3.15	1986, 1988
Campbell Creek near Cashion, OK	355032097432301	22.6	1986-88
Pawnee Creek near Crescent, OK	355125097371501	13.1	1986, 1988
Gar Creek near Guthrie, OK	355217097315601	10.6	1986-88
Cox Creek near Crescent, OK	355217097361901	7.47	1986, 1988
Kingfisher Creek near Kingfisher, OK	355342097541001	501	1986-88
Bird Creek near Kingfisher, OK	355415097464801	8.5	1986-88
Trail Creek near Kingfisher, OK	355421097521601	16.1	1986-87
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

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Cottonwood Creek at Orienta, OK	362150098282301	54.3	1986, 1988
Barney Creek near Orienta, OK	362414098420201	41.1	1986, 1988
Griever Creek near Waynoka, OK	362446098470001	88.8	1986, 1988
West Creek near Waynoka, OK	362933098554201	31.9	1986, 1988
24N-23E-08 B1 OWRB 24R, Well on Monkey	363324094502501		1980-81
Sand Creek near Belva, OK	363436098590301	54.1	1986, 1988
Chimney Creek near Belva, OK	363731099015301	27.5	1986, 1988
Doe Creek near Freedom, OK	363823099065201	14.2	1986, 1988
Long Creek near Freedom, OK	364244099070801	53.1	1986, 1988
Anderson Creek near Freedom, OK	364521099053901	34.5	1986, 1988
27N-23E-05 BDA 1 OWRB 22B, Neosho R near I-44	365108094511801		1980-82
27N-23E-06 AAD 1 WRB 22a, Neosho R Ab Tar C	365112094514401		1980-82
27N-23E-05 BBB 1 OWRB 22, Tar C Ab Neosho R	365118094513201		1981-82
28N-23E-30 Ddd 1 OWRB 21, Tar C at Hwy 10	365215094514001		1980-81
28N-23E-30 Ddb 1 OWRB 20, Tar C at Central	365230094514301		1980-82, 1984
28N-23E-30 Aac 1 Tar C at Rockdale Blvd	365255094514301		1984-85
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

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
29N-23E-32 BBD 2 Mine Trib Pond	365715094504301		1984-85
29N-23E-32 BBD 3 Outflow from Mine Trib Pd	365715094504302		1984-85
29N-23E-32 BAC 1 Mine Trib S of Rr Culvert	365720094503801		1983-85
29N-23E-32 BAB 1 1132 M from Rr Borehole	365723094503511		1984-85
29N-23E-32 BAB 3 138 M from Rr Borehole	365723094503513		1984-85
29N-23E-32 BAB 20 Mine Trib, N of Rr Culvert	365723094503520		1984-85
29N-23E-29 CDC 3 Lavrion Tailings Pond/col	365730094503301		1984-85
29N-23E-29 CCD 1 OWRB 4t, Tailings Runoff	365730094504601		1980-81, 1985
29N-23E-29 CCD 3 OWRB Site 4 Tar C at Lytl	365732094504400		1980-82
29N-23E-29 CCD 2 OWRB Site 4a Tar C Ab Lyt	365732094504401		1980-82
29N-23E-29 CAC 2 Lytle C 400 M Ab Site 4	365744094503200		1981, 1985
29N-23E-29 CAC 1 Collapse W of Lytle C	365744094503201		1984-85
29N-23E-29 BCA 1 Tar C Above Mine Disch	365807094504301		1984-85
29N-23E-29 ABD 1 Lytle C Above Mine Disch	365811094501301		1984-85
29N-23E-18 AAC 1 OWRB 7, Tar C at State Ln	365956094510701		1980-82, 1984-85
34S-23E-35 DDC 1 Tar C at Rt 166	370153094511101		1984-85



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 118 streamflow-gaging stations, and 21 partial-record or miscellaneous streamflow stations, (2) stage and content records for 8 lakes and reservoirs, (3) water-quality records for 47 streamflow-gaging stations; (4) water-level records for 28 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 levels. Data on ground-water levels were added to this format from 1975-79 and 1990 to present.

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

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is

identified as "U.S. Geological Survey Water-Data Report OK-94-1." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. Beginning with the 1990 water year, all water-data reports also will be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc.

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

COOPERATION

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

Oklahoma Water Resources Board, Patty Eaton,
Executive Director.

Oklahoma Geological Survey, Charles J. Mankin,
Director.

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

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

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

Corps of Engineers, U.S. Army

Bureau of Reclamation, U.S. Department of
Interior

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

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

Organizations that supplied data are acknowledged in the station descriptions.

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SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow

Large variations in streamflow characterize hydrologic conditions in Oklahoma. In the extreme southeastern part of the State, mean annual precipitation exceeds 52 inches and mean annual runoff exceeds 20 inches. In the southeast, stream channels are deeply incised in mountainous terrain, and streamflow generally is perennial.

In the extreme northwestern part of the Panhandle, mean annual precipitation is less than 16 inches and mean annual runoff is less than 0.1 inch. In northwestern Oklahoma, streams generally have shallow, poorly defined channels and ephemeral flow.

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

Precipitation was not spread uniformly across the State. Many areas of western Oklahoma reported annual deficits of greater than 5 inches. Generally precipitation was far above normal in northeastern and south-central Oklahoma; far below normal in western Oklahoma, and about normal over the rest of the State. A major snow storm on March 8 and 9 across all of northern Oklahoma alleviated the dry conditions of previous months. Heavy rains in April offset the lower-than-normal precipitation in May; Pawhuska, in east-central Oklahoma, received a 24-hour total of 8.33 inches of precipitation, which led to flash flooding. Three children were drowned in a flash flood near Duncan when swept away from an automobile by high waters during the last week of May. In Kenton, in the far northwestern corner of the State, a rare heavy rainfall of 3.18 inches fell on May 9. June was hot and dry across most of the State. Two children were drowned during localized flash flooding at Davis when their family car was swept off a low-water crossing and two golfers were killed by a lightning strike in Oklahoma City. July was the fourteenth wettest during the 104 years of State weather records.

A comparison of daily, monthly, and annual streamflow for the 1994 water year with the period of record at eight selected stations (fig. 1-8) reflected about average conditions in northeastern and southeastern Oklahoma; above-average streamflow for east-central and south-central Oklahoma; and below-average streamflow in western, north-central, and central Oklahoma. These stations were selected at representative locations within Oklahoma. Three locations are affected to some degree by regulation: Arkansas River at Ralston, the Washita River near Dickson, and North Canadian River at Woodward.

Drought effects during the 1994 water year were minimal for the State. Streamflow was below normal in streams during the entire water year in northwestern Oklahoma (fig. 1). For the north-central, northeastern, central, and southwestern part of the State, streamflow was below average in June (fig. 2-6). In north-central and northeastern Oklahoma, there were high flows in April and May (fig. 2-3). In east-central Oklahoma flows were also high from October through December and February through March (fig. 4). In southwestern and central Oklahoma, streamflow was high during March and April (fig. 5-6). In the south-central and southeastern part of the State high flows occurred during December, March, and May (fig. 7-8). Overall the streamflow was below normal in western Oklahoma; above normal in the east-central and south-central part of the State; and normal in the rest of the State, with all annual peak flows in the low to medium flow range, except in the northeastern part of the State, which were in the high flow range.

The worst flooding occurred during April along the Neosho River, causing the evacuation of 50 homes in Miami, in the northeastern part of the State. Local flooding occurred during May in Duncan, south-central Oklahoma, and Tulsa, Rogers, and Nowata counties in northeastern Oklahoma. Locally, heavy thunderstorms during the second week of June produced local flooding in western and southern Oklahoma. Thunderstorms in the eastern two-thirds of the State over the first 2 weeks of July led to local flooding in many areas.

The average discharge streamflow statistic for the 1994 water year also illustrates normal runoff conditions in northeastern and southeastern Oklahoma, above-normal streamflow for east-central and south-central part of the State

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and below-normal runoff conditions for the rest of the State. for the 1994 water year with streamflow for the period of record
The following table presents a comparison of streamflow at the eight selected stations:

STATION IDENTIFICATION	Statistics of discharge during 1994 water year (cubic feet per second)			Statistics of discharge during period of record (cubic feet per second)		
	Maximum instantaneous	Minimum mean daily	Average	Maximum instantaneous	Minimum mean daily	Average
ARKANSAS RIVER BASIN						
07152500 Arkansas River at Ralston	56,500	353	3,822	211,000	14	4,826
				(Prior to regulation 1926-75)		
				174,000	52	5,641
				(Since regulation by Kaw Lake 1977-94)		
07185000 Neosho River near Commerce	106,000	83	3,509	267,000	0	3,744
						(1940-94)
07197000 Baron Fork at Eldon	9,240	43	398	50,600	1.8	325
						(1949-94)
07231500 Canadian River at Calvin	20,800	70	916	174,000	0	1,773
					(1906, 1939-42, 1945-1994)	
07237500 North Canadian River at Woodward	209	1.2	30.6	42,000	0	194
				(Prior to regulation 1939-78)		
				3,090	0	97.8
				(Since regulation by Optima Lake 1979-94)		
RED RIVER BASIN						
07300500 Salt Fork Red River near Mangum	1,010	0	36.4	72,000	0	85.2
						(1938-94)
07331000 Washita River near Dickson	32,900	160	2,034	98,000	0	1,573
				(Prior to regulation 1929-58)		
				118,000	0.10	1,750
				(Since regulation by Fort Cobb Reservoir 1962-94)		
07332500 Blue River near Blue	7,920	39	361	65,200	0	323
						(1937-94)

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Conservation storage in four selected reservoirs in the State indicates that conservation storage was reduced when comparing the start of the water year to the end of the water year.

The following table presents a comparison of conservation storage capacity for the start and end of the 1994 water year for the four selected reservoirs:

STATION IDENTIFICATION	Conservation Storage Capacity			
	Start of 1994 water year		End of 1994 water year	
	(acre-feet)	(percent)	(acre-feet)	(percent)
ARKANSAS RIVER BASIN				
07190000 Lake O' the Cherokees at Langely	2,035,000	136	1,492,000	100
07229900 Lake Thunderbird near Norman	116,200	59	108,400	55
RED RIVER BASIN				
07302500 Lake Altus at Lugert	79,590	60	25,460	19
07324300 Foss Reservoir near Foss	162,400	37	154,200	35

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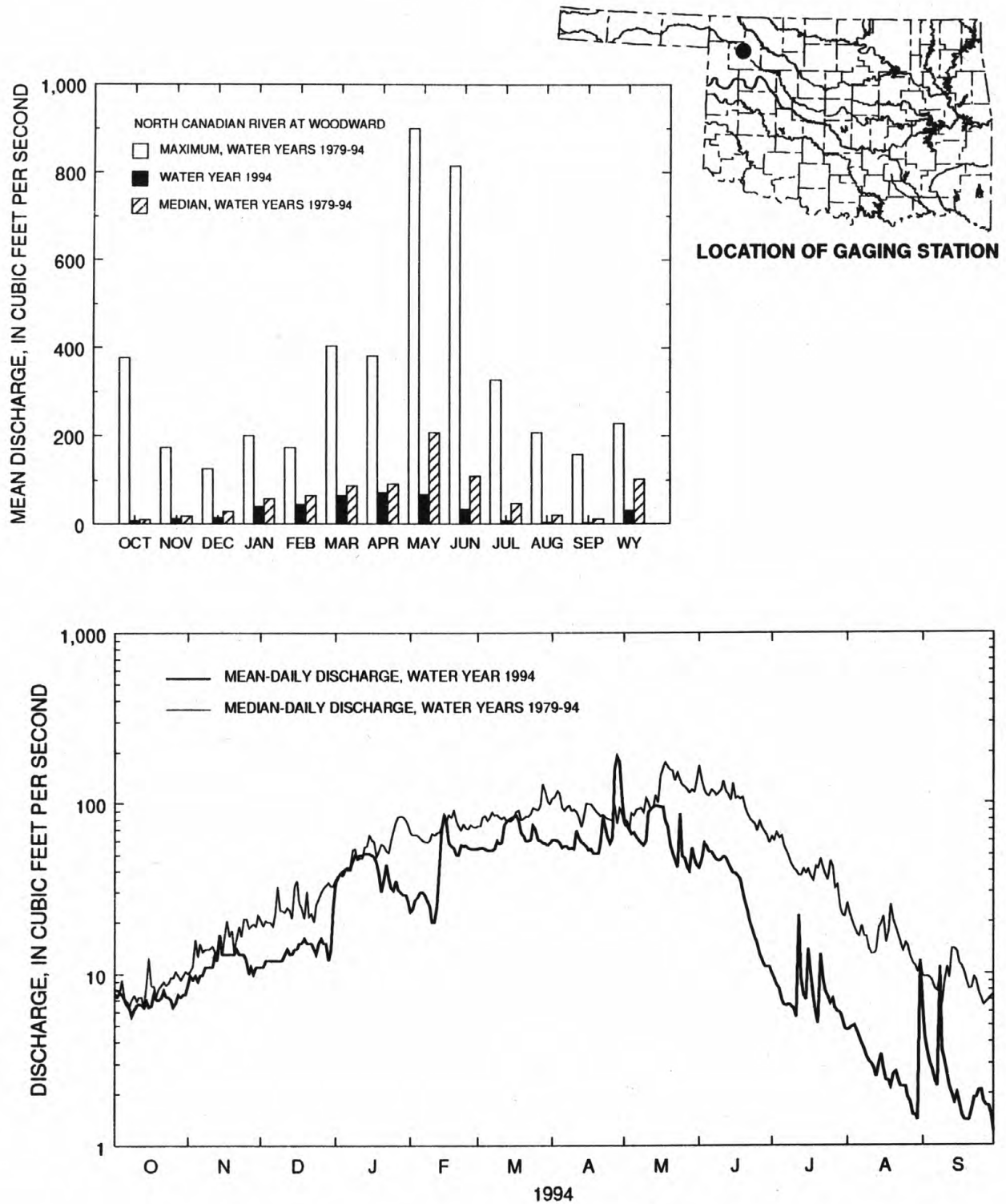


Figure 2.—Comparison of daily, monthly, and annual discharges for water year 1994 and period of record for North Canadian River at Woodward, Oklahoma.

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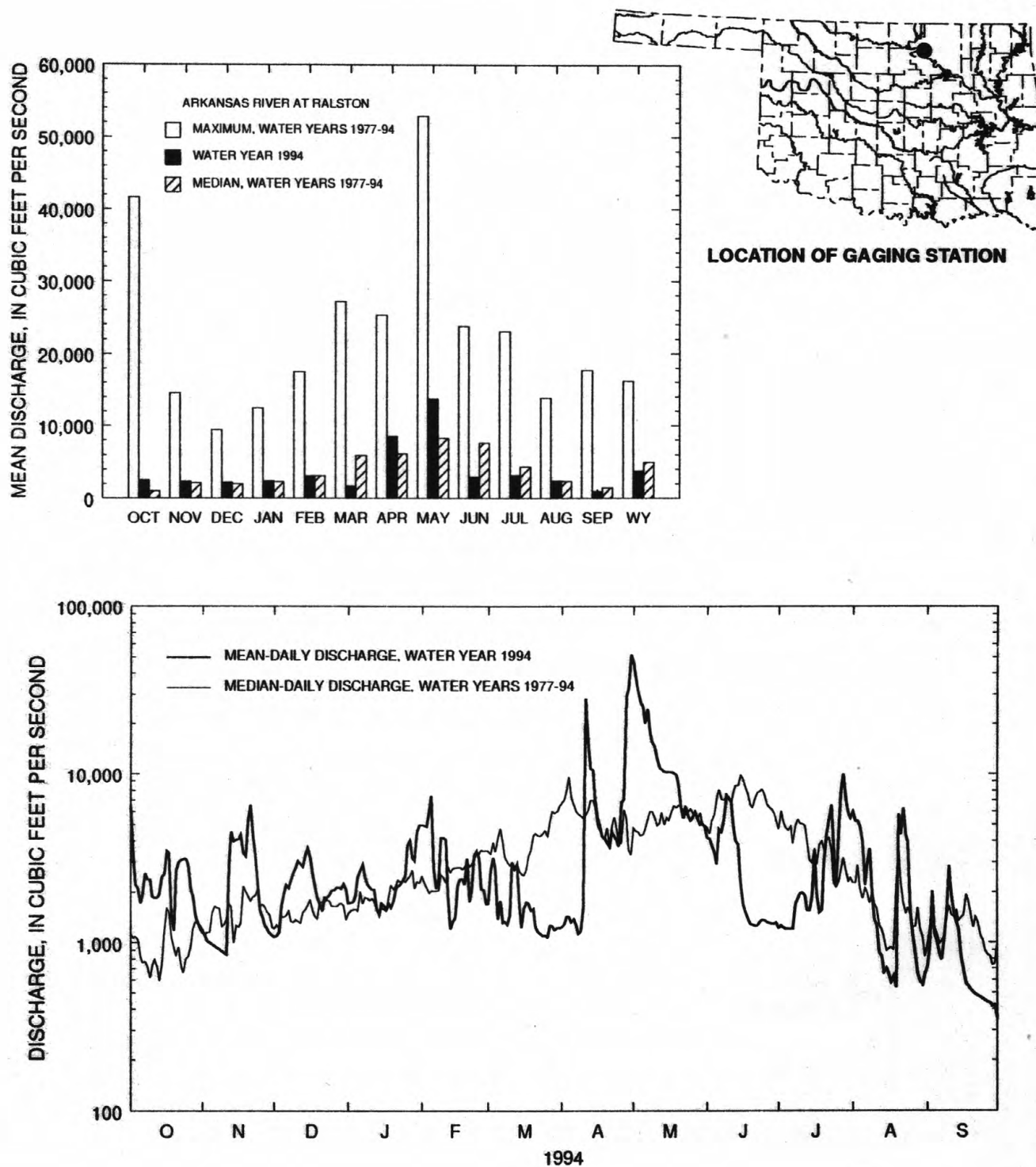


Figure 2.—Comparison of daily, monthly, and annual discharges for water year 1994 and period of record for Arkansas River at Ralston, Oklahoma.

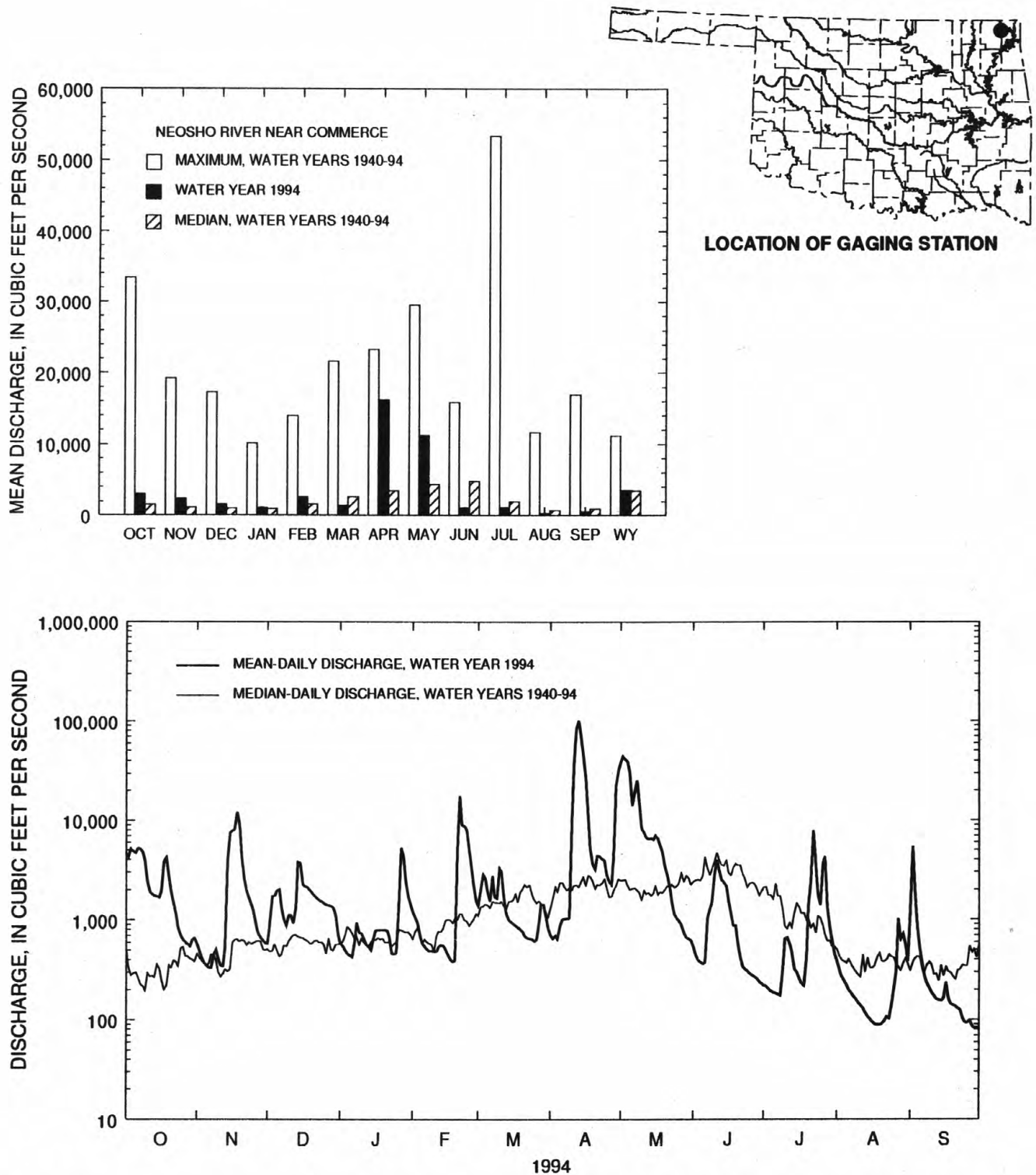


Figure 3.—Comparison of daily, monthly, and annual discharges for water year 1994 and period of record for Neosho River near Commerce, Oklahoma.

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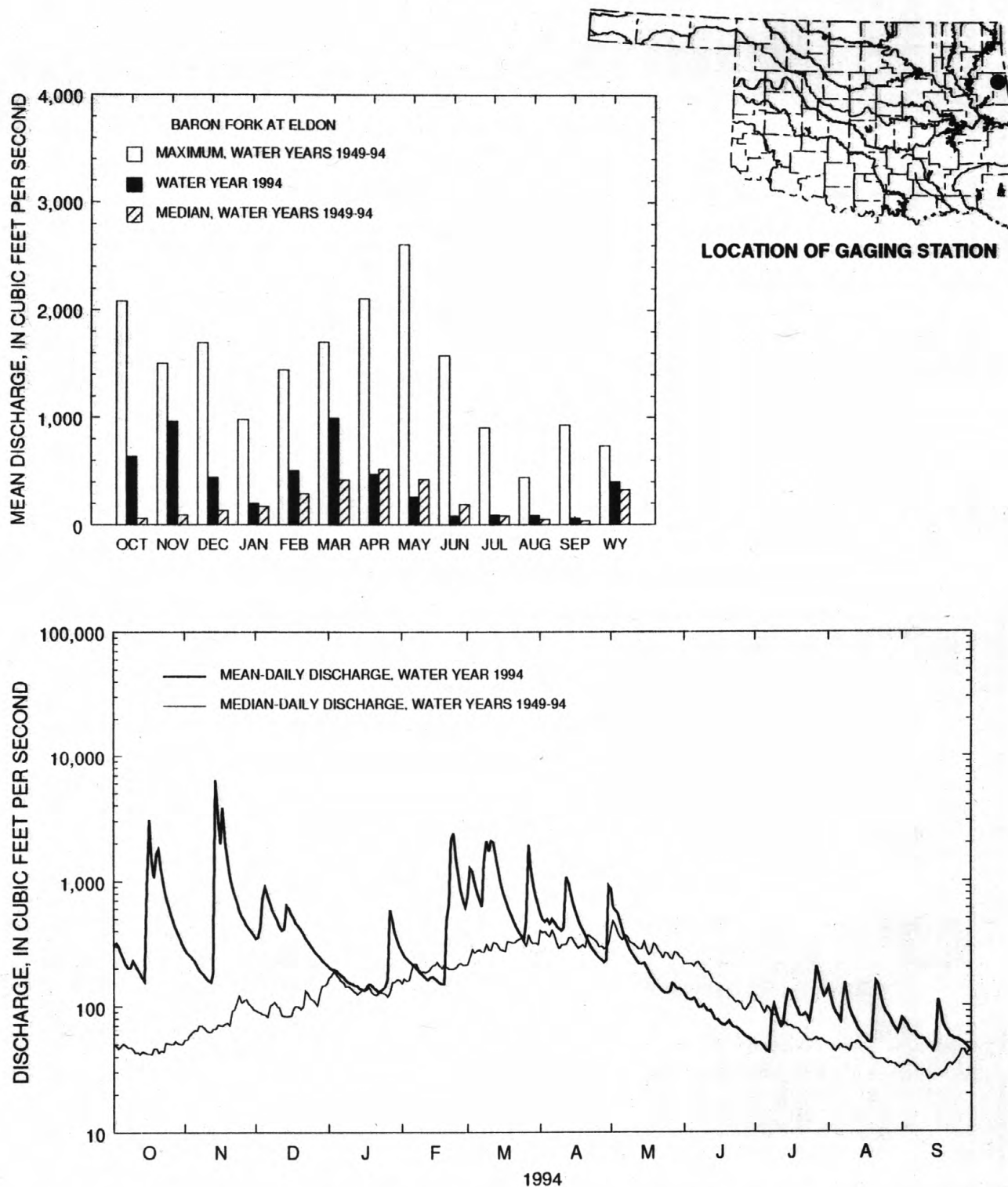


Figure 4.—Comparison of daily, monthly, and annual discharges for water year 1994 and period of record for Baron Fork at Eldon, Oklahoma.

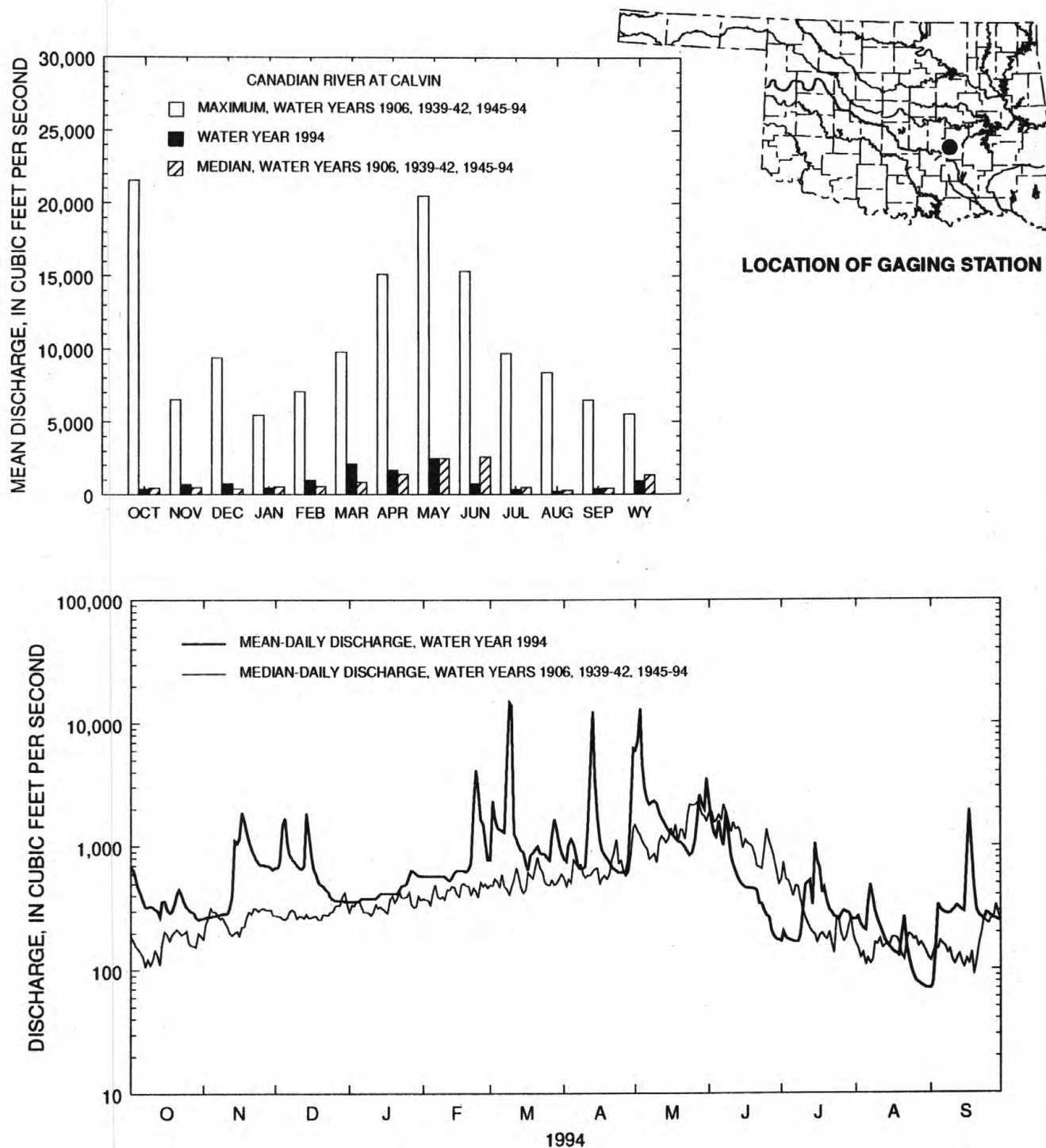


Figure 5.—Comparison of daily, monthly, and annual discharges for water year 1994 and period of record for Canadian River at Calvin, Oklahoma.

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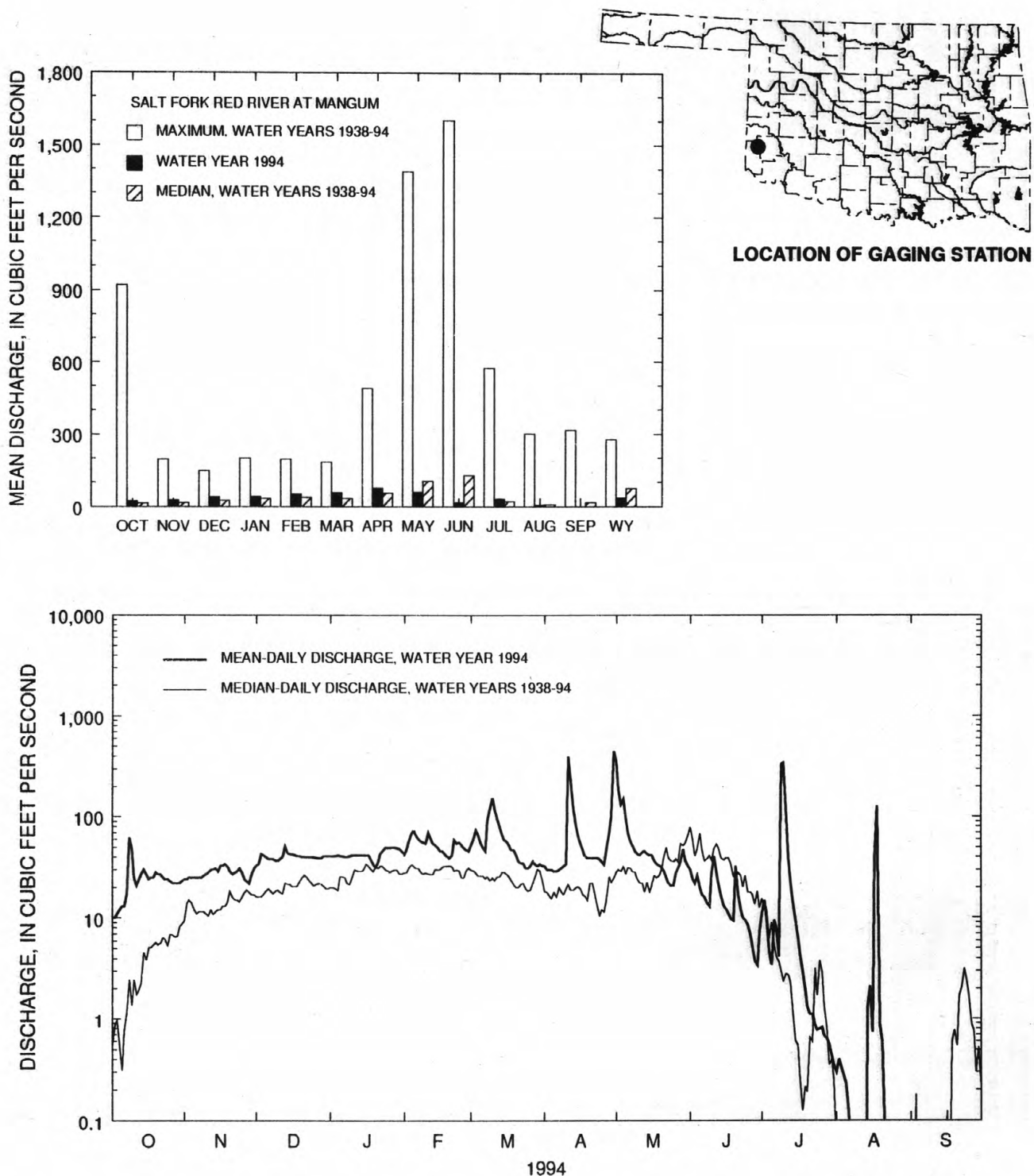


Figure 6.—Comparison of daily, monthly, and annual discharges for water year 1994 and period of record for Salt Fork Red River at Mangum, Oklahoma.

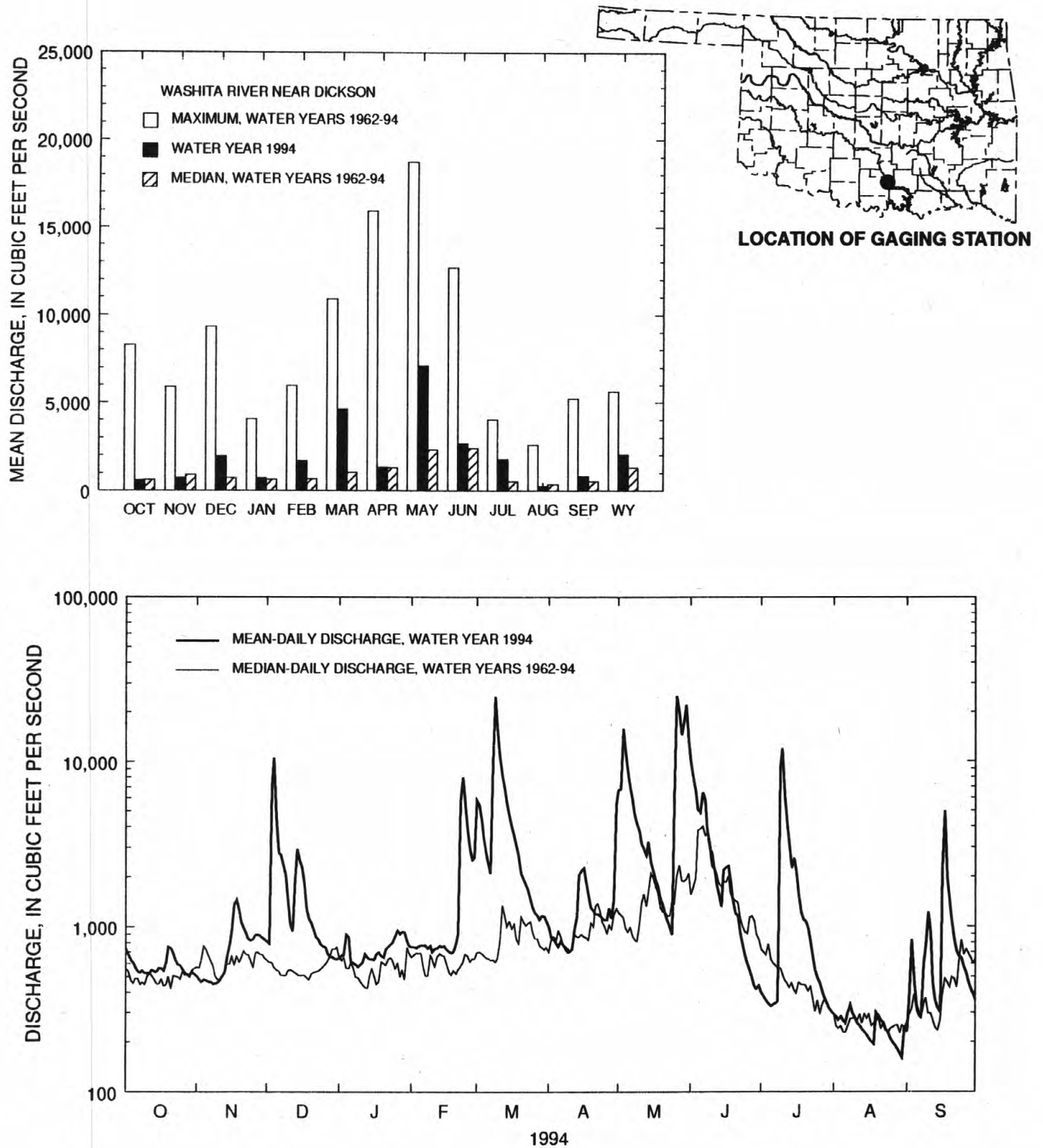


Figure 7.—Comparison of daily, monthly, and annual discharges for water year 1994 and period of record for Washita River near Dickson, Oklahoma.

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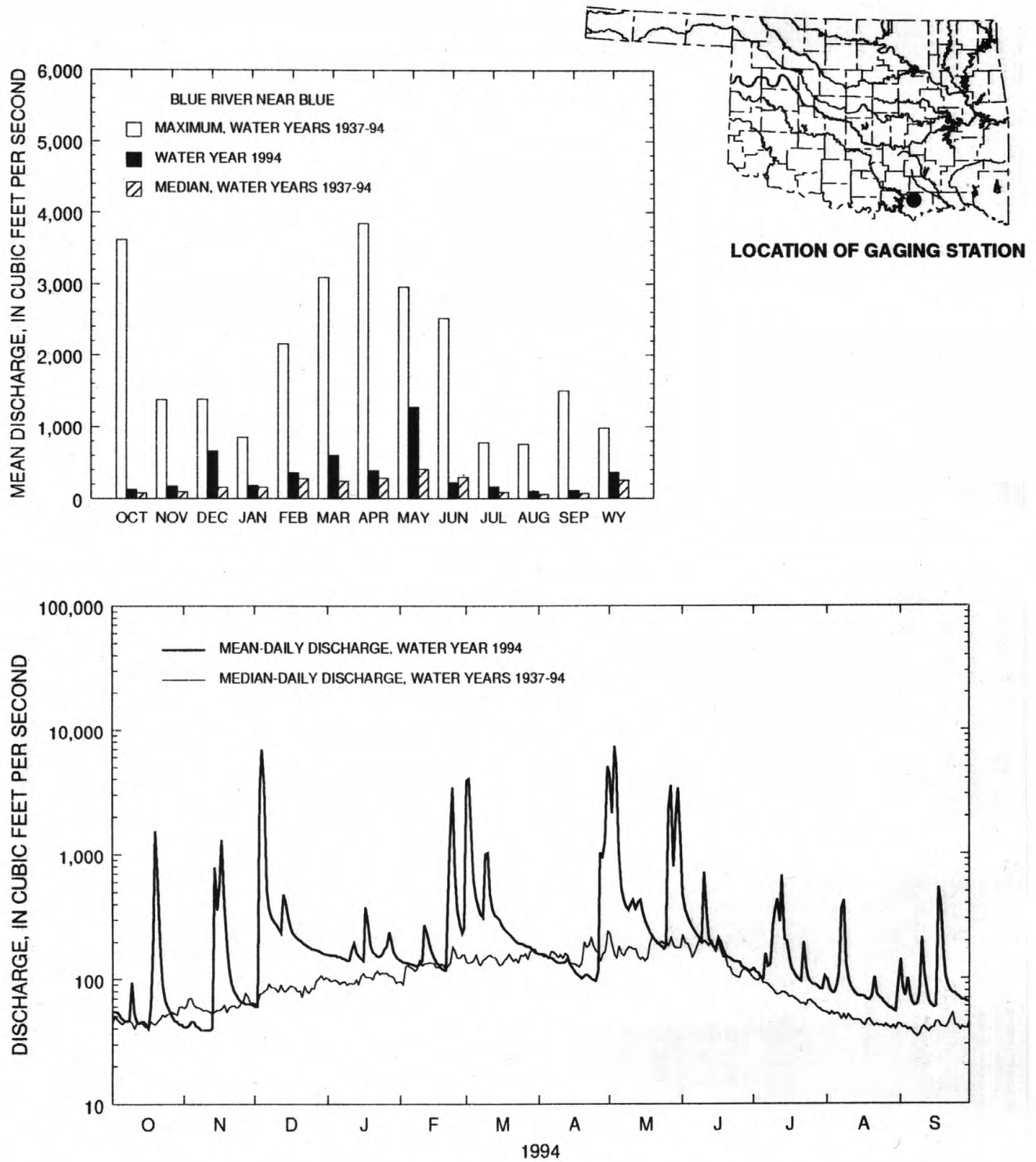


Figure 8.—Comparison of daily, monthly, and annual discharges for water year 1994 and period of record for Blue River near Blue, Oklahoma.

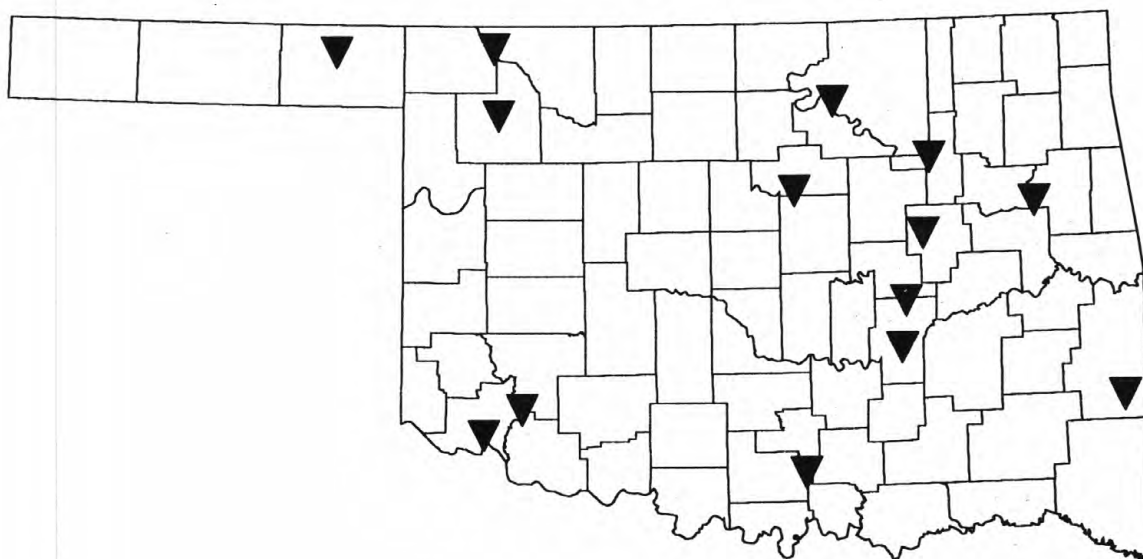
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Chemical Quality of Streamflow

The concentrations of selected dissolved chemical constituents measured at surface-water sampling stations in the State during the 1994 water year were generally within the ranges measured during previous years. The minimum values for the selected constituents for most stations were larger for the 1994 water year than the minimum values for the 1970 through 1990 water years. The maximum values for these

same constituents were smaller for most stations for the 1993 water year than the maximum values for the 1970 through 1990 water years. Concentrations of dissolved solids, chloride, sulfate, and suspended sediment are shown in the following graphs for sampling sites on selected principal streams (fig. 9) in the State. Maximum and minimum concentrations of these constituents for the 1994 water year are compared to maximum and minimum concentrations for the 1970 through 1990 water years.



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The maximum dissolved-solids concentration measured in these streams in 1994 was 27,800 milligrams per liter (mg/L) in the Cimarron River near Buffalo. The minimum

concentrations for 1994 are larger than the 20-year minimums. The maximum concentrations for 1994 are smaller than the 20-year maximums. Dissolved-solids concentrations, in mg/L, are shown in the following graphs:

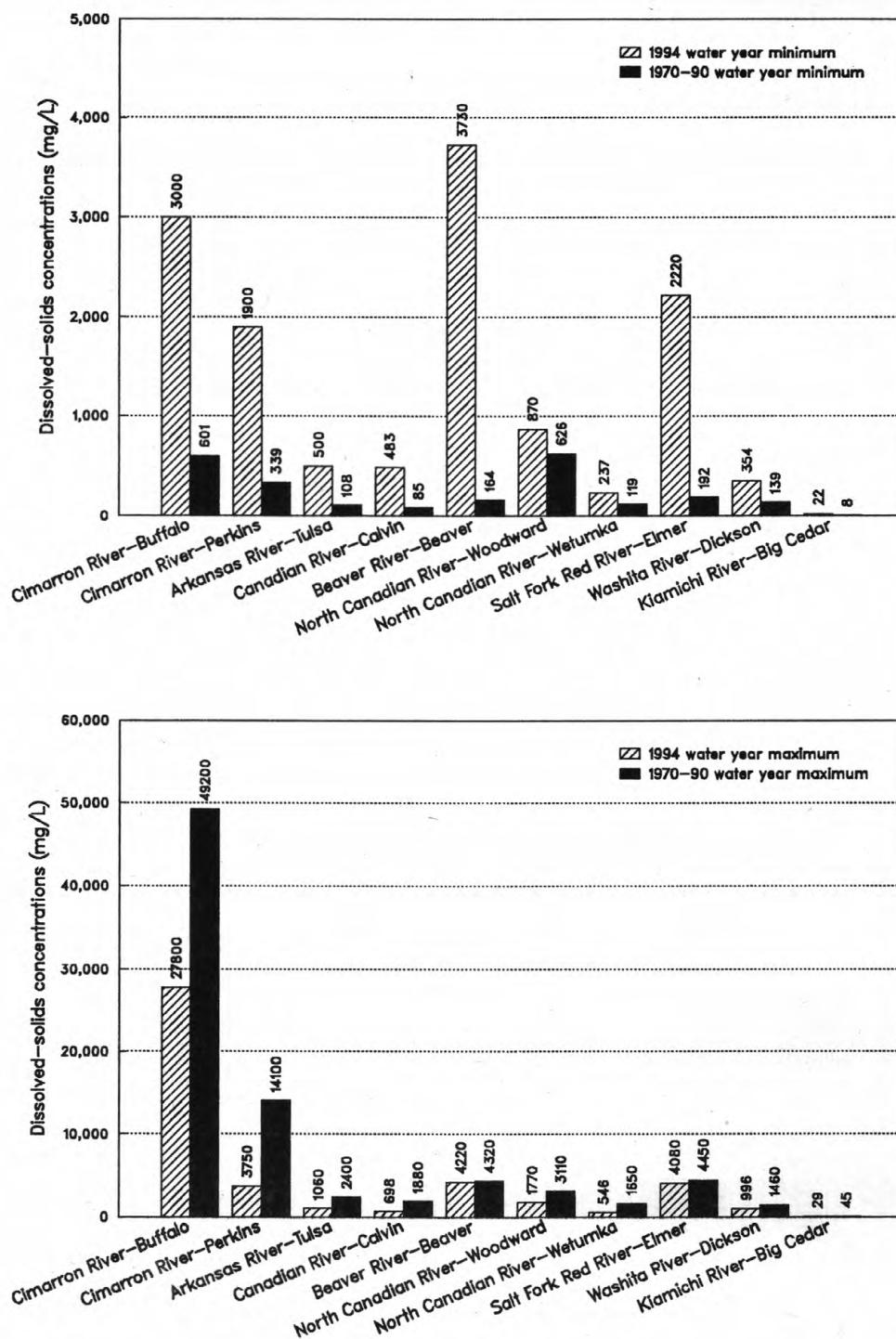


Figure 10.—Comparisons of minimum and maximum dissolved-solids concentrations, in milligrams per liter (mg/L), for water year 1994 and water years 1970-90.

The maximum dissolved-chloride concentration measured at the selected stations in 1994 was 16,000 mg/L in the Cimarron River near Buffalo. The minimum chloride concentrations for 1994 were larger than the 20-year

minimums. The maximum concentrations for 1994 were smaller than the 20-year maximums, except for the value at Beaver River at Beaver. The 1994 value equalled the 20-year maximum. Dissolved-chloride concentrations, in mg/L, are shown in the following graphs:

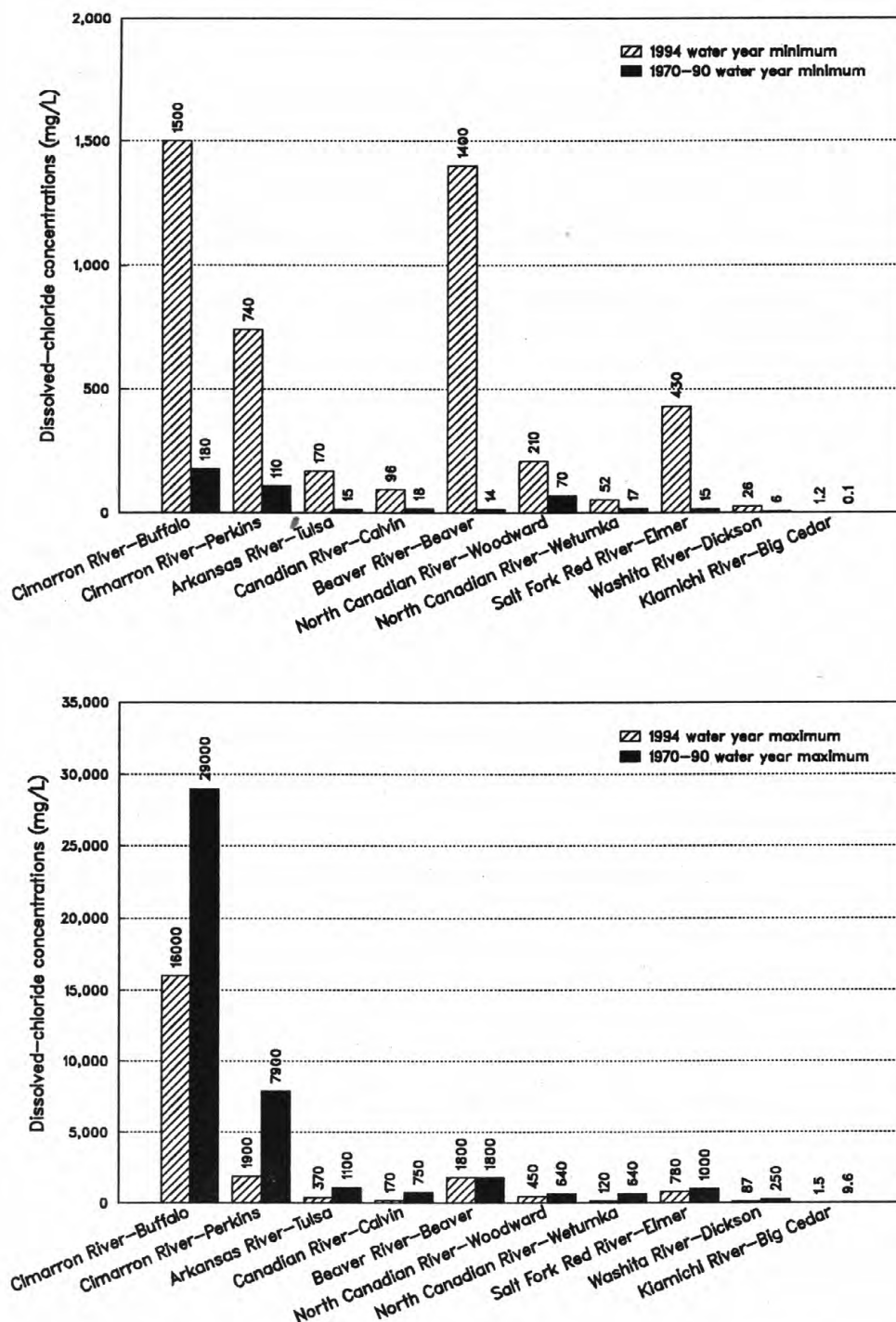


Figure 11.—Comparisons of minimum and maximum dissolved-chloride concentrations, in milligrams per liter (mg/L), for water year 1994 and water years 1970-90.

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The maximum dissolved-sulfate concentration measured at the selected stations in 1994 was 1,700 mg/L in the Salt Fork Red River near Elmer. The minimum concentrations for 1994

are larger than the 20-year minimums. The maximum concentrations for 1994 are small than the 20-year maximums. Dissolved-sulfate concentrations, in mg/L, are shown in the following graphs:

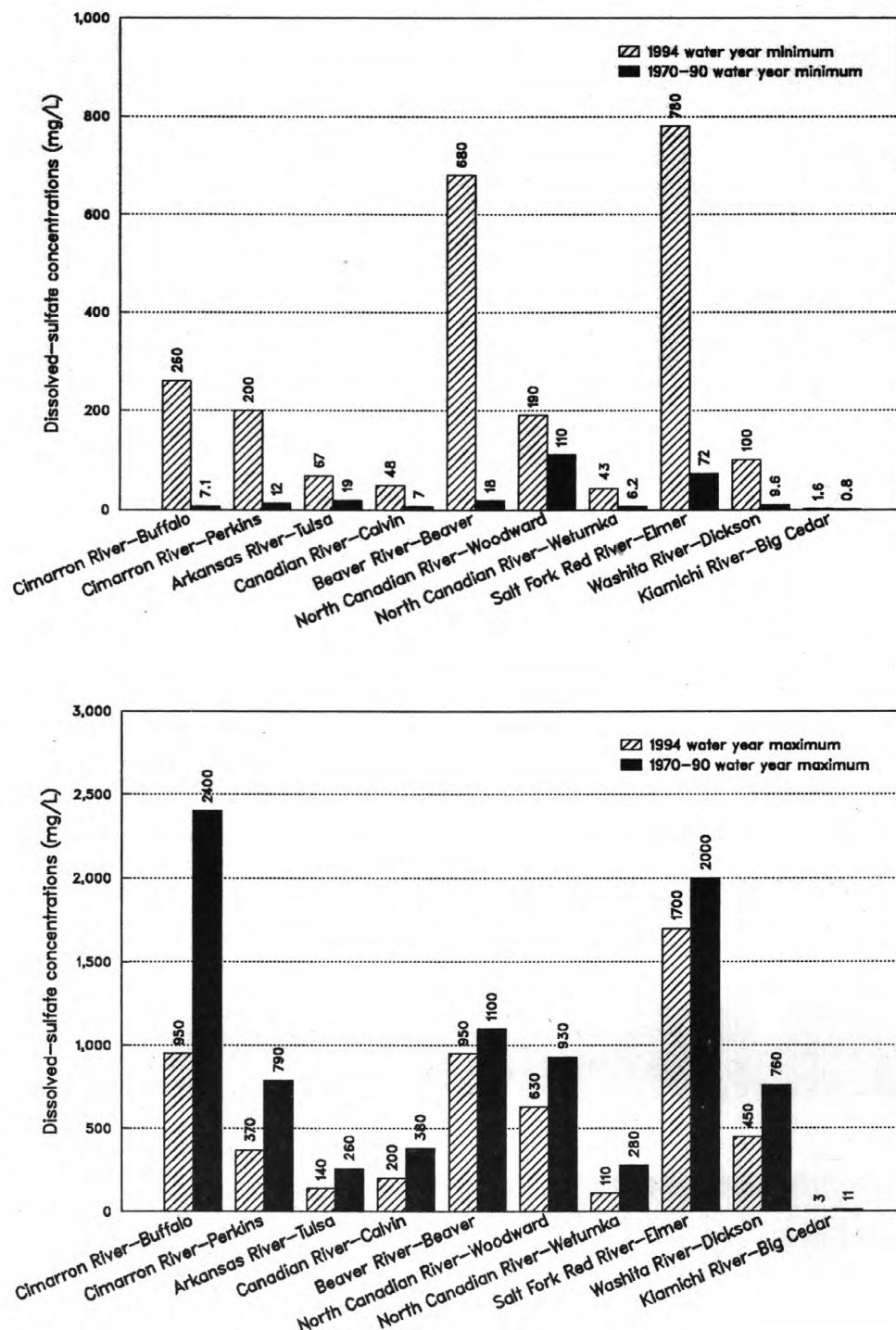


Figure 12.—Comparisons of minimum and maximum dissolved-sulfate concentrations, in milligrams per liter (mg/L), for water year 1994 and water years 1970-90.

The maximum suspended-sediment concentration measured at the selected stations in 1994 was 1,280 mg/L in the Cimarron River near Buffalo. The minimum suspended-sediment concentrations for 1994 were larger than the 20-

year values, except for the 1994 value for North Canadian River at Woodward, which was smaller. The maximum concentrations were smaller than the 20-year maximums. Suspended-sediment concentrations, in mg/L, are shown in the following graphs:

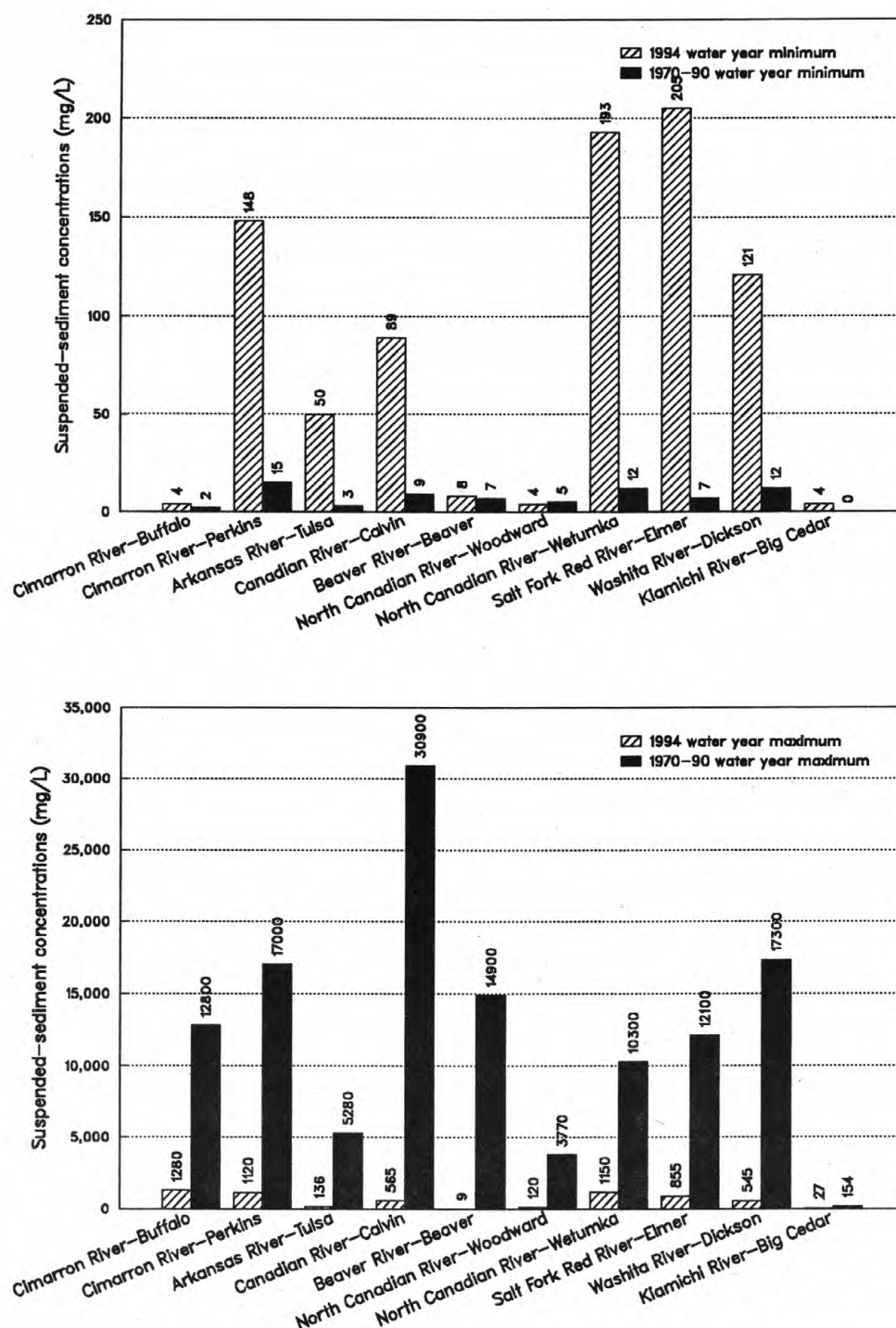


Figure 13.—Comparisons of minimum and maximum suspended-sediment concentrations, in milligrams per liter (mg/L), for water year 1994 and water years 1970-90.

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Ground Water

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

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

The hydrographs of the Texhoma GW Well (Texas County) (fig. 15) and the Sharon GW well (Woodward County) (fig. 16) are indicative of the long-term decline of

water levels in the Ogallala aquifer. The Texhoma well was the only reporting well that recorded a new low water level of record. The Sharon well continues its decline of nearly one foot per year for the last six years after a reversal last water year.

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

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

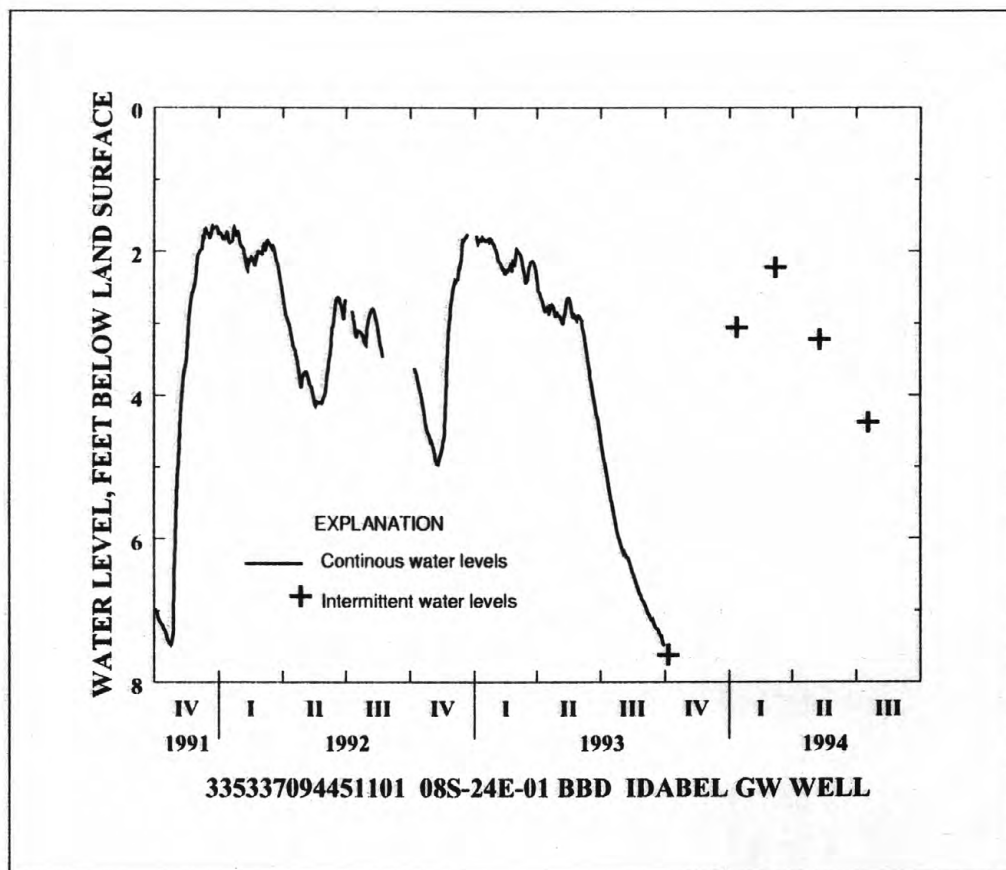


Figure 14.—Hydrograph for well 08S-24E-01 BBD 1 (Idabel GW Well, 335337094451101) for water years 1992-94.

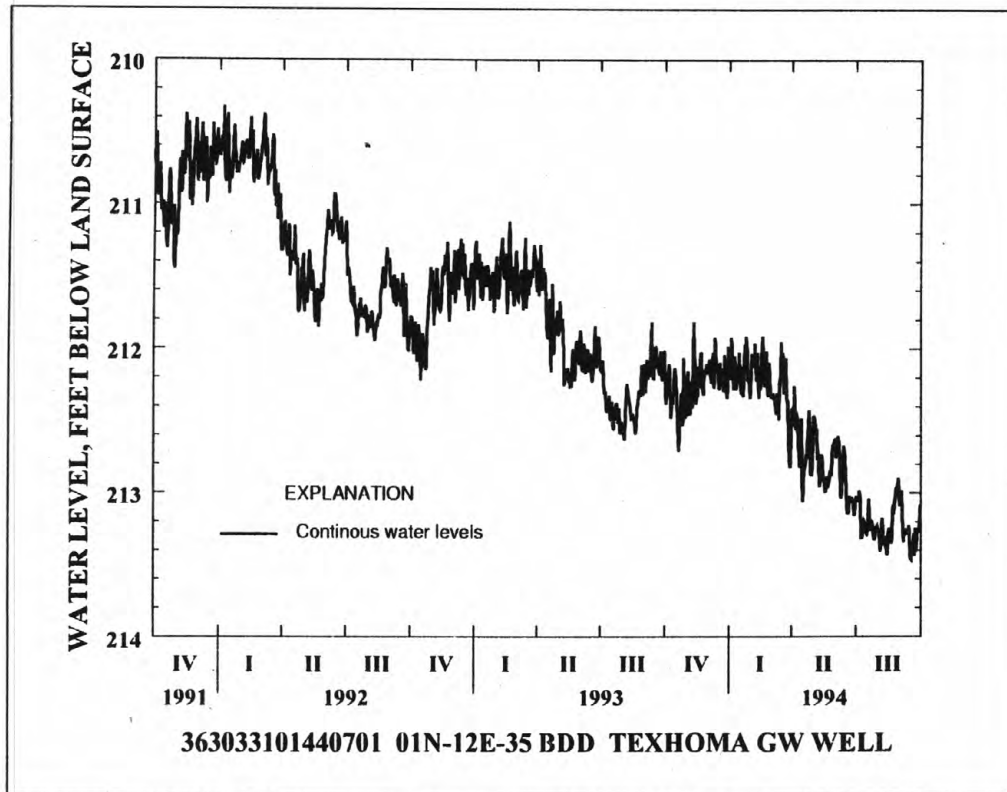


Figure 15.—Hydrograph for well 01N-12E-35 BDD 1 (Texhoma GW Well, 363033101440701) for water years 1992-94.

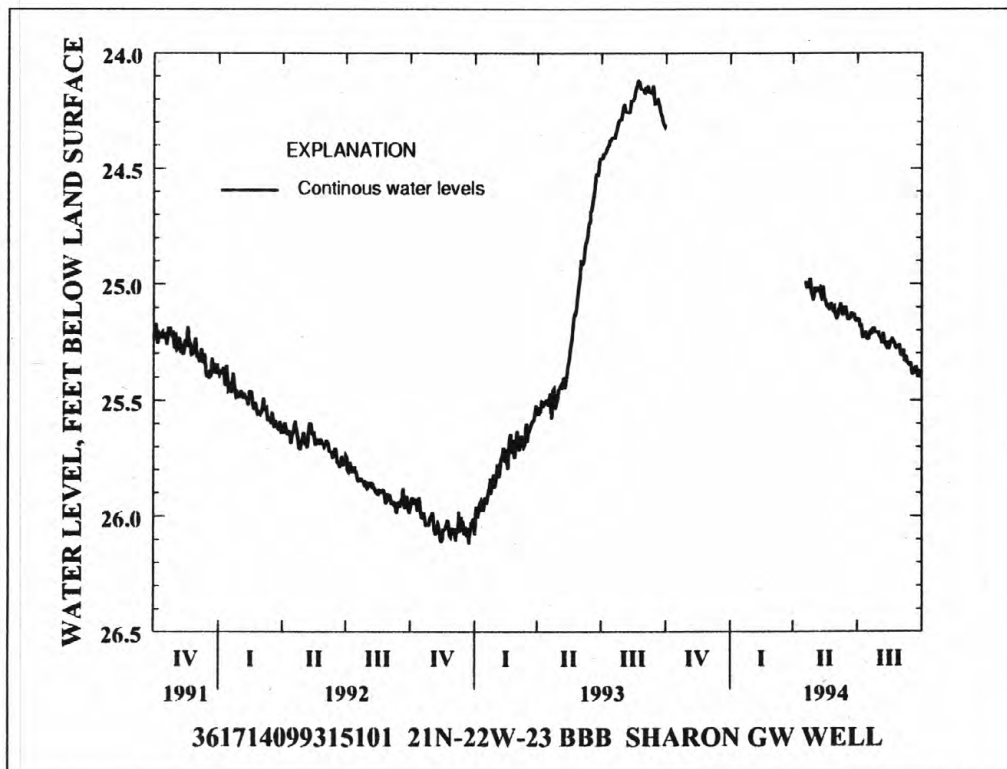


Figure 16.—Hydrograph for well 21N-22W-23 BBB 1 (Sharon GW Well, 361714099315101) for water years 1992-94.

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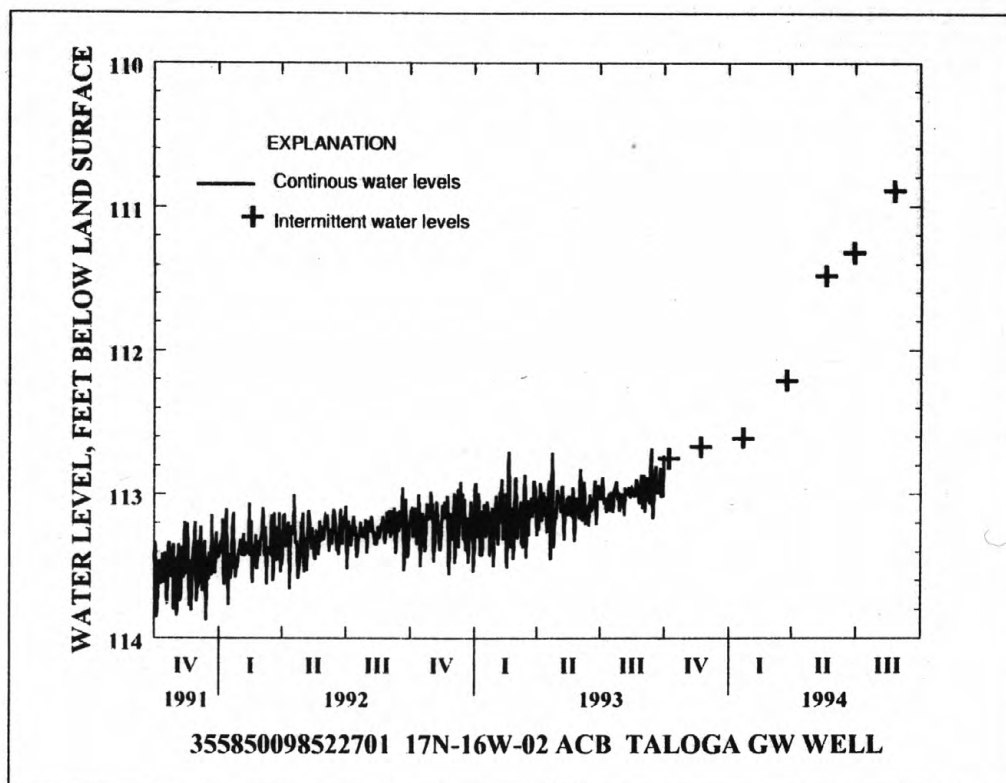


Figure 17.—Hydrograph for well 17N-16W-02 ACB 1 (Taloga GW Well, 355850098522701) for water years 1992-94.

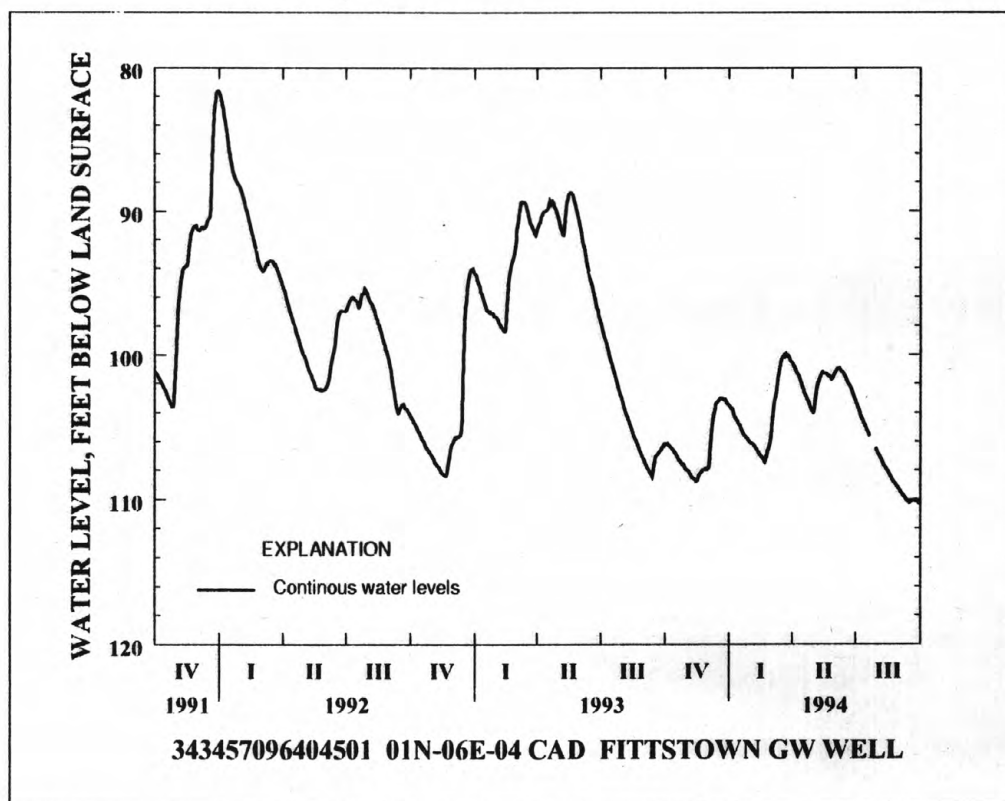


Figure 18.—Hydrograph for well 01N-06E-04 CAD 1 (Fittstown GW Well, 343457096404501) for water years 1992-94.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 53 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 284 sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

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

The National Water-Quality Assessment (NAWOA) 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 1994 water year that began Oct. 1, 1993, and ended Sept. 30, 1994. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface water and water levels for ground water. The locations of the stations where the data were collected are shown in figures 19-21. 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.

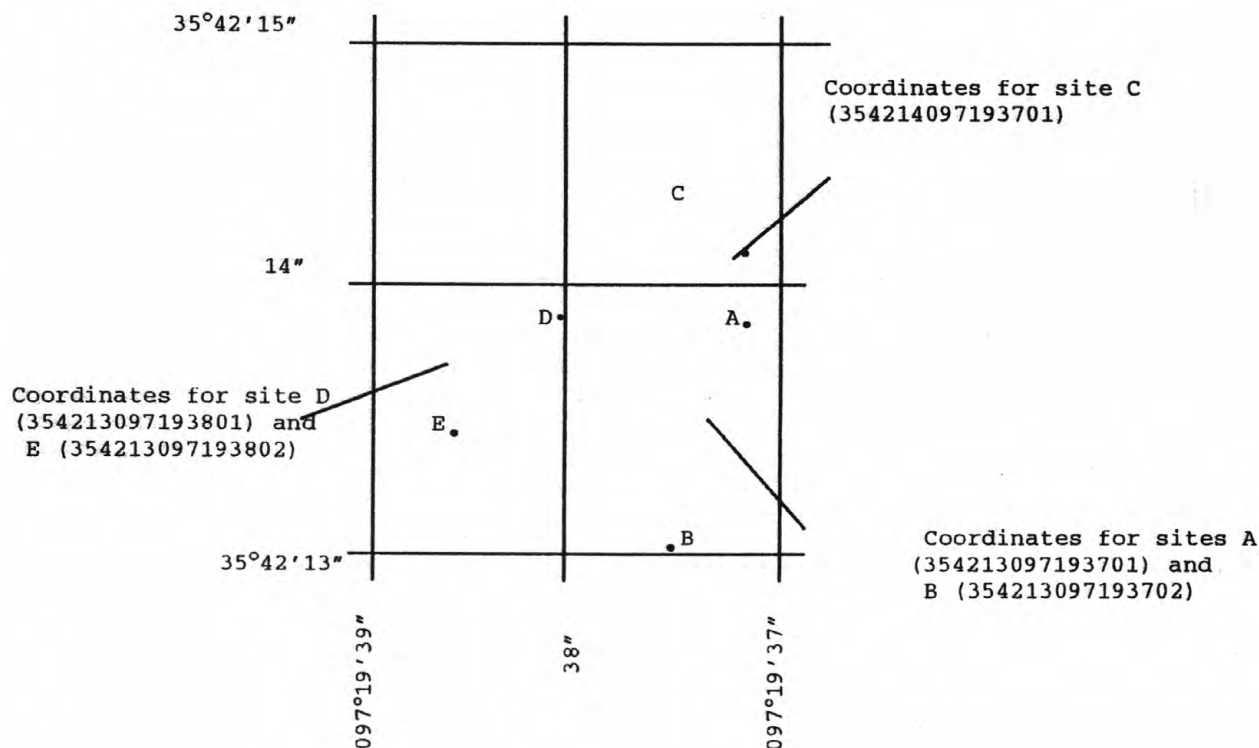
Station Identification Numbers

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

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

between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indentation in the "List of Stations" in the front of this report. Each indentation represents one rank. This downstream order and system of indentation 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 19.

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 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 or record and the current year; and possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet 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

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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 ft³/s; to the nearest tenth between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures for more than 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

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

Other Records Available

The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 22092, maintains an index of these sites as well as an index of records of discharge collected by other agencies but not published by the Geological Survey.

Information on records at specific sites can be obtained from that office upon request.

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

Records of Surface-Water Quality

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

Classification of Records

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

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

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at 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. 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. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals, depends on flow conditions and other factors which must be evaluated by the collector.

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

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

Water Temperature

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

Sediment

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

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

Sediment samples, samples for biochemical-oxygen (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratories in Arvada, Colo. Methods used 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 turbidimetric method for sulfate analysis, indicating that values below 75 mg/L have a median positive bias of 2 mg/L above the true value for the period between 1982 and 1989. Sulfate values in this report have not been corrected for this bias.

Data Presentation

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

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

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

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

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

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

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

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

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

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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).
&	Biological organism estimated as dominant.

Dissolved Trace-Element Concentrations

NOTE: Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter ($\mu\text{g/L}$) 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 $\mu\text{g/L}$ 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.

Records of Ground-Water Levels

Only water-level data from a national network of

observation wells are given in this report. These data are intended to provide a sampling and historical record of water-level changes in the Nation's most important aquifers. Locations of the observation wells in this network in Oklahoma are shown in figure 21.

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

Data Collection and Computation

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

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

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

Data Presentation

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

LOCATION.--This paragraph follows the well-

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

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

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

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

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

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

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

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

ACCESS TO WATSTORE DATA

The U.S. Geological Survey is the principal Federal water-data agency and, as such, collects and disseminates about 70 percent of the water data currently being used by numerous State, local, private, and other Federal agencies to develop and manage our water resources. As part of the Geological Survey's program of releasing water data to the public, a large-scale computerized system has been developed

for the storage and retrieval of water data collected through its activities. The National Water Data STorage and Retrieval System (WATSTORE) was established in 1972 to provide an effective and efficient means for the processing and maintenance of water data collected through the activities of the U.S. Geological Survey and to facilitate release of the data to the public. A variety of useful products, ranging from data tables to complex statistical analyses such as Log Pearson Type III, can be produced using WATSTORE. The system resides on the central computer facilities of the U.S. Geological Survey at its National Center in Reston, Virginia, and consists of related files and data bases.

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

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

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

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

available for sale by the Books and Open-File Reports Section, U.S Geological Survey, Federal Center, Box 25425, Denver, Colorado 80225.

DEFINITIONS OF TERMS

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

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

Algae are mostly aquatic single-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.

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

Fecal coliform bacteria are bacteria that are present

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

Fecal streptococcal bacteria are bacteria found also in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as Gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 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.

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

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

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

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

Cubic foot per second (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 [$(\text{ft}^3/\text{s})/\text{mi}^2$] 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.

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

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

Dissolved refers to that material in a representative water sample which passes through a 0.45 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 (CaCO_3).

HWM is a high-water mark or flood mark.

Hydrologic Benchmark Network is a network of 53 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 ($\mu\text{g/g}$) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

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

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

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 284 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

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

Organism is any living entity.

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

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

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

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

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

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

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

<u>Classifi- cation</u>	<u>Size (mm)</u>	<u>Method of analysis</u>
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-size 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 10¹⁰ 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 known 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 algal 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/(m².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 O₂/(m².time)] for periphyton and macrophytes and [mg O₂/(m³.time)] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

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

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

Substrate is the physical surface upon which an organism lives.

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

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

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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 hierarchical 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	<u>Hexagenia</u>
Species	<u>hexagenia limbata</u>

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

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

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

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is

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

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

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

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

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

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

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

The reports listed below are for sale by the U.S. Geological Survey, 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."

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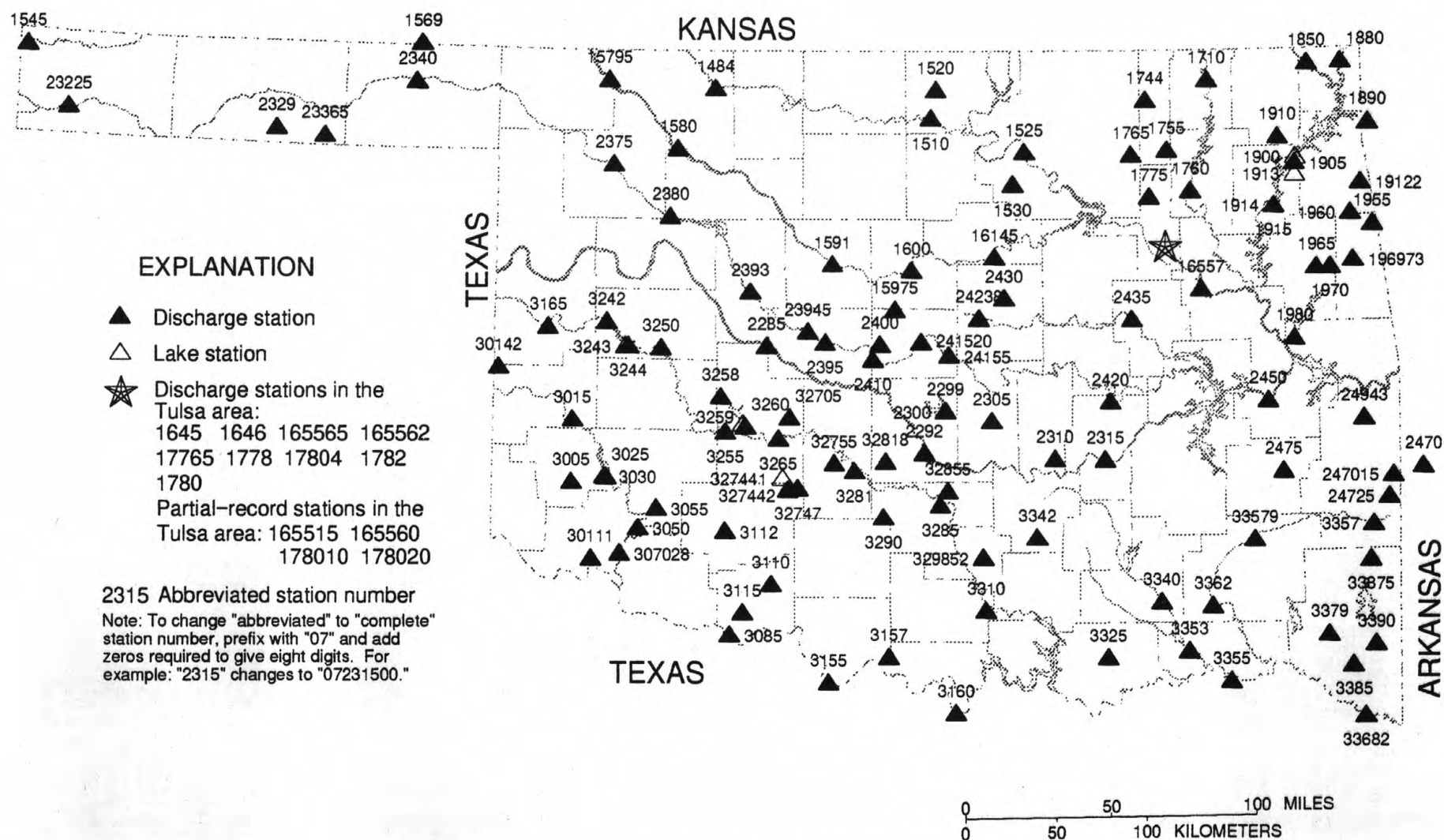


Figure 19.--Locations of continuous and partial-record surface-water stations, water year 1994

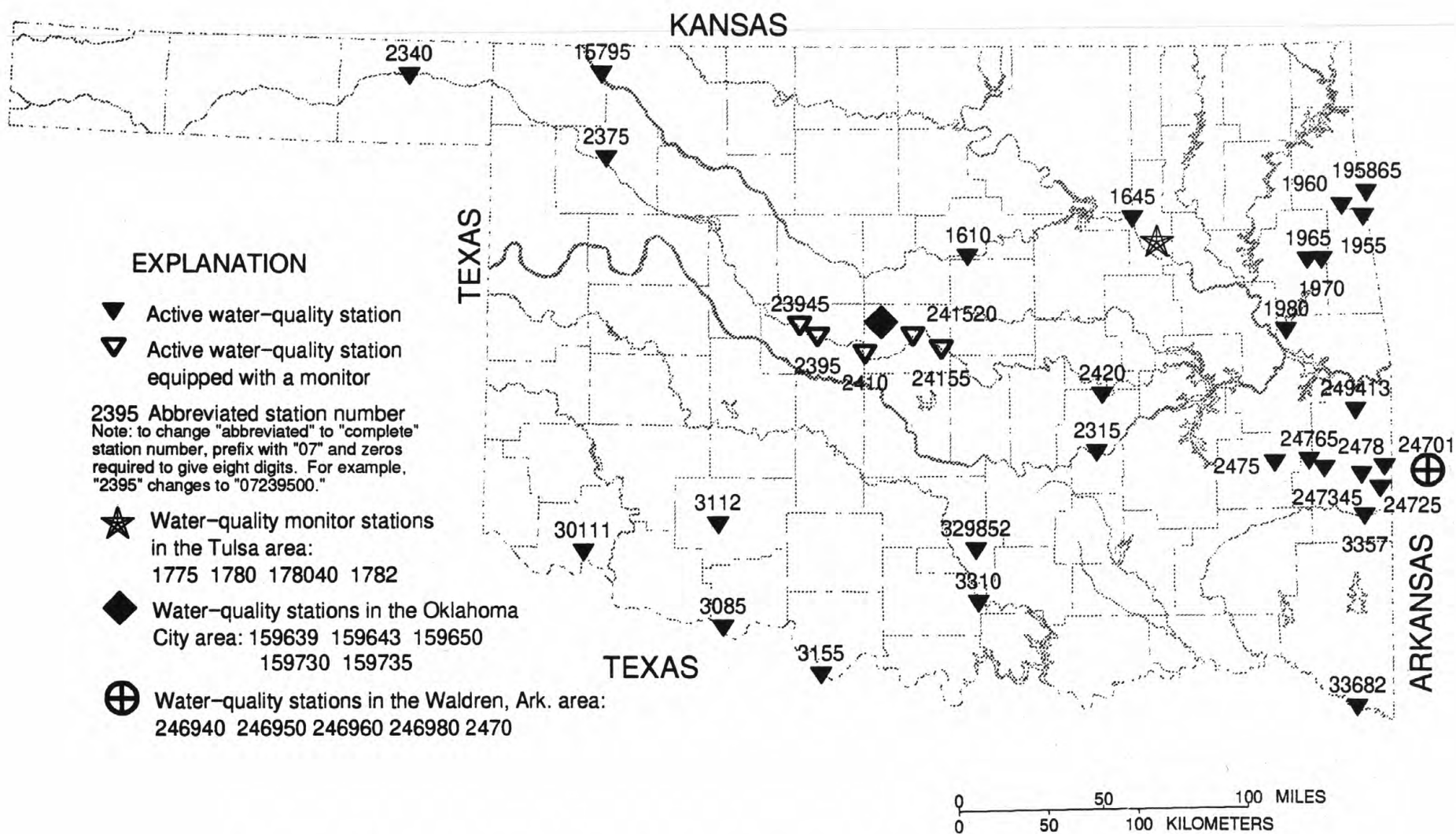


Figure 20.--Locations of water-quality stations, water year 1994

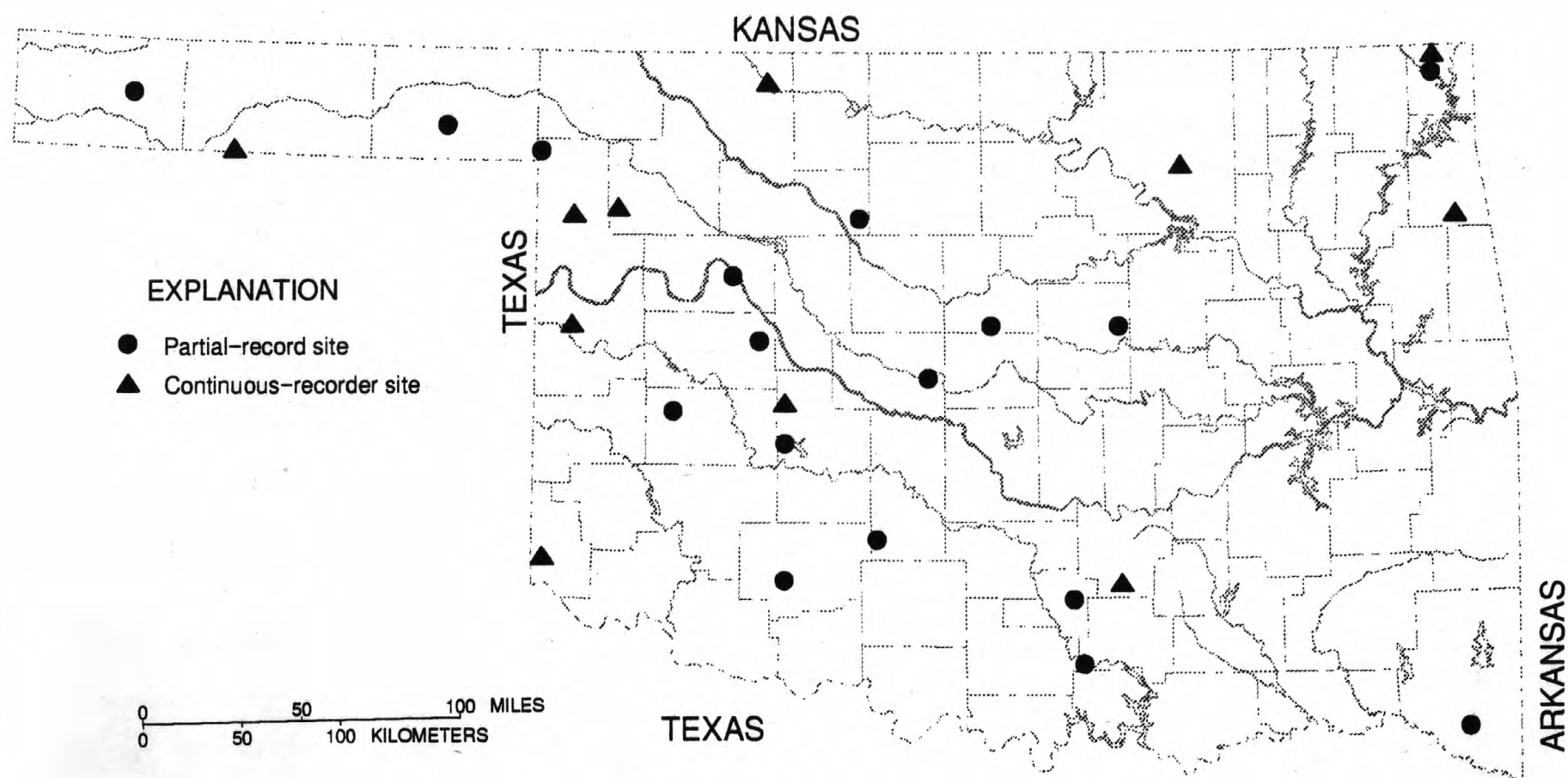
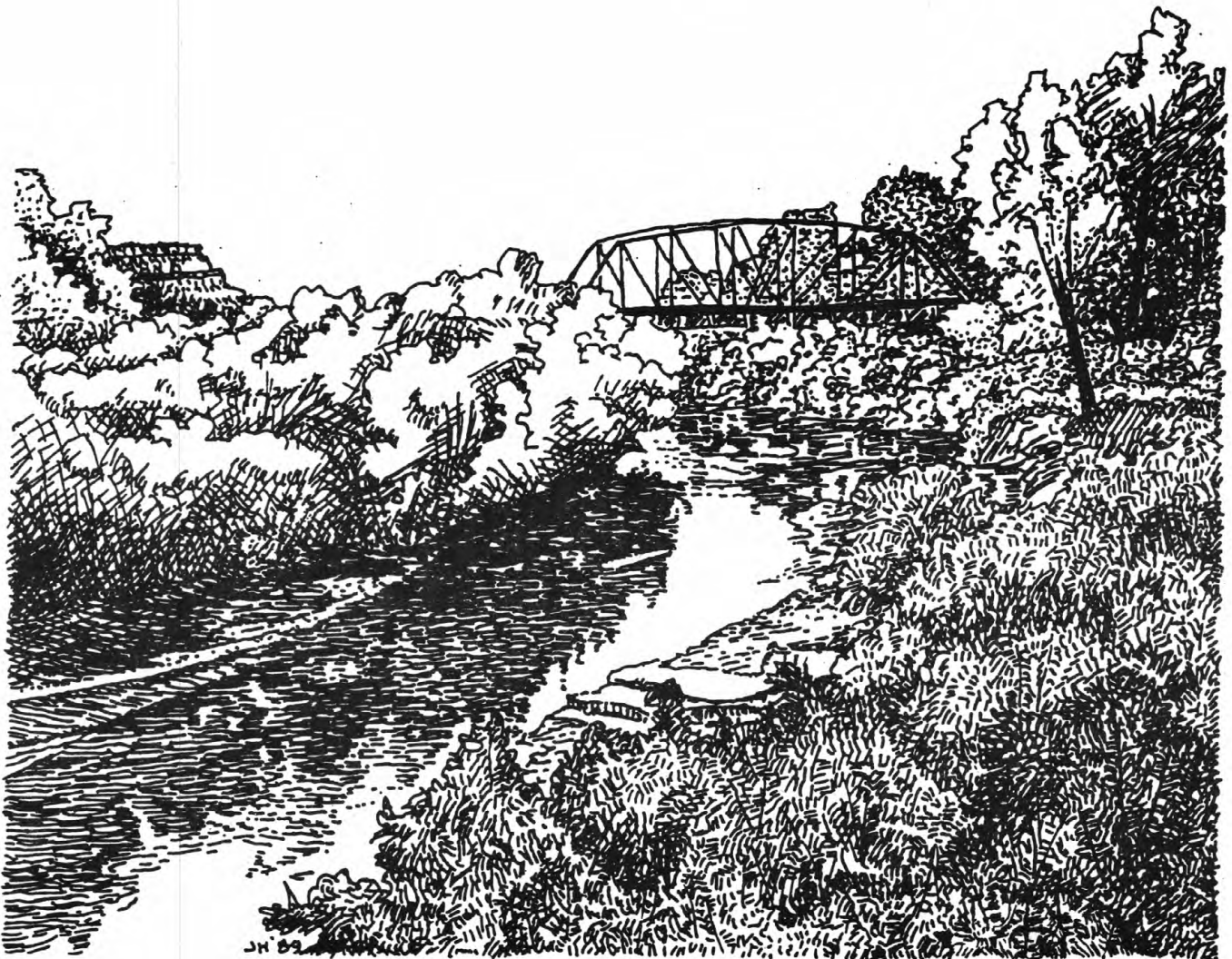


Figure 21.--Locations of network ground-water wells, water year 1994



ARKANSAS RIVER BASIN

07148400 SALT FORK ARKANSAS RIVER NEAR ALVA, OK

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

DRAINAGE AREA.--1,009 mi².

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

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

REMARKS.--Records fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 ft³/s:

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	21	50	62	e38	53	45	128	45	13	24	248
2	16	23	46	59	e33	54	46	115	37	6.0	25	75
3	16	25	45	52	e44	59	47	104	215	2.8	20	33
4	16	26	47	51	56	59	45	98	199	8.9	18	26
5	16	24	46	53	69	60	44	89	62	16	16	18
6	14	25	41	52	68	60	44	77	45	8.8	14	11
7	14	25	40	44	58	57	44	66	40	3.9	12	8.1
8	14	24	41	33	e40	52	45	61	34	3.5	10	6.4
9	12	27	44	34	e20	54	50	61	29	3.1	8.2	4.7
10	12	30	46	55	e30	56	50	59	44	2.8	6.9	3.4
11	13	33	45	60	e45	57	69	56	33	2.3	6.3	3.0
12	14	37	46	60	48	57	84	54	25	1.9	5.1	2.6
13	15	36	51	55	49	57	86	55	20	2.2	4.2	2.6
14	15	40	49	54	65	56	81	57	17	2.5	3.6	2.3
15	15	52	46	49	76	56	75	53	13	3.6	3.9	2.0
16	15	50	45	49	68	53	68	49	11	14	3.6	1.9
17	14	48	47	41	68	55	63	45	9.4	15	3.3	1.9
18	15	48	46	e28	69	55	59	42	7.3	29	2.7	1.7
19	16	44	46	e30	66	52	55	40	5.7	17	3.3	1.6
20	19	39	46	e35	59	49	48	36	4.9	8.2	39	1.5
21	17	39	44	e40	53	43	50	34	4.4	11	30	4.2
22	17	41	43	61	65	43	65	33	4.0	82	10	3.3
23	16	42	39	76	69	43	96	32	3.2	18	5.3	2.1
24	17	36	37	73	74	40	76	35	2.9	13	3.6	1.9
25	19	29	41	64	73	37	64	45	2.6	615	2.9	1.7
26	18	24	52	64	56	57	58	41	2.2	341	2.4	1.6
27	15	30	55	67	54	57	60	37	2.1	124	1.9	1.6
28	18	38	45	68	52	52	68	36	1.8	55	1.7	1.6
29	18	43	38	63	---	50	93	64	6.1	40	1.8	1.6
30	16	51	37	62	---	45	127	118	12	38	1.9	1.6
31	20	---	43	e45	---	44	---	62	---	30	27	---
TOTAL	488	1050	1387	1639	1565	1622	1905	1882	937.6	1531.5	317.6	475.9
MEAN	15.7	35.0	44.7	52.9	55.9	52.3	63.5	60.7	31.3	49.4	10.2	15.9
MAX	20	52	55	76	76	60	127	128	215	615	39	248
MIN	12	21	37	28	20	37	44	32	1.8	1.9	1.7	1.5
AC-FT	968	2080	2750	3250	3100	3220	3780	3730	1860	3040	630	944

e Estimated

ARKANSAS RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1994, BY WATER YEAR (WY)

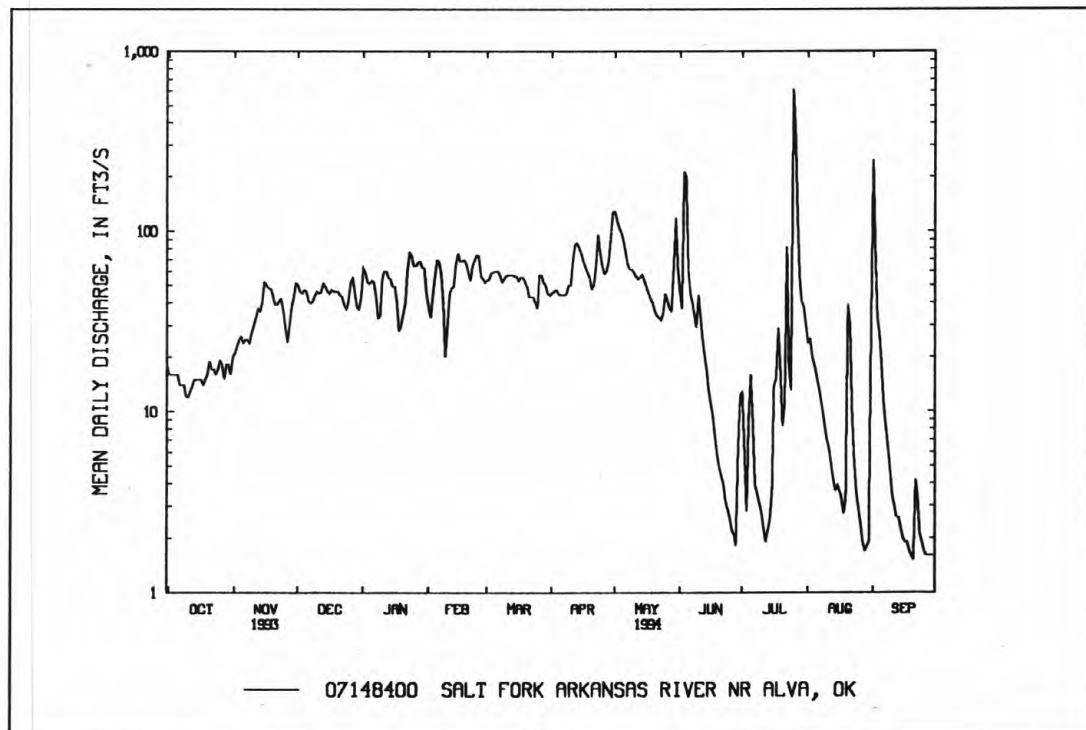
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	108	73.6	59.4	67.7	85.9	153	167	260	257	127	65.4	57.4
MAX	620	211	114	121	227	822	362	856	689	411	197	259
(WY)	1986	1982	1987	1988	1987	1987	1988	1993	1989	1982	1992	1989
MIN	2.35	.95	14.8	15.3	17.4	29.2	22.5	27.1	31.3	5.17	2.66	.94
(WY)	1992	1981	1981	1981	1981	1981	1981	1992	1994	1984	1980	1980

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1980-94
ANNUAL TOTAL	71862	14800.6	
ANNUAL MEAN	197	40.5	^a 124
HIGHEST ANNUAL MEAN			271 1987
LOWEST ANNUAL MEAN			40.5 1994
HIGHEST DAILY MEAN	2430	May 18 615	Jul 25 7880 Mar 24 1987
LOWEST DAILY MEAN	12	Oct 9 1.5	Sep 20 ^b .43 Aug 24 1984
ANNUAL SEVEN-DAY MINIMUM	13	Oct 6 1.7	Sep 24 .48 Aug 18 1984
INSTANTANEOUS PEAK FLOW		1320	Jul 25 ^c 12800 Oct 10 1985
INSTANTANEOUS PEAK STAGE		8.24	Jul 25 15.24 Oct 10 1985
ANNUAL RUNOFF (AC-FT)	142500	29360	89510
10 PERCENT EXCEEDS	416	68	246
50 PERCENT EXCEEDS	113	40	59
90 PERCENT EXCEEDS	19	3.1	4.8

^aAverage discharge, water years 1938-51, 158 ft³/s.

^bNo flow in several years 1939-48.

^cMaximum discharge for period of record 27,000 ft³/s, Oct. 23, 1941, from rating curve extended above 13,000 ft³/s.



ARKANSAS RIVER BASIN

07151000 SALT FORK ARKANSAS RIVER AT TONKAWA, OK

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

DRAINAGE AREA.--4,528 mi², of which 8 mi² is probably noncontributing.

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

REVISED RECORDS.--WSP 1117: Drainage area.

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

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

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharges of 11,000 ft³/s:

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	285	224	268	297	273	347	278	8380	1040	127	163	89
2	323	244	265	307	311	359	282	3910	721	127	177	104
3	345	236	302	295	303	374	289	2240	598	123	177	100
4	256	233	319	284	284	385	281	1360	521	115	150	86
5	262	239	319	300	284	381	280	1110	574	104	137	105
6	271	248	337	307	280	364	293	993	1020	95	134	202
7	259	245	345	e288	273	354	263	901	1140	92	109	419
8	253	243	329	273	e300	346	271	793	2310	89	92	273
9	249	250	312	315	324	325	258	699	1510	87	88	312
10	263	246	310	321	e310	304	249	662	1050	83	75	255
11	282	237	315	279	332	426	408	610	924	81	67	185
12	235	263	329	276	363	435	572	576	858	84	63	151
13	225	276	312	280	384	408	716	552	784	224	61	126
14	228	339	323	295	310	382	774	526	701	653	56	108
15	222	338	316	284	277	376	525	647	641	245	55	100
16	225	277	340	251	301	377	485	656	595	149	55	100
17	228	283	308	e240	268	315	456	657	458	165	53	94
18	220	288	294	e235	294	326	442	589	373	131	54	82
19	218	308	315	e250	284	351	438	529	333	129	58	72
20	216	320	328	e280	314	305	418	486	300	123	1080	69
21	222	320	299	e310	340	286	375	441	288	625	690	65
22	227	336	303	344	295	314	518	400	270	492	741	68
23	236	334	291	401	277	286	480	360	238	254	427	67
24	238	315	303	311	371	286	425	336	220	166	264	65
25	239	295	299	281	438	281	503	400	223	238	186	66
26	234	291	334	295	382	228	479	562	187	155	141	66
27	234	303	305	300	332	225	535	520	158	161	115	62
28	233	291	288	328	346	234	3550	549	152	183	96	59
29	230	266	e280	376	---	264	6830	565	130	172	83	58
30	243	267	284	345	---	284	9630	597	126	186	91	56
31	221	---	293	303	---	285	---	1120	---	178	85	---
TOTAL	7622	8355	9565	9251	8850	10213	31303	32726	18443	5836	5823	3664
MEAN	246	278	309	298	316	329	1043	1056	615	188	188	122
MAX	345	339	345	401	438	435	9630	8380	2310	653	1080	419
MIN	216	224	265	235	268	225	249	336	126	81	53	56
AC-FT	15120	16570	18970	18350	17550	20260	62090	64910	36580	11580	11550	7270

e Estimated

ARKANSAS RIVER BASIN

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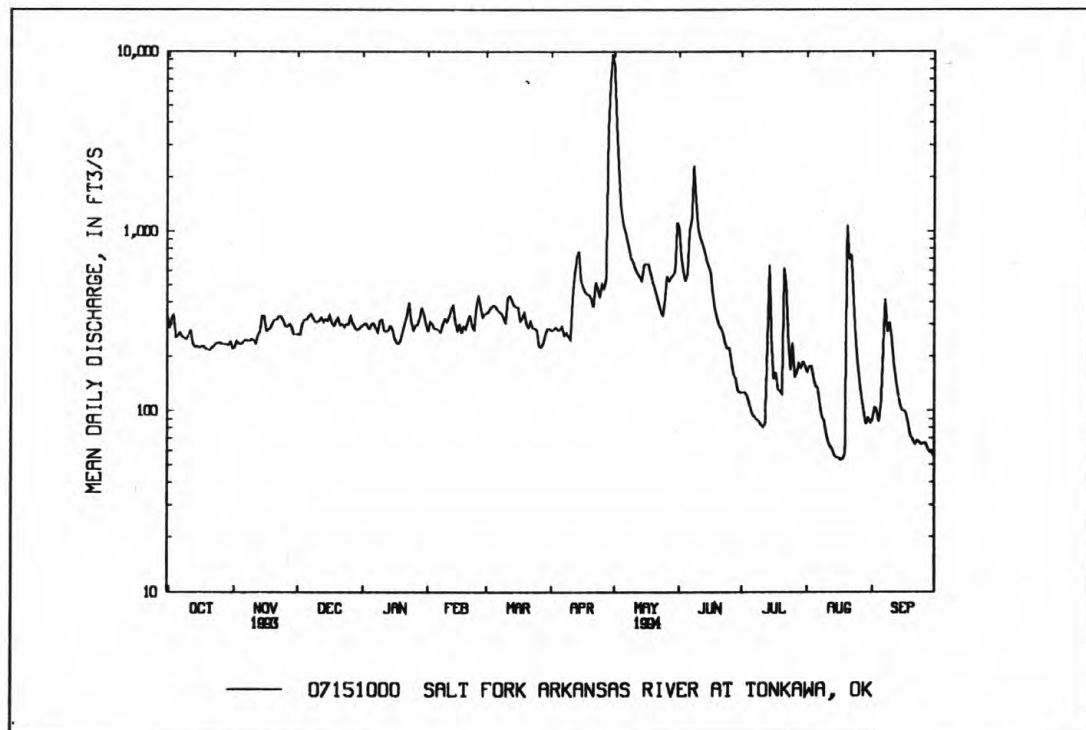
07151000 SALT FORK ARKANSAS RIVER AT TONKAWA, OK—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	868	618	343	348	533	921	1180	1672	1409	868	520	590
MAX	9412	4431	1809	1649	5171	6188	7916	12770	7539	8821	3777	3448
(WY)	1987	1975	1945	1993	1949	1973	1973	1993	1957	1951	1992	1949
MIN	.64	4.82	3.56	7.52	10.9	10.6	13.6	8.78	7.92	5.69	5.50	.000
(WY)	1957	1955	1955	1957	1957	1955	1955	1956	1956	1954	1956	1956

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1942-94
ANNUAL TOTAL	879841	151651	
ANNUAL MEAN	2411	415	823
HIGHEST ANNUAL MEAN			3260
LOWEST ANNUAL MEAN			95.5
HIGHEST DAILY MEAN	38000	May 10	9630
LOWEST DAILY MEAN	216	Oct 20	53
ANNUAL SEVEN-DAY MINIMUM	222	Oct 15	56
INSTANTANEOUS PEAK FLOW			11000
INSTANTANEOUS PEAK STAGE			16.00
ANNUAL RUNOFF (AC-FT)	1745000	300800	596500
10 PERCENT EXCEEDS	4990	616	1830
50 PERCENT EXCEEDS	1240	288	235
90 PERCENT EXCEEDS	263	93	32

^aAlso occurred Sept. 1 to Oct. 12, 14-16, 1956.



ARKANSAS RIVER BASIN

07152000 CHIKASKIA RIVER NEAR BLACKWELL, OK

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

DRAINAGE AREA.--1,859 mi².

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 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 ft³/s.

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Apr. 28	2300	10,300	24.35	No other peaks above base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152	116	165	176	e175	193	154	5200	257	67	69	11
2	148	128	161	191	e172	189	152	1360	214	78	64	13
3	114	134	159	180	e178	189	154	647	194	84	57	15
4	111	142	168	171	186	188	152	477	3110	77	55	19
5	108	140	168	170	207	182	162	393	1890	70	47	36
6	110	133	163	178	203	175	161	359	913	70	43	48
7	140	134	166	173	187	173	162	365	1260	57	40	47
8	97	138	162	e160	182	170	163	300	760	48	38	144
9	96	146	163	e165	e172	173	165	274	408	53	34	101
10	95	143	165	184	e165	168	191	258	319	49	33	78
11	98	142	161	206	e160	172	1050	245	263	56	30	61
12	102	167	155	212	e165	168	1300	239	234	61	27	45
13	99	175	169	193	e180	166	879	232	213	85	28	32
14	100	181	167	179	191	161	498	225	190	68	23	26
15	99	179	163	173	213	161	343	231	168	75	15	22
16	109	174	166	e168	214	155	275	303	154	86	14	42
17	115	177	167	e161	197	153	239	277	144	100	13	47
18	133	177	168	e158	186	150	215	237	136	114	13	28
19	187	174	164	e156	189	145	199	213	127	126	9.6	18
20	195	164	164	e152	189	150	189	198	119	105	38	10
21	165	158	161	e160	181	144	186	182	116	185	20	5.2
22	150	156	159	e170	198	141	203	170	112	129	27	6.8
23	133	155	161	191	211	140	450	162	108	167	28	6.7
24	122	152	e155	225	231	138	381	161	100	125	21	77
25	119	141	e160	221	235	139	249	162	97	306	17	100
26	116	e138	170	202	e220	153	214	188	90	293	13	67
27	113	e142	172	197	e200	190	365	270	86	331	7.3	54
28	109	140	163	188	191	187	7540	238	77	208	7.7	40
29	109	161	e155	192	---	179	7270	428	67	131	6.2	36
30	111	175	e150	185	---	168	6750	363	73	100	5.5	30
31	110	---	e160	182	---	158	---	293	---	74	9.0	---
TOTAL	3765	4582	5050	5619	5378	5118	30411	14650	11999	3578	852.3	1265.7
MEAN	121	153	163	181	192	165	1014	473	400	115	27.5	42.2
MAX	195	181	172	225	235	193	7540	5200	3110	331	69	144
MIN	95	116	150	152	160	138	152	161	67	48	5.5	5.2
AC-FT	7470	9090	10020	11150	10670	10150	60320	29060	23800	7100	1690	2510

c Estimated

ARKANSAS RIVER BASIN

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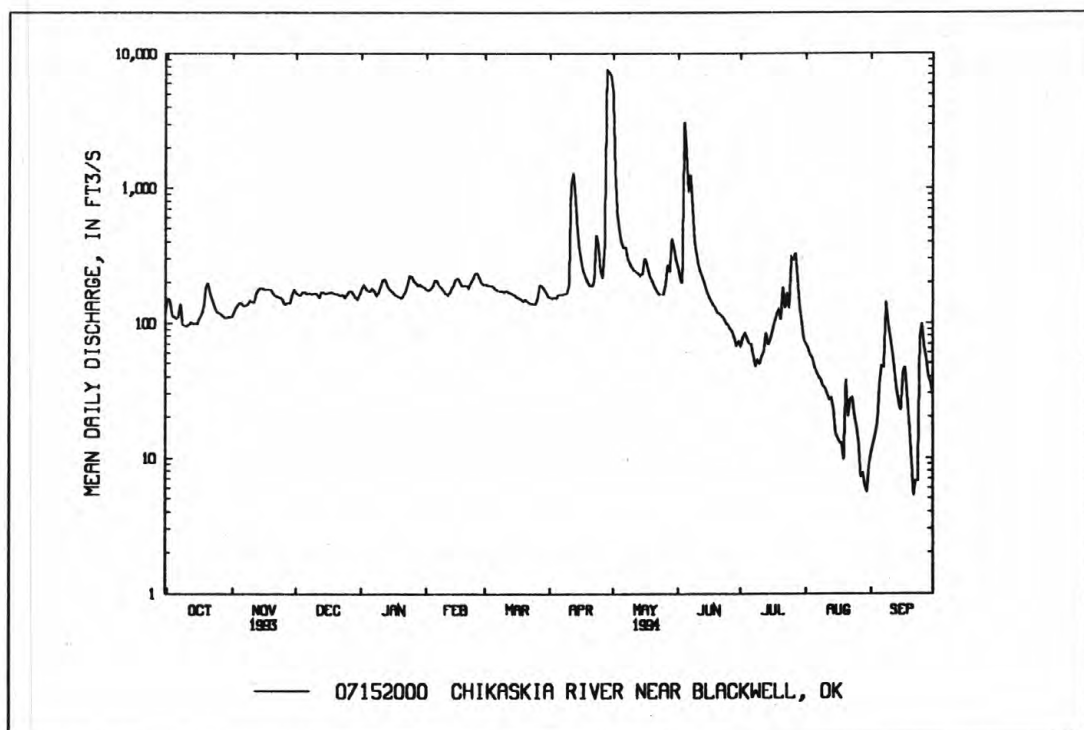
07152000 CHIKASKIA RIVER NEAR BLACKWELL, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1994, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	537	402	232	233	351	614	737	1048	954	473	300	449
MAX	5244	4486	1649	1659	3732	4561	4748	8589	5093	5129	2426	3395
(WY)	1960	1965	1945	1949	1949	1973	1944	1993	1951	1951	1948	1973
MIN	.90	1.08	1.34	4.35	10.3	30.7	29.4	27.1	26.1	6.17	.55	.64
(WY)	1957	1955	1955	1957	1957	1957	1955	1956	1972	1954	1936	1956

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1936-94
ANNUAL TOTAL	517995	92268.0	
ANNUAL MEAN	1419	253	532
HIGHEST ANNUAL MEAN			1732
LOWEST ANNUAL MEAN			71.0
HIGHEST DAILY MEAN	49300	May 10	69500
LOWEST DAILY MEAN	95	Oct 10	^a .00
ANNUAL SEVEN-DAY MINIMUM	98	Oct 8	.00
INSTANTANEOUS PEAK FLOW		10300	85000
INSTANTANEOUS PEAK STAGE		24.35	34.31
ANNUAL RUNOFF (AC-FT)	1027000	183000	385300
10 PERCENT EXCEEDS	2270	272	784
50 PERCENT EXCEEDS	391	161	130
90 PERCENT EXCEEDS	132	35	19

^aNo flow at times in 1954 and 1956.



ARKANSAS RIVER BASIN

07152500 ARKANSAS RIVER AT RALSTON, OK

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

DRAINAGE AREA.--54,465 mi², of which 7,615 mi² 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 good. Flow regulated since April 1976 by Kaw Lake (station 07148130) 59.7 mi upstream; some regulation by Great Salt Plains Lake (station 07150000) since 1941. U.S. Army Corps of Engineers' satellite telemeter at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5330	e1180	1080	1720	4970	1720	1230	45800	4170	1220	5940	711
2	6500	e1090	1090	1730	4930	2670	1270	37800	4140	1260	5210	954
3	3230	e1020	1160	1750	4890	3220	1430	31200	3770	1230	5260	2020
4	2220	e1000	1630	1940	6090	2740	1430	26800	3480	1200	4880	1130
5	2090	e970	1940	2470	7440	1370	1320	25000	2910	1200	3970	1010
6	1720	e950	2190	2670	2770	1780	1380	20000	4700	1200	2180	845
7	1930	e930	2120	2900	2090	1320	1260	24500	4530	1200	2940	788
8	2570	e910	2330	2480	2400	1330	1120	17600	5420	1690	3620	1050
9	2370	e890	2600	2230	4170	1290	1180	15500	7440	1840	1970	1510
10	2370	e870	2800	2130	4180	1460	1620	14500	7160	1950	1370	2860
11	1880	e850	3040	2070	4090	3010	28300	12300	6830	1980	1260	1950
12	1850	2880	2950	2070	1930	2730	15500	10900	4750	1920	872	1520
13	1850	4530	2840	1580	1200	2920	10700	10600	4000	1560	831	1320
14	1950	3980	3360	1460	1340	1660	10500	10300	3830	1550	664	1220
15	2470	4080	3640	1710	1420	1220	7000	10200	2280	1920	704	826
16	2560	4090	3210	1670	2170	1600	5520	10200	1680	3440	636	681
17	3500	4370	2550	1580	2380	1740	4900	10200	1520	1940	581	567
18	3400	3420	2200	1700	2380	1720	4240	10100	1390	1500	627	e550
19	1450	3250	1850	1620	2210	1560	4150	9860	1280	1570	534	e518
20	1170	5210	1720	1760	3170	1590	3900	8730	1270	2960	5810	e505
21	2640	6550	1530	2090	1750	1240	3700	6470	1250	4380	4320	e490
22	3000	4320	1860	2170	2040	1150	4540	5450	1250	5360	6300	e480
23	3090	3280	1850	2210	3300	1120	4260	6130	1310	6570	4340	e470
24	3140	2320	1930	2350	3490	1090	4040	5660	1360	3740	3930	e460
25	3160	1550	2040	2510	3150	1100	3720	5310	1350	2170	1520	e450
26	2880	1430	2050	3780	2080	1080	6730	5610	1320	4390	1080	e440
27	2070	e1280	2120	4040	2060	1260	7070	5950	1310	7650	828	434
28	1900	e1200	2120	3190	1700	1250	29300	5420	1290	10000	650	418
29	1460	e1130	2100	3090	---	1190	32300	4970	1290	7090	580	424
30	1300	e1100	2230	4530	---	1220	51500	5090	1310	5790	556	353
31	e1250	---	2060	4980	---	1220	---	4900	---	5500	649	---
TOTAL	78300	70630	68190	74180	85790	51570	255110	423050	89590	96970	74612	26954
MEAN	2526	2354	2200	2393	3064	1664	8504	13650	2986	3128	2407	898
MAX	6500	6550	3640	4980	7440	3220	51500	45800	7440	10000	6300	2860
MIN	1170	850	1080	1460	1200	1080	1120	4900	1250	1200	534	353
AC-FT	155300	140100	135300	147100	170200	102300	506000	839100	177700	192300	148000	53460

e Estimated

ARKANSAS RIVER BASIN

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07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4852	4102	2891	3400	4095	7505	8495	9838	9333	6066	3497	3568
MAX	41580	14500	9430	12450	17510	27120	25290	52840	23710	23050	13800	17660
(WY)	1987	1980	1993	1993	1993	1987	1984	1993	1993	1993	1993	1989
MIN	161	251	453	500	487	402	305	2041	2139	908	390	205
(WY)	1992	1981	1983	1977	1981	1981	1981	1992	1988	1991	1978	1984

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1977-94

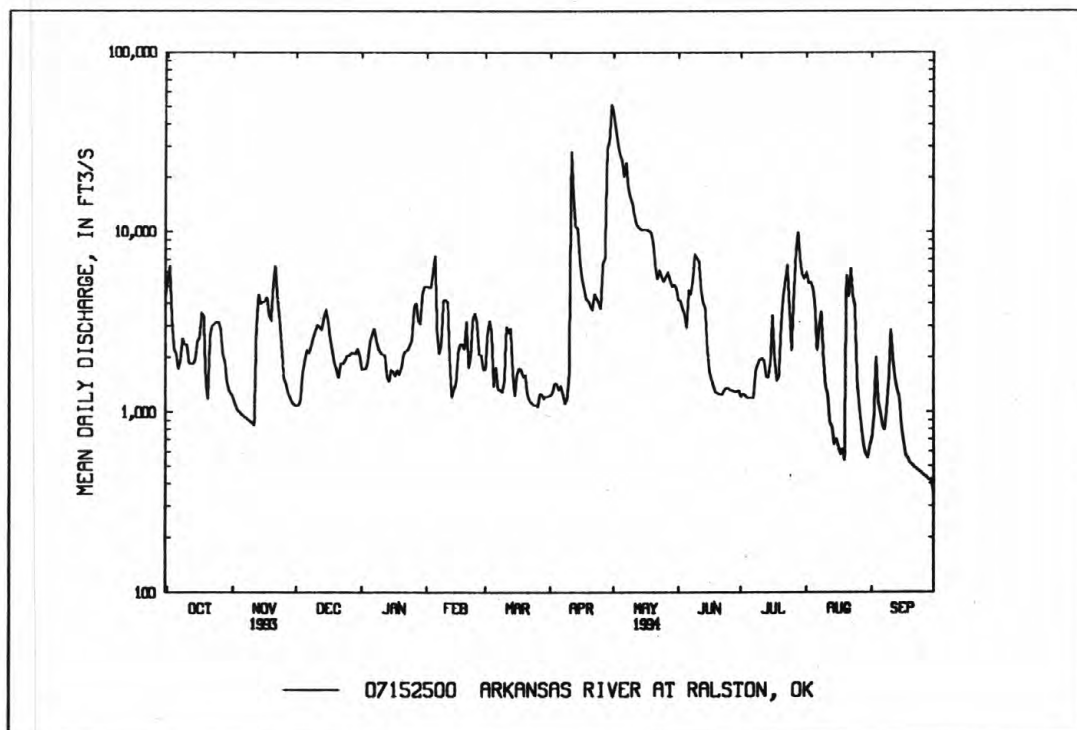
ANNUAL TOTAL	5458790	1394946	
ANNUAL MEAN	14960	3822	^a 5641
HIGHEST ANNUAL MEAN			16160 1993
LOWEST ANNUAL MEAN			1292 1981
HIGHEST DAILY MEAN	127000	May 12 51500	Apr 30 170000 Oct 4 1986
LOWEST DAILY MEAN	850	Nov 11 353	Sep 30 ^b 52 Sep 18 1978
ANNUAL SEVEN-DAY MINIMUM	910	Nov 5 426	Sep 24 103 Oct 19 1991
INSTANTANEOUS PEAK FLOW		56500	Apr 30 ^c 174000 Oct 4 1986
INSTANTANEOUS PEAK STAGE		13.52	Apr 30 ^d 22.20 Oct 4 1986
ANNUAL RUNOFF (AC-FT)	10830000	2767000	4086000
10 PERCENT EXCEEDS	28800	6770	14000
50 PERCENT EXCEEDS	11100	2090	2570
90 PERCENT EXCEEDS	1890	922	430

^aPrior to regulation by Kaw Lake, water years 1926-75, 4,826 ft³/s.

^bMinimum daily discharge for period of record, 14 ft³/s, Oct. 12, 1956.

^cMaximum for period of record, 211,000 ft³/s, Oct. 13, 1973.

^dMaximum for period of record, 22.98 ft, Oct. 13, 1973.



ARKANSAS RIVER BASIN

07153000 BLACK BEAR CREEK AT PAWNEE, OK

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

DRAINAGE AREA.--576 mi².

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

REVISED RECORDS.--WSP 1117: Drainage area.

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

REMARKS.--Records fair. 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 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Apr. 11	1500	7,430	17.09	Apr. 30	0700	5,210	13.20

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	16	26	25	24	91	33	3990	157	e9.2	5.3	4.8
2	23	17	83	26	22	149	32	3390	101	e18	5.4	4.8
3	19	17	164	27	21	97	32	2180	72	e13	5.5	16
4	18	20	122	28	22	75	32	1670	56	e11	5.8	12
5	18	20	173	27	23	59	35	1280	49	e10	5.4	9.6
6	16	22	117	27	26	52	34	1080	207	e9.0	5.2	8.5
7	17	20	85	26	27	48	29	3360	94	e8.5	6.3	6.5
8	27	20	67	25	26	347	28	2450	62	e8.0	9.4	5.8
9	25	22	56	25	22	629	60	e1000	66	e7.4	6.2	6.4
10	19	24	48	26	18	819	811	e700	109	e7.0	5.8	29
11	18	25	43	24	17	1470	6180	e500	48	e6.6	5.8	14
12	17	46	43	26	22	1330	6560	e400	e35	e6.4	5.5	7.4
13	16	54	48	29	22	667	5450	e330	e30	e7.0	5.3	5.2
14	17	74	65	27	23	390	2390	e290	e25	e9.8	4.8	4.6
15	17	158	70	26	25	258	1820	e250	e22	e35	4.4	4.4
16	19	120	57	24	24	181	1460	e200	e21	e20	4.3	4.1
17	19	108	50	23	26	135	1180	166	e20	e13	4.3	5.4
18	20	204	45	18	25	111	995	140	e19	e25	4.3	4.6
19	19	105	41	18	71	93	858	123	e18	e18	4.2	3.6
20	21	68	38	22	100	84	709	110	e17	e14	31	3.4
21	19	50	36	22	55	71	504	100	e16	e70	38	3.8
22	18	40	34	25	242	61	e400	91	e15	e35	30	26
23	19	33	32	26	362	55	e300	85	e14	e20	23	9.4
24	19	28	30	31	174	51	e250	78	e13	e13	17	6.3
25	19	26	28	35	106	48	e200	76	e12	e9.0	13	6.5
26	18	24	30	35	66	53	e160	267	e11	41	9.4	6.0
27	17	22	36	31	50	63	e130	485	e10	14	6.3	5.0
28	16	21	29	30	43	59	654	182	e10	7.6	5.6	4.6
29	17	21	27	28	---	55	3260	548	e9.8	5.9	5.4	4.4
30	16	25	26	27	---	46	4620	717	e10	5.4	5.4	4.0
31	15	---	25	25	---	39	---	292	---	5.3	5.0	---
TOTAL	585	1450	1774	814	1684	7686	39206	26530	1348.8	482.1	292.3	236.1
MEAN	18.9	48.3	57.2	26.3	60.1	248	1307	856	45.0	15.6	9.43	7.87
MAX	27	204	173	35	362	1470	6560	3990	207	70	38	29
MIN	15	16	25	18	17	39	28	76	9.8	5.3	4.2	3.4
AC-FT	1160	2880	3520	1610	3340	15250	77770	52620	2680	956	580	468

e Estimated

ARKANSAS RIVER BASIN

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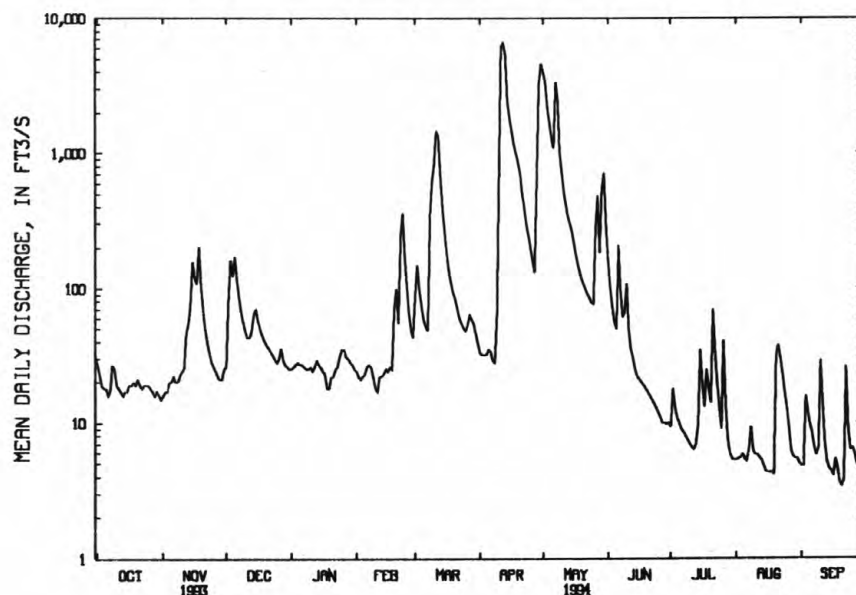
07153000 BLACK BEAR CREEK AT PAWNEE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	225	147	84.0	66.3	113	248	280	482	319	153	100	177
MAX	4025	2359	715	595	1013	1607	1307	2933	2181	932	1592	1354
(WY)	1987	1975	1993	1993	1987	1990	1994	1993	1957	1959	1992	1945
MIN	.000	.000	.023	.37	.73	.90	1.14	2.28	4.68	.30	.000	.000
(WY)	1955	1955	1967	1957	1968	1954	1955	1956	1966	1954	1954	1954

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1945-94

ANNUAL TOTAL	188473.4	82088.3	
ANNUAL MEAN	516	225	200
HIGHEST ANNUAL MEAN			835
LOWEST ANNUAL MEAN			23.1
HIGHEST DAILY MEAN	11300	May 10	6560
LOWEST DAILY MEAN	9.4	Aug 4	3.4
ANNUAL SEVEN-DAY MINIMUM	12	Jul 29	4.2
INSTANTANEOUS PEAK FLOW			7430
INSTANTANEOUS PEAK STAGE			17.09
ANNUAL RUNOFF (AC-FT)	373800	162800	144900
10 PERCENT EXCEEDS	1440	394	358
50 PERCENT EXCEEDS	148	26	13
90 PERCENT EXCEEDS	18	5.8	.90



— 07153000 BLACK BEAR CREEK AT PAWNEE, OK

ARKANSAS RIVER BASIN
07154500 CIMARRON RIVER NEAR KENTON, OK

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

DRAINAGE AREA.--1,106 mi², of which 68 mi² is probably noncontributing.

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

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

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

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s:

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	108	20
2	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	136	45
3	.00	.00	.00	.00	.00	.00	.00	.02	24	.00	77	36
4	.00	.00	.00	.00	.00	.00	.00	.01	2.2	.00	55	4.4
5	.00	.00	.00	.00	.00	.00	.00	.00	.85	.00	1.1	2.2
6	.00	.00	.00	.00	.00	.00	.00	.00	.35	.00	.34	e1.0
7	.00	.00	.00	.00	.00	.00	.00	.00	.09	.00	.23	e.36
8	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.14	e.18
9	.00	.00	.00	.00	.00	.02	.00	.03	126	.00	.08	e.09
10	.00	.00	.00	.00	.00	.01	.00	1.3	5.7	.00	.10	e.06
11	.00	.00	.00	.00	.00	.01	.02	.69	.44	.00	7.6	e.03
12	.00	.00	.00	.00	.00	.00	.02	.16	.15	.00	2.9	e.02
13	.00	.00	.00	.00	.00	.01	.01	.06	.04	.00	.49	e.01
14	.00	.00	.00	.00	.00	.01	.01	.03	.01	.00	.67	e.00
15	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.48	e.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.41	e.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.28	e.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.18	e.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.15	e.00
20	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	107	e.00
21	.00	.00	.00	.00	.00	.00	12	.01	.00	.00	31	e.00
22	.00	.00	.00	.00	.00	.00	23	.00	.00	.00	5.1	e.00
23	.00	.00	.00	.00	.00	.00	.49	.00	.00	.00	2.3	e.00
24	.00	.00	.00	.00	.00	.00	.07	.00	.00	.00	1.6	e.00
25	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	1.5	e.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	59	1.0	e.00
27	.00	.00	.00	.00	.00	.00	.00	.01	.00	4.5	.83	e.00
28	.00	.00	.00	.00	.00	.00	.04	.00	.00	.15	.74	e.00
29	.00	.00	.00	.00	---	.00	.05	.00	.00	.00	1.4	e.00
30	.00	.00	.00	.00	---	.00	.05	.00	.00	.00	90	e.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	118	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.06	35.77	2.40	159.84	63.65	751.62	109.35
MEAN	.0000	.0000	.0000	.0000	.0000	.0002	1.19	.077	5.33	2.05	24.2	3.64
MAX	.00	.00	.00	.00	.00	.02	23	1.3	126	59	136	45
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.08	.00
AC-FT	.00	.00	.00	.00	.00	.1	71	4.8	317	126	1490	217

e Estimated

ARKANSAS RIVER BASIN

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07154500 CIMARRON RIVER NEAR KENTON, OK--Continued

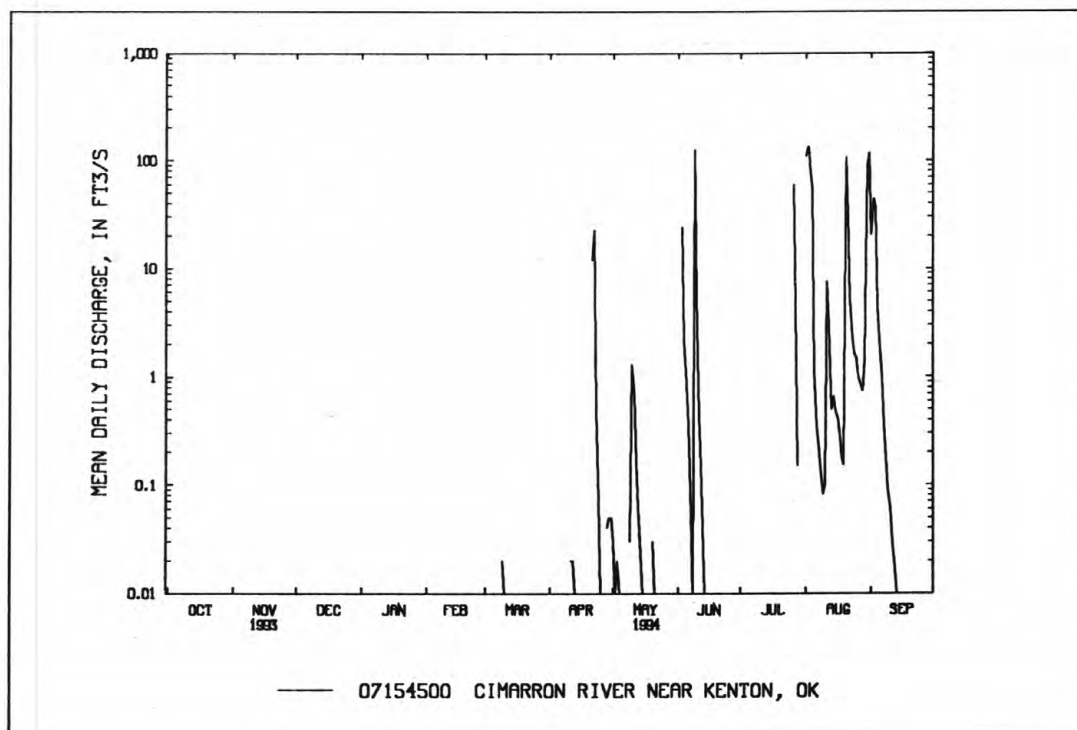
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.3	2.05	2.19	2.08	1.82	1.50	6.07	34.3	35.2	33.9	54.7	28.7
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

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1951-94
ANNUAL TOTAL	192.24	1122.69	
ANNUAL MEAN	.53	3.08	17.9
HIGHEST ANNUAL MEAN			95.2 1965
LOWEST ANNUAL MEAN			.65 1993
HIGHEST DAILY MEAN	65	Jun 19	136 Aug 2 11000 Jun 17 1965
LOWEST DAILY MEAN	.00	Jun 5	.00 at times most years
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 5	.00 Oct 1 Jun 14 1952
INSTANTANEOUS PEAK FLOW		1020	Jun 9 ^a 43400 Oct 17 1965
INSTANTANEOUS PEAK STAGE		10.56	Jun 9 ^b 22.32 Oct 17 1965
ANNUAL RUNOFF (AC-FT)	381	2230	12990
10 PERCENT EXCEEDS	1.2	.68	8.0
50 PERCENT EXCEEDS	.00	.00	1.0
90 PERCENT EXCEEDS	.00	.00	.00

^aFrom rating curve extended above 7,000 ft³/s, on basis of contracted-opening measurement of peak flow.

^bPresent datum.



ARKANSAS RIVER BASIN

07156900 CIMARRON RIVER NEAR FORGAN, OK

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

DRAINAGE AREA.--8,536 mi², of which 4,316 mi² is probably noncontributing.

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

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

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

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s:

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	32	42	41	42	39	39	41	31	20	26	37
2	27	32	42	40	42	39	40	39	31	19	29	35
3	28	30	43	40	39	40	42	40	29	21	26	47
4	28	30	44	41	40	38	41	41	27	23	25	47
5	27	32	46	42	39	38	41	40	27	21	26	34
6	26	33	46	43	38	40	41	39	26	20	26	31
7	27	33	45	46	38	42	39	40	27	21	25	31
8	29	31	45	45	38	44	41	39	27	21	25	40
9	30	31	45	46	e37	44	42	39	26	20	24	36
10	30	31	44	47	e35	44	43	39	26	19	24	34
11	29	31	45	46	e37	41	47	39	42	18	23	32
12	29	32	44	46	40	40	47	38	33	20	23	31
13	29	33	54	47	38	40	46	45	29	21	23	30
14	29	38	47	46	39	40	45	41	25	26	31	29
15	28	36	44	45	39	40	44	39	24	25	32	28
16	29	41	43	46	39	39	42	36	25	25	29	27
17	30	37	44	44	40	39	41	35	24	34	28	28
18	31	36	43	44	39	38	41	34	23	28	27	28
19	31	36	43	45	39	37	41	33	22	27	26	28
20	32	36	43	44	41	36	40	34	21	27	26	29
21	31	37	43	44	42	35	40	33	22	26	26	30
22	31	36	43	43	42	34	40	32	23	25	26	30
23	31	35	43	41	42	36	40	31	23	23	25	32
24	30	36	40	44	43	37	39	31	22	23	27	33
25	31	37	41	45	43	37	37	31	21	28	34	31
26	32	e36	39	48	42	39	39	33	20	31	32	31
27	33	e35	39	46	41	41	42	33	20	28	28	31
28	31	e40	40	46	41	39	46	31	19	25	26	30
29	34	41	40	45	---	38	45	33	19	25	26	29
30	32	40	42	44	---	37	45	31	20	25	27	29
31	31	---	42	42	---	38	---	31	---	24	35	---
TOTAL	924	1044	1344	1372	1115	1209	1256	1121	754	739	836	968
MEAN	29.8	34.8	43.4	44.3	39.8	39.0	41.9	36.2	25.1	23.8	27.0	32.3
MAX	34	41	54	48	43	44	47	45	42	34	35	47
MIN	26	30	39	40	35	34	37	31	19	18	23	27
AC-FT	1830	2070	2670	2720	2210	2400	2490	2220	1500	1470	1660	1920

e Estimated

ARKANSAS RIVER BASIN

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07156900 CIMARRON RIVER NEAR FORGAN, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	74.2	57.0	59.2	58.5	63.1	61.9	75.4	79.0	66.3	51.0	54.1	51.1
MAX	751	114	102	110	167	111	376	476	364	211	208	210
(WY)	1966	1972	1973	1967	1978	1973	1976	1977	1978	1967	1972	1966
MIN	26.1	32.3	30.7	38.8	39.8	39.0	38.3	23.8	22.0	20.5	19.1	22.0
(WY)	1992	1988	1990	1988	1994	1994	1986	1986	1986	1991	1983	1990

SUMMARY STATISTICS 1993 CALENDAR YEAR

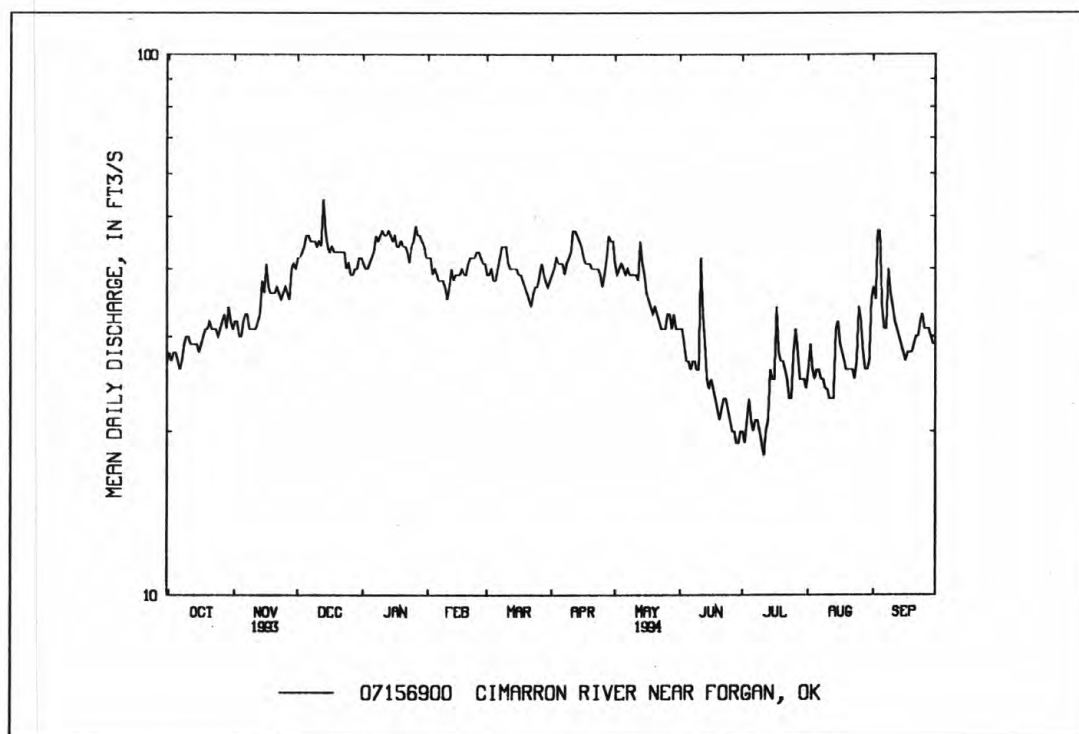
1994 WATER YEAR

WATER YEARS 1966-94

ANNUAL TOTAL	14964		12682			
ANNUAL MEAN	41.0		34.7		62.6	
HIGHEST ANNUAL MEAN					145	1966
LOWEST ANNUAL MEAN					34.7	1994
HIGHEST DAILY MEAN	156	Jun 3	54	Dec 13	7490	Oct 20 1965
LOWEST DAILY MEAN	26	Sep 11	18	Jul 11	^a 13	Jun 19 1988
ANNUAL SEVEN-DAY MINIMUM	27	Sep 30	20	Jun 26	15	Jul 13 1986
INSTANTANEOUS PEAK FLOW			64	Dec 13	21200	Oct 20 1965
INSTANTANEOUS PEAK STAGE			^b 3.68	Nov 26	8.10	Oct 20 1965
ANNUAL RUNOFF (AC-FT)	29680		25150		45340	
10 PERCENT EXCEEDS	52		44		86	
50 PERCENT EXCEEDS	40		36		49	
90 PERCENT EXCEEDS	29		25		28	

^aAlso occurred June 20, 1988, and Aug. 2, 1991.

^bOccurred during ice jam.



ARKANSAS RIVER BASIN

07157950 CIMARRON RIVER NEAR BUFFALO, OK

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

DRAINAGE AREA.--12,004 mi², of which 4,813 mi² is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1960 to September 1994 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,599.67 ft above sea level. Prior to Oct. 1, 1979, at site 6.9 mi upstream at elevation 1,650 ft.

REMARKS.--Records poor.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s:

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	5.5	e41	e41	e47	e58	e30	51	73	.03	.00	.00
2	e.07	e6.0	e42	e46	e46	e57	e31	50	42	.03	.00	.00
3	e.07	e6.8	e42	e44	e50	e54	e35	51	22	.03	.00	.00
4	e.08	e6.7	e41	e44	e55	e48	32	53	20	2.3	.00	.00
5	e.07	e7.0	e40	e45	e60	e43	e29	49	28	.03	.00	.00
6	e.08	e7.0	e38	e44	e62	e40	28	42	8.7	.00	.00	.00
7	e.09	e7.8	e38	e40	e61	e43	27	36	5.6	.00	.00	.00
8	.08	e7.9	e38	e38	e56	e52	25	33	3.8	.00	.00	1.7
9	e.09	e8.0	e40	e40	e51	e60	38	32	2.6	.00	.00	.00
10	e.10	e8.4	e38	e46	e50	e50	32	30	2.9	.00	.00	.00
11	e.15	e10	e39	e48	e52	e45	64	29	2.7	.00	.00	.00
12	e.20	e12	e38	e51	e54	e40	51	28	2.0	.00	.00	.00
13	e.30	e16	e38	e53	e55	e38	46	25	.85	.00	.00	.00
14	e.40	e28	39	55	e60	e37	51	25	.46	.00	.00	.00
15	e.60	e16	e38	e50	e70	e36	54	26	.25	.00	.00	.00
16	e1.0	15	e40	e47	65	34	42	25	.19	13	.00	.00
17	e2.0	e14	e41	e48	e63	e30	33	24	.12	7.2	.00	.00
18	e2.4	e15	e40	e35	e62	e28	28	22	.08	.44	.00	.00
19	e3.0	e14	e41	e35	e60	e27	26	20	.07	.02	.00	.00
20	e3.0	e15	e40	e40	e58	e27	25	17	.07	.00	.00	.00
21	e2.5	e16	e39	e55	e70	e26	25	13	.05	.69	.00	.00
22	e3.0	e15	e38	e65	e85	e25	86	11	.06	.00	.00	.00
23	e3.5	e14	e36	e70	e70	e24	51	9.4	.04	.00	.00	.00
24	e3.1	e12	e37	e72	e71	e23	41	12	.04	.00	.00	.00
25	e3.0	e10	e31	e70	e68	e28	36	20	.04	.00	.00	.00
26	e3.0	e7.0	e33	65	e60	e40	28	20	.03	.75	.00	.00
27	e3.4	e10	e37	e62	e61	e35	32	15	.02	.02	.00	.00
28	e3.5	e20	e36	e60	e60	e34	74	12	.01	.00	.00	.00
29	e4.5	e30	e34	e61	---	e33	52	87	.02	.00	.00	.00
30	e5.0	40	e33	e55	---	e33	70	30	.03	.00	.00	.00
31	e5.5	---	e37	e50	---	32	---	65	---	.00	.00	---
TOTAL	53.86	400.1	1183	1575	1682	1180	1222	962.4	215.73	24.54	0.00	1.70
MEAN	1.74	13.3	38.2	50.8	60.1	38.1	40.7	31.0	7.19	.79	.000	.057
MAX	5.5	40	42	72	85	60	86	87	73	13	.00	1.7
MIN	.07	5.5	31	35	46	23	25	9.4	.01	.00	.00	.00
AC-FT	107	794	2350	3120	3340	2340	2420	1910	428	49	.00	3.4

c Estimated

ARKANSAS RIVER BASIN

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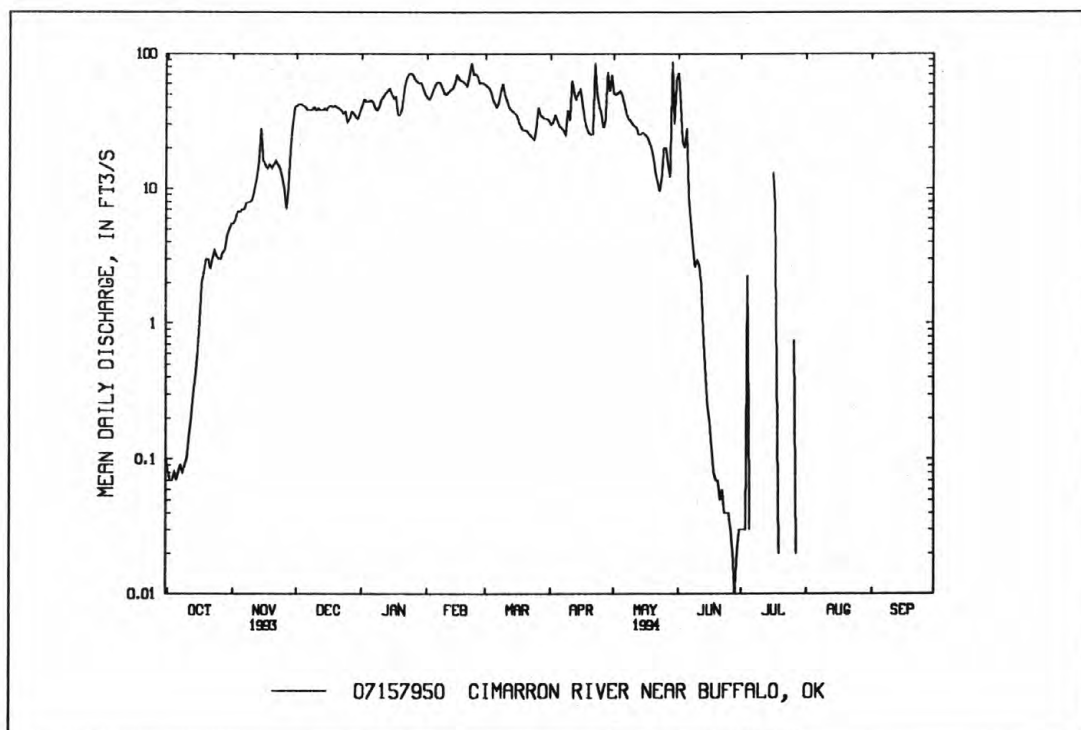
07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	90.5	80.3	83.9	92.3	120	183	148	207	231	90.3	83.3	126
MAX	788	482	270	155	225	1848	1304	851	1227	461	476	1100
(WY)	1966	1972	1974	1964	1993	1973	1973	1987	1965	1962	1968	1973
MIN	.000	.47	8.61	31.2	40.2	26.1	8.69	4.45	6.70	.21	.000	.000
(WY)	1981	1981	1981	1981	1981	1992	1981	1992	1966	1991	1976	1980

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1960-94
ANNUAL TOTAL	44413.64	8500.33	
ANNUAL MEAN	122	23.3	128
HIGHEST ANNUAL MEAN			430
LOWEST ANNUAL MEAN			23.3
HIGHEST DAILY MEAN	4070	May 2	12500
LOWEST DAILY MEAN	.02	Sep 22	.00
ANNUAL SEVEN-DAY MINIMUM	.03	Sep 16	.00
INSTANTANEOUS PEAK FLOW		183	26400
INSTANTANEOUS PEAK STAGE		4.91	5.57
ANNUAL RUNOFF (AC-FT)	88090	16860	92950
10 PERCENT EXCEEDS	257	56	232
50 PERCENT EXCEEDS	65	20	56
90 PERCENT EXCEEDS	1.2	.00	.02

^aSite and datum then in use.



ARKANSAS RIVER BASIN
07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953, 1961-63, 1968 to 1994 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1968 to January 1982.

WATER TEMPERATURE: July 1968 to January 1982.

INSTRUMENTATION.--Water-quality monitor from March 1969 to September 1979.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAMPLE		AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	DIS- CHARGE, INST. CUBIC FEET PER SECOND		GAGE HEIGHT (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	OXYGEN, DIS- SOLVED (MG/L)	PH WATER WHOLE FIELD (STAND- ARD UNITS)		
		ATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPER- ATURE WATER (DEG C) (00010)										
FEB													
16...	0918	3.00	2.0	1028	1028	65	4.37	5130	13.3	8.4			
16...	0920	9.00	2.0	1028	1028	65	4.37	5100	13.3	8.4			
16...	0923	15.0	2.0	1028	1028	65	4.37	5130	13.3	8.4			
16...	0926	21.0	2.0	1028	1028	65	4.37	5140	13.3	8.4			
16...	0928	27.0	2.0	1028	1028	65	4.37	5190	13.3	8.4			
16...	0931	33.0	2.0	1028	1028	65	4.37	5190	13.3	8.4			
16...	0934	39.0	2.0	1028	1028	65	4.37	5240	13.3	8.4			
16...	0936	45.0	2.0	1028	1028	65	4.37	5270	13.3	8.4			
16...	0939	51.0	2.0	1028	1028	65	4.37	5340	13.3	8.4			
16...	0942	57.0	2.0	1028	1028	65	4.37	5450	13.3	8.4			
DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE AIR (DEG C)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	BARO- METRIC PRES- SURE (MM HG)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)		
NOV													
01...	1230	1028	80020	5.5	8080	8.3	13.0	10.5	1.2	731	11.0	106	
FEB													
16...	1000	1028	80020	65	5220	8.4	3.5	2.0	1.7	740	13.3	101	
MAY													
09...	1300	1028	80020	32	12100	8.4	22.0	22.0	0.80	725	8.8	110	
JUL													
05...	1300	1028	80020	0.03	41000	8.0	34.0	30.0	3.1	722	5.8	94	

ARKANSAS RIVER BASIN
07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

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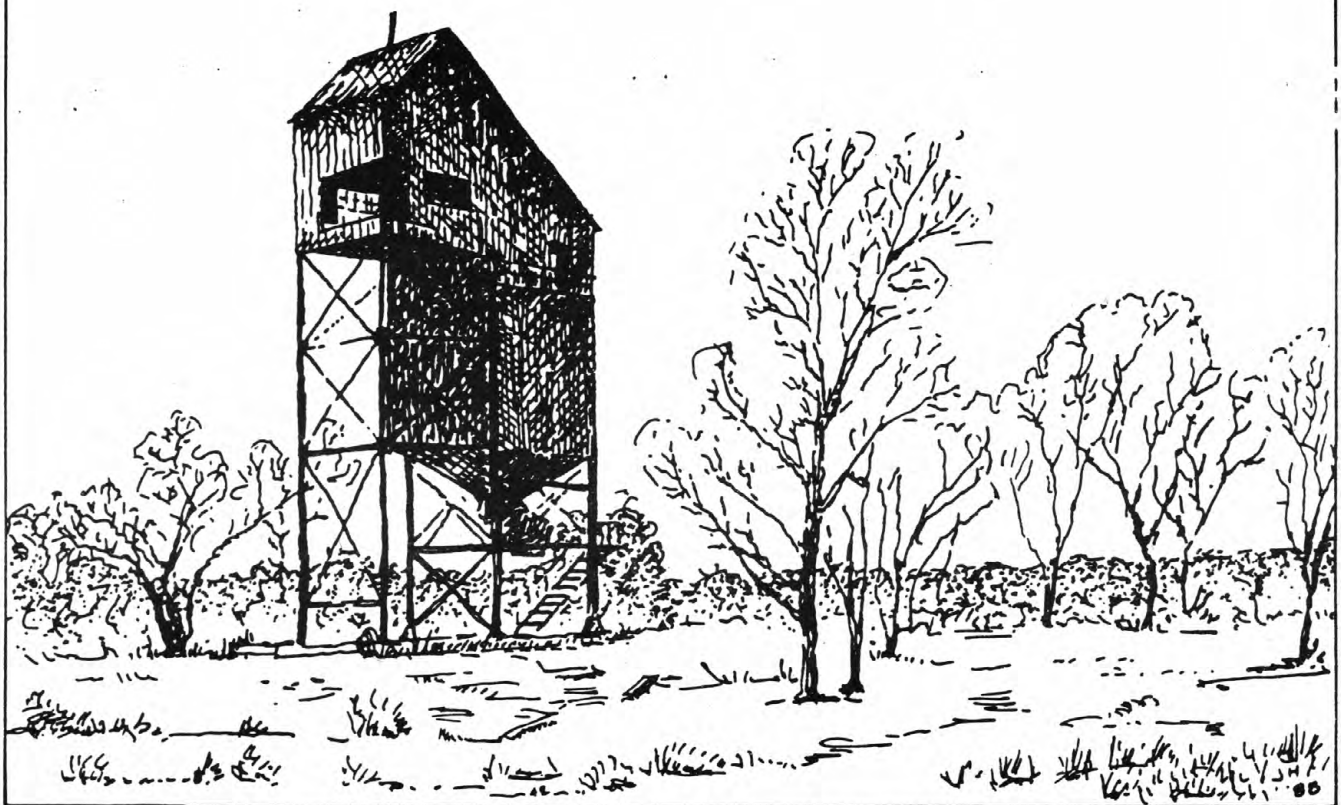
WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (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- SIUM, SORP- TION SOLVED (MG/L AS K) (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	
	NOV 01...	49	80	700	540	190	55	1300	80	21	6.9	201	0
	FEB 16...	10	18	490	270	120	45	900	80	18	5.3	262	0
	MAY 09...	7	8	--	--	--	--	1700	--	--	--	177	10
	JUL 05...	390	960	1500	1300	390	130	9300	93	100	14	215	0
DATE	ALKA- LINITY WAT DISSULFATE TOT IT FIELD (MG/L AS CACO3) (39086)	CHLO- RIDE, DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, 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)	
	NOV 01...	165	550	2100	0.90	18	4350	4320	5.92	64.8	<0.010	<0.050	0.030
	FEB 16...	215	260	1500	0.80	20	3000	2980	4.08	529	<0.010	--	0.020
	MAY 09...	161	450	3900	0.80	12	7350	--	--	--	<0.010	<0.050	0.010
	JUL 05...	176	950	16000	0.50	21	27800	26900	37.8	2.25	<0.010	<0.050	0.260
DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- 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)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	
	NOV 01...	0.04	0.17	0.20	0.20	0.020	<0.010	0.010	0.03	<10	100	<1	40
	FEB 16...	0.03	--	<0.20	--	0.030	0.020	<0.010	--	<10	<100	<1	30
	MAY 09...	0.01	0.19	0.20	0.20	0.010	<0.010	<0.010	--	<20	100	<1	40
	JUL 05...	0.33	0.14	0.40	0.40	0.030	<0.010	0.020	0.06	60	200	<1	260

ARKANSAS RIVER BASIN
07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	SEDI- MENT, DIS- SUS- PENDEDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	
NOV 01...	50	50	3	<1	<1	<1.0	2200	25	4	0.06	54
FEB 16...	60	30	4	<1	2	<1.0	2000	35	290	51	92
MAY 09...	70	30	5	<1	D40	<1.0	3000	40	9	0.77	62
JUL 05...	70	860	<10	<1	<1	<1.0	5600	240	1280	0.10	99



Ore loader in the Tar Creek area

ARKANSAS RIVER BASIN

07158000 CIMARRON RIVER NEAR WAYNOKA, OK

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

DRAINAGE AREA.--13,334 mi², of which 4,830 mi² is probably noncontributing.

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

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

REMARKS.--Records good. Diversions for irrigation above station. U.S. Army Corps of Engineers satellite telemeter at station.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft³/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 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	7.3	37	51	e70	76	34	119	168	3.6	4.4	102
2	2.7	7.8	46	58	e65	73	32	100	155	1.8	4.3	42
3	2.6	9.1	49	60	e65	69	39	97	243	1.2	4.1	16
4	2.7	9.9	49	58	72	67	52	88	296	5.3	3.3	12
5	2.7	9.9	48	57	86	62	40	80	138	5.2	2.5	7.5
6	2.5	11	42	56	90	58	34	73	94	4.8	1.9	5.3
7	2.7	11	42	52	e89	56	32	63	73	1.9	1.2	4.0
8	2.5	12	44	41	e85	61	30	57	56	1.2	.77	53
9	1.7	14	45	41	e80	78	29	53	46	.78	.36	70
10	2.1	15	45	45	e80	89	39	52	49	.51	.24	30
11	2.4	19	44	56	e85	77	73	49	69	.15	.05	14
12	2.9	21	45	56	75	68	120	46	48	.59	.00	11
13	3.0	23	48	60	65	63	75	44	36	1.6	.00	7.0
14	3.1	36	50	58	61	59	55	43	23	2.2	.00	4.6
15	3.7	66	47	55	89	58	47	40	18	1.3	.00	3.4
16	3.5	38	47	49	93	54	44	35	15	23	.00	3.2
17	4.2	41	50	e45	85	49	42	32	13	79	.00	2.2
18	5.4	43	54	e40	80	45	33	29	11	51	.00	1.8
19	5.3	39	53	e30	79	42	26	27	10	17	.00	1.5
20	7.0	37	54	e30	76	40	22	25	9.4	8.2	.00	1.4
21	6.9	37	52	e50	70	37	23	21	8.6	115	.00	1.1
22	5.9	37	48	72	89	35	29	19	7.5	101	.00	1.0
23	5.6	37	48	89	124	31	54	29	6.3	74	.00	1.0
24	5.4	32	45	97	93	28	49	351	6.1	37	.00	1.0
25	4.9	19	41	111	97	28	37	288	5.6	37	.00	1.0
26	4.3	18	46	106	87	39	27	131	5.4	71	.00	1.0
27	4.5	24	51	111	80	76	28	105	4.9	35	.00	.94
28	4.9	28	49	98	80	58	49	82	4.4	18	.00	.86
29	5.3	27	47	97	---	45	89	764	e4.0	10	.00	.82
30	6.6	32	40	107	---	39	125	550	3.8	7.7	.00	.52
31	7.0	---	43	84	---	35	---	224	---	5.6	60	---
TOTAL	127.3	761.0	1449	2020	2290	1695	1408	3716	1627.0	721.63	83.12	401.14
MEAN	4.11	25.4	46.7	65.2	81.8	54.7	46.9	120	54.2	23.3	2.68	13.4
MAX	7.0	66	54	111	124	89	125	764	296	115	60	102
MIN	1.7	7.3	37	30	61	28	22	19	3.8	.15	.00	.52
AC-FT	252	1510	2870	4010	4540	3360	2790	7370	3230	1430	165	796

c Estimated

ARKANSAS RIVER BASIN

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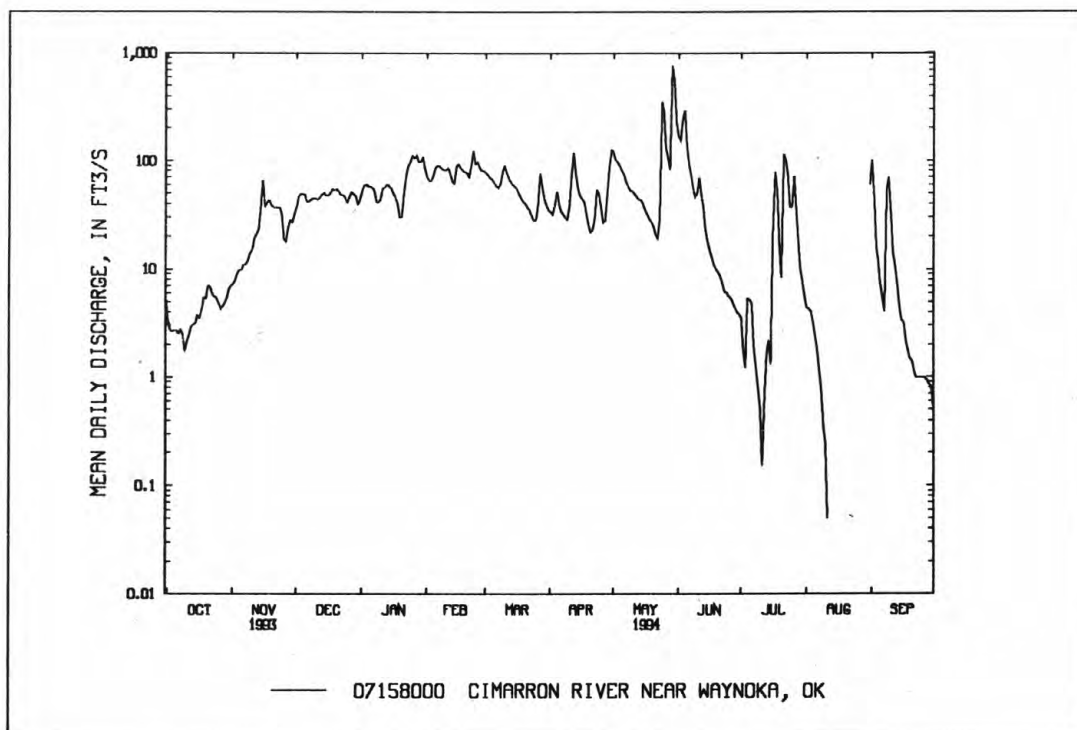
07158000 CIMARRON RIVER NEAR WAYNOKA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	221	117	111	124	178	237	358	816	607	345	224	258
MAX	2644	587	493	290	1011	2196	2944	5673	3674	3826	2507	1475
(WY)	1942	1947	1974	1974	1949	1973	1942	1957	1957	1950	1950	1973
MIN	.000	.000	1.98	2.65	30.1	12.6	6.00	10.6	.60	.008	.000	.000
(WY)	1940	1981	1955	1940	1957	1955	1956	1967	1966	1974	1970	1956

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1938-94
ANNUAL TOTAL	115368.99	16299.19	
ANNUAL MEAN	316	44.7	300
HIGHEST ANNUAL MEAN			1081
LOWEST ANNUAL MEAN			43.2
HIGHEST DAILY MEAN	12000	May 2	51600
LOWEST DAILY MEAN	.50	Sep 22	.00
ANNUAL SEVEN-DAY MINIMUM	.97	Sep 16	.00
INSTANTANEOUS PEAK FLOW		1630	May 29
INSTANTANEOUS PEAK STAGE		7.11	May 29
ANNUAL RUNOFF (AC-FT)	228800	32330	217500
10 PERCENT EXCEEDS	508	89	459
50 PERCENT EXCEEDS	142	37	83
90 PERCENT EXCEEDS	3.5	1.1	.30

^aFrom rating curve extended above 45,000 ft³/s on basis of contracted-opening measurement of peak flow.



ARKANSAS RIVER BASIN

07159100 CIMARRON RIVER NEAR DOVER, OK

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

DRAINAGE AREA.--15,713 mi², of which 4,926 mi² is probably noncontributing.

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

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

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
May 29	2200	14,600	16.08				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	e94	155	192	227	274	196	4630	1720	110	114	102
2	e98	e94	156	187	233	274	182	2300	968	101	126	135
3	e95	e95	167	182	226	277	172	2590	686	96	115	336
4	e95	e94	202	184	221	268	182	1580	547	92	101	190
5	e94	e95	203	200	222	257	169	1080	480	89	89	146
6	e94	e94	197	204	218	243	170	917	882	85	82	118
7	e94	e94	189	202	216	234	187	801	674	83	77	109
8	e94	e95	190	226	214	290	184	715	490	103	70	104
9	e94	e95	187	230	e213	339	250	655	382	96	67	90
10	e94	e100	182	226	212	347	342	604	340	88	62	84
11	e93	127	179	217	213	374	730	562	313	83	58	153
12	e94	143	186	208	210	426	1060	527	320	82	56	161
13	e94	149	184	196	215	425	530	519	286	84	53	161
14	e94	165	182	200	215	346	403	742	255	87	51	148
15	e94	152	179	205	215	295	360	554	239	89	49	136
16	e94	149	179	207	214	270	299	475	221	134	49	132
17	e93	149	182	213	212	246	257	425	205	145	53	124
18	e94	162	184	210	235	236	237	382	191	128	201	118
19	e94	161	181	252	249	232	223	352	178	99	644	116
20	e94	157	179	173	242	213	220	327	193	86	201	112
21	e94	156	183	215	224	199	222	304	189	101	601	108
22	e94	158	186	194	248	195	212	285	175	107	419	106
23	e94	156	186	223	265	185	206	275	153	95	137	99
24	e94	149	186	219	277	176	198	561	143	87	97	e95
25	e94	148	188	206	276	173	212	1340	136	139	81	e91
26	96	162	186	214	270	184	242	2580	127	135	72	e88
27	e95	169	185	212	265	182	244	2430	122	139	66	e85
28	e95	141	177	224	257	178	3650	980	117	344	61	e84
29	e95	155	177	230	---	173	2690	6830	112	240	58	e83
30	e95	154	181	230	---	184	7990	9620	110	167	56	e82
31	e94	---	188	225	---	203	---	2570	---	134	74	---
TOTAL	2930	4012	5666	6506	6504	7898	22219	48512	10954	3648	4040	3696
MEAN	94.5	134	183	210	232	255	741	1565	365	118	130	123
MAX	100	169	203	252	277	426	7990	9620	1720	344	644	336
MIN	93	94	155	173	210	173	169	275	110	82	49	82
AC-FT	5810	7960	11240	12900	12900	15670	44070	96220	21730	7240	8010	7330

e Estimated

ARKANSAS RIVER BASIN

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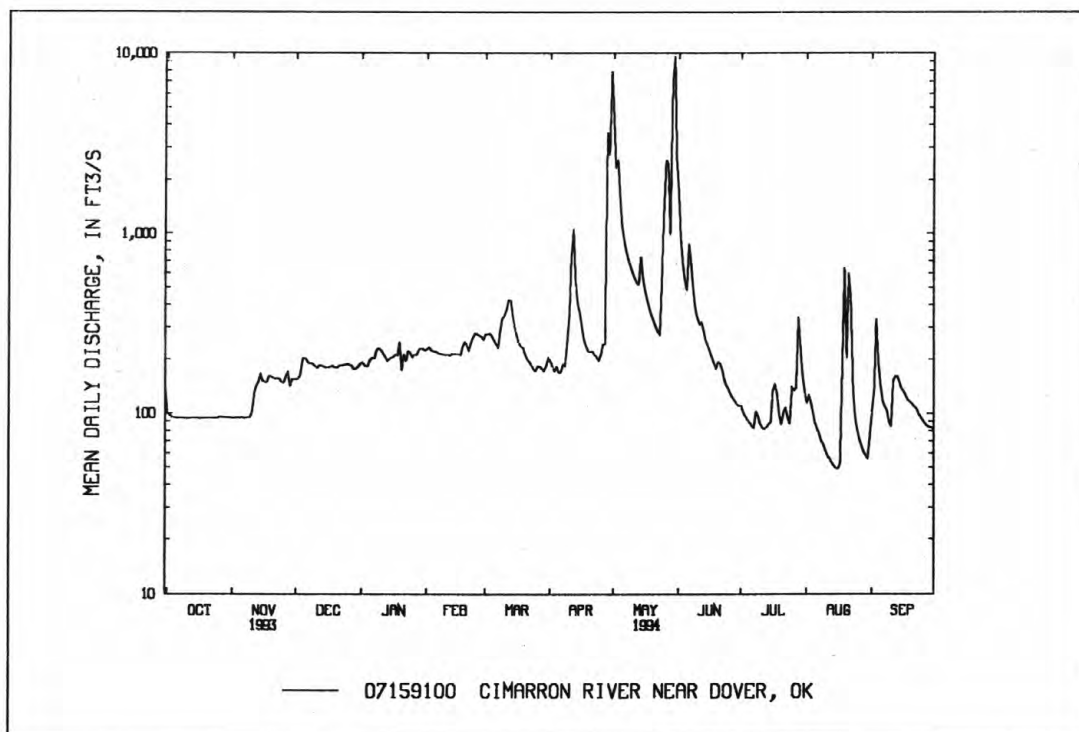
07159100 CIMARRON RIVER NEAR DOVER, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	856	724	386	353	517	1069	929	2532	1331	528	407	576
MAX	9071	3381	1218	1068	2410	4283	4218	11750	3795	2002	1489	1996
(WY)	1987	1975	1993	1988	1987	1987	1988	1993	1975	1987	1989	1974
MIN	40.2	45.1	70.2	61.8	75.6	77.4	60.7	173	207	45.3	29.5	13.8
(WY)	1985	1985	1977	1977	1981	1977	1981	1992	1984	1974	1984	1984

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1974-94
ANNUAL TOTAL	622580	126585	
ANNUAL MEAN	1706	347	853
HIGHEST ANNUAL MEAN			2804
LOWEST ANNUAL MEAN			265
HIGHEST DAILY MEAN	51200	May 10	9620
LOWEST DAILY MEAN	93	Oct 11	49
ANNUAL SEVEN-DAY MINIMUM	94	Oct 11	53
INSTANTANEOUS PEAK FLOW		14600	May 29
INSTANTANEOUS PEAK STAGE		16.08	May 29
INSTANTANEOUS LOW FLOW		49	Aug 15
ANNUAL RUNOFF (AC-FT)	1235000	251100	617700
10 PERCENT EXCEEDS	2820	522	1720
50 PERCENT EXCEEDS	548	184	252
90 PERCENT EXCEEDS	95	89	57

^aFrom high-water mark.



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

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

PERIOD OF RECORD.--November 1983 to September 1984; August 1993 to 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 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY	AGENCY	DIS-		PH			BARO-
		COL-	ANA-	CHARGE,	SPE-	WATER			METRIC
		LECTING	LYZING	INST.	CIFIC	WHOLE			PRES-
		SAMPLE	SAMPLE	CUBIC	CON-	FIELD	TEMPER-	TEMPER-	SURE
		(CODE	(CODE	FEET	DUCT-	(STAND-	ATURE	ATURE	(MM
		NUMBER)	NUMBER)	PER	ANCE	ARD	AIR	WATER	OF
		(00027)	(00028)	SECOND	(US/CM)	UNITS)	(DEG C)	(DEG C)	(HG)
		(00027)	(00028)	(00061)	(00095)	(00400)	(00020)	(00010)	(00025)
MAY									
13...	1030	1028	80020	10	981	8.3	22.5	20.0	729
JUN									
20...	1330	1028	80020	7.5	879	8.1	37.0	27.0	735
JUL									
19...	1200	1028	80020	8.2	813	8.2	33.5	26.0	731
AUG									
25...	1315	1028	80020	5.8	845	8.0	33.5	27.0	737
SEP									
28...	1400	1028	80020	5.6	880	8.1	32.0	21.0	735
		OXYGEN,	BICAR-	CAR-	ALKA-	FONOFOS			
		DIS-	BONATE	BONATE	LINITY	(DY-			
		SOLVED	WATER	WATER	WAT DIS	FONATE)			
	OXYGEN,	(PER-	DIS IT	DIS IT	TOT IT	WATER	CHLOR-		
	DIS-	CENT	FIELD	FIELD	FIELD	WHOLE	PYRIFOS		
DATE	SOLVED	SATUR-	(MG/L AS	(MG/L AS	(MG/L AS	TOT.REC	TOTAL	DEF	
	(MG/L)	ATION)	HCO3)	CO3)	CACO3)	(UG/L)	RECOVER	TOTAL	
	(00300)	(00301)	(00453)	(00452)	(39086)	(82614)	(38932)	(UG/L)	(39040)
MAY									
13...	6.4	74	319	4	268	<0.01	<0.01	<0.01	
JUN									
20...	6.6	86	234	0	192	<0.01	<0.01	<0.01	
JUL									
19...	6.1	79	204	0	167	<0.01	<0.01	<0.01	
AUG									
25...	5.6	73	200	0	164	<0.01	<0.01	<0.01	
SEP									
28...	8.4	98	222	0	182	<0.01	0.02	<0.01	

[illegible]

ARKANSAS RIVER BASIN
07159643 DEER CREEK BELOW BLUFF CREEK AT OKLAHOMA CITY, OK

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

PERIOD OF RECORD.--August 1993 to 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 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY	AGENCY	DIS-		PH			BARO-
		COL-	ANA-	CHARGE,	SPE-	WATER			METRIC
		LECTING	LYZING	INST.	CIFIC	WHOLE			PRES-
		SAMPLE	SAMPLE	CUBIC	CON-	FIELD	TEMPER-	TEMPER-	SURE
		(CODE	(CODE	FEET	DUCT-	(STAND-	ATURE	ATURE	(MM
		NUMBER)	NUMBER)	PER	ANCE	ARD	AIR	WATER	OF
		(00027)	(00028)	SECOND	(US/CM)	UNITS)	(DEG C)	(DEG C)	HG)
		(00027)	(00028)	(00061)	(00095)	(00400)	(00020)	(00010)	(00025)
MAY									
13...	1330	1028	80020	52	1040	8.2	29.5	21.0	728
JUN									
21...	1015	1028	80020	22	1140	7.9	34.0	26.0	737
JUL									
19...	1045	1028	80020	16	978	7.9	35.0	26.5	733
AUG									
25...	1200	1028	80020	8.4	1030	7.9	34.5	27.0	737
SEP									
28...	1245	1028	80020	13	1070	7.9	31.5	21.0	735
		OXYGEN,	BICAR-	CAR-	ALKA-	FONOFOS			
		DIS-	BONATE	BONATE	LINITY	(DY-			
		SOLVED	WATER	WATER	WAT DIS	FONATE)	CHLOR-		
	OXYGEN,	(PER-	DIS IT	DIS IT	TOT IT	WATER	PYRIFOS		
	DIS-	CENT	FIELD	FIELD	FIELD	WHOLE	TOTAL	DEF	
DATE	SOLVED	SATUR-	(MG/L AS	(MG/L AS	(MG/L AS	TOT.REC	RECOVER	TOTAL	
	(MG/L)	ATION)	HCO3)	CO3)	CACO3)	(UG/L)	(UG/L)	(UG/L)	
	(00300)	(00301)	(00453)	(00452)	(39086)	(82614)	(38932)	(39040)	
MAY									
13...	7.5	89	325	0	266	<0.01	0.02	<0.01	
JUN									
21...	6.8	87	279	0	229	<0.01	0.01	<0.01	
JUL									
19...	5.7	74	168	0	138	<0.01	<0.01	<0.01	
AUG									
25...	6.2	81	182	0	149	<0.01	0.02	<0.01	
SEP									
28...	7.5	88	220	0	180	<0.01	<0.01	<0.01	

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[illegible]

ARKANSAS RIVER BASIN
07159650 DEER CREEK AT OKLAHOMA CITY, OK

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

PERIOD OF RECORD.--August 1993 to 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 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY	AGENCY	DIS-		PH			BARO-
		COL-	ANA-	CHARGE,	SPE-	WATER			METRIC
		LECTING	LYZING	INST.	CIFIC	WHOLE			PRES-
		SAMPLE	SAMPLE	CUBIC	CON-	FIELD	TEMPER-	TEMPER-	SURE
		(CODE	(CODE	FEET	DUCT-	(STAND-	ATURE	ATURE	(MM
		NUMBER)	NUMBER)	PER	ANCE	ARD	AIR	WATER	OF
		(00027)	(00028)	SECOND	(US/CM	UNITS)	(DEG C)	(DEG C)	HG)
				(00061)	(00095)	(00400)	(00020)	(00010)	(00025)
MAY									
13...	1445	1028	80020	70	1090	8.2	29.5	21.5	728
JUN									
21...	0845	1028	80020	31	1190	7.7	27.5	25.0	737
JUL									
19...	0930	1028	80020	26	1050	8.0	31.0	25.5	733
AUG									
25...	1045	1028	80020	19	1120	7.8	32.0	26.0	737
SEP									
28...	1010	1028	80020	24	1130	7.7	25.5	21.0	735
		OXYGEN,	BICAR-	CAR-	ALKA-	FONOFOS			
		DIS-	BONATE	BONATE	LINITY	(DY-			
		SOLVED	WATER	WATER	WAT DIS	FONATE)	CHLOR-		
	OXYGEN,	(PER-	DIS IT	DIS IT	TOT IT	WATER	PYRIFOS		
	DIS-	CENT	FIELD	FIELD	FIELD	WHOLE	TOTAL	DEF	
DATE	SOLVED	SATUR-	(MG/L AS	(MG/L AS	(MG/L AS	TOT.REC	RECOVER	TOTAL	
	(MG/L)	ATION)	HCO3)	CO3)	CACO3)	(UG/L)	(UG/L)	(UG/L)	
	(00300)	(00301)	(00453)	(00452)	(39086)	(82614)	(38932)	(39040)	
MAY									
13...	7.4	88	303	0	248	<0.01	0.02	<0.01	
JUN									
21...	5.7	72	244	0	200	<0.01	0.02	<0.01	
JUL									
19...	5.6	72	204	0	167	<0.01	0.03	<0.01	
AUG									
25...	6.2	79	142	0	116	<0.01	0.03	<0.01	
SEP									
28...	7.4	86	145	0	119	<0.01	0.02	<0.01	

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

ARKANSAS RIVER BASIN
07159730 CHISHOLM CREEK AT EDMOND, OK

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

PERIOD OF RECORD.--August 1993 to 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 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY	AGENCY	DIS-		PH			BARO-
		COL-	ANA-	CHARGE,	SPE-	WATER			METRIC
		LECTING	LYZING	INST.	CIFIC	WHOLE			PRES-
		SAMPLE	SAMPLE	CUBIC	CON-	FIELD	TEMPER-	TEMPER-	SURE
		(CODE	(CODE	FEET	DUCT-	(STAND-	ATURE	ATURE	(MM
		NUMBER)	NUMBER)	PER	ANCE	ARD	AIR	WATER	OF
		(00027)	(00028)	SECOND	(US/CM)	UNITS)	(DEG C)	(DEG C)	HG)
				(00061)	(00095)	(00400)	(00020)	(00010)	(00025)
MAY									
16...	1245	1028	80020	4.7	1020	8.0	29.5	22.0	735
JUN									
20...	1145	1028	80020	4.4	746	7.9	31.0	26.5	735
JUL									
18...	1330	1028	80020	2.0	246	7.8	37.0	30.0	735
AUG									
26...	1145	1028	80020	<1.0	331	7.6	32.0	27.0	736
SEP									
27...	1345	1028	80020	<1.0	332	7.5	29.5	19.0	730
		OXYGEN,	BICAR-	CAR-	ALKA-	FONOFOS			
		DIS-	BONATE	BONATE	LINITY	(DY-			
		SOLVED	WATER	WATER	WAT DIS	FONATE)	CHLOR-		
	OXYGEN,	(PER-	DIS IT	DIS IT	TOT IT	WATER	PYRIFOS		
	DIS-	CENT	FIELD	FIELD	FIELD	WHOLE	TOTAL	DEF	
DATE	SOLVED	SATUR-	(MG/L AS	(MG/L AS	(MG/L AS	TOT.REC	RECOVER	TOTAL	
	(MG/L)	ATION)	HCO3)	CO3)	CACO3)	(UG/L)	(UG/L)	(UG/L)	
	(00300)	(00301)	(00453)	(00452)	(39086)	(82614)	(38932)	(39040)	
MAY									
16...	6.2	74	361	0	296	<0.01	0.01	<0.01	
JUN									
20...	4.6	59	248	0	203	<0.01	0.01	<0.01	
JUL									
18...	3.6	50	92	0	75	<0.01	<0.01	<0.01	
AUG									
26...	2.9	38	122	0	100	<0.01	0.02	<0.01	
SEP									
27...	6.4	72	116	0	95	<0.01	0.01	<0.01	

ARKANSAS RIVER BASIN
07159730 CHISHOLM CREEK AT EDMOND, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	DI - AZINON, TOTAL (UG/L) (39570)	DI - SYSTON TOTAL (UG/L) (39011)	MALA - ETHION, TOTAL (UG/L) (39398)	PARA - THION, TOTAL (UG/L) (39530)	METHYL PARA - THION, TOTAL (UG/L) (39600)	THION, TOTAL (UG/L) (39540)	PHORATE TOTAL (UG/L) (39023)	TOTAL TRI - THION (UG/L) (39786)
MAY								
16...	0.11	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
JUN								
20...	0.22	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01
JUL								
18...	0.20	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01
AUG								
26...	0.40	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01
SEP								
27...	0.32	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01

ARKANSAS RIVER BASIN
07159735 CHISHOLM CREEK NEAR EDMOND, OK

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

PERIOD OF RECORD.--August 1993 to 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 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY	AGENCY	DIS-		PH			BARO-
		COL-	ANA-	CHARGE,	SPE-	WATER			METRIC
		LECTING	LYZING	INST.	CIFIC	WHOLE			PRES-
		SAMPLE	SAMPLE	CUBIC	CON-	FIELD	TEMPER-	TEMPER-	SURE
		(CODE	(CODE	FEET	DUCT-	(STAND-	ATURE	ATURE	(MM
		NUMBER)	NUMBER)	PER	ANCE	ARD	AIR	WATER	OF
		(00027)	(00028)	SECOND	(US/CM)	UNITS)	(DEG C)	(DEG C)	HG)
				(00061)	(00095)	(00400)	(00020)	(00010)	(00025)
MAY									
16...	1030	1028	80020	9.8	1000	7.9	26.0	21.0	737
JUN									
20...	1015	1028	80020	25	1060	7.8	31.5	24.5	735
JUL									
18...	1130	1028	80020	8.1	565	7.7	35.5	28.5	735
AUG									
26...	1100	1028	80020	5.9	1020	7.7	29.0	27.0	736
SEP									
27...	1430	1028	80020	7.5	918	7.7	29.5	22.5	730
		OXYGEN,	BICAR-	CAR-	ALKA-	FONOFOS			
		DIS-	BONATE	BONATE	LINITY	(DY-			
		SOLVED	WATER	WATER	WAT DIS	FONATE)	CHLOR-		
	OXYGEN,	(PER-	DIS IT	DIS IT	TOT IT	WATER	PYRIFOS		
	DIS-	CENT	FIELD	FIELD	FIELD	WHOLE	TOTAL	DEF	
DATE	SOLVED	SATUR-	(MG/L AS	(MG/L AS	(MG/L AS	TOT.REC	RECOVER	TOTAL	
	(MG/L)	ATION)	HCO3)	CO3)	CACO3)	(UG/L)	(UG/L)	(UG/L)	
	(00300)	(00301)	(00453)	(00452)	(39086)	(82614)	(38932)	(39040)	
MAY									
16...	6.5	76	308	0	252	<0.01	0.02	<0.01	
JUN									
20...	6.8	85	211	0	173	<0.01	0.02	<0.01	
JUL									
18...	4.1	55	117	0	96	<0.01	0.01	<0.01	
AUG									
26...	4.3	56	127	0	104	<0.01	0.01	<0.01	
SEP									
27...	7.6	92	151	0	124	<0.01	0.01	<0.01	

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[illegible]

ARKANSAS RIVER BASIN

07159750 COTTONWOOD CREEK NEAR SEWARD, OK

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

DRAINAGE AREA.--320 mi².

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

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

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Apr. 12	0500	4,480	22.19				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	50	55	51	42	71	68	1470	289	e48	38	362
2	66	52	59	51	41	164	67	773	196	e47	36	107
3	62	52	79	50	44	101	68	2500	152	e45	35	66
4	63	51	91	51	45	77	63	1050	164	e43	35	51
5	61	50	82	50	43	67	61	509	169	e42	33	49
6	61	50	74	50	43	62	59	376	833	e40	33	129
7	57	51	74	50	43	59	58	306	901	39	34	73
8	58	52	68	47	43	644	57	262	302	38	34	48
9	65	53	65	48	41	1560	57	232	194	37	34	501
10	60	51	65	52	e42	1220	60	208	153	36	32	126
11	64	52	64	50	e43	1050	1030	188	134	36	32	59
12	87	54	64	50	e43	542	3160	173	122	35	30	45
13	67	116	65	49	e44	318	918	161	107	33	29	39
14	61	134	121	49	e44	233	642	159	93	36	27	35
15	57	162	83	49	e44	187	545	148	83	57	25	33
16	56	94	75	50	43	154	483	138	e78	76	25	32
17	58	101	67	52	44	137	449	128	e73	142	25	30
18	57	90	63	48	45	126	420	120	e69	75	87	27
19	57	69	60	49	47	107	313	113	e64	58	89	26
20	56	65	58	e50	180	107	218	104	68	48	49	26
21	56	61	57	50	97	101	180	97	e62	44	97	26
22	57	60	55	50	416	86	157	94	e58	43	64	50
23	56	58	54	51	295	84	149	90	55	42	45	163
24	56	56	51	50	131	82	142	96	e54	39	37	55
25	55	59	51	50	87	75	132	132	e53	42	33	41
26	51	59	49	49	67	75	161	288	e51	60	30	35
27	48	58	49	49	60	148	141	350	e51	57	27	33
28	e48	61	49	47	59	113	160	206	e51	55	26	31
29	e47	62	50	44	---	85	244	979	e50	48	25	30
30	e47	57	50	44	---	75	2130	1620	e49	44	24	29
31	48	---	50	44	---	68	---	512	---	42	68	---
TOTAL	1815	2040	1997	1524	2216	7978	12392	13582	4778	1527	1238	2357
MEAN	58.5	68.0	64.4	49.2	79.1	257	413	438	159	49.3	39.9	78.6
MAX	87	162	121	52	416	1560	3160	2500	901	142	97	501
MIN	47	50	49	44	41	59	57	90	49	33	24	26
AC-FT	3600	4050	3960	3020	4400	15820	24580	26940	9480	3030	2460	4680

c Estimated

ARKANSAS RIVER BASIN

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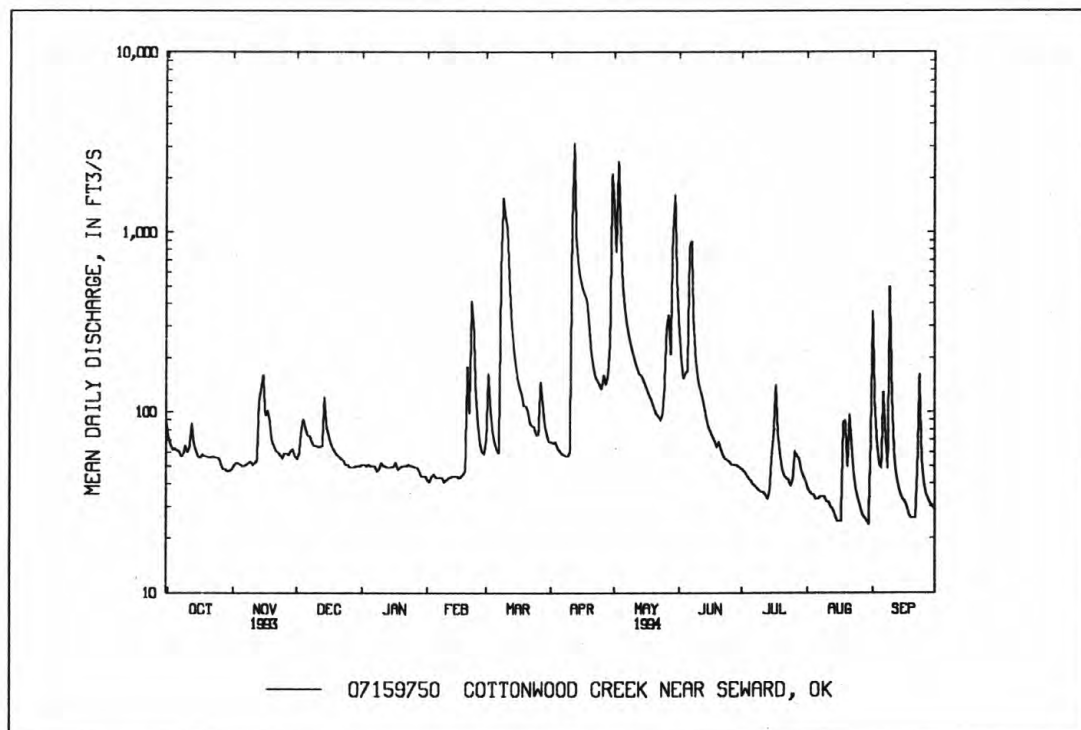
07159750 COTTONWOOD CREEK NEAR SEWARD, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	77.7	182	113	88.5	117	245	201	558	320	95.4	60.0	111
MAX	267	1218	570	265	336	1591	803	2267	811	467	231	546
(WY)	1975	1975	1992	1975	1975	1990	1990	1993	1992	1975	1975	1973
MIN	12.0	15.2	17.6	17.6	22.7	19.8	22.1	42.5	24.9	18.2	8.58	17.4
(WY)	1977	1977	1977	1978	1977	1977	1978	1981	1976	1976	1976	1980

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1973-94
ANNUAL TOTAL	138117	53444	
ANNUAL MEAN	378	146	165
HIGHEST ANNUAL MEAN			438
LOWEST ANNUAL MEAN			42.9
HIGHEST DAILY MEAN	29300	May 9	3160
LOWEST DAILY MEAN	25	Aug 24	24
ANNUAL SEVEN-DAY MINIMUM	30	Aug 18	28
INSTANTANEOUS PEAK FLOW		4480	Apr 12
INSTANTANEOUS PEAK STAGE		22.19	Apr 12
INSTANTANEOUS LOW FLOW		24	Aug 30
ANNUAL RUNOFF (AC-FT)	274000	106000	119300
10 PERCENT EXCEEDS	588	272	341
50 PERCENT EXCEEDS	153	58	50
90 PERCENT EXCEEDS	49	36	18

^aAlso occurred on Aug. 22, 23, 1976.



ARKANSAS RIVER BASIN

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 mi², of which 4,926 mi² is probably noncontributing.

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

REVISED RECORDS.--WSP 1341: Drainage area.

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

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 ft³/s.

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Apr. 12	0700	20,500	9.57	May 30	1400	21,900	9.30
Apr. 30	2400	24,100	10.21				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	342	210	333	367	398	551	418	16800	e6000	e285	e280	e160
2	333	216	363	372	385	657	403	6070	e4400	e260	e300	e245
3	291	223	433	379	393	644	389	8970	e3400	e245	e250	e395
4	278	219	511	363	396	548	372	6900	e2700	e230	e225	e310
5	270	227	500	350	392	492	375	3730	e2280	e210	e210	e280
6	258	222	486	361	383	457	379	2850	e3500	e195	e195	e230
7	247	219	456	369	376	444	375	2410	e2100	e185	e180	e200
8	267	223	433	359	362	1030	378	2040	e1600	e250	e170	e180
9	277	228	418	359	e362	3830	429	e1780	e1400	e230	e155	e170
10	266	233	411	365	e361	3740	503	e1580	e1230	e210	148	e160
11	255	233	401	381	e361	3860	11100	e1440	e1130	e200	e140	e265
12	264	274	390	385	e362	3260	16200	e1320	e1130	e200	e130	e280
13	270	480	423	374	410	2030	5200	e1210	e980	e200	e125	e250
14	247	647	462	361	407	1350	2950	e1150	e840	e205	e120	e223
15	233	846	549	360	392	1030	2380	e1300	e710	e210	e120	e203
16	269	784	466	365	388	832	1990	e1080	e600	e320	e120	e187
17	247	612	438	e362	361	702	1750	e900	e500	e340	e117	e175
18	239	541	413	e360	343	637	1580	e820	e430	e295	e116	e168
19	241	469	405	e358	355	579	1330	e750	e400	e230	e200	e160
20	241	421	396	e357	459	539	1080	e700	e460	e200	e710	e155
21	240	393	396	356	588	517	939	e670	e485	e240	e570	e155
22	237	359	391	356	672	482	882	e630	e465	e250	e420	e155
23	234	347	386	394	1260	451	837	e590	422	e215	e620	e168
24	230	347	385	406	706	440	772	e960	e398	e200	e450	e175
25	225	330	386	413	595	411	753	1290	e365	e290	e290	e170
26	226	329	375	407	530	424	761	1860	e340	e285	e215	e170
27	216	313	375	396	514	500	973	3640	e320	e285	e180	e165
28	208	311	375	397	481	542	3300	2650	e310	e305	e165	e160
29	213	348	361	398	---	474	8610	3630	e290	e385	e148	e160
30	210	360	357	407	---	432	15500	18100	e285	e318	e135	e155
31	210	---	350	410	---	413	---	10500	---	e295	e130	---
MEAN	251	365	414	376	464	1042	2764	3494	1316	251	237	201
MAX	342	846	549	413	1260	3860	16200	18100	6000	385	710	395
MIN	208	210	333	350	343	411	372	590	285	185	116	155
AC-FT	15440	21750	25440	23100	25770	64060	164400	214900	78290	15410	14550	11960
CFSM	.02	.03	.03	.03	.04	.09	.23	.29	.11	.02	.02	.02

e Estimated

ARKANSAS RIVER BASIN

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07160000 CIMARRON RIVER NEAR GUTHRIE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1099	674	439	425	597	1028	1408	2612	1974	858	557	867
MAX	13800	6145	2874	2266	4063	6337	8184	20630	11780	4220	4100	3988
(WY)	1987	1975	1993	1993	1987	1987	1942	1993	1957	1950	1950	1989
MIN	.79	.70	1.39	6.38	21.7	24.7	66.5	63.0	58.6	9.58	26.1	8.03
(WY)	1953	1955	1955	1940	1957	1955	1956	1971	1953	1954	1943	1954

SUMMARY STATISTICS 1993 CALENDAR YEAR

ANNUAL MEAN	3271
HIGHEST ANNUAL MEAN	
LOWEST ANNUAL MEAN	
HIGHEST DAILY MEAN	90200
LOWEST DAILY MEAN	208
ANNUAL SEVEN-DAY MINIMUM	212
INSTANTANEOUS PEAK FLOW	
INSTANTANEOUS PEAK STAGE	
ANNUAL RUNOFF (AC-FT)	2368000
ANNUAL RUNOFF (CFSM)	.27
10 PERCENT EXCEEDS	6230
50 PERCENT EXCEEDS	1310
90 PERCENT EXCEEDS	267

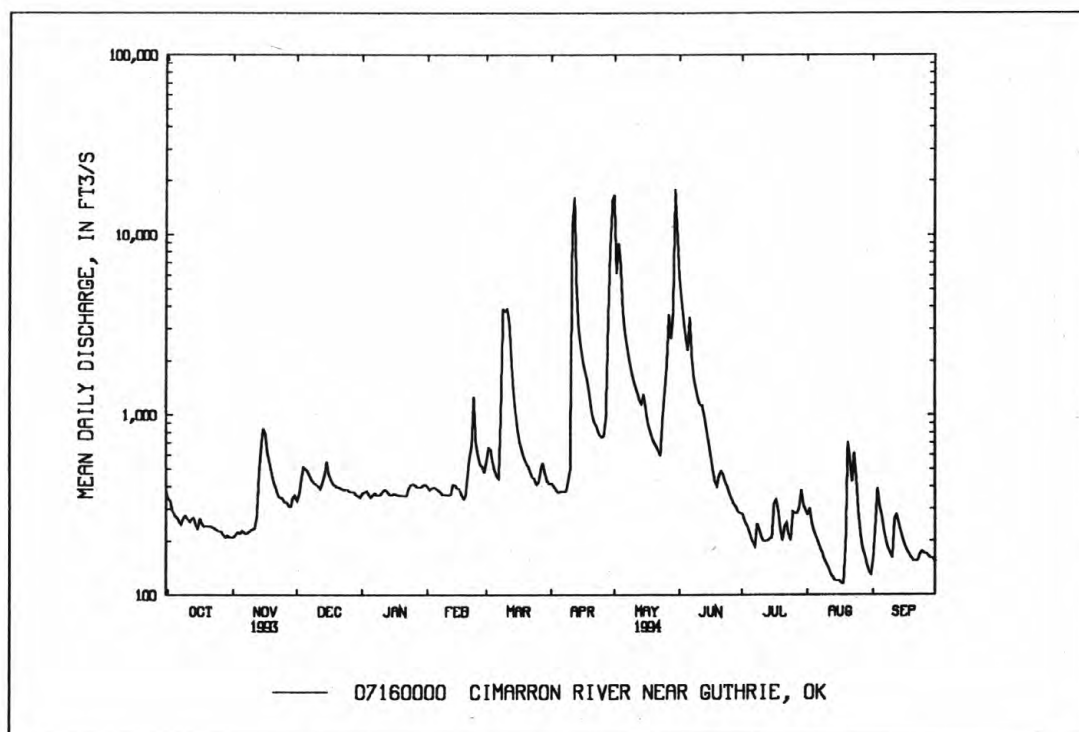
1994 WATER YEAR

932
May 10
Oct 28
Oct 27
24100
10.21
675100
.078
1760
378
186

WATER YEARS 1938-94

1040
3901
192
May 17 1957
112000
a.30
.39
May 17 1957
158000
18.58
753400
.087
2020
305
50

^aOct. 20-22, Nov. 2, 1939.



ARKANSAS RIVER BASIN
0716100 CIMARRON RIVER AT PERKINS, OK

(National stream-quality accounting network station)

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

DRAINAGE AREA.--17,852 mi² of which 4,926 mi² is probably noncontributing.

PERIOD OF RECORD.--May 1950, October 1952 to September 1963, June 1965 to August 1994 (discontinued).

PERIOD OF DAILY RECORD.--

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

WATER TEMPERATURE: October 1952 to September 1963, June 1965 to January 1982.

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

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
JUN										
22...	1145	31.5	738	1028	1028	419	7.03	6250	6.7	8.1
22...	1149	30.5	738	1028	1028	419	7.03	6330	6.6	8.1
22...	1153	30.5	738	1028	1028	419	7.03	6330	6.7	8.1
22...	1157	30.5	738	1028	1028	419	7.03	6340	6.8	8.1
22...	1203	30.5	738	1028	1028	419	7.03	6340	7.0	8.1
22...	1207	30.5	738	1028	1028	419	7.03	6330	7.0	8.1
22...	1209	30.5	738	1028	1028	419	7.03	6320	7.0	8.1
22...	1212	30.5	738	1028	1028	419	7.03	6300	7.0	8.2
22...	1214	31.0	738	1028	1028	419	7.03	6280	7.1	8.2
22...	1216	32.5	738	1028	1028	419	7.03	6260	7.9	8.2
22...	1218	31.0	738	1028	1028	419	7.03	6250	7.2	8.2
22...	1219	31.0	738	1028	1028	419	7.03	6210	7.4	8.2
22...	1220	31.5	738	1028	1028	419	7.03	6000	7.9	8.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT											
12...	1200	1028	80020	348	3260	8.4	25.0	17.5	19	740	12.6
DEC											
06...	1130	1028	80020	681	3440	8.5	9.0	9.5	8.1	750	12.8
APR											
19...	1200	1028	80020	1770	3980	8.3	26.5	19.5	30	743	8.5
JUN											
22...	1015	1028	80020	419	6340	8.1	35.0	31.5	3.2	738	6.7
AUG											
02...	0930	1028	80020	300	4640	8.4	31.5	28.0	1.5	740	8.4

ARKANSAS RIVER BASIN
07161000 CIMARRON RIVER AT PERKINS, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI 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 SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
OCT 12...	137	K10	K11	410	200	94	43	530	73	11	7.6
DEC 06...	115	360	210	450	210	110	41	--	--	--	--
APR 19...	97	250	190	360	180	88	34	690	80	16	5.2
JUN 22...	96	K23	--	520	330	120	53	--	--	--	6.3
AUG 02...	112	K51	1200	360	250	86	36	800	82	18	6.6
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)	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 12...	237	13	216	280	740	0.40	7.5	1900	1830	2.58	1770
DEC 06...	280	6	240	260	920	0.40	10	2100	--	--	--
APR 19...	215	0	176	200	1100	0.30	9.6	2290	2240	3.11	11000
JUN 22...	229	0	188	370	1900	0.40	10	3750	--	--	--
AUG 02...	122	4	106	340	1200	0.40	6.8	2520	2540	3.43	2040
DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	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)
OCT 12...	0.280	0.280	1.2	0.010	0.03	0.290	0.290	<0.010	--	1.0	1.0
DEC 06...	1.47	1.47	6.5	0.030	0.10	1.50	1.50	0.010	0.01	0.69	0.70
APR 19...	0.970	0.970	4.3	0.030	0.10	1.00	1.00	0.030	0.04	0.47	0.50
JUN 22...	--	--	--	<0.010	--	--	<0.050	0.020	0.03	0.98	1.0
AUG 02...	--	--	--	<0.010	--	--	<0.050	0.020	0.03	1.5	1.5

ARKANSAS RIVER BASIN
07161000 CIMARRON RIVER AT PERKINS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
OCT 12...	1.3	0.130	<0.010	<0.010	--	<10	170	<9	43	22
DEC 06...	2.2	0.170	0.120	0.120	0.37	<10	100	<1	20	20
APR 19...	1.5	0.180	0.110	0.120	0.37	--	--	--	--	--
JUN 22...	1.0	0.150	0.030	0.020	0.06	10	300	<1	20	30
AUG 02...	1.5	0.190	0.010	<0.010	--	10	100	<1	<10	30
DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	SEDI- MENT, DIS- SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 12...	15	<30	1	1	<1.0	1300	<18	355	331	98
DEC 06...	20	1	4	2	<1.0	1400	22	220	405	79
APR 19...	--	--	--	--	--	--	--	284	1360	95
JUN 22...	10	3	2	1	<1.0	1800	40	1120	1270	27
AUG 02...	<10	6	1	2	<1.0	1100	27	148	120	99



Old gage, Council Creek at Stillwater, Oklahoma

ARKANSAS RIVER BASIN

07161450 CIMARRON RIVER NEAR RIPLEY, OK

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

DRAINAGE AREA.--17,979 mi² of which 4,926 mi² is probably noncontributing.

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

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

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Apr. 11	2000	44,200	20.41	May 31	0300	18,500	16.31
May 1	0600	30,400	18.53				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	647	e450	530	477	429	e1000	519	28100	6640	368	414	217
2	607	e445	568	475	423	e1100	558	12600	4370	350	336	288
3	579	e441	638	502	404	e900	621	9730	3030	328	287	494
4	e560	e438	809	495	408	e743	519	11200	2230	310	256	394
5	e550	e436	976	452	420	e650	505	7360	1740	295	249	429
6	e540	e435	838	475	419	e585	494	4870	1850	273	236	589
7	e537	e434	755	462	416	e554	462	3520	2840	265	221	459
8	e533	432	686	440	413	2340	432	2780	3790	264	197	415
9	e530	438	654	458	e400	2500	473	2300	2140	239	182	354
10	e526	436	618	447	e410	5000	793	2010	1530	240	173	389
11	e520	444	592	444	e420	5660	22300	1810	1270	251	160	694
12	e515	474	558	462	e430	6390	26200	1650	1140	261	146	397
13	e512	568	738	484	e425	4870	10900	1530	1090	255	136	297
14	e510	810	799	453	e430	3070	5400	1450	956	257	132	245
15	e508	929	635	440	e460	2050	3870	1370	849	349	121	226
16	593	1190	697	424	e450	1520	3160	1390	770	379	114	224
17	547	1100	680	431	e430	1130	2680	1280	e730	375	107	203
18	e540	918	620	394	e428	982	2360	1150	e700	398	103	186
19	e530	851	582	393	e450	872	2150	1070	e650	450	108	174
20	e520	729	581	469	e650	812	1830	992	e610	388	238	167
21	e510	661	545	451	e840	747	1510	928	e570	382	556	164
22	e500	610	546	423	e1500	697	1330	867	e540	326	703	243
23	e493	576	525	427	e2500	668	1400	805	e510	281	653	203
24	e486	611	520	435	e2000	641	1340	775	e470	268	817	194
25	e482	571	527	454	e1600	605	1150	850	e450	293	530	264
26	e480	524	512	462	e1200	631	1080	1760	e430	463	340	215
27	e475	532	514	467	e1000	680	1100	1750	411	348	258	189
28	e470	518	511	453	e850	670	4900	3670	402	350	204	184
29	e465	514	491	430	---	725	14100	3120	380	339	166	180
30	e460	512	477	427	---	636	21800	8940	385	329	139	166
31	e455	---	464	427	---	554	---	14700	---	462	159	---
TOTAL	16180	18027	19186	13933	20205	49982	135936	136327	43473	10136	8441	8843
MEAN	522	601	619	449	722	1612	4531	4398	1449	327	272	295
MAX	647	1190	976	502	2500	6390	26200	28100	6640	463	817	694
MIN	455	432	464	393	400	554	432	775	380	239	103	164
AC-FT	32090	35760	38060	27640	40080	99140	269600	270400	86230	20100	16740	17540

e Estimated

ARKANSAS RIVER BASIN

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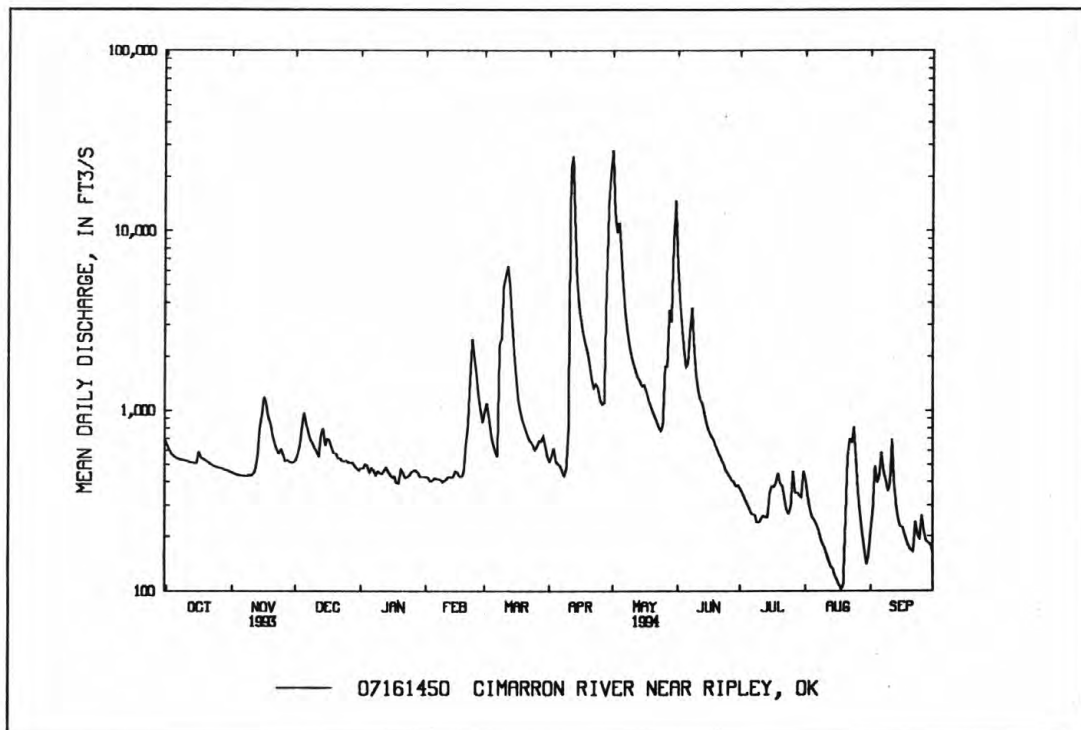
07161450 CIMARRON RIVER NEAR RIPLEY, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	552	1182	1751	1435	1178	3294	3881	5905	3220	1315	1127	1668
MAX	939	4070	4300	3541	3766	9824	7456	26790	7176	2973	3587	4554
(WY)	1990	1993	1993	1993	1993	1990	1988	1993	1989	1989	1989	1989
MIN	193	238	233	287	244	234	402	593	967	251	209	263
(WY)	1991	1991	1991	1991	1991	1991	1991	1992	1991	1990	1991	1990

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1988-94

ANNUAL TOTAL	1608338	480669	
ANNUAL MEAN	4406	1317	2214
HIGHEST ANNUAL MEAN			4983
LOWEST ANNUAL MEAN			437
HIGHEST DAILY MEAN	137000	May 10	28100 May 1 137000
LOWEST DAILY MEAN	388	Aug 30	103 Aug 18 84
ANNUAL SEVEN-DAY MINIMUM	419	Aug 26	117 Aug 13 87
INSTANTANEOUS PEAK FLOW			44200 Apr 11 141000
INSTANTANEOUS PEAK STAGE			20.41 Apr 11 28.36
ANNUAL RUNOFF (AC-FT)	3190000	953400	1604000
10 PERCENT EXCEEDS	8010	2320	4880
50 PERCENT EXCEEDS	1810	515	682
90 PERCENT EXCEEDS	494	242	226



ARKANSAS RIVER BASIN

07164500 ARKANSAS RIVER AT TULSA, OK

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

DRAINAGE AREA.--74,615 mi², of which 12,541 mi² 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 mi² 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 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1760	2760	3950	1010	5350	4490	2840	34700	16400	2530	3670	219
2	2750	1660	375	144	5840	4060	421	49600	16600	2170	5800	562
3	1600	1970	95	3120	3640	3210	293	67100	14800	445	3800	180
4	877	2060	957	4610	4490	3160	2790	65600	12700	3950	4350	138
5	2950	1570	109	6160	2030	1940	6920	59100	12500	2610	4430	175
6	5280	886	61	2320	918	173	6760	43200	12800	3880	4440	226
7	2370	684	733	3760	2790	5150	4980	33100	9530	1890	4420	2510
8	4890	940	3800	5380	3590	6460	937	33200	1880	527	4450	4020
9	1700	1880	2800	3020	3100	10800	865	33000	9020	1180	4300	1250
10	50	446	2770	1700	3030	5620	2150	30700	12400	89	5940	1380
11	948	3250	206	2510	3480	753	14200	27500	6210	50	4620	816
12	3630	813	1050	1200	349	476	15200	27200	2900	850	4340	1160
13	2890	1450	1360	1570	117	368	13500	27400	5620	415	1040	2250
14	3810	3830	4510	2320	1740	2460	13600	28100	7230	1620	70	1520
15	4060	9200	3680	1010	2650	7240	13100	27900	5160	672	429	2490
16	3930	2020	3590	1310	3850	9520	13000	25200	6020	1430	2370	2250
17	3740	179	3020	1720	4190	8490	13000	12900	4590	375	61	898
18	3740	2370	2810	4960	3440	11700	12700	11700	3100	2030	188	131
19	3050	5380	2790	5770	4470	5180	14700	10400	1980	3510	1540	541
20	4620	5330	3130	3790	6050	3800	22500	8430	2460	3850	1290	1020
21	2600	3450	3230	3880	6150	7420	22600	7780	3370	2660	534	1610
22	4320	5750	2800	1680	8450	8360	22700	7810	2020	3070	8360	1450
23	517	5590	2080	234	7680	4930	23200	8250	1460	6020	5720	1190
24	e100	3940	1770	1470	6470	4170	23200	9640	1020	6340	4040	635
25	256	363	737	877	5030	4690	22800	9170	966	5590	3710	86
26	2840	1150	157	1280	319	2670	21300	9120	1030	2640	3970	151
27	4180	2300	1080	3650	159	2050	13700	8540	1750	3820	2740	801
28	3480	182	1670	3250	1370	3850	14600	6550	2750	5370	1090	2020
29	3410	4640	2810	3820	---	4350	19100	6150	3000	7990	2220	1650
30	3650	5900	1300	4180	---	4120	17600	7040	2860	7010	3250	1340
31	1910	---	2110	4440	---	4150	---	7110	---	2850	2280	---
TOTAL	85908	81943	61540	86145	100742	145810	375256	743190	184126	87433	99462	34669
MEAN	2771	2731	1985	2779	3598	4704	12510	23970	6138	2820	3208	1156
MAX	5280	9200	4510	6160	8450	11700	23200	67100	16600	7990	8360	4020
MIN	50	179	61	144	117	173	293	6150	966	50	61	86
AC-FT	170400	162500	122100	170900	199800	289200	744300	1474000	365200	173400	197300	68770

ARKANSAS RIVER BASIN

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07164500 ARKANSAS RIVER AT TULSA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7500	6604	4599	4960	5383	10170	11900	13900	13230	8042	4578	5426
MAX	72720	39390	16830	19630	22500	42890	44460	81400	38930	24800	16690	23280
(WY)	1987	1975	1993	1993	1993	1987	1973	1993	1975	1993	1993	1989
MIN	491	457	582	483	494	490	557	881	2595	1314	1129	1156
(WY)	1965	1983	1983	1967	1967	1977	1981	1967	1966	1991	1980	1994

SUMMARY STATISTICS 1993 CALENDAR YEAR

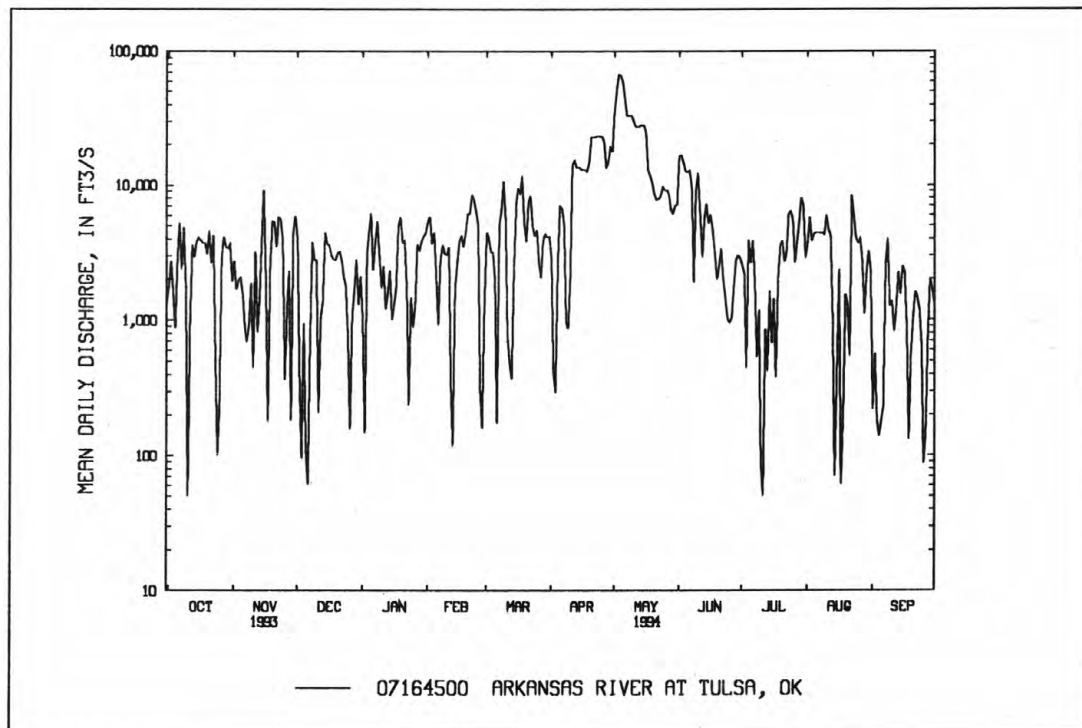
1994 WATER YEAR

WATER YEARS 1965-94

ANNUAL TOTAL	7530963	2086224	
ANNUAL MEAN	20630	5716	^a 8031
HIGHEST ANNUAL MEAN			22840
LOWEST ANNUAL MEAN			1813
HIGHEST DAILY MEAN	148000	May 14	67100
LOWEST DAILY MEAN	50	Oct 10	50
ANNUAL SEVEN-DAY MINIMUM	876	Dec 2	540
INSTANTANEOUS PEAK FLOW			67500
INSTANTANEOUS PEAK STAGE			11.39
ANNUAL RUNOFF (AC-FT)	14940000	4138000	5818000
10 PERCENT EXCEEDS	39900	13000	20900
50 PERCENT EXCEEDS	15700	3160	3870
90 PERCENT EXCEEDS	1640	419	622

^aPrior to regulation 1926-64, 6,554 ft³/s.

^bMinimum daily for period of record 27 ft³/s, Oct. 12, 13, 1956.



ARKANSAS RIVER BASIN
07164500 ARKANSAS RIVER AT TULSA, OK--Continued

(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-61, 1977 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1977 to July 1985, October 1987 to current year.

WATER TEMPERATURE: March 1977 to July 1985, October 1987 to current year.

INSTRUMENTATION.--Water-quality monitor since March 1977.

REMARKS.--Interruptions in daily record were due to malfunctions of the recording instrument. Prior to September 1985, once-daily observer's readings were published. Water-quality monitor records for these periods are available upon request at the District office. Samples were collected bimonthly and specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 7,820 microsiemens, Feb. 16, 1978; minimum, 450 microsiemens, Apr. 26, 27, 28, 1990, Dec. 20, 1992.

WATER TEMPERATURE: Maximum, 34.0° C, July 18, 1994; minimum, 0.0° C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 2,200 microsiemens, Jan. 27, 30, Feb. 19; minimum, 481 microsiemens, July 14.

WATER TEMPERATURE: Maximum, 34.0°C, July 18; minimum, 0.0°C, Feb. 9.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY	AGENCY	DIS-		PH				BARO-	
		COL-	ANA-	CHARGE,	SPE-	WATER				METRIC	
		LECTING	LYZING	INST.	CIFIC	WHOLE				PRES-	OXYGEN,
		SAMPLE	SAMPLE	CUBIC	CON-	FIELD	TEMPER-	TEMPER-	TUR-	SURE	DIS-
		(CODE	(CODE	FEET	DUCT-	(STAND-	ATURE	ATURE	BID-	(MM	SOLVED
		NUMBER)	NUMBER)	PER	ANCE	ARD	AIR	WATER	ITY	OF	(MG/L)
		(00027)	(00028)	SECOND	(US/CM)	UNITS)	(DEG C)	(DEG C)	(NTU)	(HG)	(00300)
OCT											
26...	1330	1028	80020	719	1280	8.2	17.0	16.0	2.2	750	9.7
DEC											
13...	1415	1028	80020	3260	1450	8.2	9.5	9.0	2.6	735	12.8
FEB											
28...	1300	1028	80020	116	1850	8.2	6.5	7.0	1.8	752	13.9
MAY											
10...	1100	1028	80020	32700	880	8.1	24.0	18.0	45	740	11.0
AUG											
23...	1300	1028	80020	789	1580	8.0	30.0	26.5	0.40	753	7.9
	OXYGEN,	COLI-	STREP-		HARD-						
	DIS-	FORM,	TOCOCCI		NESS						
	SOLVED	FECAL,	FECAL,	HARD-	NONCARB	CALCIUM				SODIUM	POTAS-
	(PER-	0.7	KF AGAR	NESS	DISSOLV	DIS-	MAGNE-	SODIUM,		AD-	SIUM,
	CENT	UM-MF	(COLS.	TOTAL	FLD. AS	SOLVED	SIUM,	DIS-		SORP-	DIS-
	SATUR-	(COLS./	PER	AS	CACO3	(MG/L	DIS-	SOLVED	SODIUM	TION	SOLVED
DATE	ATION)	100 ML)	100 ML)	AS	(MG/L)	AS CA)	(MG/L	(MG/L	PERCENT	RATIO	(MG/L
	(00301)	(31625)	(31673)	(00900)	(00904)	(00915)	(00925)	(00930)	(00932)	(00931)	(00935)
OCT											
26...	100	K46	K44	220	71	60	17	170	62	5	6.4
DEC											
13...	115	K34	K12	240	65	64	19	180	61	5	8.8
FEB											
28...	117	K57	K14	300	92	82	22	250	64	6	7.5
MAY											
10...	120	--	380	150	61	42	12	110	60	4	4.4
AUG											
23...	100	47	42	210	90	54	18	230	70	7	5.1

ARKANSAS RIVER BASIN
07164500 ARKANSAS RIVER AT TULSA, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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)	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 26...	183	0	150	100	240	0.40	7.7	716	695	0.97	1390
DEC 13...	212	0	174	110	290	1.0	5.6	828	786	1.13	7290
FEB 28...	249	0	204	140	370	0.60	4.8	1060	1000	1.44	332
MAY 10...	114	0	93	67	170	0.30	5.4	500	471	0.68	44100
AUG 23...	145	0	119	100	350	0.30	2.3	858	832	1.17	1830

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	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)
OCT 26...	0.600	0.600	2.7	0.030	0.10	0.630	0.630	0.030	0.04	0.37	0.40
DEC 13...	0.490	0.490	2.2	0.020	0.07	0.510	0.510	0.160	0.21	0.44	0.60
FEB 28...	0.350	0.350	1.5	0.010	0.03	0.360	0.360	0.180	0.23	0.52	0.70
MAY 10...	0.530	0.530	2.3	0.040	0.13	0.570	0.570	0.170	0.22	0.53	0.70
AUG 23...	0.200	0.200	0.89	0.010	0.03	0.210	0.210	0.020	0.03	0.38	0.40

DATE	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
OCT 26...	1.0	0.130	0.080	0.110	0.34	20	130	<3	5	11
DEC 13...	1.1	0.110	0.100	0.070	0.21	20	140	<3	4	11
FEB 28...	1.1	0.140	0.080	0.060	0.18	30	150	<3	15	16
MAY 10...	1.3	0.100	0.080	0.080	0.25	20	96	<3	17	7
AUG 23...	0.61	0.060	0.060	0.030	0.09	--	--	--	--	--

ARKANSAS RIVER BASIN
07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	SEDI- MENT, DIS- 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 26...	16	<10	<1	<1	<1.0	620	6	136	264	99
DEC 13...	120	<10	2	<1	<1.0	670	<6	92	810	55
FEB 28...	100	<10	2	1	<1.0	830	<6	52	16	84
MAY 10...	3	<10	1	<1	<1.0	430	<6	93	8210	71
AUG 23...	--	--	--	--	--	--	--	50	107	75

ARKANSAS RIVER BASIN
07164500 ARKANSAS RIVER AT TULSA, OK--Continued

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SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1110	1080	1090	1180	1140	1160	1290	1240	1270	1870	1770	1840
2	1090	1050	1060	1180	1150	1160	1270	1210	1250	1850	1700	1800
3	1060	1040	1040	1180	1150	1170	1220	1160	1180	1760	1600	1720
4	1080	1030	1060	1190	1150	1160	1320	981	1280	1700	1610	1640
5	1030	1020	1020	1200	1150	1170	1310	1270	1290	1800	1570	1670
6	1020	1010	1010	1220	1160	1190	1270	1240	1260	1830	1770	1810
7	1040	996	1020	1180	1160	1180	1410	1200	1280	1770	1600	1650
8	1040	1010	1030	1200	1140	1180	1430	1380	1410	1740	1560	1650
9	1030	996	1010	1160	1130	1150	1460	1420	1440	1720	1640	1680
10	1050	1010	1020	1170	1150	1160	1450	1430	1440	1870	1600	1710
11	---	---	---	1200	1040	1180	1440	1390	1420	1900	1790	1850
12	1020	996	1000	1200	1170	1190	1580	1350	1510	1950	1730	1820
13	1030	996	1010	1280	1100	1250	1700	1350	1540	1960	1810	1870
14	1030	1010	1010	1280	1040	1140	1680	1360	1500	1970	1770	1860
15	1060	1010	1020	1280	1210	1250	1430	1350	1380	2010	1910	1960
16	1090	1020	1050	1230	1160	1210	1580	1430	1480	2130	1760	1930
17	1100	1070	1080	1210	1180	1190	1600	1540	1580	2140	2060	2110
18	1110	1070	1100	1290	1140	1250	1580	1500	1550	2080	1950	2000
19	1130	1100	1110	1350	1270	1320	1610	1510	1540	2010	1900	1950
20	1140	1110	1120	1270	1200	1220	1610	1480	1570	2070	1970	2030
21	1110	1070	1080	1240	1210	1230	1560	1420	1460	2010	1850	1920
22	1100	1060	1080	1330	1220	1270	1600	1550	1570	1950	1900	1930
23	1110	1090	1100	1310	1270	1290	1590	1500	1540	1910	1810	1860
24	1130	1110	1120	1310	1220	1270	1660	1590	1640	2060	1770	1990
25	1130	1100	1120	1230	1220	1220	1640	1560	1590	2070	2020	2050
26	1300	1120	1270	1230	1180	1220	1580	1530	1560	2150	1940	2040
27	1200	1130	1160	1210	1180	1200	1740	1430	1560	2200	2020	2130
28	1180	1140	1160	1220	1200	1210	1750	1570	1690	2070	1960	2010
29	1150	1140	1150	1220	1180	1200	1630	1550	1580	2160	1990	2080
30	1180	1150	1160	1240	1190	1210	1700	1590	1640	2200	2090	2130
31	1180	1150	1170	---	---	---	1780	1690	1750	2110	1960	2050
MONTH	---	---	---	1350	1040	1210	1780	981	1480	2200	1560	1890

ARKANSAS RIVER BASIN
07164500 ARKANSAS RIVER AT TULSA, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	2130	2010	2070	2150	1950	2060	1720	1660	1690	1050	972	1000
2	2030	1930	1980	1960	1860	1910	1710	1680	1690	1070	968	1020
3	2080	1980	2020	1970	1880	1940	1610	1160	1410	1030	960	988
4	2060	1950	2030	2010	1930	1970	1760	995	1300	988	926	954
5	1960	1900	1920	1960	1850	1920	1780	1700	1740	985	881	912
6	2070	1790	1920	1880	1820	1860	1710	1680	1700	891	821	860
7	2180	2010	2100	---	---	---	1700	1660	1680	851	821	838
8	2110	2010	2070	---	---	---	1700	1660	1690	858	821	835
9	2080	1860	2000	---	---	---	1740	1700	1730	881	858	868
10	2090	1830	1940	---	---	---	1740	1250	1640	911	861	887
11	2070	1960	2030	---	---	---	1710	681	1290	931	901	919
12	2080	2000	2040	---	---	---	1600	1020	1470	921	901	910
13	2000	1930	1970	---	---	---	1680	1600	1660	931	891	909
14	2030	1830	1930	---	---	---	1790	1670	1730	921	891	905
15	2080	1930	2010	---	---	---	1830	1710	1780	911	899	904
16	2070	1930	2020	---	---	---	1720	1700	1710	951	901	934
17	2020	1900	1960	---	---	---	1710	1620	1680	971	931	944
18	2050	1920	1980	2190	1850	2050	1650	1590	1630	971	941	956
19	2200	1990	2060	2050	1810	1950	1690	1570	1640	971	931	953
20	2060	1920	2000	2070	1930	2020	1570	1510	1540	1000	971	982
21	2000	1830	1930	1960	1820	1920	1560	1480	1510	1000	990	990
22	1940	1530	1820	1980	1920	1950	1510	1360	1430	1000	971	958
23	1820	1770	1790	1950	1900	1930	1470	1340	1430	1020	951	989
24	2170	1770	1920	1930	1820	1880	1440	1320	1370	1030	1010	1020
25	2150	2010	2070	1830	1760	1790	1380	1240	1300	1070	946	1020
26	2060	1960	2000	1840	1610	1750	1300	1190	1240	1120	946	1090
27	1960	1840	1910	1780	1720	1750	1190	1090	1140	1220	1120	1180
28	2150	1770	1930	1770	1700	1740	1130	1070	1090	1240	1210	1220
29	---	---	---	1750	1690	1720	1090	971	1020	1230	1020	1150
30	---	---	---	1740	1680	1700	1000	814	911	1190	1100	1170
31	---	---	---	1720	1670	1690	---	---	---	1230	1170	1180
MONTH	2200	1530	1980	---	---	---	1830	681	1490	1240	821	982

ARKANSAS RIVER BASIN
07164500 ARKANSAS RIVER AT TULSA, OK--Continued

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SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	1760	1230	1500	1850	1710	1750	1740	1690	1720	1820	1130	1380
2	1770	1570	1660	1850	1690	1730	1690	1580	1640	1550	1380	1500
3	1610	1420	1510	1690	1610	1650	1600	1530	1560	1520	1480	1490
4	1610	1420	1540	1890	1570	1720	1590	1520	1550	1480	1440	1450
5	1600	1470	1530	1870	1800	1820	1520	1480	1490	1440	1110	1350
6	---	---	---	1840	1750	1770	1520	1450	1470	1390	1180	1330
7	---	---	---	1750	1660	1700	1520	1440	1500	1510	1350	1450
8	---	---	---	1660	1260	1530	1550	1470	1500	1460	1410	1420
9	---	---	---	1790	1600	1720	1530	1490	1510	1460	1430	1440
10	---	---	---	1700	1480	1660	1550	1460	1500	1500	1450	1460
11	---	---	---	1640	1580	1610	1590	1530	1540	1520	1500	1510
12	---	---	---	1850	1580	1770	1770	1590	1630	1550	1480	1510
13	---	---	---	1760	628	1550	1780	1710	1750	1560	1510	1530
14	---	---	---	1720	481	1390	1710	1640	1670	1550	1530	1540
15	---	---	---	1340	584	788	2020	1590	1620	1560	1500	1540
16	---	---	---	1630	1340	1570	2020	1650	1720	1520	1460	1490
17	---	---	---	1530	1390	1500	1650	1600	1630	1510	1470	1490
18	---	---	---	1930	1440	1560	1650	1530	1570	1500	1480	1480
19	---	---	---	1890	1720	1800	1940	1650	1840	1540	1450	1470
20	---	---	---	1970	1870	1900	1790	1470	1570	1540	1490	1510
21	1400	1330	1350	1970	1430	1660	1620	1400	1420	1520	1450	1490
22	1400	1350	1360	1850	1590	1790	1630	1550	1580	1480	1410	1440
23	1450	1400	1430	1830	1790	1820	1590	1530	1550	1470	1450	1460
24	1570	1440	1540	1830	1740	1790	1560	1500	1520	1450	1430	1440
25	1630	1550	1610	1810	1590	1740	1590	1520	1540	1450	1420	1430
26	1700	1600	1680	1790	665	1270	1660	1410	1570	1460	1420	1440
27	1780	1620	1680	1700	855	1500	1610	1570	1580	1480	1430	1460
28	1780	1720	1750	1750	1560	1630	1590	1550	1570	1510	1450	1480
29	1760	1680	1710	1790	1690	1730	1660	1570	1630	1530	1480	1500
30	1790	1690	1720	1780	1720	1750	1590	1510	1530	1550	1510	1530
31	---	---	---	1750	1690	1710	1580	1400	1500	---	---	---
MONTH	---	---	---	1970	481	1640	2020	1400	1580	1820	1110	1470

ARKANSAS RIVER BASIN
07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	23.0	20.0	21.5	13.0	10.5	12.0	11.0	9.0	10.0	8.0	6.0	7.5
2	22.0	19.5	20.5	13.0	11.5	12.5	12.5	10.5	11.5	8.0	6.5	7.0
3	21.5	19.0	20.0	15.0	13.0	14.0	13.0	12.0	12.5	6.5	4.5	5.5
4	23.5	19.0	21.5	16.0	13.0	14.0	12.5	9.5	10.5	5.5	4.5	5.0
5	23.5	20.0	21.5	15.0	11.0	12.0	11.5	9.0	10.0	6.5	4.0	5.5
6	23.0	20.0	21.5	11.0	8.5	9.5	10.0	7.5	9.0	6.5	4.5	5.5
7	23.0	20.5	21.5	10.5	8.0	9.5	10.0	8.0	8.5	4.5	2.5	3.5
8	23.5	20.5	21.5	11.5	8.0	9.5	9.0	7.0	8.5	5.0	2.5	4.0
9	21.0	15.0	17.5	13.5	11.5	12.5	13.0	9.0	11.0	5.5	4.0	5.0
10	17.5	13.0	15.0	14.5	11.0	12.5	11.0	8.5	9.5	6.5	5.5	6.0
11	20.5	11.5	16.5	14.0	12.0	13.0	11.0	8.5	9.5	6.5	5.5	6.0
12	20.5	18.0	19.5	16.0	14.0	15.0	9.0	7.5	8.5	7.0	5.5	6.5
13	21.0	18.5	20.0	16.0	12.5	13.5	9.5	7.5	9.0	7.5	5.5	6.5
14	20.5	18.0	19.0	13.5	12.0	12.5	7.5	6.0	7.0	6.0	4.0	4.5
15	20.0	18.5	19.0	12.0	10.5	11.0	7.5	7.0	7.0	4.0	2.0	3.0
16	20.0	19.0	19.5	11.5	10.0	10.5	8.0	7.5	7.5	3.0	1.0	2.5
17	19.5	18.0	18.5	10.5	9.5	10.0	8.5	7.5	8.0	3.0	1.0	2.0
18	19.0	18.0	18.5	13.0	9.5	11.5	8.0	6.5	7.5	3.0	1.5	2.0
19	19.0	18.0	18.5	12.5	10.5	11.5	8.0	6.5	7.0	4.0	1.5	2.5
20	19.0	17.5	18.0	11.5	9.0	10.5	8.0	6.5	7.0	5.0	3.5	4.0
21	18.0	16.0	17.0	12.0	10.0	11.0	8.0	5.5	7.0	5.0	2.5	4.0
22	19.0	15.5	17.5	11.5	9.5	10.5	7.0	5.5	6.5	6.5	4.5	5.5
23	18.0	15.5	17.0	13.0	10.5	11.5	6.5	5.0	6.0	8.0	6.5	7.0
24	18.5	15.0	16.5	12.5	8.5	10.0	6.5	5.0	6.0	8.0	6.5	7.5
25	21.5	14.5	17.0	8.5	5.0	6.0	7.0	5.0	6.0	9.0	7.5	8.0
26	17.0	15.0	16.5	6.5	2.5	4.5	8.5	5.5	7.0	11.0	7.0	9.0
27	16.5	14.5	15.5	9.0	6.5	7.5	8.5	6.0	7.5	7.0	4.0	5.5
28	17.0	14.0	15.5	10.5	6.5	8.0	6.0	3.0	4.5	4.5	2.5	3.5
29	17.0	10.0	13.5	10.5	7.5	9.0	6.5	4.0	5.0	5.0	2.5	4.0
30	13.0	10.5	12.0	10.5	8.5	9.5	6.0	4.0	5.0	4.5	3.0	4.0
31	13.0	11.0	12.0	---	---	---	7.0	5.0	6.0	3.5	1.5	3.0
MONTH	23.5	10.0	18.0	16.0	2.5	10.8	13.0	3.0	7.9	11.0	1.0	5.0

ARKANSAS RIVER BASIN
07164500 ARKANSAS RIVER AT TULSA, OK--Continued

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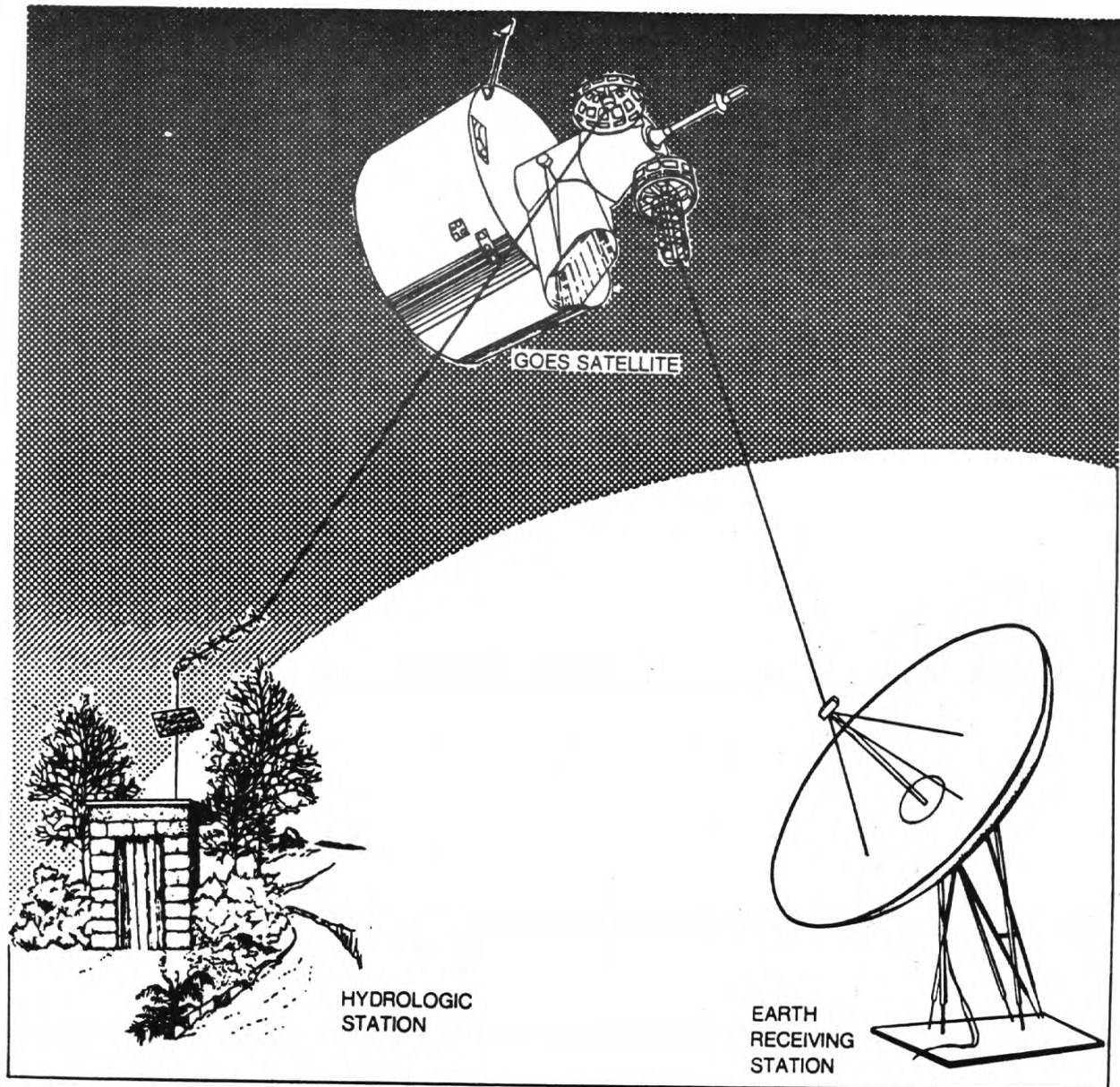
WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	4.5	2.0	3.0	6.0	4.0	5.5	15.5	10.5	13.5	18.5	16.0	17.0
2	5.0	2.5	3.5	8.0	4.0	6.0	17.5	13.5	15.0	17.0	14.5	15.5
3	5.5	3.0	4.0	9.5	5.5	7.5	16.5	12.5	14.0	16.0	14.5	15.0
4	6.0	3.5	5.0	10.5	7.0	9.0	15.0	13.0	14.0	15.5	14.0	14.5
5	7.0	4.0	5.5	11.5	7.0	9.5	13.0	10.0	11.5	15.5	14.0	14.5
6	8.5	5.5	6.5	16.5	11.5	13.5	13.5	8.5	11.0	16.0	13.5	14.5
7	7.5	4.0	6.0	15.0	7.0	12.0	14.0	10.0	12.0	15.5	14.0	14.5
8	4.0	2.0	3.5	7.0	3.5	5.0	16.0	11.0	13.5	16.0	13.5	14.5
9	2.5	.0	1.0	7.5	3.5	5.5	16.0	14.0	15.0	16.5	14.5	15.5
10	3.5	.5	2.0	9.0	5.0	7.0	16.5	13.0	15.5	17.0	14.5	16.0
11	5.0	2.0	3.5	11.0	7.5	9.5	14.0	12.5	13.0	17.5	15.0	16.0
12	6.5	4.5	5.5	12.0	10.0	11.0	13.5	11.0	12.0	18.0	15.5	16.5
13	8.5	3.5	5.5	15.5	10.5	13.0	15.5	11.0	13.0	17.5	16.0	16.5
14	7.5	5.0	6.0	16.5	10.0	13.5	17.5	13.0	14.5	18.0	16.0	17.0
15	8.5	5.0	6.5	11.5	8.0	9.5	16.5	13.0	14.5	20.0	16.5	18.0
16	6.5	3.5	5.5	11.0	7.5	9.0	16.5	12.5	14.5	20.0	17.0	18.5
17	7.5	5.5	6.5	13.5	8.0	10.5	17.5	13.0	15.0	21.0	17.5	19.0
18	9.0	7.0	8.0	11.5	8.5	10.0	17.5	13.5	15.0	21.0	17.0	19.0
19	10.0	7.0	8.5	15.5	8.5	11.5	18.0	13.5	15.5	22.0	17.5	19.5
20	7.5	6.0	7.0	15.0	10.5	12.5	17.5	14.0	15.5	21.5	17.5	19.5
21	8.0	5.5	6.5	13.0	9.5	11.5	18.0	14.5	16.0	21.5	17.5	19.5
22	7.0	5.5	6.0	13.5	9.0	11.0	16.5	15.0	15.5	21.5	18.0	19.5
23	5.5	3.5	5.0	15.5	10.0	12.5	18.0	15.0	16.0	22.5	18.5	20.5
24	7.0	2.5	4.5	13.0	10.0	10.5	18.5	15.0	16.5	22.0	19.0	20.5
25	6.0	4.5	5.5	13.0	9.5	11.0	16.5	15.5	16.0	23.0	19.5	21.0
26	7.0	3.0	4.5	11.5	10.5	11.0	19.0	15.5	17.0	22.5	20.0	21.5
27	7.0	3.0	5.0	12.0	10.0	11.0	18.0	15.5	16.0	23.0	19.5	21.0
28	6.5	5.5	6.0	12.5	8.5	11.0	17.5	15.5	16.5	22.5	20.0	21.5
29	---	---	---	13.0	9.5	11.5	17.0	14.5	15.5	23.0	20.0	21.5
30	---	---	---	13.5	9.0	11.5	16.5	14.0	15.0	26.0	20.5	23.0
31	---	---	---	14.0	9.5	12.0	---	---	---	26.0	21.5	23.5
MONTH	10.0	.0	5.2	16.5	3.5	10.2	19.0	8.5	14.6	26.0	13.5	18.2

ARKANSAS RIVER BASIN
07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	25.5	21.0	23.0	31.0	27.0	29.0	30.5	26.5	28.5	24.0	22.0	23.0
2	25.5	22.0	23.5	30.0	26.0	28.0	31.0	26.5	28.5	23.0	21.5	22.5
3	26.0	22.5	24.0	32.5	28.0	30.0	31.5	26.5	28.5	24.0	22.5	23.0
4	26.0	23.0	24.5	30.0	28.0	29.0	31.0	26.5	28.0	27.0	22.5	24.5
5	26.5	23.0	24.5	31.0	27.0	29.0	28.5	26.0	27.5	26.0	24.0	25.0
6	---	---	---	30.0	26.5	28.0	29.5	25.5	27.0	27.5	23.5	25.0
7	---	---	---	30.0	26.0	28.0	28.0	25.5	27.0	27.0	23.5	25.5
8	---	---	---	31.0	27.0	29.0	29.5	25.5	27.5	27.0	24.0	25.5
9	---	---	---	30.0	26.5	27.5	30.0	26.0	27.5	27.0	23.5	25.5
10	---	---	---	31.5	26.0	28.5	29.0	25.5	27.5	26.5	24.0	25.5
11	---	---	---	32.0	27.0	29.0	30.5	26.0	28.0	26.5	23.5	25.0
12	---	---	---	31.0	27.5	29.5	30.0	26.0	28.0	28.5	24.0	26.0
13	---	---	---	31.0	26.5	29.5	30.0	26.0	28.0	28.0	24.5	26.0
14	---	---	---	31.0	24.0	28.0	29.0	26.0	28.0	27.5	24.5	26.0
15	---	---	---	30.0	24.5	26.5	28.0	23.0	25.5	27.0	24.5	25.5
16	---	---	---	31.5	27.5	29.5	28.0	24.5	26.5	26.0	23.5	25.0
17	---	---	---	33.0	28.5	30.5	29.0	25.5	27.0	25.0	22.0	23.5
18	---	---	---	34.0	29.5	31.0	29.5	24.5	27.0	26.0	21.5	23.5
19	---	---	---	31.5	27.5	29.5	28.5	26.0	27.0	26.0	21.5	24.0
20	---	---	---	32.0	27.5	29.0	27.5	25.0	26.0	25.0	22.5	24.0
21	31.5	26.0	28.0	29.5	26.5	27.5	28.5	24.0	26.0	25.0	22.5	24.0
22	30.5	26.0	28.0	32.5	27.0	29.5	29.0	25.0	27.0	24.0	20.5	21.5
23	30.0	26.5	28.0	32.5	27.5	30.0	29.0	24.5	26.5	21.0	18.0	19.5
24	29.5	25.5	27.5	32.0	29.0	30.5	29.5	25.5	27.0	18.5	17.5	18.0
25	31.0	27.0	29.0	30.0	27.0	28.5	29.5	25.5	27.5	20.0	16.5	18.0
26	31.0	27.0	29.5	29.5	24.5	26.5	29.0	25.0	27.0	22.0	17.5	19.5
27	32.0	28.0	30.0	29.5	24.5	26.5	30.5	26.0	27.5	22.5	19.5	21.0
28	31.5	27.0	29.0	29.5	25.5	27.5	29.0	25.5	27.5	25.0	20.5	22.5
29	31.0	26.0	28.5	30.0	25.5	27.5	29.5	26.0	28.0	25.0	21.0	23.0
30	31.0	26.5	28.5	29.5	26.0	27.5	29.5	25.5	27.5	24.0	21.0	22.5
31	---	---	---	29.5	26.0	28.0	27.0	24.0	25.5	---	---	---
MONTH	---	---	---	34.0	24.0	28.6	31.5	23.0	27.3	28.5	16.5	23.4



**Geostationary Operational Earth Satellite (GOES)
Data-Collection System**

ARKANSAS RIVER BASIN

07164600 JOE CREEK AT 61ST STREET AT TULSA, OK

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

DRAINAGE AREA.--12.2 mi².

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

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

REMARKS.--Records fair.

EXTREMES OUTSIDE PERIOD OF RECORD.--23,000 ft³/s, May 26, 1984, slope-area measurement at 71st Street, gage height undetermined at 61st Street.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	.72	2.4	.72	1.1	102	3.9	10	3.8	2.4	1.8	39
2	2.1	1.1	83	2.2	7.5	25	74	140	3.0	7.7	6.6	4.4
3	.99	.92	5.1	5.2	1.3	8.3	19	17	2.5	5.6	4.9	2.8
4	.85	.69	21	.80	.47	7.2	4.9	6.9	7.4	3.7	6.8	1.6
5	.79	.68	.94	9.4	1.1	7.4	97	5.5	4.2	1.6	1.6	69
6	.84	.66	1.3	.80	1.4	5.6	10	5.0	15	1.4	3.8	4.1
7	.77	.75	1.0	8.7	.50	10	4.2	28	2.5	1.5	3.0	3.4
8	5.8	.69	2.1	3.1	1.3	346	5.2	6.0	8.9	13	.80	3.2
9	1.2	.66	.73	14	20	151	10	6.2	153	7.8	2.3	13
10	1.1	.77	.62	1.0	37	96	18	4.5	3.5	5.1	3.2	10
11	2.2	.97	.55	1.2	6.6	38	514	4.6	2.8	5.5	1.6	7.6
12	1.4	9.8	32	.73	.90	12	23	5.6	2.4	7.3	5.9	2.1
13	.89	83	112	.71	.62	6.7	13	13	2.2	120	4.6	3.6
14	.80	84	3.9	.65	3.1	4.7	6.5	77	2.3	392	1.1	2.2
15	.97	2.3	1.3	3.3	3.5	3.7	5.1	5.7	2.9	21	1.2	113
16	121	47	1.9	13	.82	4.0	4.5	4.2	2.0	e8.8	3.8	8.7
17	1.9	16	1.0	6.5	.74	5.4	4.5	3.9	61	e4.5	1.6	1.0
18	1.1	5.1	.88	25	.62	2.4	5.0	3.5	11	e2.7	178	2.2
19	3.3	3.5	1.3	31	97	4.8	4.2	3.5	11	e1.3	2.7	1.1
20	3.5	4.0	.90	1.8	6.0	3.0	4.0	3.5	5.0	2.4	1.2	.85
21	.77	4.5	1.7	2.1	13	3.8	4.4	4.7	8.4	220	1.2	8.4
22	.56	7.6	.81	1.4	163	7.4	3.5	4.6	9.9	4.0	1.2	97
23	.55	5.4	.98	.70	9.7	6.2	3.1	5.6	9.1	6.5	1.2	2.3
24	.97	3.7	.70	.68	2.7	6.6	3.6	6.6	5.8	6.3	1.2	3.0
25	1.1	3.6	.65	.62	1.6	2.4	3.5	129	6.0	107	1.5	1.7
26	.47	6.0	.68	72	15	210	84	281	13	400	156	.97
27	.48	6.3	1.1	1.4	3.4	6.2	4.0	3.7	4.0	10	2.8	2.5
28	.53	.92	2.6	.72	47	4.1	44	2.6	3.4	3.8	1.5	1.6
29	.87	.94	.80	2.3	---	2.3	341	495	12	2.4	1.2	.97
30	1.3	1.2	.97	1.6	---	2.9	145	16	5.5	3.9	1.8	.98
31	.91	---	1.0	7.9	---	7.7	---	10	---	2.2	133	---
TOTAL	162.11	303.47	285.91	221.23	446.97	1102.8	1466.1	1312.4	383.5	1381.4	539.10	412.27
MEAN	5.23	10.1	9.22	7.14	16.0	35.6	48.9	42.3	12.8	44.6	17.4	13.7
MAX	121	84	112	72	163	346	514	495	153	400	178	113
MIN	.47	.66	.55	.62	.47	2.3	3.1	2.6	2.0	1.3	.80	.85
AC-FT	322	602	567	439	887	2190	2910	2600	761	2740	1070	818
CFSM	.43	.83	.76	.58	1.31	2.92	4.01	3.47	1.05	3.65	1.43	1.13
IN.	.49	.93	.87	.67	1.36	3.36	4.47	4.00	1.17	4.21	1.64	1.26

c Estimated

ARKANSAS RIVER BASIN

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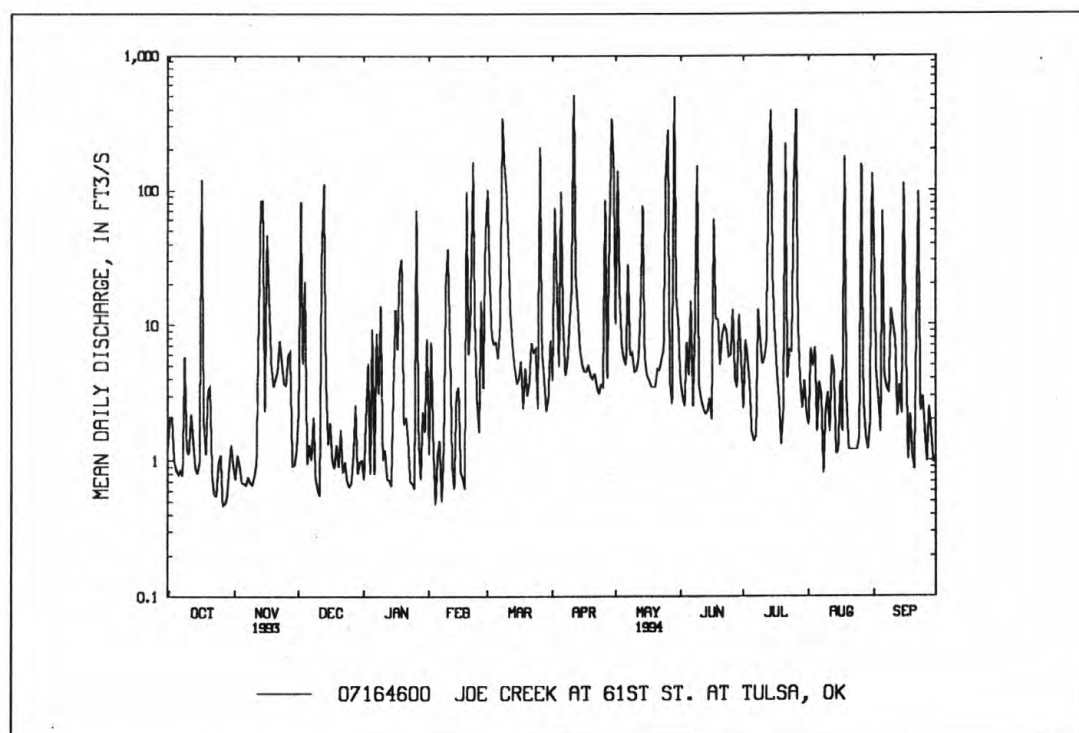
07164600 JOE CREEK AT 61ST STREET AT TULSA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.1	17.1	17.7	11.4	16.1	26.4	30.4	37.6	21.5	14.0	15.8	23.9
MAX	32.5	42.3	45.3	19.9	29.1	56.2	48.9	57.6	51.7	44.6	33.2	42.6
(WY)	1992	1993	1993	1993	1990	1990	1994	1993	1992	1994	1989	1993
MIN	3.38	2.02	2.36	5.19	2.71	7.94	2.85	13.9	9.48	3.22	4.59	10.6
(WY)	1989	1990	1990	1992	1991	1992	1989	1989	1990	1990	1990	1992

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1989-94
ANNUAL TOTAL	7779.83	8017.26	
ANNUAL MEAN	21.3	22.0	20.2
HIGHEST ANNUAL MEAN			27.1
LOWEST ANNUAL MEAN			14.3
HIGHEST DAILY MEAN	506	May 8	514
LOWEST DAILY MEAN	.47	Oct 26	.47
ANNUAL SEVEN-DAY MINIMUM	.67	Oct 22	.67
INSTANTANEOUS PEAK FLOW		8340	8340
INSTANTANEOUS PEAK STAGE		8.03	8.03
ANNUAL RUNOFF (AC-FT)	15430	15900	14670
ANNUAL RUNOFF (CFSM)	1.75	1.80	1.66
ANNUAL RUNOFF (INCHES)	23.72	24.45	22.55
10 PERCENT EXCEEDS	55	64	41
50 PERCENT EXCEEDS	4.6	3.7	3.0
90 PERCENT EXCEEDS	.91	.80	1.1

^aAlso on Feb. 4, 1994.



ARKANSAS RIVER BASIN

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

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

DRAINAGE AREA.--17.8 mi².

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

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

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.18	1.2	2.9	3.1	1.7	191	2.9	11	4.8	.76	1.3	84
2	e.14	e1.1	182	2.6	1.7	69	7.2	211	2.9	23	.93	7.6
3	e.09	e1.1	12	3.8	1.7	14	31	79	2.2	3.7	e.60	3.0
4	e.06	e1.1	28	3.8	1.9	7.4	5.0	9.7	2.2	.61	e.35	1.6
5	e.04	e1.0	6.2	3.3	2.1	5.7	30	5.3	1.5	.14	e.22	72
6	e.03	e1.0	2.8	3.0	2.2	4.6	7.9	5.1	67	.69	e.15	15
7	e.03	e.95	2.1	2.9	2.3	4.1	3.7	39	4.8	.54	e.10	2.9
8	e.02	e.90	2.0	2.7	2.0	456	3.4	4.8	2.6	199	e.07	1.3
9	e.02	e.88	2.4	2.6	1.5	248	3.2	2.0	212	3.8	e.05	.85
10	e.01	e.82	2.5	2.6	1.3	183	61	1.4	15	1.2	e.04	.67
11	e.01	e.80	2.9	2.7	1.3	83	733	.90	4.9	.54	e.03	e.58
12	e.01	e.78	3.5	3.0	1.4	28	94	.62	2.8	.29	e.02	e.50
13	e.00	5.7	175	3.2	1.5	15	14	1.2	2.0	365	.02	e.44
14	.00	197	31	3.2	1.6	9.8	8.2	4.3	1.3	438	e.02	e.40
15	.00	7.9	6.9	3.0	1.6	7.0	5.1	7.3	1.3	97	e.02	2.4
16	225	35	4.1	4.1	1.6	5.4	2.7	.55	1.8	6.8	e.02	83
17	19	50	3.4	5.4	1.9	4.7	e2.0	.09	1.7	3.2	e.01	4.3
18	4.4	6.1	3.0	2.8	1.8	5.3	e1.7	.00	1.2	1.7	e.01	1.7
19	3.3	3.7	2.6	1.9	23	4.7	e1.3	.00	1.4	.85	1.1	1.4
20	9.0	3.8	2.7	2.1	48	4.5	e1.2	.00	.81	.35	151	1.5
21	4.7	3.3	2.5	2.3	3.7	7.0	e.95	.00	.79	431	6.4	2.1
22	1.9	3.6	2.5	2.3	208	4.6	e.78	.00	1.4	15	2.2	77
23	1.6	3.3	2.5	2.4	21	4.1	e.65	.00	.85	4.5	.69	6.0
24	1.5	3.6	2.5	2.5	5.7	4.1	e.52	.00	.49	2.1	.64	3.3
25	2.1	3.3	2.5	2.9	3.6	4.4	e.43	.00	.27	40	1.8	1.9
26	1.9	3.4	2.3	24	2.8	204	e.80	408	.28	550	246	e1.5
27	1.5	3.2	2.5	8.8	2.8	31	1.6	7.6	.31	36	8.8	e1.1
28	1.2	3.0	2.6	3.0	29	7.6	41	2.7	.23	8.1	2.9	e.90
29	1.3	2.9	2.9	2.2	---	4.3	250	761	.00	4.2	1.6	e.70
30	1.3	2.9	2.5	1.9	---	3.1	261	27	.00	2.6	1.6	e.62
31	1.2	---	3.0	1.7	---	2.5	---	8.4	---	1.7	86	---
TOTAL	281.54	353.33	506.3	115.8	378.7	1626.9	1576.23	1597.96	338.83	2242.37	514.69	380.26
MEAN	9.08	11.8	16.3	3.74	13.5	52.5	52.5	51.5	11.3	72.3	16.6	12.7
MAX	225	197	182	24	208	456	733	761	212	550	246	84
MIN	.00	.78	2.0	1.7	1.3	2.5	.43	.00	.00	.14	.01	.40
AC-FT	558	701	1000	230	751	3230	3130	3170	672	4450	1020	754
CFSM	.51	.66	.92	.21	.76	2.95	2.95	2.90	.63	4.06	.93	.71
IN.	.59	.74	1.06	.24	.79	3.40	3.29	3.34	.71	4.69	1.08	.79

e Estimated

ARKANSAS RIVER BASIN

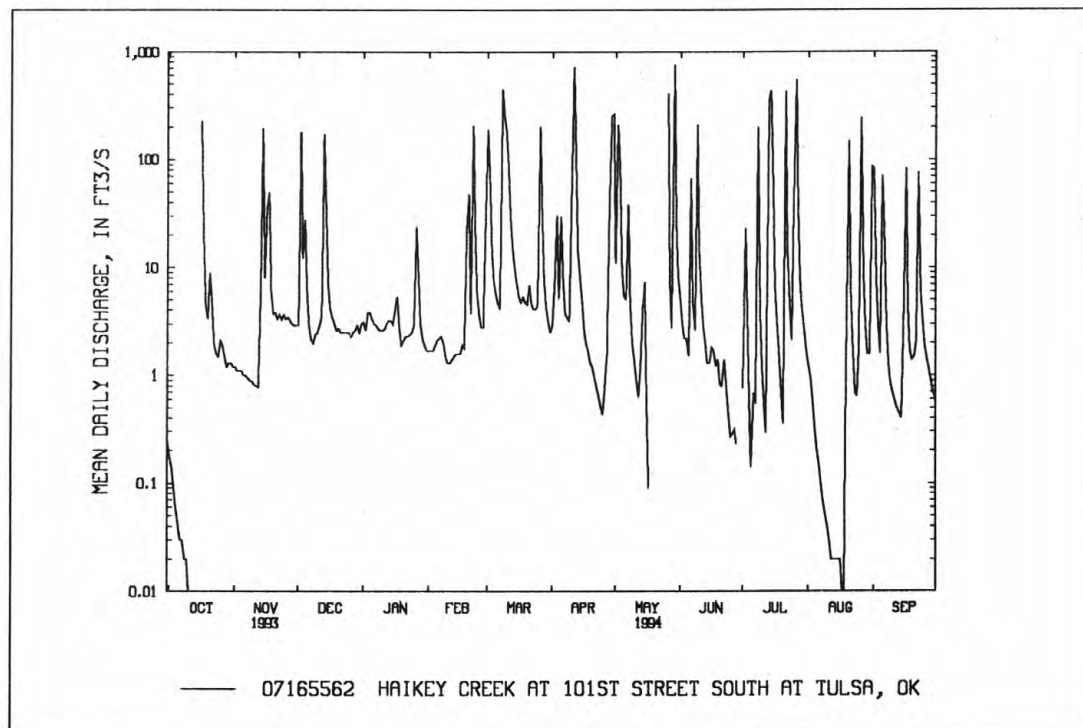
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07165562 HAIKEY CREEK AT 101ST STREET SOUTH AT TULSA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.1	19.1	25.7	14.5	20.4	41.0	38.7	35.8	25.7	17.9	15.9	24.4
MAX	47.0	47.7	62.3	28.3	38.7	120	82.3	67.3	75.9	72.3	49.6	54.3
(WY)	1992	1993	1993	1993	1993	1990	1990	1993	1992	1994	1989	1993
MIN	.74	.76	1.67	3.74	1.67	6.22	5.07	14.0	3.63	.47	.36	10.7
(WY)	1989	1990	1990	1994	1991	1991	1989	1989	1990	1990	1991	1992

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1989-94
ANNUAL TOTAL	8740.84	9912.91	
ANNUAL MEAN	23.9	27.2	24.3
HIGHEST ANNUAL MEAN			31.0 1992
LOWEST ANNUAL MEAN			11.0 1991
HIGHEST DAILY MEAN	745 May 9	761 May 29	1620 Mar 14 1990
LOWEST DAILY MEAN	.00 Jun 30	.00 at times	.00 at times
ANNUAL SEVEN-DAY MINIMUM	.00 Jun 30	.00 May 18	.00 Oct 12 1988
INSTANTANEOUS PEAK FLOW		3300 May 29	5890 Aug 20 1989
INSTANTANEOUS PEAK STAGE		16.44 May 29	17.28 Aug 20 1989
ANNUAL RUNOFF (AC-FT)	17340	19660	17580
ANNUAL RUNOFF (CFSM)	1.35	1.53	1.36
ANNUAL RUNOFF (INCHES)	18.27	20.72	18.52
10 PERCENT EXCEEDS	65	54	40
50 PERCENT EXCEEDS	2.7	2.6	2.7
90 PERCENT EXCEEDS	.00	.12	.00



ARKANSAS RIVER BASIN

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

LOCATION.--Lat 36°01'03", long 95°51'38", in SE 1/4 SW 1/4 sec.19, T.18 N., R.14 E., Tulsa County, Hydrologic Unit 11110101, near right upstream abutment of 101st Street South bridge, and at mile 2.0.

DRAINAGE AREA.--5.45 mi².

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

REVISED RECORDS.--WDR OK-92-1: 1988, 89 (M).

GAGE.--Water-stage recorder. Datum of gage is 626.21 ft above sea level.

REMARKS.--Records poor.

REVISIONS.--The maximum discharge for the water years 1988 and 1989 have been revised to 773 ft³/s, Mar. 29, 1988, gage height 13.51 ft and 1,380 ft³/s, Aug. 20, 1989, gage height 16.20 ft, superseding figures published in reports for 1988 and 1989.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.05	e.01	.03	e.00	.00	43	.00	3.9	6.9	.00	.00	12
2	e.03	.03	41	e.00	.00	9.3	8.9	61	2.7	e1.0	1.9	.64
3	e.02	.09	1.4	e.50	.00	1.1	4.6	20	1.6	e.10	14	.03
4	e.02	.33	6.8	e.12	.00	.13	.09	5.2	1.2	e.01	e1.0	.00
5	e.01	.25	e1.7	e.06	.00	.00	10	2.0	.96	e.00	e.02	12
6	e.01	.08	e.55	e.04	.00	.00	.20	1.2	.99	.20	e.00	.42
7	e.00	e.02	e.28	e.02	.00	.02	.00	15	21	.10	.00	.00
8	e15	e.01	e.16	e.01	.00	116	.00	e7.5	3.4	20	.00	.00
9	e2.0	.00	e.12	e.00	.00	38	.00	.61	.21	e.40	.00	.00
10	e.44	.00	e.09	e.00	.00	34	3.1	.30	11	e.12	.00	2.6
11	e.16	.00	e.07	e.00	.00	13	252	e.05	30	e.07	.00	11
12	e.10	.98	1.0	e.00	.00	4.3	13	e.01	.77	e.02	.00	1.8
13	e.07	16	121	.00	.00	1.2	3.6	e.12	e.25	54	.00	e.50
14	.05	79	e10	.00	.00	.26	.68	e1.0	e.15	145	.00	e.20
15	.04	4.9	e2.0	.00	.00	.00	.01	e2.0	e.09	30	.00	1.9
16	50	12	e.50	e.00	.00	.00	.00	e.30	e.06	6.8	.00	15
17	2.6	10	e.22	e2.0	.00	.00	.00	e.12	e.04	6.6	41	.32
18	.51	2.0	e.08	e1.0	.00	.00	.00	e.08	e.02	1.6	2.5	e.04
19	.11	e.40	e.04	e.30	17	.00	.00	e.05	e.02	.50	.01	e.01
20	1.2	e.10	e.02	e.15	2.0	.00	.00	e.03	e.02	83	e10	.00
21	e.30	e.04	e.02	e.06	.00	.00	.00	.00	e.01	52	e1.0	.00
22	e.09	e.02	e.01	e.03	51	.00	.00	.00	e.01	5.5	e.50	27
23	e.06	e.00	e.00	e.02	3.3	.00	.00	.00	.00	2.2	e.35	1.3
24	e.04	e.00	e.00	e.30	.03	.00	.00	.00	.00	.56	e.30	.03
25	e.03	e.00	e.00	.41	.00	.00	.00	.80	.00	51	e.40	.00
26	e.02	e.00	e.00	7.6	.00	45	.10	37	.00	74	96	.00
27	e.02	.00	e.00	.04	.00	3.9	.08	.19	.00	4.9	1.6	.00
28	e.01	.00	e.00	.00	11	.27	2.5	.00	.00	1.1	e.20	.00
29	e.01	.00	e.00	.00	---	.00	76	192	.00	.12	e.02	.00
30	e.01	.00	e.00	.00	---	.00	50	e60	.00	.00	.00	.00
31	e.01	---	e.00	.00	---	.00	---	9.9	---	.00	23	---
TOTAL	73.02	126.26	187.09	12.66	84.33	309.48	424.86	420.36	81.40	540.90	193.80	86.79
MEAN	2.36	4.21	6.04	.41	3.01	9.98	14.2	13.6	2.71	17.4	6.25	2.89
MAX	50	79	121	7.6	51	116	252	192	30	145	96	27
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	145	250	371	25	167	614	843	834	161	1070	384	172
CFSM	.43	.77	1.11	.07	.55	1.83	2.60	2.49	.50	3.20	1.15	.53
IN.	.50	.86	1.28	.09	.58	2.11	2.90	2.87	.56	3.69	1.32	.59

e Estimated

ARKANSAS RIVER BASIN

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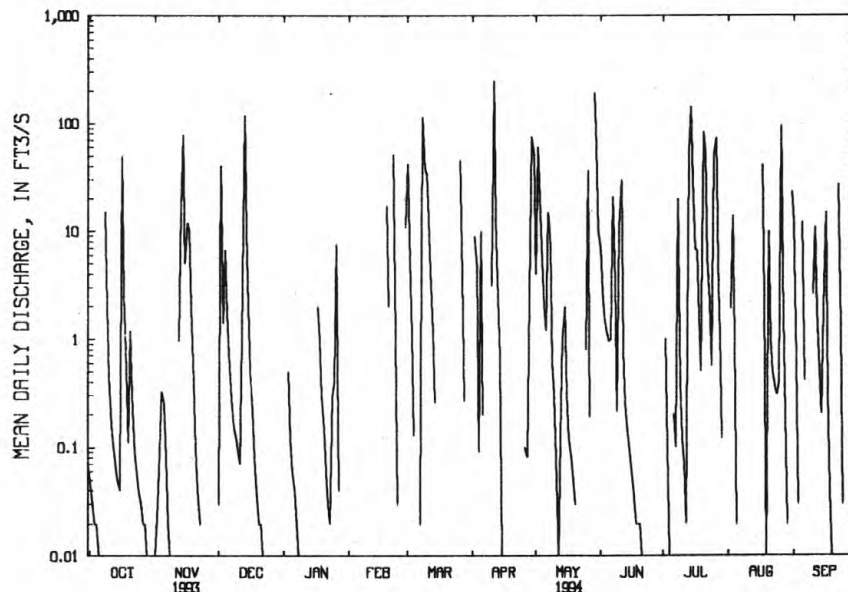
07165565 LITTLE HAIKEY CREEK AT 101ST STREET SOUTH AT TULSA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.82	5.78	8.88	3.14	4.48	11.9	9.10	9.82	5.22	4.35	3.74	6.86
MAX	11.8	15.0	19.9	6.77	10.1	28.3	17.8	25.1	18.1	17.4	9.62	15.2
(WY)	1992	1993	1993	1993	1993	1990	1990	1993	1992	1994	1992	1993
MIN	.12	.27	.40	.41	.37	1.61	1.44	3.00	.15	.042	.26	2.02
(WY)	1989	1990	1990	1994	1991	1991	1989	1988	1988	1990	1988	1992

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1988-94

ANNUAL TOTAL	2880.54	2540.95	
ANNUAL MEAN	7.89	6.96	6.35
HIGHEST ANNUAL MEAN			9.85 1993
LOWEST ANNUAL MEAN			2.73 1991
HIGHEST DAILY MEAN	318 May 9	252 Apr 11	374 Mar 14 1990
LOWEST DAILY MEAN	.00 Jul 2	.00 at times	.00 at times
ANNUAL SEVEN-DAY MINIMUM	.00 Aug 13	.00 Nov 23	.00 Sep 5 1988
INSTANTANEOUS PEAK FLOW		1040 Jul 14	1380 Aug 20 1989
INSTANTANEOUS PEAK STAGE		15.44 Jul 14	16.20 Aug 20 1989
ANNUAL RUNOFF (AC-FT)	5710	5040	4600
ANNUAL RUNOFF (CFSM)	1.45	1.28	1.16
ANNUAL RUNOFF (INCHES)	19.66	17.34	15.82
10 PERCENT EXCEEDS	12	15	10
50 PERCENT EXCEEDS	.90	.05	.69
90 PERCENT EXCEEDS	.00	.00	.00



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

ARKANSAS RIVER BASIN

07165570 ARKANSAS RIVER NEAR HASKELL, OK

LOCATION.--Lat 35°49'15", long 95°38'19", in SW 1/4 NW 1/4 sec.32, T.16 N., R.16 E., Wagoner County, Hydrologic Unit 11110101, near left, downstream abutment of old bridge downstream from State Highway 104, 2.0 mi east of Haskell, 23.5 mi upstream from Verdigris River, and at mile 483.7.

DRAINAGE AREA.--75,473 mi², of which 12,541 mi² probably is noncontributing.

PERIOD OF RECORD.--June 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 530.00 ft above sea level.

REMARKS.--Records fair. Except for 858 mi² 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 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2840	e2800	4960	2280	4080	2950	3900	26800	10600	3000	3350	3310
2	1600	e2400	3830	1710	4600	7040	2940	38700	16900	3090	4320	1280
3	1780	e2200	2090	984	4670	5220	1580	64100	17200	2350	6120	1210
4	2190	e2250	1490	2140	3680	3860	1410	64200	14200	984	4770	937
5	1920	e2400	1960	4140	4160	3720	2630	61300	13600	3520	5090	796
6	e2980	e2100	1350	4510	2700	2620	5900	49500	14300	3200	5020	970
7	e5480	e1500	1110	2800	1520	1280	5930	38200	13800	3990	5460	885
8	e4560	e850	1200	3080	2690	8720	4170	34400	8990	2300	5010	2270
9	e3730	e990	3310	4570	3480	14500	1700	34600	5590	1280	5170	4400
10	e1350	e1950	3200	2980	3940	16300	1560	33900	12200	1670	5120	2250
11	e800	e1600	2710	1980	3410	9260	3450	29600	13000	834	6790	1720
12	e850	e1950	1250	2580	3120	4580	26200	28000	5900	710	5810	1640
13	e3720	e3720	1570	1670	1570	3060	19700	27600	4240	1420	4710	1250
14	e2780	e2780	3340	2000	1050	2360	14900	28300	6700	1480	2200	2550
15	e3800	e2300	5070	2080	1530	3640	13600	28400	8220	3990	1030	2130
16	e4100	e9200	4310	1770	2700	6300	13000	27700	6870	1440	1270	3890
17	e4000	3310	4190	1470	3620	9440	12800	21000	7080	1720	2660	3060
18	e3800	2270	3910	2730	3780	7580	12800	14800	5160	836	1020	1950
19	e3750	3260	3620	5510	3330	9980	12600	13900	3830	1980	840	940
20	e3150	5250	3690	4710	4830	4660	16700	11700	2820	3630	2050	873
21	e4350	5600	3780	3530	5410	3940	21700	9800	3240	6280	2580	1580
22	e3800	3760	3790	3370	7900	7070	21500	9090	3870	4550	2020	1820
23	e4050	5470	3250	2270	11700	6980	21900	9120	2700	4830	7910	2280
24	e1500	4460	2560	1230	6320	4360	22300	9940	2120	5810	6340	1830
25	e950	3430	2240	1700	6870	4170	22100	11100	1670	8020	4600	1410
26	e850	1700	1740	1850	4000	4840	21900	12600	1520	6830	4660	831
27	e1900	1720	1110	1700	1670	5350	18400	11000	1580	5920	5450	695
28	e4300	2480	1160	3390	1190	3390	14400	9540	2100	4570	3400	1160
29	e3800	1250	2020	3110	---	4140	18100	9860	3370	6820	2090	1900
30	e3500	3650	2580	3230	---	4000	22000	11000	3300	9660	2470	2210
31	e4100	---	2010	3890	---	3840	---	8250	---	7990	4340	---
TOTAL	92280	88600	84400	84964	109520	179150	381770	788000	216670	114704	123670	54027
MEAN	2977	2953	2723	2741	3911	5779	12730	25420	7222	3700	3989	1801
MAX	5480	9200	5070	5510	11700	16300	26200	64200	17200	9660	7910	4400
MIN	800	850	1110	984	1050	1280	1410	8250	1520	710	840	695
AC-FT	183000	175700	167400	168500	217200	355300	757200	1563000	429800	227500	245300	107200

c Estimated

ARKANSAS RIVER BASIN

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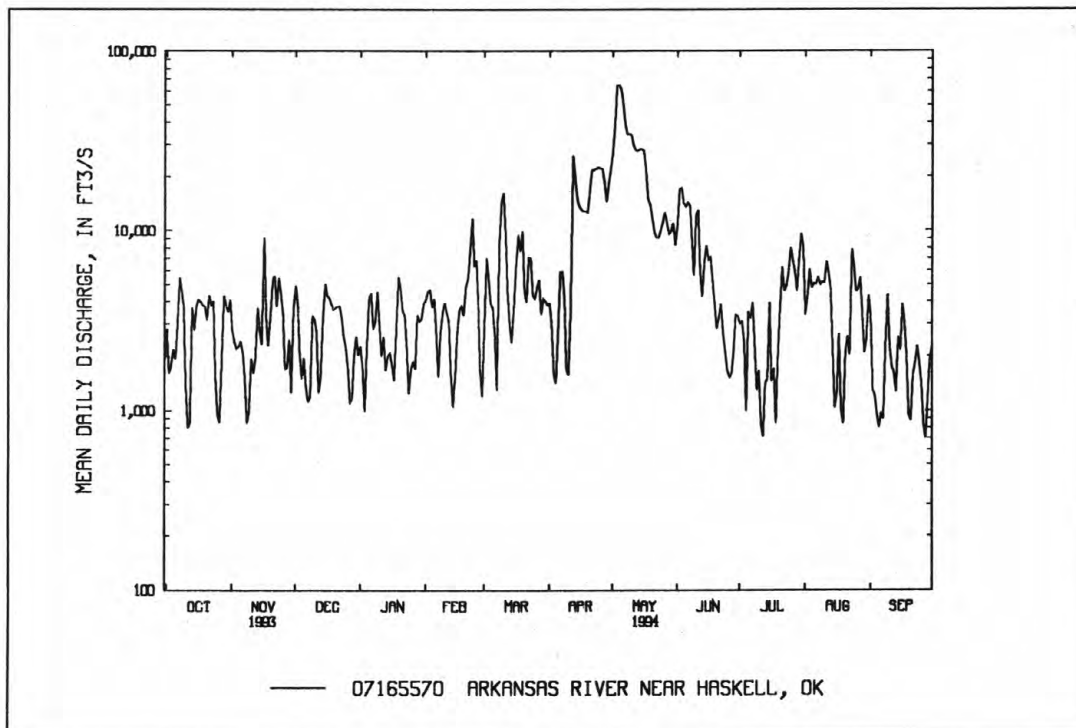
07165570 ARKANSAS RIVER NEAR HASKELL, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9487	7857	5723	6358	7440	13910	15070	17670	16000	8949	5211	5572
MAX	75500	42220	19930	21540	25540	50990	46910	85550	40940	26780	18990	23690
(WY)	1987	1975	1993	1993	1993	1987	1973	1993	1975	1993	1993	1989
MIN	576	646	802	567	549	722	638	2472	5074	1671	1171	1108
(WY)	1979	1981	1981	1981	1977	1977	1977	1981	1988	1991	1984	1983

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1973-94

ANNUAL TOTAL	8295450	2317755	
ANNUAL MEAN	22730	6350	9944
HIGHEST ANNUAL MEAN			25440 1987
LOWEST ANNUAL MEAN			2097 1981
HIGHEST DAILY MEAN	146000	May 14 64200	May 4 243000 Oct 5 1986
LOWEST DAILY MEAN	800	Oct 11 695	Sep 27 87 Sep 13 1988
ANNUAL SEVEN-DAY MINIMUM	1560	Nov 6 1190	Sep 2 369 Feb 25 1977
INSTANTANEOUS PEAK FLOW		70300	May 3 259000 Oct 5 1986
INSTANTANEOUS PEAK STAGE		14.11	May 3 22.82 Oct 5 1986
ANNUAL RUNOFF (AC-FT)	16450000	4597000	7204000
10 PERCENT EXCEEDS	46700	14300	25000
50 PERCENT EXCEEDS	18700	3650	5340
90 PERCENT EXCEEDS	2200	1280	786



ARKANSAS RIVER BASIN
07171000 VERDIGRIS RIVER NEAR LENAPAH, OK

LOCATION.--Lat 36°51'04", long 95°35'09", NE 1/4, SW 1/4, sec.3, T.27 N., R.16 E., Nowata County, Hydrologic Unit 11070103, on right bank on downstream side of county road bridge, 2.8 mi east of Lenapah, 4.5 mi upstream from Cedar Creek, and at mile 144.6.

DRAINAGE AREA.--3,639 mi².

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

REVISED RECORDS.--WSP 977: 1942 (M). WSP 1117: drainage area.

GAGE.--Water-stage recorder. Datum of gage is 644.90 ft above sea level.

REMARKS.--Records good. Some regulation since April 1949 by Fall River Reservoir in Kansas. Flow regulated since 1960 by Toronto Lake in Kansas. Flow has been further regulated since 1966 by Elk Reservoir in Kansas. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	832	e270	565	579	708	1580	503	37300	e350	e62	1770	1840
2	2180	e250	955	528	482	1620	487	39300	e320	e58	1730	4040
3	5110	e230	907	482	447	1500	498	28100	e310	e80	982	710
4	7010	e210	858	460	429	1190	524	14800	e260	e70	569	516
5	6920	e200	1110	539	380	927	781	16700	e210	e65	274	424
6	6050	e195	1130	664	349	776	743	18800	e190	e58	e165	383
7	3290	e190	1000	625	273	1370	703	30200	e240	e54	179	340
8	1600	e235	970	499	e220	865	834	20800	e270	e50	e105	288
9	877	e260	1150	276	e200	887	944	15000	e350	e46	54	265
10	755	e230	1090	e245	e190	1130	9610	17200	345	179	49	138
11	454	e205	929	e210	e180	826	38900	18200	446	e176	52	72
12	280	e195	758	e200	e175	695	50500	18500	349	e155	54	53
13	e260	e185	861	e190	e205	635	43200	19600	324	e160	49	47
14	e250	1550	1620	e180	e250	561	36000	15400	312	185	49	44
15	e230	2850	1240	304	e220	496	14700	12800	303	179	41	42
16	e225	4340	950	702	e200	412	10700	13100	284	173	36	41
17	e220	3500	1420	716	e190	335	11100	14100	247	179	34	39
18	1840	7230	1490	1140	e180	303	10300	13100	200	296	33	33
19	1220	5390	1560	762	348	286	9730	9510	e170	337	30	30
20	779	2720	1530	714	8970	304	9360	6690	e150	341	29	39
21	1480	2050	1500	918	5530	276	10000	3850	e120	975	30	40
22	1090	1770	1250	777	2100	269	16300	1490	e105	3080	31	45
23	471	1930	773	735	4690	276	15400	680	e90	2820	34	42
24	345	2110	638	715	3800	e245	10500	535	e85	4360	41	38
25	305	1740	574	711	2590	320	12200	493	180	4230	43	41
26	276	1170	568	728	2710	435	12900	458	176	6570	124	46
27	e260	681	560	810	2260	577	13200	427	e120	7570	905	46
28	e240	596	545	832	2090	708	15200	403	e90	3400	648	46
29	e230	577	531	784	---	643	20800	414	e80	3190	350	43
30	278	569	571	767	---	571	29400	419	e70	2530	219	42
31	287	---	583	858	---	488	---	381	---	1990	147	---
TOTAL	45644	43628	30186	18650	40366	21506	406017	388750	6746	43618	8856	9813
MEAN	1472	1454	974	602	1442	694	13530	12540	225	1407	286	327
MAX	7010	7230	1620	1140	8970	1620	50500	39300	446	7570	1770	4040
MIN	220	185	531	180	175	245	487	381	70	46	29	30
AC-FT	90530	86540	59870	36990	80070	42660	805300	771100	13380	86520	17570	19460

c Estimated

ARKANSAS RIVER BASIN

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07171000 VERDIGRIS RIVER NEAR LENAPAH, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2438	2905	2056	1788	2278	4388	4326	4139	4778	2170	874	1207
MAX	27970	15440	11000	7998	8983	17130	16300	12540	12500	13920	5364	5614
(WY)	1987	1975	1993	1973	1985	1973	1988	1994	1969	1976	1985	1989
MIN	15.5	20.0	29.2	17.6	20.0	19.7	30.2	366	84.3	17.9	16.1	9.99
(WY)	1981	1981	1967	1981	1981	1981	1981	1992	1972	1980	1983	1980

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1967-94

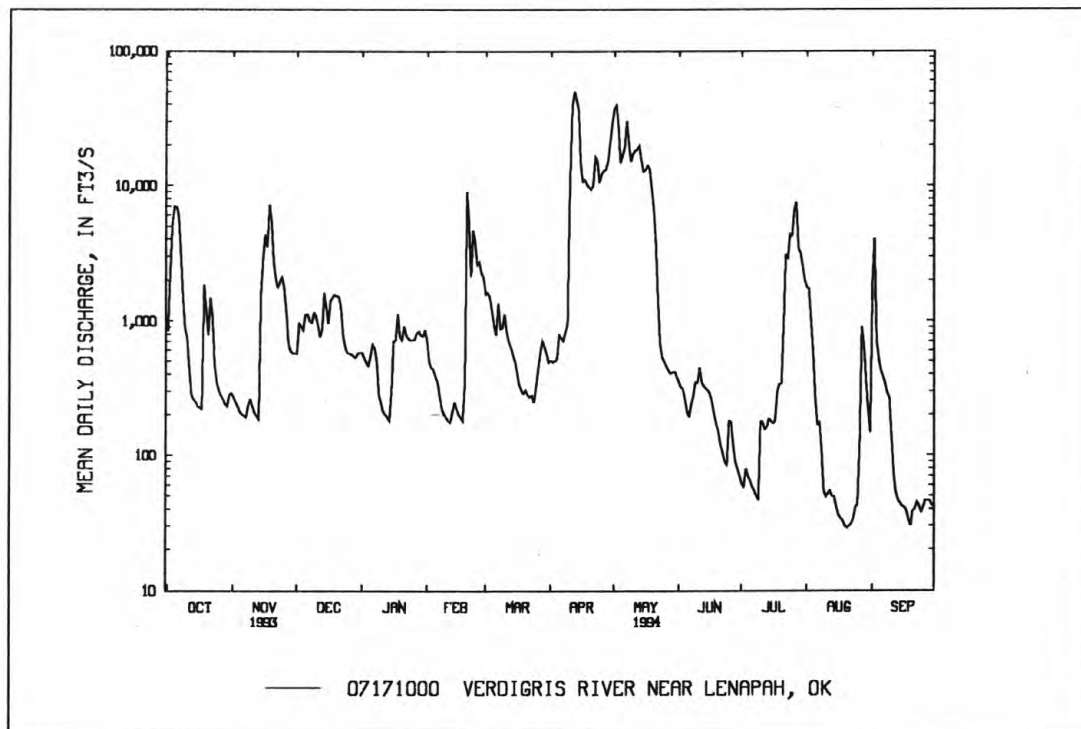
ANNUAL TOTAL	1582979	1063780	
ANNUAL MEAN	4337	2914	^a 2777
HIGHEST ANNUAL MEAN			5906 1987
LOWEST ANNUAL MEAN			329 1981
HIGHEST DAILY MEAN	39100	May 10 50500	Apr 12 76200 Oct 5 1986
LOWEST DAILY MEAN	39	Aug 30 29	Aug 20 ^b 5.5 Sep 30 1980
ANNUAL SEVEN-DAY MINIMUM	52	Aug 25 32	Aug 17 5.7 Sep 26 1980
INSTANTANEOUS PEAK FLOW		52600	Apr 12 ^c 78400 Jul 4 1976
INSTANTANEOUS PEAK STAGE		36.70	Apr 12 ^d 38.60 Jul 4 1976
ANNUAL RUNOFF (AC-FT)	3140000	2110000	2012000
10 PERCENT EXCEEDS	8850	9840	8580
50 PERCENT EXCEEDS	2540	524	654
90 PERCENT EXCEEDS	226	54	41

^aPrior to regulation, water years 1939-49, 2,599 ft³/s.

^bMinimum daily discharge for period of record, no flow at times in 1939, 1940, and 1956.

^cMaximum discharge for period of record, 137,000 ft³/s, May 20, 1943.

^dMaximum gage height for period of record, 40.44 ft, May 20, 1943 (from floodmarks.)



ARKANSAS RIVER BASIN

07174400 CANEY RIVER ABOVE COON CREEK AT BARTLESVILLE, OK

LOCATION.--Lat 36°45'20", long 95°58'19", in NE 1/4 NE 1/4 sec.12, T.26 N, R.12 E, Washington County, Hydrologic Unit 11070106, at right bank in city of Bartlesville water intake tower, 0.2 mi upstream from State Highway 123 bridge and low-water dam, 0.5 mi downstream from Atchison, Topeka, and Santa Fe railroad bridge, 1.0 mi upstream from confluence with Coon Creek, 2.7 mi downstream from confluence with Butler Creek, 5.0 mi upstream from confluence with Sand Creek, and at mile 69.2.

DRAINAGE AREA.--1,392 mi².

PERIOD OF RECORD.--October 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 653.33 ft above sea level.

REMARKS.--Records fair. Considerable regulation by Hulah Lake (station 07172500) 27.0 mi upstream, and Copan Lake (station 07174300) 12.0 mi upstream. Diversion at gage for municipal water supply by the city of Bartlesville. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	367	39	150	70	134	1760	381	3830	75	54	1160	36
2	364	39	187	69	97	1800	319	6060	41	68	677	30
3	363	39	181	69	95	1770	304	6320	41	62	185	20
4	363	41	318	66	62	1670	299	6350	39	51	47	18
5	375	47	362	66	28	1150	303	6250	34	50	42	19
6	1550	51	375	66	24	1060	301	6380	65	49	38	18
7	2280	54	850	66	24	1050	296	3910	44	54	38	17
8	2330	54	910	62	23	1050	274	3590	38	75	39	20
9	2130	54	857	64	17	1040	155	5940	154	43	39	16
10	2050	54	532	62	17	901	1010	6320	146	42	136	15
11	2040	54	229	62	17	761	e9000	6310	146	37	189	15
12	1940	66	182	77	17	526	e3400	6500	146	35	107	15
13	1040	49	259	109	17	473	1980	6430	148	160	46	15
14	509	89	421	114	16	445	4160	5500	89	57	39	14
15	115	70	721	114	17	224	4880	6090	43	146	39	13
16	40	60	722	114	36	164	5590	6190	41	233	39	13
17	36	198	432	114	85	142	5870	6370	36	260	39	16
18	33	1480	343	103	138	139	5820	6380	41	238	39	30
19	33	1610	308	77	223	142	5580	6160	56	232	40	33
20	36	1220	305	77	1040	146	5360	4670	56	149	71	29
21	39	1120	298	77	308	146	5260	4240	50	164	49	21
22	39	1120	138	76	298	133	2310	4130	51	161	43	34
23	39	991	85	76	2080	116	3690	4020	61	1050	192	18
24	36	268	81	76	2040	70	5150	3840	58	1160	241	17
25	32	158	80	76	1890	62	5190	3130	58	1190	84	15
26	30	158	80	79	1840	72	5150	1830	58	1590	50	15
27	31	131	80	85	1810	82	5380	429	58	1630	35	15
28	33	94	80	195	1780	88	2770	138	57	1580	26	16
29	36	91	216	213	---	325	172	125	54	1520	24	15
30	38	115	282	227	---	378	1250	121	54	1220	24	26
31	39	---	129	229	---	381	---	117	---	1180	30	---
TOTAL	18386	9614	10193	3030	14173	18266	91604	137670	2038	14540	3847	594
MEAN	593	320	329	97.7	506	589	3053	4441	67.9	469	124	19.8
MAX	2330	1610	910	229	2080	1800	9000	6500	154	1630	1160	36
MIN	30	39	80	62	16	62	155	117	34	35	24	13
AC-FT	36470	19070	20220	6010	28110	36230	181700	273100	4040	28840	7630	1180

c Estimated

ARKANSAS RIVER BASIN

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

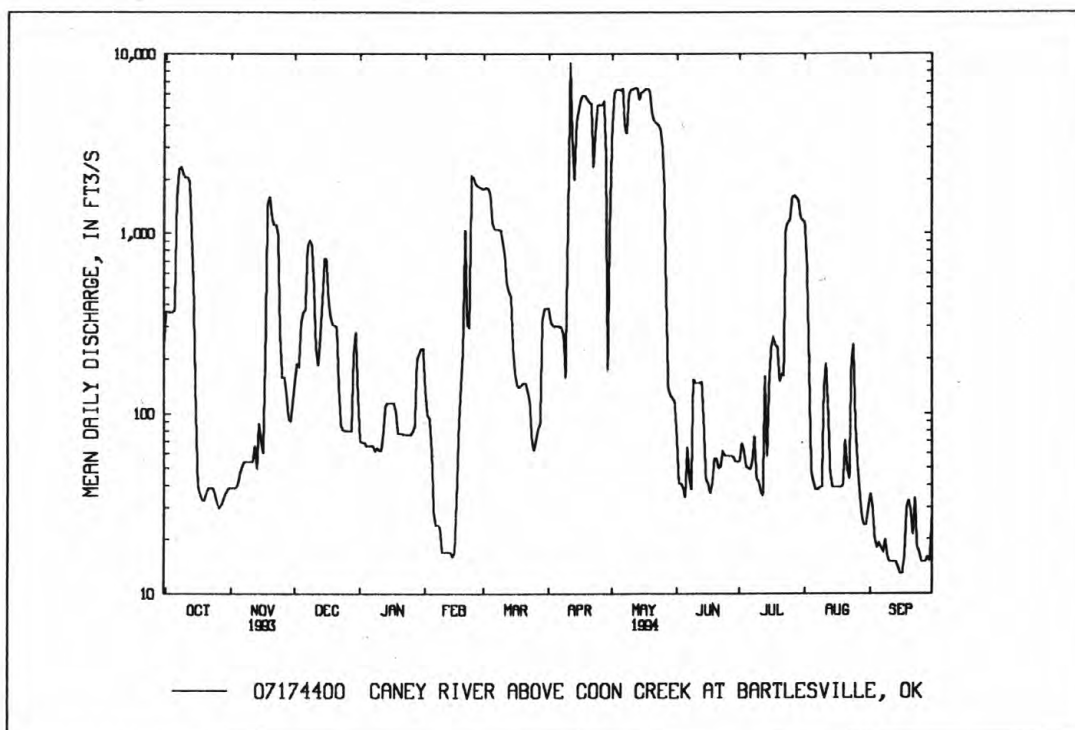
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2012	1072	1051	1042	822	1694	1951	2069	2272	830	153	521
MAX	14800	3096	2663	4075	2721	4606	5185	5054	4561	2899	511	2635
(WY)	1987	1987	1987	1993	1987	1990	1988	1993	1993	1989	1986	1989
MIN	13.2	44.9	27.7	27.4	29.1	29.4	175	139	49.9	29.4	22.5	12.8
(WY)	1988	1992	1991	1991	1991	1991	1991	1992	1988	1988	1988	1987

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1986-94

ANNUAL TOTAL	638445	323955	1293
ANNUAL MEAN	1749	888	2888
HIGHEST ANNUAL MEAN			1987
LOWEST ANNUAL MEAN			204
HIGHEST DAILY MEAN	14200	May 9	9000
LOWEST DAILY MEAN	30	Aug 29	13
ANNUAL SEVEN-DAY MINIMUM	34	Oct 24	14
INSTANTANEOUS PEAK FLOW		10000	Apr 11
INSTANTANEOUS PEAK STAGE		^a 16.75	Apr 11
ANNUAL RUNOFF (AC-FT)	1266000	642600	936400
10 PERCENT EXCEEDS	5090	3750	4080
50 PERCENT EXCEEDS	726	116	212
90 PERCENT EXCEEDS	39	26	24

^aBackwater from Coon and Sand Creeks.



ARKANSAS RIVER BASIN

07175500 CANEY RIVER NEAR RAMONA, OK

LOCATION.--Lat 36°30'32", long 95°50'30", in NE 1/4 NW 1/4 sec.5, T.23 N., R.14 E., Washington County, Hydrologic Unit 11070106, on left bank near downstream abutment of county road bridge, 1 mi upstream from Buck Creek, 2.2 mi downstream from Double Creek, 4.5 mi southeast of Ramona, and at mile 32.0.

DRAINAGE AREA.--1,955 mi².

PERIOD OF RECORD.--September 1945 to current year. Monthly discharge only for some periods, published in WSP 1311. Previous reports have included Caney River near Collinsville from Oct. 1935 to Feb. 1939; this record has been separated from Ramona.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1241: 1939.

GAGE.--Water-stage recorder. Datum of gage is 586.43 ft above sea level. Sept. 1, 1945, to Feb. 15, 1946, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharge. Records good. Flow regulated since February 1950 by Hulah Lake (station 07172500), and since April 1983 by Copan Lake (station 07174300). U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	399	39.0	153	209	281	2230	423	7020	207	55	1450	102
2	434	45.0	502	148	167	2750	418	6220	164	60	1230	103
3	407	48.0	582	143	132	2390	448	7130	118	69	640	95
4	376	53.0	482	147	130	2020	488	7300	110	61	276	88
5	369	51.0	663	143	108	1620	433	7160	96	54	198	91
6	574	44.0	559	143	81	1170	428	7080	126	51	153	93
7	1870	37.0	590	136	75	1090	423	7770	170	53	110	81
8	2230	56.0	956	129	75	1440	406	5430	113	514	102	66
9	2160	65.0	956	126	71	1750	386	5330	683	209	117	69
10	1960	61.0	789	130	68	2760	553	6820	651	107	132	64
11	1940	62.0	499	130	64	3030	10100	7080	329	76	225	58
12	1910	63.0	285	129	70	1550	24400	7130	283	62	254	54
13	1620	113	360	138	72	943	21200	7260	233	3000	168	49
14	829	250	1600	166	65	758	12100	7010	215	2950	96	48
15	441	369	1180	163	63	621	8540	6350	142	822	78	65
16	211	221	1040	161	63	413	6670	6720	85	429	70	56
17	174	669	811	160	86	356	6630	6860	71	393	71	46
18	118	1360	533	166	118	316	6580	7040	64	434	68	42
19	96.0	1920	452	183	209	296	6390	7020	67	328	64	52
20	67.0	1670	425	125	4210	283	6100	6510	75	279	680	59
21	66.0	1210	409	144	2890	278	5880	5250	72	1480	1420	58
22	58.0	1120	388	119	1470	249	5780	4870	67	2820	398	59
23	55.0	1080	256	124	3540	242	3430	4740	62	927	200	82
24	55.0	802	201	124	3960	198	5190	4610	63	1610	275	53
25	53.0	282	191	131	2420	155	5810	4310	63	1650	284	44
26	46.0	207	185	138	2060	174	5760	3320	60	2050	818	42
27	42.0	202	178	143	1880	374	5750	1730	59	3010	411	39
28	42.0	170	177	149	1790	353	5620	438	58	2500	173	38
29	46.0	137	172	244	---	300	1760	256	58	2110	123	34
30	48.0	129	318	282	---	453	5860	240	56	1820	102	33
31	40.0	---	352	287	---	449	---	227	---	1510	101	---
TOTAL	18736.0	12535.0	16244	4860	26218	31011	163956	166231	4620	31493	10487	1863
MEAN	604	418	524	157	936	1000	5465	5362	154	1016	338	62.1
MAX	2230	1920	1600	287	4210	3030	24400	7770	683	3010	1450	103
MIN	40	37	153	119	63	155	386	227	56	51	64	33
AC-FT	37160	24860	32220	9640	52000	61510	325200	329700	9160	62470	20800	3700

ARKANSAS RIVER BASIN

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07175500 CANEY RIVER NEAR RAMONA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1994, BY WATER YEAR (WY)

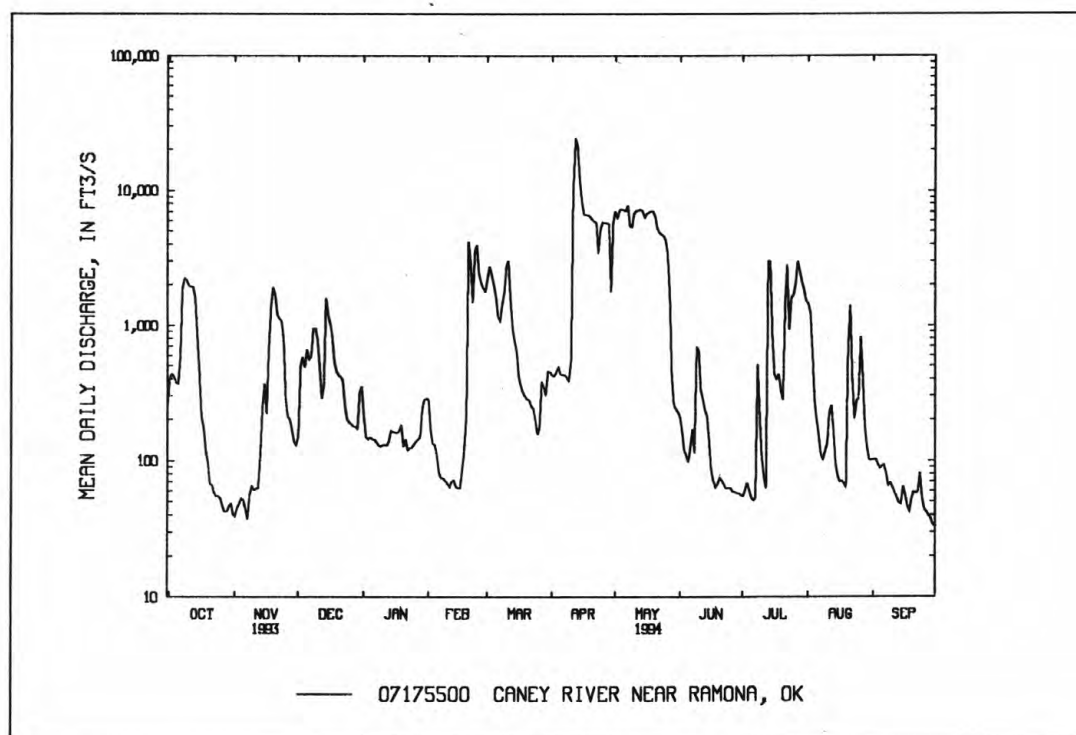
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2375	1413	1519	1269	1371	3068	3244	2864	2748	999	215	752
MAX	19540	4390	3596	5204	4208	7228	6989	8547	5098	2892	792	3178
(WY)	1987	1987	1993	1993	1987	1990	1988	1993	1985	1989	1986	1989
MIN	35.4	98.2	76.1	134	81.0	71.9	452	222	70.1	30.2	34.9	48.7
(WY)	1993	1991	1991	1984	1991	1991	1992	1992	1988	1984	1984	1984

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1984-94

ANNUAL TOTAL	900786.0	488254.0	
ANNUAL MEAN	2468	1338	^a 1821
HIGHEST ANNUAL MEAN			3887 1987
LOWEST ANNUAL MEAN			370 1991
HIGHEST DAILY MEAN	32900 May 10	24400 Apr 12	71700 Oct 5 1986
LOWEST DAILY MEAN	37 Nov 7	33 Sep 30	^b 13 Sep 16 1984
ANNUAL SEVEN-DAY MINIMUM	43 Oct 27	40 Sep 24	16 Jul 31 1984
INSTANTANEOUS PEAK FLOW		28400 Apr 12	85600 Oct 5 1986
INSTANTANEOUS PEAK STAGE		28.62 Apr 12	31.16 Oct 5 1986
ANNUAL RUNOFF (AC-FT)	1787000	968500	1319000
10 PERCENT EXCEEDS	6530	5370	5290
50 PERCENT EXCEEDS	1080	250	424
90 PERCENT EXCEEDS	63	57	43

^a Average discharge since regulation by Hulah Lake and before regulation by Copan Lake, 32 years (water years 1951-82), 925 ft³/s.

^b No flow Sept. 11 to Nov. 3, 1956.



ARKANSAS RIVER BASIN

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 mi².

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

REVISED RECORDS.--WSP 1117: Drainage area.

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

REMARKS.--Records 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 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11000	163	637	453	1740	9470	1060	32200	655	234	3900	334
2	11200	144	1130	282	756	11000	1110	32900	588	250	1800	255
3	11200	140	3090	460	675	8590	1110	35400	350	240	1300	215
4	9820	114	2870	1210	636	6130	1240	36200	298	241	809	189
5	5940	106	2960	1210	634	5740	1400	34000	281	241	631	171
6	8330	106	2500	959	613	5230	2030	32600	297	239	522	903
7	11900	106	1430	547	581	4950	2010	33800	298	229	411	2090
8	12900	106	1660	543	752	5720	1940	35900	338	1050	348	1380
9	13000	106	2160	538	614	4950	1900	31800	238	921	227	206
10	12700	106	2720	536	563	5210	3920	28500	1300	416	214	164
11	12600	106	2440	466	557	6720	13700	29000	772	289	225	148
12	10400	106	2170	186	562	4660	20100	29000	543	242	314	138
13	7300	106	2020	180	569	3290	23700	28900	471	3150	363	128
14	6650	181	2630	179	469	2870	35500	e28700	436	5350	292	124
15	4480	1180	3370	215	180	2650	34800	e28400	413	2630	215	146
16	4890	3110	2730	222	171	2390	33800	28000	334	1050	142	554
17	4660	3090	2190	224	176	2160	31500	27400	226	755	114	434
18	4590	5020	1870	215	183	2080	31500	27000	259	623	109	213
19	2930	7290	1660	316	244	2030	32700	24300	250	639	106	149
20	1600	7430	1560	675	1480	2010	32300	15700	248	546	1130	128
21	585	7020	1720	770	5050	1980	31900	11100	254	1290	1850	127
22	570	6730	2090	966	3930	1420	31700	10400	252	3680	1340	154
23	563	5380	2010	966	7310	467	31000	10200	247	1880	470	145
24	556	2890	1860	972	8930	438	28900	10000	239	1460	263	166
25	553	2410	1810	984	8480	391	28200	10900	234	2440	384	139
26	546	2030	1800	1060	9050	394	26900	12800	239	2810	1400	114
27	572	1970	1220	1050	8790	665	25900	10200	236	5130	2070	107
28	524	1960	267	1400	8650	1370	24900	7230	272	5830	599	104
29	168	1920	254	2290	---	2190	20600	6490	234	4750	306	101
30	161	1410	249	2400	---	2170	18200	6330	234	5590	178	102
31	170	---	453	2430	---	1860	---	4410	---	5200	218	---
TOTAL	173058	62536	57530	24904	72345	111195	575520	699760	11036	59395	22250	9328
MEAN	5583	2085	1856	803	2584	3587	19180	22570	368	1916	718	311
MAX	13000	7430	3370	2430	9050	11000	35500	36200	1300	5830	3900	2090
MIN	161	106	249	179	171	391	1060	4410	226	229	106	101
AC-FT	343300	124000	114100	49400	143500	220600	1142000	1388000	21890	117800	44130	18500

c Estimated

ARKANSAS RIVER BASIN
07176000 VERDIGRIS RIVER NEAR CLAREMORE, OK

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3518	4429	3673	3520	3348	6661	8156	6695	7457	3902	1143	1492
MAX	47570	23150	16250	15850	11470	23920	25200	23480	19750	19960	7053	7538
(WY)	1987	1975	1993	1993	1975	1985	1988	1973	1993	1976	1992	1989
MIN	24.1	18.0	47.4	37.9	31.3	23.2	107	87.2	84.0	42.5	52.7	57.4
(WY)	1967	1967	1979	1981	1967	1967	1971	1971	1972	1966	1965	1979

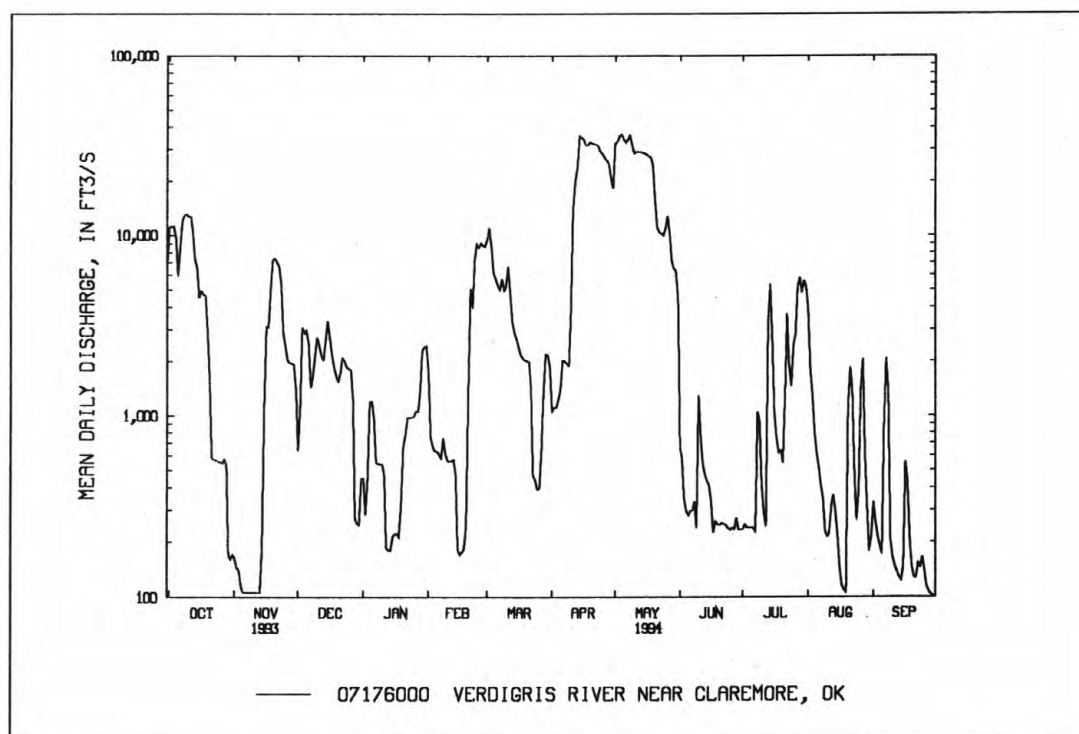
SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1965-94
ANNUAL TOTAL	2976547	1878857	
ANNUAL MEAN	8155	5148	^a 4498
HIGHEST ANNUAL MEAN			10870
LOWEST ANNUAL MEAN			365
HIGHEST DAILY MEAN	28800	May 26	36200
LOWEST DAILY MEAN	75	Sep 12	101
ANNUAL SEVEN-DAY MINIMUM	92	Sep 7	106
INSTANTANEOUS PEAK FLOW			36700
INSTANTANEOUS PEAK STAGE			27.71
ANNUAL RUNOFF (AC-FT)	5904000	3727000	3259000
10 PERCENT EXCEEDS	20100	20300	13300
50 PERCENT EXCEEDS	6610	1210	1120
90 PERCENT EXCEEDS	162	167	62

^aPrior to regulation by Oologah Lake, water years 1936-62, 3,723 ft³/s.

^bNo flow at times in 1936, 1939, 1940, 1956.

^cMaximum for period of record, 182,000 ft³/s, May 21, 1943.

^dMaximum for period of record, 55.05 ft, May 21, 1943.



ARKANSAS RIVER BASIN

07176500 BIRD CREEK AT AVANT, OK

LOCATION.--Lat 36°29'12", long 96°03'50", in SW 1/4 NW 1/4 sec.7, T.23 N., R.12 E., Osage County, Hydrologic Unit 11070107, 150 ft upstream from county road bridge at Avant, 2.4 mi upstream from Candy Creek, and at mile 54.2.

DRAINAGE AREA.--364 mi².

PERIOD OF RECORD.--August 1945 to current year, published as Bird Creek near Avant Oct. 1, 1973, to Sept. 30, 1993.

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

REMARKS.--Records good. Flow slightly regulated since 1958 by Bluestem Lake. Some regulation since March 1977 by Birch Lake (station 07176460), located on Birch Creek, 12.1 mi upstream. Small diversions upstream for municipal water supply for the cities of Pawhuska and Barnsdall. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Apr. 11	1600	25,700	29.98	July 21	1100	15,800	17.43
July 13	1100	8,800	11.26	July 26	1400	7,640	10.13

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	35	28	32	37	141	81	338	50	29	120	67
2	46	37	114	32	35	283	83	412	45	25	61	56
3	43	32	102	34	34	282	138	359	43	26	54	53
4	40	23	124	34	34	216	214	315	36	26	45	49
5	37	22	127	35	34	161	158	348	34	20	39	54
6	37	25	115	37	35	132	209	590	43	15	66	57
7	37	e25	81	37	34	114	131	366	45	22	96	56
8	37	27	64	37	34	377	105	303	45	907	400	48
9	34	27	57	37	34	444	126	278	1220	152	196	59
10	36	25	51	34	34	1160	649	268	495	59	102	69
11	39	25	48	34	34	994	17100	263	152	31	68	52
12	37	34	45	34	34	662	1380	132	81	21	51	41
13	35	43	141	34	34	510	754	88	64	3620	44	36
14	34	74	601	34	34	413	530	81	107	450	38	34
15	34	98	274	34	34	258	537	75	110	199	55	32
16	41	105	141	34	35	220	470	70	106	140	30	32
17	46	472	99	34	37	166	431	64	48	128	28	35
18	47	316	79	34	37	132	398	49	42	121	27	44
19	47	158	69	34	70	115	244	44	40	110	27	37
20	44	90	61	34	2420	112	626	42	38	79	2750	31
21	42	63	54	32	441	102	890	40	33	9530	866	30
22	38	52	52	32	761	92	993	39	34	789	253	32
23	37	45	47	32	1520	81	788	39	32	524	290	32
24	37	40	45	32	535	73	725	69	32	420	263	34
25	37	37	42	34	256	68	691	69	e29	2400	243	34
26	37	34	39	38	197	79	669	60	e28	2840	232	30
27	37	32	38	39	143	189	167	65	e27	940	152	28
28	37	29	37	39	125	150	3000	77	28	524	142	27
29	33	28	37	38	---	115	1210	71	25	391	129	26
30	32	27	34	37	---	93	496	69	33	323	52	25
31	33	---	32	37	---	80	---	57	---	301	45	---
TOTAL	1205	2080	2878	1079	7092	8014	33993	5140	3145	25162	6964	1240
MEAN	38.9	69.3	92.8	34.8	253	259	1133	166	105	812	225	41.3
MAX	54	472	601	39	2420	1160	17100	590	1220	9530	2750	69
MIN	32	22	28	32	34	68	81	39	25	15	27	25
AC-FT	2390	4130	5710	2140	14070	15900	67430	10200	6240	49910	13810	2460

e Estimated

ARKANSAS RIVER BASIN

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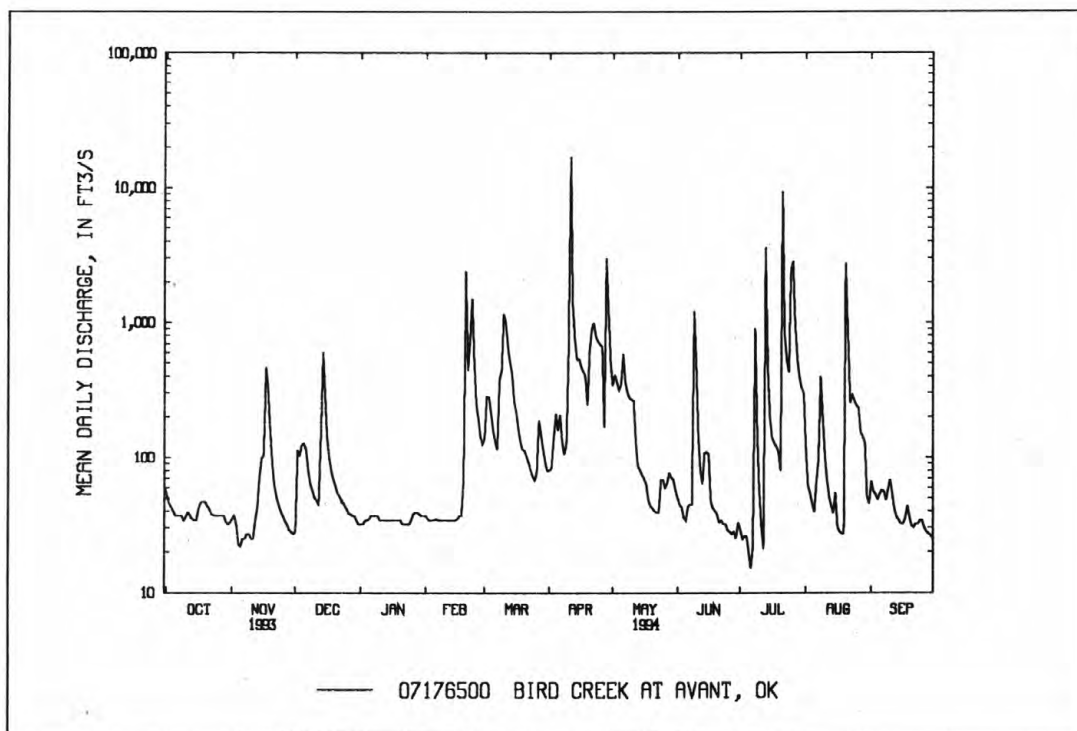
07176500 BIRD CREEK NEAR AVANT, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	178	197	137	114	184	369	355	498	380	151	79.1	167
MAX	1940	1677	863	827	1376	2264	1235	2266	2648	832	980	1585
(WY)	1987	1975	1972	1973	1985	1990	1973	1957	1957	1959	1950	1961
MIN	.000	.000	.000	.000	.000	.000	.000	.000	1.07	.000	.000	.000
(WY)	1949	1953	1953	1953	1957	1956	1956	1956	1963	1954	1952	1952

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1946-94
ANNUAL TOTAL	180308	97992	
ANNUAL MEAN	494	268	234
HIGHEST ANNUAL MEAN			639
LOWEST ANNUAL MEAN			5.50
HIGHEST DAILY MEAN	25900	May 9	17100
LOWEST DAILY MEAN	22	Nov 5	15
ANNUAL SEVEN-DAY MINIMUM	24	Aug 23	23
INSTANTANEOUS PEAK FLOW		25700	Apr 11
INSTANTANEOUS PEAK STAGE		25.98	Apr 11
ANNUAL RUNOFF (AC-FT)	357600	194400	169600
10 PERCENT EXCEEDS	1100	516	423
50 PERCENT EXCEEDS	149	52	20
90 PERCENT EXCEEDS	33	31	.00

^aGage height, 31.40 ft.



ARKANSAS RIVER BASIN
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 mi².

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--No estimated daily discharges. Records good. Flow slightly regulated since March 1977 by Birch Lake (station 07176460). Flow slightly regulated since October 1984 by Skiatook Lake (station 07177400). U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1915 reached a stage similar to flood of Oct. 31, 1941, 30.14 ft, from information provided by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Apr. 12	0400	21,700	28.93				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	79	42	53	67	581	137	2690	186	157	264	177
2	219	81	117	52	67	778	147	769	174	159	98	192
3	220	84	216	52	67	552	170	542	165	155	171	174
4	216	70	169	52	67	347	285	680	181	150	174	170
5	208	46	185	52	68	242	207	684	181	150	174	171
6	205	79	165	50	69	181	198	1280	204	146	161	195
7	205	112	129	57	66	146	199	1260	196	148	200	182
8	204	114	99	70	66	939	140	1480	164	1050	300	172
9	198	77	88	72	64	1400	172	1330	659	544	500	164
10	197	70	79	73	65	1700	2800	1260	1390	262	273	178
11	201	71	72	70	67	2940	9080	1240	349	196	206	184
12	206	74	70	70	68	1320	20000	1220	186	163	182	172
13	203	84	102	69	67	788	11300	1150	130	3110	172	161
14	200	150	612	67	67	588	2420	902	221	3420	165	156
15	192	170	572	65	68	393	1300	787	247	351	157	168
16	100	124	261	69	68	273	1760	687	200	205	154	262
17	89	409	165	68	70	220	1680	146	183	179	152	174
18	93	587	126	63	69	170	1630	155	137	169	150	157
19	96	301	108	66	71	139	1560	159	133	138	152	161
20	94	161	96	68	2040	128	1720	152	130	119	1840	156
21	79	108	86	62	1230	115	2940	154	138	3360	3020	151
22	62	83	79	67	857	106	3290	152	139	5780	679	161
23	66	71	74	71	1690	100	3570	148	164	686	1010	151
24	84	61	71	72	1230	84	3270	147	161	470	1010	149
25	84	55	68	73	421	77	3170	148	157	2430	989	153
26	82	50	63	74	255	89	3130	228	154	4580	1240	151
27	65	50	60	72	186	212	3090	224	150	4490	850	147
28	55	48	56	69	145	235	2820	160	153	912	710	146
29	52	45	56	69	---	155	508	202	152	542	580	145
30	57	43	55	68	---	120	4030	239	150	405	219	146
31	76	---	55	67	---	100	---	198	---	339	172	---
TOTAL	4273	3557	4196	2022	9335	15218	86723	20573	6934	34965	16124	5026
MEAN	138	119	135	65.2	333	491	2891	664	231	1128	520	168
MAX	220	587	612	74	2040	2940	20000	2690	1390	5780	3020	262
MIN	52	43	42	50	64	77	137	146	130	119	98	145
AC-FT	8480	7060	8320	4010	18520	30180	172000	40810	13750	69350	31980	9970

ARKANSAS RIVER BASIN

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07177500 BIRD CREEK NEAR SPERRY, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	166	263	511	517	627	1332	1523	1461	1386	451	245	214
MAX	251	575	1168	1921	1254	4949	2891	3695	2510	1128	520	366
(WY)	1990	1993	1993	1993	1993	1990	1994	1993	1992	1994	1994	1993
MIN	112	109	61.9	65.2	81.2	80.4	393	231	231	155	156	150
(WY)	1993	1991	1990	1994	1991	1991	1992	1992	1994	1990	1990	1992

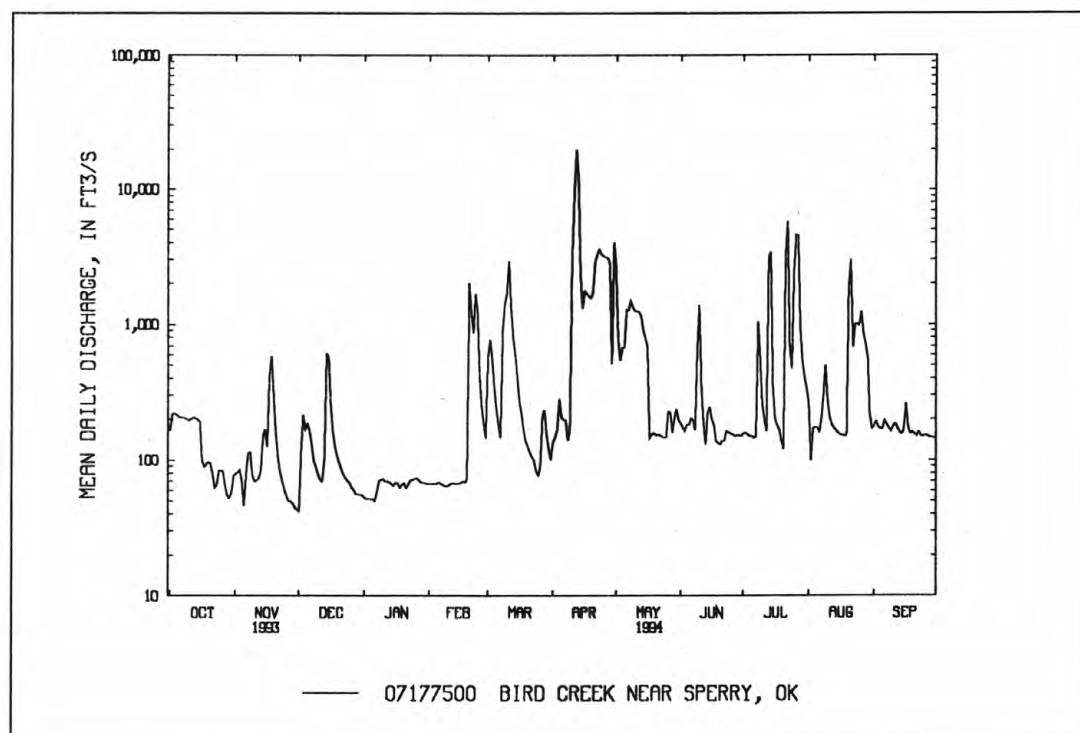
SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1990-94
ANNUAL TOTAL	400997	208946	
ANNUAL MEAN	1099	572	^a 724
HIGHEST ANNUAL MEAN			1222 1993
LOWEST ANNUAL MEAN			282 1991
HIGHEST DAILY MEAN	27500	May 10	20000 Apr 12 27500 May 10 1993
LOWEST DAILY MEAN	42	Dec 1	42 Dec 1 ^b 42 Dec 1 1993
ANNUAL SEVEN-DAY MINIMUM	48	Nov 25	48 Nov 25 46 Dec 23 1989
INSTANTANEOUS PEAK FLOW		21700	Apr 12 ^c 30600 May 10 1993
INSTANTANEOUS PEAK STAGE		28.93	Apr 12 ^d 29.88 May 10 1993
ANNUAL RUNOFF (AC-FT)	795400	414400	524600
10 PERCENT EXCEEDS	2980	1350	2050
50 PERCENT EXCEEDS	274	161	171
90 PERCENT EXCEEDS	79	67	70

^aPrior to regulation, water years 1939-84, 484 ft³/s.

^bNo flow at times in 1939, 1954-57, 1964-66, 1970.

^cMaximum discharge for period of record, 90,000 ft³/s, Oct. 3, 1959, from rating curve extended.

^dMaximum gage height for period of record, 32.60 ft, Oct. 3, 1959.



ARKANSAS RIVER BASIN
07177500 BIRD CREEK NEAR SPERRY, OK--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1987 to current year.

pH: April 1987 to current year.

WATER TEMPERATURE: April 1987 to current year.

DISSOLVED OXYGEN: April 1987 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, greater than 2,000 microsiemens, Nov. 1, 1992; minimum, 80 microsiemens, Aug. 20, 1989.

pH: Maximum, 8.6 units, Aug. 27, 1988, Mar. 5, 1991; minimum, 5.7 units Sept. 2, 1987.

WATER TEMPERATURE: Maximum, 35.5°C, July 14-16, 1988; minimum, 0.0°C, several days in winter months.

DISSOLVED OXYGEN: Maximum (observed), 17.2 mg/L, Dec. 29, 1993; minimum, 2.0 mg/L, June 29, 1987.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, greater than 1,050 microsiemens, Aug. 20; minimum, 84 microsiemens, July 13.

pH: Maximum, 8.2 units, Mar. 29, 30; minimum, 6.9 units, Aug. 21.

WATER TEMPERATURE: Maximum, 31.0°C, June 26-29, July 1-4; minimum, 0.5°C, Jan. 19.

DISSOLVED OXYGEN: Maximum (observed), 17.2 mg/L, Dec. 29; minimum recorded, 3.1 mg/L, July 13.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	295	268	275	667	434	547	486	474	481	537	523	529
2	305	273	284	445	418	430	574	455	491	549	537	543
3	298	269	278	445	410	422	609	401	478	564	549	555
4	306	273	287	416	410	413	448	368	401	574	564	567
5	292	286	290	418	412	416	411	386	403	585	572	579
6	294	290	293	425	414	418	386	376	380	589	583	584
7	298	294	296	632	379	469	386	378	383	593	587	590
8	306	296	300	400	348	358	417	386	399	794	591	703
9	300	296	299	365	350	354	441	417	431	796	577	660
10	300	296	298	401	365	381	458	439	451	---	---	---
11	302	298	300	424	401	416	468	456	462	---	---	---
12	306	300	303	436	424	429	483	466	475	518	514	516
13	306	304	306	443	436	440	520	483	497	518	512	515
14	306	304	305	515	418	449	584	469	510	521	513	518
15	308	304	306	531	397	465	494	441	459	520	514	516
16	354	308	325	---	---	---	449	432	442	516	512	514
17	426	354	382	---	---	---	434	426	430	516	511	512
18	406	400	404	---	---	---	428	418	423	511	506	508
19	414	406	411	455	385	429	421	417	419	509	491	502
20	412	402	407	416	392	407	423	421	422	506	491	498
21	402	400	401	392	367	377	427	421	426	502	497	499
22	402	394	398	369	364	367	435	427	431	501	496	499
23	394	384	390	385	369	377	443	433	440	496	483	489
24	511	380	420	396	385	390	455	443	451	511	476	497
25	525	400	455	408	396	403	464	455	461	477	468	472
26	422	398	408	420	408	414	471	463	468	479	470	474
27	406	390	395	430	420	426	479	471	476	477	472	475
28	394	384	389	440	430	435	489	479	483	477	471	474
29	386	376	382	458	440	451	495	487	492	473	469	470
30	384	378	382	474	458	468	507	495	501	471	467	469
31	509	378	419	---	---	---	523	505	514	467	459	463
MONTH	525	268	348	---	---	---	609	368	451	---	---	---

ARKANSAS RIVER BASIN
07177500 BIRD CREEK NEAR SPERRY, OK--Continued

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SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	461	457	459	444	290	361	605	513	549	262	206	243
2	459	455	457	309	263	285	537	434	478	260	240	248
3	461	457	459	347	307	332	501	438	463	296	260	275
4	459	454	457	356	347	353	501	460	478	308	284	295
5	458	452	455	368	356	362	486	474	481	292	282	287
6	464	458	462	381	368	376	485	472	480	290	264	271
7	466	462	464	392	379	386	556	483	508	272	268	271
8	462	454	460	477	236	356	556	518	531	270	262	267
9	464	456	460	299	249	272	518	476	501	290	264	278
10	467	462	465	286	245	265	476	201	302	286	280	283
11	464	458	461	260	217	231	370	115	196	---	---	---
12	465	460	462	237	217	227	137	117	126	---	---	---
13	467	460	465	258	237	251	204	135	160	---	---	---
14	465	461	463	320	257	287	277	204	258	285	278	281
15	467	463	465	343	316	330	289	269	282	286	278	282
16	466	462	464	360	332	348	275	267	272	295	279	285
17	468	464	466	376	342	361	276	273	274	372	295	342
18	468	464	466	414	376	403	279	274	275	437	372	395
19	470	462	467	422	414	419	277	275	276	454	376	400
20	558	290	425	422	418	420	278	260	272	398	376	386
21	417	290	378	426	418	422	274	258	269	411	397	405
22	504	361	418	444	422	431	276	254	262	409	404	407
23	374	205	293	456	444	449	280	254	266	420	405	413
24	267	203	248	474	456	466	278	266	270	417	411	414
25	317	267	291	488	472	482	266	262	264	418	412	414
26	340	317	333	492	486	489	262	256	258	465	402	423
27	342	334	337	571	472	510	258	256	257	510	427	470
28	350	338	344	492	464	474	264	256	259	475	358	427
29	---	---	---	503	464	487	284	258	264	426	333	361
30	---	---	---	498	488	492	513	214	295	512	380	442
31	---	---	---	513	498	504	---	---	---	445	392	417
MONTH	558	203	423	571	217	382	605	115	328	---	---	---

ARKANSAS RIVER BASIN
07177500 BIRD CREEK NEAR SPERRY, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	449	386	406	350	341	346	297	242	253	336	297	307
2	415	384	394	348	340	344	327	280	300	344	307	320
3	402	389	396	341	333	338	541	282	371	315	307	310
4	400	372	387	339	328	333	329	292	315	322	311	314
5	375	368	372	334	325	330	354	308	331	315	307	310
6	399	362	379	326	319	323	358	306	346	345	308	329
7	396	383	389	327	305	319	371	334	352	333	315	324
8	406	379	393	415	210	275	370	315	353	328	311	317
9	476	217	388	240	211	225	313	298	299	325	312	317
10	349	260	298	258	237	243	314	299	307	335	323	327
11	305	291	300	308	248	272	325	310	318	337	316	322
12	297	291	294	314	271	281	330	322	326	338	314	319
13	318	293	306	327	84	204	334	324	328	321	314	316
14	570	312	390	150	118	138	335	329	331	322	314	317
15	354	311	322	182	150	170	339	317	332	322	303	314
16	337	324	332	242	179	205	340	328	334	598	303	402
17	343	329	335	254	192	218	343	324	336	355	324	340
18	356	341	349	270	221	251	341	325	336	358	331	345
19	372	356	366	285	267	276	346	327	338	365	335	347
20	375	365	371	305	285	294	1050	236	339	365	342	349
21	369	350	358	315	88	200	236	150	199	354	327	344
22	359	350	353	170	86	132	246	199	220	360	326	342
23	352	330	340	240	167	191	254	244	250	368	338	349
24	338	330	332	235	207	226	252	244	248	345	331	340
25	336	330	332	292	162	222	297	247	260	337	312	331
26	340	330	334	187	127	157	467	204	274	339	325	333
27	339	332	336	149	110	130	273	227	260	337	326	332
28	343	335	339	179	148	160	298	273	280	336	326	332
29	348	340	343	224	179	213	301	278	283	335	325	329
30	347	328	341	234	218	226	305	274	287	333	325	328
31	---	---	---	246	232	240	328	295	308	---	---	---
MONTH	570	217	352	415	84	241	1050	150	304	598	297	330

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[illegible]

[illegible]

ARKANSAS RIVER BASIN
07177500 BIRD CREEK NEAR SPERRY, OK--Continued

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PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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

ARKANSAS RIVER BASIN
07177500 BIRD CREEK NEAR SPERRY, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	21.5	20.0	20.5	8.5	7.0	7.5	6.0	4.5	5.5	5.0	3.0	4.0
2	21.5	20.5	21.0	9.0	7.5	8.0	7.5	6.0	7.0	4.5	3.5	4.0
3	21.0	19.0	20.0	10.0	8.0	9.0	9.0	7.0	8.0	4.0	3.0	3.5
4	21.0	19.0	20.0	11.0	9.0	10.0	9.0	8.5	9.0	3.5	3.0	3.5
5	21.5	20.0	21.0	10.5	9.0	10.0	8.5	8.0	8.5	4.0	3.0	3.5
6	22.0	20.5	21.0	9.5	7.0	8.5	8.0	7.0	7.5	4.5	3.0	4.0
7	22.5	21.0	21.5	7.5	7.0	7.5	7.0	6.5	6.5	3.5	1.5	3.0
8	22.5	22.0	22.0	9.0	7.5	8.5	7.0	6.0	6.5	2.0	1.0	1.5
9	22.0	19.0	20.0	10.5	9.0	10.0	9.0	7.0	8.0	2.5	1.0	2.0
10	19.0	17.5	18.0	11.0	9.5	10.0	9.0	8.0	8.5	---	---	---
11	18.5	17.0	17.5	11.0	9.5	10.0	8.5	7.5	8.0	---	---	---
12	19.0	17.5	18.0	12.0	10.5	11.0	8.5	7.5	8.0	4.5	3.5	4.0
13	19.5	18.5	19.0	12.5	12.0	12.0	8.5	7.5	8.0	5.0	4.0	4.5
14	19.5	18.0	18.5	12.0	11.0	11.5	7.5	6.5	7.0	5.0	3.5	4.5
15	19.0	18.0	18.5	11.0	10.5	10.5	7.0	6.5	6.5	4.0	2.5	3.5
16	19.0	18.5	19.0	10.5	9.5	9.5	7.0	6.5	7.0	3.0	2.0	2.5
17	18.5	17.5	18.0	---	---	---	7.0	7.0	7.0	2.0	1.0	2.0
18	18.0	17.5	17.5	9.0	8.5	9.0	7.0	6.0	6.5	1.5	1.0	1.0
19	17.5	17.0	17.5	9.0	8.5	9.0	6.5	5.5	6.0	1.5	.5	1.0
20	17.5	17.0	17.0	8.5	7.5	8.0	6.0	5.0	5.5	1.5	1.0	1.0
21	17.0	15.5	16.5	8.0	7.0	7.5	5.5	4.5	5.0	2.0	1.0	1.5
22	16.0	14.5	15.0	8.0	7.0	7.5	5.0	4.0	4.5	3.0	1.5	2.5
23	15.5	13.5	14.5	8.5	7.5	8.0	4.0	3.5	4.0	4.5	3.0	4.0
24	15.0	13.5	14.5	8.5	6.5	8.0	4.5	3.5	4.0	5.5	4.5	5.0
25	14.5	13.0	14.0	6.5	5.0	6.0	4.5	3.5	4.0	7.0	5.5	6.5
26	14.5	13.0	13.5	5.5	4.0	5.0	4.5	3.5	4.0	8.0	7.0	7.5
27	14.0	12.5	13.0	5.0	4.0	4.5	5.0	4.0	4.5	8.0	6.5	7.5
28	13.5	11.5	12.5	5.5	3.5	4.5	4.0	3.0	4.0	6.5	5.5	6.5
29	13.0	11.0	12.0	5.0	3.5	4.5	3.5	3.0	3.0	5.5	4.5	5.5
30	11.5	9.0	10.5	5.5	3.5	4.5	3.5	2.5	3.0	5.5	4.0	5.0
31	9.0	7.5	8.0	---	---	---	4.0	2.0	3.0	4.0	3.0	4.0
MONTH	22.5	7.5	17.1	---	---	---	9.0	2.0	6.0	---	---	---

ARKANSAS RIVER BASIN
07177500 BIRD CREEK NEAR SPERRY, OK--Continued

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WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	3.5	2.5	3.0	6.0	4.5	5.5	15.5	12.0	14.0	12.5	11.0	11.5
2	3.5	2.5	3.0	6.0	4.0	5.0	15.5	14.0	15.0	12.5	12.0	12.5
3	4.0	2.5	3.0	8.0	6.0	7.0	15.5	13.5	15.0	14.5	12.0	13.0
4	5.0	3.0	4.0	10.0	7.5	8.5	15.5	13.5	14.5	15.5	14.0	15.0
5	6.0	4.5	5.0	12.0	9.0	10.5	14.5	12.5	13.5	17.5	15.0	16.0
6	6.0	5.0	5.0	13.5	10.5	11.5	13.5	11.5	12.5	17.5	16.0	17.0
7	6.0	5.0	5.5	13.0	12.5	12.5	13.5	10.5	12.0	17.0	15.0	16.0
8	5.0	3.5	4.5	12.5	5.0	9.0	15.0	12.0	13.0	15.5	14.5	15.0
9	3.5	1.5	2.5	5.5	5.0	5.5	15.5	14.0	14.5	16.0	15.0	15.5
10	2.0	1.5	1.5	8.0	5.5	6.5	15.5	14.0	15.0	16.0	15.0	15.5
11	3.0	1.0	2.0	9.0	7.5	8.0	14.0	11.0	12.5	---	---	---
12	4.0	2.0	3.5	10.0	9.0	9.5	12.5	11.0	11.5	---	---	---
13	4.5	3.5	4.0	11.5	10.0	10.5	13.5	11.5	12.0	---	---	---
14	5.0	3.5	4.0	12.5	10.5	11.5	15.5	13.0	14.0	18.0	17.5	18.0
15	6.0	4.0	5.0	13.5	11.5	12.5	16.0	13.5	15.5	19.5	18.0	18.5
16	6.5	5.0	5.5	14.0	12.0	13.0	14.5	13.0	13.5	20.0	17.0	18.5
17	8.0	5.5	7.0	15.5	12.5	14.0	15.0	13.5	14.0	24.0	19.5	21.5
18	9.5	7.5	9.0	17.0	14.0	15.5	15.5	13.5	14.5	24.5	22.0	23.5
19	10.5	9.5	10.0	18.0	15.0	16.0	15.5	14.0	14.5	24.5	22.5	23.5
20	11.5	10.5	11.0	18.0	16.5	17.0	15.0	13.5	14.0	24.0	22.0	23.0
21	11.0	10.0	10.5	18.0	16.0	17.0	15.0	13.0	14.0	24.0	22.0	23.0
22	10.0	9.0	9.5	18.0	15.5	16.5	14.5	13.5	14.0	24.5	22.0	23.0
23	9.5	7.5	8.5	17.5	16.0	17.0	14.5	13.5	14.0	24.5	22.5	23.5
24	7.5	6.0	7.0	18.0	14.5	16.5	15.0	13.5	14.0	25.0	23.0	24.0
25	7.0	6.0	6.5	15.0	14.0	14.5	14.5	14.0	14.0	26.5	24.0	25.0
26	6.5	5.0	6.0	15.5	13.5	14.5	15.0	14.0	14.5	26.5	24.5	25.0
27	6.0	4.5	5.0	13.5	12.0	13.0	14.5	13.5	14.0	25.5	24.0	25.0
28	6.0	5.5	5.5	13.0	11.5	12.0	15.0	13.5	14.0	25.5	23.0	23.5
29	---	---	---	13.0	11.0	12.0	14.5	13.0	14.0	24.5	22.0	23.0
30	---	---	---	13.0	11.0	12.0	13.0	11.0	12.0	26.0	23.0	24.5
31	---	---	---	13.5	11.0	12.5	---	---	---	27.0	24.5	25.5
MONTH	11.5	1.0	5.6	18.0	4.0	11.8	16.0	10.5	13.8	---	---	---

ARKANSAS RIVER BASIN
07177500 BIRD CREEK NEAR SPERRY, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	28.0	25.5	26.5	31.0	29.0	30.0	27.5	25.5	26.0	26.0	24.0	25.0
2	28.0	26.5	27.0	31.0	29.0	30.0	27.5	26.0	26.5	24.5	23.5	24.0
3	28.5	26.5	27.5	31.0	29.5	30.0	28.5	26.5	27.5	24.5	23.5	24.0
4	28.5	26.5	27.5	31.0	29.5	30.0	29.0	27.0	28.0	26.0	24.0	25.0
5	28.5	25.5	27.0	30.5	29.0	30.0	29.0	27.0	27.5	26.0	25.0	25.0
6	28.5	26.0	27.0	30.5	29.0	29.5	28.0	26.0	26.5	26.0	24.0	25.0
7	29.0	26.5	28.0	30.0	28.5	29.0	27.5	26.0	26.5	25.5	24.0	24.5
8	29.0	26.5	27.5	29.0	26.0	27.0	28.0	25.5	26.5	25.5	24.0	24.5
9	28.5	22.5	26.5	26.5	25.5	26.0	28.5	26.5	27.5	25.5	24.0	24.5
10	25.0	23.0	24.0	28.0	25.0	26.5	29.0	26.5	27.5	26.0	24.5	25.0
11	25.0	23.5	24.0	29.0	26.0	27.5	29.5	27.0	28.0	26.0	24.0	25.0
12	27.0	24.0	25.0	29.0	27.0	28.0	29.5	27.5	28.5	26.5	24.5	25.5
13	28.0	25.5	26.5	29.0	23.0	26.0	30.0	28.0	29.0	26.5	25.0	26.0
14	28.5	26.5	28.0	25.5	23.5	24.5	30.0	28.0	28.5	27.0	25.5	26.0
15	28.5	26.5	27.5	26.5	24.5	25.5	28.5	26.0	27.0	27.0	25.5	26.0
16	28.5	26.5	27.5	28.0	25.5	26.5	27.0	25.0	26.0	26.0	24.5	25.0
17	29.5	27.0	28.0	28.5	27.0	27.5	27.0	25.5	26.0	24.5	23.0	24.0
18	29.5	27.5	28.0	30.0	27.0	28.5	27.5	25.5	26.5	24.5	22.5	23.5
19	29.0	27.0	28.0	30.5	28.0	29.0	28.0	27.0	27.5	24.0	22.5	23.0
20	29.5	27.5	28.5	30.5	28.5	29.5	28.0	24.0	26.0	24.5	22.5	23.5
21	29.5	28.0	29.0	30.0	23.0	26.0	25.0	23.5	24.0	24.5	23.0	23.5
22	30.5	28.5	29.5	25.0	23.0	24.0	25.5	24.0	24.5	24.0	22.5	23.0
23	30.5	29.0	29.5	27.5	25.0	26.5	25.5	17.0	18.5	22.5	20.0	21.0
24	30.0	28.0	29.0	28.5	27.0	27.5	19.0	17.5	18.5	20.0	19.0	19.5
25	30.5	28.0	29.0	27.5	24.0	25.0	19.5	17.5	18.5	20.0	19.0	19.5
26	31.0	29.0	30.0	25.5	23.5	24.5	---	---	---	21.0	19.5	20.0
27	31.0	29.0	29.5	24.0	23.0	23.5	21.5	19.0	19.5	21.0	19.5	20.5
28	31.0	29.0	30.0	25.0	23.5	24.0	19.5	18.0	19.0	21.5	20.0	20.5
29	31.0	29.0	29.5	25.5	24.0	24.5	20.0	17.5	19.0	22.5	20.5	21.5
30	30.5	28.0	29.5	25.5	23.5	24.5	27.0	19.5	23.0	22.5	21.0	22.0
31	---	---	---	26.5	24.5	25.5	27.0	26.0	26.5	---	---	---
MONTH	31.0	22.5	27.8	31.0	23.0	27.0	---	---	---	27.0	19.0	23.5

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DAY	MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN
	OCTOBER				NOVEMBER				DECEMBER				JANUARY		
1	6.7	6.2	6.5		12.0	10.4	11.1		13.4	12.1	12.6		---	---	---
2	7.3	6.4	6.8		11.4	9.8	10.9		12.7	11.4	12.0		---	---	---
3	8.4	7.2	7.7		11.2	9.7	10.3		11.5	10.8	11.1		---	---	---
4	8.9	8.0	8.5		10.9	9.5	10.2		11.1	10.5	10.8		---	---	---
5	8.9	8.1	8.5		10.7	8.9	9.6		11.4	10.8	11.1		---	---	---
6	9.0	8.0	8.5		10.6	9.3	9.8		12.2	11.2	11.7		---	---	---
7	8.9	8.1	8.5		9.9	8.9	9.3		12.6	11.7	12.0		---	---	---
8	8.6	7.9	8.2		10.0	9.5	9.7		12.6	11.9	12.4		---	---	---
9	9.0	7.9	8.4		10.1	9.6	9.9		---	---	---		---	---	---
10	9.5	8.6	9.0		11.1	9.6	10.2		---	---	---		---	---	---
11	9.5	8.5	9.2		10.7	9.5	10.1		---	---	---		---	---	---
12	9.6	8.8	9.2		9.5	8.4	9.3		---	---	---		12.9	11.6	12.0
13	9.4	8.6	9.0		8.5	8.0	8.2		---	---	---		13.4	11.7	12.5
14	9.6	8.6	9.0		8.8	8.0	8.5		---	---	---		13.6	11.7	12.6
15	9.5	8.8	9.0		8.6	7.8	8.3		---	---	---		13.9	11.7	12.9
16	9.0	8.0	8.4		9.3	8.1	9.0		---	---	---		13.9	12.1	12.9
17	8.4	7.9	8.2		---	---	---		---	---	---		13.1	12.2	12.6
18	8.5	8.0	8.3		10.9	10.7	10.8		---	---	---		14.7	12.5	13.9
19	8.4	8.0	8.3		10.8	10.5	10.6		---	---	---		15.1	13.4	14.3
20	8.6	8.0	8.3		10.9	10.6	10.8		---	---	---		14.6	13.3	14.0
21	8.9	8.2	8.6		11.1	10.6	10.9		---	---	---		15.1	13.3	14.2
22	9.8	8.4	9.0		11.2	10.9	11.0		---	---	---		14.9	13.0	13.9
23	10.3	8.7	9.2		11.2	10.6	11.0		---	---	---		13.8	12.1	13.1
24	10.0	8.9	9.5		10.9	10.5	10.7		---	---	---		13.0	11.8	12.4
25	10.8	9.1	9.8		11.2	10.5	10.9		---	---	---		12.7	11.6	12.2
26	10.5	9.3	9.9		11.7	10.9	11.4		---	---	---		13.1	11.0	12.2
27	11.1	9.3	10.2		12.3	11.4	11.8		---	---	---		12.3	10.7	11.5
28	12.1	9.3	10.3		12.6	11.7	12.1		---	---	---		12.4	10.9	11.8
29	11.2	9.7	10.3		12.9	11.9	12.4		---	---	---		12.9	11.3	12.3
30	11.4	9.3	10.3		13.2	12.1	12.5		---	---	---		13.1	11.8	12.5
31	12.3	10.4	11.1		---	---	---		---	---	---		13.4	12.1	12.9
MONTH	12.3	6.2	8.9		---	---	---		---	---	---		---	---	---

ARKANSAS RIVER BASIN
07177500 BIRD CREEK NEAR SPERRY, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	13.5	12.5	13.1	11.8	11.6	11.7	10.6	9.6	10.2	10.1	9.6	9.8
2	13.7	12.8	13.3	12.4	11.8	12.2	10.0	9.0	9.5	10.0	9.9	9.9
3	13.7	12.7	13.3	12.0	11.4	11.7	10.2	8.9	9.5	9.9	9.5	9.8
4	13.6	12.4	13.2	11.4	10.9	11.2	9.8	8.8	9.4	9.5	9.3	9.4
5	13.3	12.2	12.9	10.9	10.3	10.6	9.7	9.0	9.3	9.5	9.1	9.4
6	13.0	12.0	12.6	10.3	10.0	10.2	11.0	9.4	10.1	9.5	8.9	9.4
7	12.9	11.8	12.4	10.0	9.5	9.7	11.5	10.1	10.7	9.8	9.3	9.5
8	12.7	11.6	12.2	11.3	9.6	10.3	11.3	9.8	10.6	---	---	---
9	12.8	11.6	12.4	12.0	11.2	11.8	11.1	9.3	9.8	---	---	---
10	13.7	12.4	13.2	11.8	11.1	11.7	9.4	7.3	8.2	---	---	---
11	13.8	13.1	13.5	11.1	10.8	10.9	---	---	---	---	---	---
12	13.8	12.7	13.3	10.9	10.6	10.7	---	---	---	---	---	---
13	13.6	12.6	13.1	10.6	10.4	10.4	---	---	---	---	---	---
14	13.5	12.6	13.1	10.4	10.0	10.2	---	---	---	9.2	8.6	8.9
15	13.7	12.4	13.1	10.0	9.6	9.9	---	---	---	9.4	8.7	9.0
16	13.5	12.2	12.9	10.0	9.6	9.8	---	---	---	9.5	8.7	9.1
17	13.3	11.6	12.7	9.7	9.0	9.5	---	---	---	9.8	8.0	8.7
18	12.8	10.9	12.1	9.8	8.9	9.3	---	---	---	9.6	7.3	8.5
19	11.6	9.7	10.8	10.0	8.6	9.3	---	---	---	9.2	7.2	8.3
20	9.9	8.1	9.3	9.6	8.4	9.0	---	---	---	9.7	7.1	8.3
21	10.3	9.3	10.0	9.5	8.5	9.1	11.0	10.4	10.6	9.4	7.3	8.4
22	10.4	10.1	10.3	9.3	8.3	8.9	10.5	10.3	10.4	9.5	7.3	8.4
23	10.8	10.3	10.5	9.2	8.4	8.9	10.4	10.1	10.3	9.2	7.2	8.2
24	11.6	10.8	11.4	9.0	8.1	8.6	10.4	10.2	10.4	8.6	6.7	7.5
25	11.7	11.5	11.6	9.2	8.7	9.0	10.4	10.2	10.3	8.0	6.5	7.3
26	12.0	11.7	11.9	9.2	8.6	8.8	10.4	10.2	10.3	7.7	6.3	6.9
27	12.2	12.0	12.1	10.0	8.9	9.3	10.8	10.3	10.4	7.5	6.3	6.8
28	12.0	11.8	11.9	10.4	9.5	9.9	10.4	9.8	10.2	6.7	5.8	6.3
29	---	---	---	10.9	9.7	10.2	9.8	9.2	9.3	7.0	6.4	6.6
30	---	---	---	10.8	9.8	10.3	9.6	8.1	9.1	6.9	6.3	6.6
31	---	---	---	10.7	9.9	10.4	---	---	---	7.3	6.2	6.7
MONTH	13.8	8.1	12.2	12.4	8.1	10.1	---	---	---	---	---	---

ARKANSAS RIVER BASIN
07177500 BIRD CREEK NEAR SPERRY, OK--Continued

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OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.1	6.0	6.5	7.0	5.6	6.3	7.6	7.2	7.4	7.2	6.6	6.9
2	7.5	5.9	6.6	6.7	5.7	6.2	7.9	6.9	7.3	7.5	7.0	7.2
3	7.4	5.9	6.6	6.8	5.5	6.1	7.6	5.9	6.7	7.5	7.0	7.3
4	7.2	5.9	6.6	7.0	5.6	6.3	7.2	6.3	6.8	7.6	7.1	7.3
5	7.5	6.1	6.8	6.8	5.6	6.2	7.3	6.3	6.7	7.3	6.8	7.1
6	6.9	6.0	6.4	6.7	5.5	6.1	7.4	6.5	6.9	7.8	7.0	7.3
7	7.4	5.7	6.5	6.6	5.7	6.1	7.1	6.4	6.7	7.7	7.0	7.3
8	7.1	5.6	6.4	6.6	4.0	5.4	7.5	6.4	6.9	7.9	7.1	7.4
9	6.9	4.8	5.8	6.0	5.0	5.6	7.7	6.7	7.1	7.7	6.9	7.3
10	6.5	5.0	5.9	6.4	5.8	6.1	8.3	6.9	7.5	8.0	6.8	7.4
11	6.7	6.3	6.5	6.6	6.0	6.2	8.0	6.8	7.3	7.8	6.9	7.3
12	6.6	6.1	6.4	6.8	5.9	6.3	8.0	6.6	7.2	7.7	6.9	7.2
13	6.3	5.9	6.1	6.5	3.1	5.3	7.7	6.3	7.0	7.5	6.8	7.1
14	6.7	5.7	6.1	6.2	4.3	5.2	7.2	6.3	6.8	7.4	6.6	7.0
15	6.9	6.1	6.4	6.5	6.2	6.4	7.9	6.6	7.2	7.3	6.6	6.9
16	7.1	6.0	6.5	6.5	6.0	6.3	8.0	6.9	7.4	7.4	6.0	6.4
17	7.3	5.9	6.5	6.6	6.0	6.3	7.9	6.9	7.3	6.4	5.9	6.2
18	7.0	5.9	6.4	6.5	6.2	6.4	8.1	6.8	7.4	6.5	6.0	6.3
19	7.3	5.9	6.6	6.4	6.0	6.2	7.8	6.6	7.2	7.3	6.2	6.7
20	7.2	5.9	6.6	6.5	5.8	6.1	7.6	4.7	6.2	7.4	6.8	7.2
21	7.1	5.8	6.4	6.4	4.4	5.6	6.7	5.0	5.8	7.6	6.8	7.1
22	6.9	5.7	6.4	5.9	4.6	5.1	7.2	6.7	6.9	7.6	6.6	7.1
23	6.7	5.5	6.1	6.4	5.9	6.2	9.1	6.8	8.7	7.4	6.9	7.2
24	6.7	5.3	6.1	6.5	6.1	6.3	9.1	8.6	8.8	---	---	---
25	6.7	5.7	6.2	6.6	5.2	6.0	8.9	8.2	8.8	---	---	---
26	6.7	5.5	6.1	6.2	5.3	5.7	8.3	6.8	7.8	---	---	---
27	6.6	5.5	6.0	6.4	5.6	5.9	8.6	7.6	8.2	---	---	---
28	6.9	5.7	6.3	---	---	---	8.8	8.4	8.6	---	---	---
29	6.9	5.7	6.3	---	---	---	9.0	8.2	8.6	---	---	---
30	6.8	5.8	6.3	7.7	7.3	7.5	8.2	7.0	7.6	---	---	---
31	---	---	---	7.7	7.3	7.5	7.0	6.5	6.7	---	---	---
MONTH	7.5	4.8	6.3	---	---	---	9.1	4.7	7.3	---	---	---

ARKANSAS RIVER BASIN

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

LOCATION.--Lat 36°12'55", long 95°59'42", in SE 1/4 NE 1/4 sec.14, T.20 N., R.12 E., Tulsa County, Hydrologic Unit 11070107, near right upstream abutment of Cincinnati Avenue bridge, 0.5 mi north of Cincinnati Avenue-36th Street North intersection, 2.0 mi south of Turley, and at mile 5.6.

DRAINAGE AREA.--8.2 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 615.56 ft above sea level.

REMARKS.--Records fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Apr. 11		1,560	9.42				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.10	e1.5	e3.0	.59	.46	37	3.6	e3.0	.24	.10	.48	1.6
2	e.09	e1.9	4.7	.66	.46	27	7.8	e20	.18	.18	.30	.58
3	e.07	e1.7	2.9	.77	.46	15	17	e6.0	.11	.13	.19	.26
4	e.05	e1.5	7.1	.75	.46	10	8.0	e2.0	24	.14	.08	.24
5	e.04	e1.3	4.0	.75	.46	7.9	6.2	e1.1	3.0	.16	.11	.82
6	e.04	e1.2	2.4	.74	.46	6.5	5.3	.85	2.9	.12	.11	.84
7	e.03	e1.1	1.8	.59	.46	5.9	4.6	e1.2	1.0	.12	.15	.30
8	e3.0	e1.1	1.5	.52	.46	110	4.3	e.80	.47	1.7	.15	.70
9	e.06	e1.0	1.4	.52	.46	54	4.3	.52	4.6	.15	.12	.98
10	e.02	e1.0	1.2	.52	.46	100	20	.46	1.2	.11	.04	.52
11	e.01	e1.0	.98	.52	.40	66	407	e.40	.64	.08	.00	.31
12	.00	e10	1.1	.52	.43	24	e50	e.90	.50	.07	.00	.27
13	e.00	e20	11	.52	.46	13	e20	e1.5	.34	1.2	.00	.25
14	e.00	e30	7.8	.52	.46	9.5	e5.0	e1.0	.25	3.7	.00	.24
15	e.00	e10	3.9	.42	.46	7.3	e2.7	e.80	.23	1.6	.00	.55
16	e10	e20	2.8	.49	.41	6.1	e1.7	e.65	.20	.39	.00	7.9
17	e5.0	e5.5	2.2	.51	.40	5.8	e1.0	e1.0	.15	.17	.00	.86
18	e2.5	e3.9	1.8	.54	.40	5.0	e.80	e.48	.11	.15	.00	.24
19	e4.0	e3.1	1.5	.40	1.9	4.7	e.60	e.27	.33	.12	.00	.10
20	e4.5	e2.8	1.3	.40	4.3	4.8	e.50	.15	.21	.09	3.3	.09
21	e3.0	e2.5	1.2	.38	2.2	4.8	e.39	e.14	.14	30	.53	.20
22	e2.2	e2.4	1.0	.40	32	4.5	.31	e.13	.12	1.0	.23	.27
23	e1.8	e2.3	.95	.40	18	4.5	e.27	.12	.11	.35	.15	.07
24	e2.0	e2.2	.92	.42	8.4	4.3	e.22	.07	.12	.19	.10	.10
25	e2.4	e2.2	.85	.48	6.7	3.8	e.19	.77	.11	49	.08	.17
26	e2.0	e2.1	.85	.74	4.6	7.9	e10	2.5	.09	151	1.4	.19
27	e1.8	e2.1	.84	.70	4.2	8.2	e.70	.53	.35	8.9	.65	.20
28	e1.6	e2.0	.70	.59	4.8	5.3	e4.0	.31	.09	2.7	.38	.21
29	e2.0	e2.0	.66	.49	---	4.5	e30	2.0	.09	1.5	.37	.18
30	e1.8	e2.0	.60	.46	---	4.2	e40	.83	.10	.87	.34	.16
31	e1.6	---	.59	.46	---	3.8	---	.42	---	.66	.78	---
TOTAL	51.71	141.4	73.54	16.77	95.12	575.3	656.48	50.90	41.98	256.65	10.04	19.40
MEAN	1.67	4.71	2.37	.54	3.40	18.6	21.9	1.64	1.40	8.28	.32	.65
MAX	10	30	11	.77	32	110	407	20	24	151	3.3	7.9
MIN	.00	1.0	.59	.38	.40	3.8	.19	.07	.09	.07	.00	.07
AC-FT	103	280	146	33	189	1140	1300	101	83	509	20	38
CFSM	.20	.57	.29	.07	.41	2.26	2.67	.20	.17	1.01	.04	.08
IN.	.23	.64	.33	.08	.43	2.61	2.98	.23	.19	1.16	.05	.09

e Estimated

ARKANSAS RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.65	3.78	5.36	3.84	6.58	13.3	9.55	9.51	6.08	2.44	2.55	1.40
MAX	1.67	8.16	16.0	10.3	14.5	34.4	21.9	28.1	24.0	8.28	13.6	6.54
(WY)	1994	1993	1993	1993	1993	1990	1994	1993	1992	1994	1989	1993
MIN	.12	.11	.64	.54	.30	.37	1.15	.82	.80	.044	.031	.051
(WY)	1993	1990	1991	1994	1991	1991	1989	1989	1990	1991	1990	1992

SUMMARY STATISTICS 1993 CALENDAR YEAR

ANNUAL TOTAL	2895.92
ANNUAL MEAN	7.93
HIGHEST ANNUAL MEAN	
LOWEST ANNUAL MEAN	
HIGHEST DAILY MEAN	400
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	
INSTANTANEOUS PEAK STAGE	
ANNUAL RUNOFF (AC-FT)	5740
ANNUAL RUNOFF (CFSM)	.97
ANNUAL RUNOFF (INCHES)	13.14
10 PERCENT EXCEEDS	14
50 PERCENT EXCEEDS	2.3
90 PERCENT EXCEEDS	.02

1994 WATER YEAR

1989.29
5.45
407
.00
.00
1560
^b 9.42
3950
.66
9.02
8.1
.75
.10

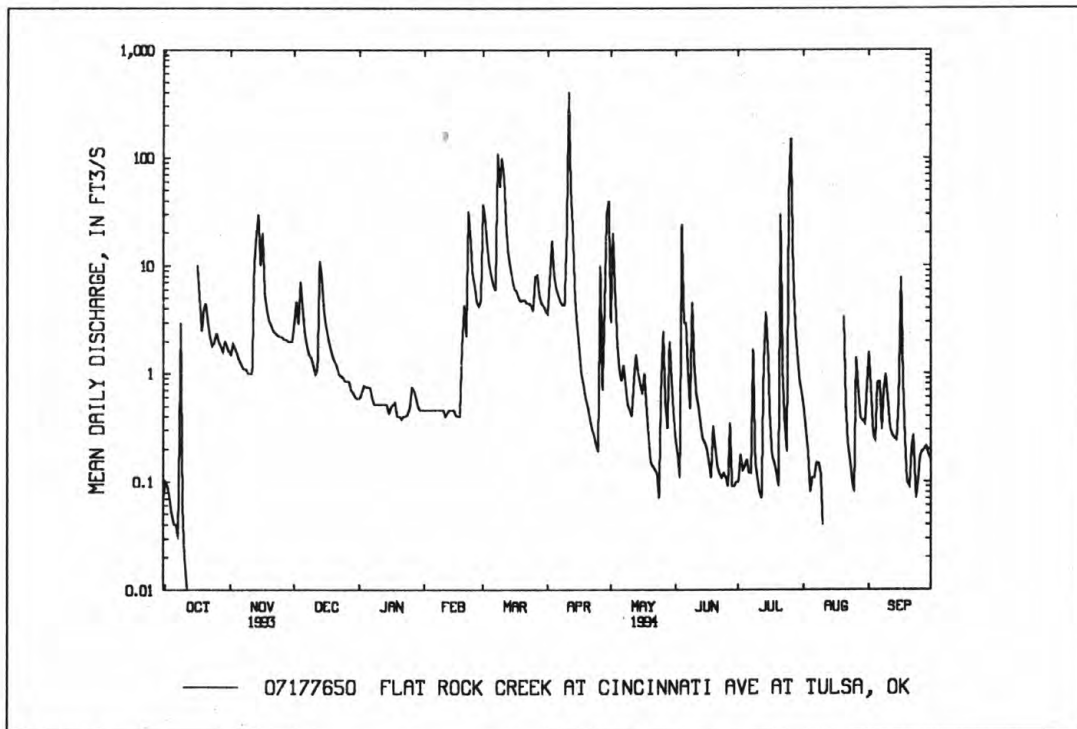
WATER YEARS 1989-94

5.41
9.25
.81
407
.00
.00
2840
11.52
3920
.66
8.96
8.6
.59
.00

1993
1991
Apr 11 1994
at times
Oct 14 1988
May 8 1993
May 8 1993

^aAlso Aug. 11-19.

^bFrom high-water mark.



ARKANSAS RIVER BASIN
07177800 COAL CREEK AT TULSA, OK

LOCATION.--Lat 36°11'40", long 95°54'50", in SE 1/4 SW 1/4 sec.22, T.20 N., R.13 E., Tulsa County, Hydrologic Unit 11070107, near right downstream abutment of bridge on State Highway 11, .2 mile Northwest of intersection of SH 11 and Apache Street in Tulsa, and at mile 4.1.

DRAINAGE AREA.--7.53 mi².

PERIOD OF RECORD.--January 29, 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 596.84 ft above sea level.

REMARKS.--Records fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Apr. 11	0900	1,110	9.77	July 21	0530	1,910	11.02
May 26	0045	2,070	11.23	July 25	0545	1,230	9.99
July 14	1700	3,740	13.01	Aug. 26	0845	1,060	9.68

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	e2.2	3.1	2.7	3.2	23	2.2	4.2	.88	.51	1.2	4.1
2	.11	e3.0	19	4.3	2.2	11	31	16	1.4	11	1.1	2.4
3	.11	e2.8	2.1	4.8	2.2	4.1	7.6	4.5	1.6	.28	1.2	2.0
4	.12	e2.5	13	2.3	2.2	3.2	3.0	2.0	9.2	.17	1.4	1.8
5	.12	e2.4	1.9	2.3	2.3	2.5	13	1.4	.85	.69	1.3	19
6	.12	e2.3	2.5	2.3	2.3	2.0	3.6	.96	24	.17	1.1	3.1
7	.11	e2.1	2.7	2.3	2.4	2.0	3.1	1.0	e.50	.16	2.2	1.8
8	2.8	e2.0	2.7	2.0	2.3	65	2.8	.50	e.40	34	.88	5.2
9	.13	e2.0	2.7	2.6	2.1	52	4.0	.51	14	.59	.85	2.7
10	.10	e2.8	2.8	2.4	2.3	34	25	.58	.61	.18	.61	1.5
11	.13	e2.5	3.7	2.2	2.4	21	213	.57	.50	.14	.44	1.4
12	.13	14	10	2.3	2.4	9.2	15	.98	e.45	1.1	.40	1.3
13	.13	29	31	2.2	2.2	5.4	4.8	1.3	e.40	57	.32	1.3
14	.15	33	4.0	2.0	2.3	4.4	2.8	.87	.85	216	.80	1.1
15	.15	1.7	2.3	2.0	2.8	4.0	1.9	.68	.37	6.9	.26	36
16	27	14	3.1	4.7	15	5.5	1.5	.34	.32	3.6	.26	6.4
17	2.4	7.5	3.0	3.3	3.8	5.7	1.1	1.6	.32	3.2	.26	1.9
18	3.4	2.0	2.9	1.7	1.2	5.4	.95	1.3	13	.88	.26	1.3
19	5.0	3.1	3.2	3.2	26	4.9	.78	.43	.67	.50	.27	1.1
20	9.0	3.1	3.1	2.7	4.8	3.3	.65	.26	.20	.49	46	1.2
21	6.1	3.2	2.9	4.2	1.9	2.4	.54	.30	.19	166	2.1	1.2
22	e3.8	3.0	3.2	3.9	42	4.2	.42	.26	.20	3.8	1.4	16
23	e2.7	3.0	3.0	3.9	7.0	2.7	.27	.19	.18	1.5	1.3	2.2
24	e4.0	3.2	3.4	3.9	3.0	2.3	.20	.37	.18	.99	1.3	2.1
25	e4.6	3.0	3.3	4.1	2.4	2.0	.15	1.9	.19	88	1.1	1.0
26	e3.5	3.0	3.3	11	1.7	37	17	101	.18	149	57	.84
27	e3.0	2.8	3.2	2.5	1.6	4.5	.76	e.60	.19	13	2.1	.79
28	e2.8	2.7	3.0	2.2	9.7	3.2	2.8	e.40	.21	4.7	1.0	.77
29	e4.2	2.7	3.0	2.2	---	2.8	46	41	.28	2.0	.70	.74
30	e3.5	2.6	3.5	2.2	---	2.3	50	1.5	.48	1.0	.82	.56
31	e2.5	---	2.8	2.1	---	2.4	---	1.7	---	1.1	16	---
TOTAL	92.02	163.2	153.4	96.5	155.7	333.4	455.92	189.20	72.80	768.65	145.93	122.80
MEAN	2.97	5.44	4.95	3.11	5.56	10.8	15.2	6.10	2.43	24.8	4.71	4.09
MAX	27	33	31	11	42	65	213	101	24	216	57	36
MIN	.10	1.7	1.9	1.7	1.2	2.0	.15	.19	.18	.14	.26	.56
AC-FT	183	324	304	191	309	661	904	375	144	1520	289	244
CFSM	.39	.72	.66	.41	.74	1.43	2.02	.81	.32	3.29	.63	.54
IN.	.45	.81	.76	.48	.77	1.65	2.25	.93	.36	3.80	.72	.61

e Estimated

ARKANSAS RIVER BASIN

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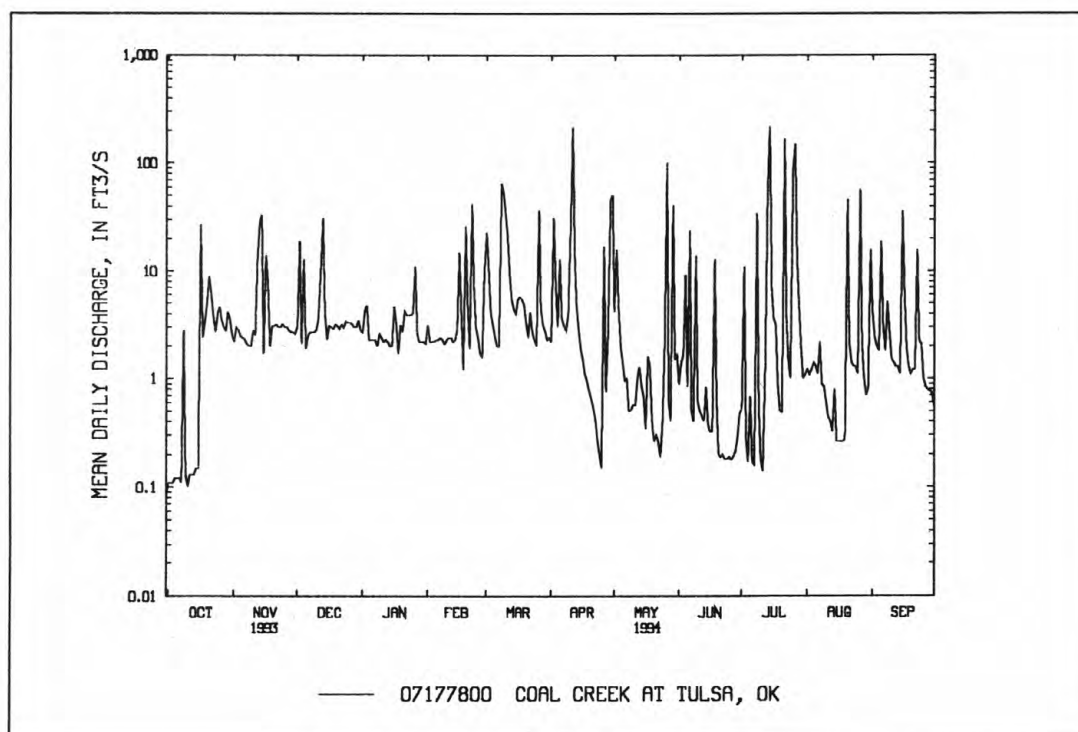
07177800 COAL CREEK AT TULSA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.72	7.43	9.11	6.28	6.79	11.2	10.3	12.3	6.99	6.44	5.06	5.69
MAX	8.17	15.2	20.3	9.60	12.2	33.2	16.8	23.2	14.0	24.8	18.7	7.85
(WY)	1992	1993	1993	1993	1990	1990	1990	1993	1992	1994	1989	1993
MIN	1.11	2.24	3.93	2.24	2.64	1.71	1.62	6.10	2.20	.29	.75	1.91
(WY)	1993	1990	1991	1992	1991	1992	1989	1994	1990	1991	1991	1992

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1989-94

ANNUAL TOTAL	2796.71	2749.52	
ANNUAL MEAN	7.66	7.53	7.70
HIGHEST ANNUAL MEAN			9.81 1990
LOWEST ANNUAL MEAN			4.30 1991
HIGHEST DAILY MEAN	199	May 8	216 Jul 14
LOWEST DAILY MEAN	.00	Jul 27	.10 Oct 10
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 27	.11 Oct 1
INSTANTANEOUS PEAK FLOW			3740 Jul 14
INSTANTANEOUS PEAK STAGE			13.01 Jul 14
ANNUAL RUNOFF (AC-FT)	5550	5450	5580
ANNUAL RUNOFF (CFSM)	1.02	1.00	1.02
ANNUAL RUNOFF (INCHES)	13.82	13.58	13.89
10 PERCENT EXCEEDS	18	15	16
50 PERCENT EXCEEDS	2.9	2.3	1.9
90 PERCENT EXCEEDS	.04	.26	.26



ARKANSAS RIVER BASIN
07178000 BIRD CREEK NEAR OWASSO, OK

LOCATION.--Lat 36°14'54", long 95°52'01" (revised), in NW 1/4 NW 1/4 sec.6, T.20 N., R.14 E., Tulsa County, Hydrologic Unit 11070107, at bridge on Mingo Road 1.4 mi upstream from Mingo Creek, 1.5 mi downstream from Coal Creek, 2 mi southwest of Owasso, and at mile 14.1.

DRAINAGE AREA.--1022 mi².

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. U.S. Geological Survey satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peak stages, 34.0 ft, Oct. 25, 1908; 28.5 ft, Apr. 15, 1927; 26.3 ft, Apr. 15, 1929; 26.2 ft, June 1935, from information provided by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 9,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Apr. 13	1100	21,300	24.14	July 22	0500	9,100	14.18

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176	70	61	60	95	577	145	3950	200	155	327	219
2	203	71	143	57	92	1280	184	1080	188	181	148	221
3	206	74	264	59	91	828	353	809	175	158	149	208
4	200	69	216	59	92	511	360	782	358	154	176	197
5	199	49	213	58	92	343	325	745	330	153	179	229
6	196	45	196	59	91	252	236	1380	383	148	163	245
7	200	93	158	56	90	204	257	1460	247	144	181	217
8	236	100	121	70	88	1210	180	1730	193	1170	214	244
9	237	104	103	74	86	2260	188	1600	536	870	493	242
10	234	138	90	75	86	2160	4010	1480	1950	295	289	192
11	238	169	81	75	94	3650	10500	1420	466	200	211	196
12	238	173	78	74	94	1940	18100	1400	222	164	184	190
13	233	188	174	74	92	1050	20000	1340	152	2390	170	177
14	219	451	518	77	93	763	8740	1010	195	5810	161	167
15	208	296	666	83	93	549	1820	869	252	1170	150	211
16	184	286	299	91	92	363	2210	812	213	336	148	413
17	142	449	179	100	96	296	2160	228	193	251	145	243
18	118	776	134	99	97	231	2060	150	150	220	144	179
19	112	392	112	104	103	193	1990	165	143	192	144	210
20	106	211	100	110	1440	174	1940	159	138	143	1310	279
21	95	145	89	111	1800	159	3180	156	140	3820	3580	277
22	75	115	82	113	1060	146	3400	157	139	e7700	746	315
23	67	102	77	118	1920	134	3650	153	157	e1000	901	277
24	80	88	75	121	1660	117	3400	153	157	e600	967	261
25	81	77	72	126	610	107	3270	153	157	2800	931	254
26	80	70	69	139	342	182	3280	549	155	e6000	1460	252
27	72	67	66	133	251	242	3220	344	150	6800	1060	246
28	60	65	62	118	203	321	3170	169	153	1230	750	244
29	54	62	61	109	---	216	1190	374	152	721	673	240
30	51	60	60	101	---	163	4160	295	151	523	270	239
31	64	---	61	95	---	131	---	229	---	431	222	---
TOTAL	4664	5055	4680	2798	11043	20752	107678	25301	8195	45929	16646	7084
MEAN	150	168	151	90.3	394	669	3589	816	273	1482	537	236
MAX	238	776	666	139	1920	3650	20000	3950	1950	7700	3580	413
MIN	51	45	60	56	86	107	145	150	138	143	144	167
AC-FT	9250	10030	9280	5550	21900	41160	213600	50180	16250	91100	33020	14050

e Estimated

ARKANSAS RIVER BASIN
07178000 BIRD CREEK NEAR OWASSO, OK--Continued

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1994, BY WATER YEAR (WY)

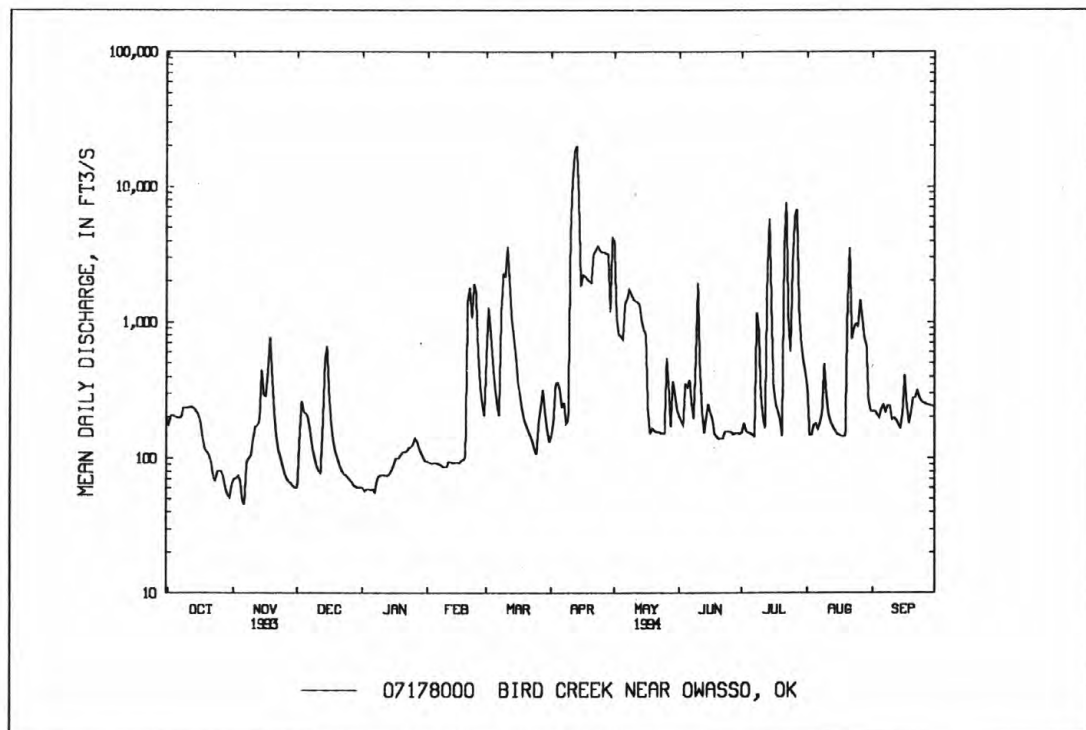
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	199	337	658	600	708	1606	1852	1759	1538	561	273	265
MAX	307	710	1561	2119	1393	5861	3589	4551	2918	1482	537	458
(WY)	1990	1993	1993	1993	1993	1990	1994	1993	1992	1994	1994	1993
MIN	131	151	85.7	90.3	94.5	91.9	522	349	273	181	176	165
(WY)	1993	1991	1990	1994	1991	1991	1992	1992	1994	1991	1991	1992

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1990-94
ANNUAL TOTAL	468433	259825	
ANNUAL MEAN	1283	712	863
HIGHEST ANNUAL MEAN			1446
LOWEST ANNUAL MEAN			306
HIGHEST DAILY MEAN	27700	May 11	^a 27700 May 11 1993
LOWEST DAILY MEAN	45	Nov 6	^b 45 Nov 6 1993
ANNUAL SEVEN-DAY MINIMUM	63	Oct 27	58 Jan 1 1994
INSTANTANEOUS PEAK FLOW		21300	Apr 13 ^c 29200 May 11 1993
INSTANTANEOUS PEAK STAGE		24.14	Apr 13 26.94 May 11 1993
ANNUAL RUNOFF (AC-FT)	929100	515400	625000
10 PERCENT EXCEEDS	3200	1760	2440
50 PERCENT EXCEEDS	355	193	206
90 PERCENT EXCEEDS	89	75	87

^aRevised, recomputed with revised rating.

^bMinimum daily discharge for period of record, 2.0 ft³/s, July 31, Aug. 1, 13-16, 1936, and July 5, 1937.

^cRevised discharge, based on new rating.



ARKANSAS RIVER BASIN
07178000 BIRD CREEK NEAR OWASSO, OK--Continued

WATER QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1987 to current year.

pH: May 1987 to current year.

WATER TEMPERATURE: May 1987 to current year.

DISSOLVED OXYGEN: May 1987 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,850 microsiemens, Nov. 3, 1992; minimum, 48 microsiemens, July 18, 1989.

pH: Maximum, 8.9 units, May 17, 1988; minimum, 5.5 units June 14, 15, 1987.

WATER TEMPERATURE: Maximum, 35.0°C, Aug. 2, 3, 1987; minimum, 0.0°C, several days during winter periods.

DISSOLVED OXYGEN: Maximum, 16.3 mg/l, Jan. 17, 1988; minimum, 1.3 mg/l Aug. 14, 1987.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 783 microsiemens, Jan. 12; minimum, 88 microsiemens, July 22.

pH: Maximum recorded (more than 20 percent missing record), 8.3 units, Sept. 29; minimum recorded, 7.0 units, Oct. 3, Aug. 21.

WATER TEMPERATURE: Maximum, 32.0°C, June 28, 29, July 4,5; minimum, 0.5°C, Jan. 19.

DISSOLVED OXYGEN: Maximum, 14.6 mg/L, Jan. 21; minimum, 2.8 mg/L, July 13.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	283	276	281	433	429	431	482	464	474	561	550	555
2	287	276	282	448	433	442	488	448	469	567	561	565
3	306	286	296	448	430	439	536	424	500	578	566	572
4	305	293	298	468	426	435	592	500	539	591	578	584
5	298	294	295	573	468	521	520	438	480	602	591	596
6	304	298	302	575	509	560	472	436	458	628	602	619
7	304	295	299	509	464	475	472	450	462	630	627	628
8	295	283	290	468	457	461	477	449	458	640	630	635
9	283	275	277	467	442	457	483	471	477	650	640	646
10	280	275	277	538	379	463	493	474	488	650	640	647
11	278	275	276	379	265	295	516	493	506	688	634	649
12	280	277	278	271	262	265	523	516	519	783	688	758
13	286	280	283	292	271	279	524	458	503	762	627	677
14	292	286	288	384	247	301	619	481	538	627	571	595
15	300	292	297	480	384	433	563	518	547	580	571	576
16	300	288	294	456	422	447	525	487	500	580	562	571
17	353	286	298	434	357	379	487	480	482	562	488	529
18	353	291	315	440	356	407	481	474	477	488	479	483
19	342	311	330	415	392	402	476	475	475	489	454	471
20	382	342	363	488	412	463	477	476	476	454	442	448
21	398	382	393	481	439	456	478	475	476	442	435	437
22	408	398	402	439	429	436	485	478	481	442	434	436
23	411	407	409	429	408	417	488	484	486	440	429	433
24	409	400	404	408	396	400	496	490	493	464	440	445
25	416	400	407	397	395	396	502	495	497	448	440	445
26	430	416	426	409	397	401	509	502	505	459	431	435
27	425	411	418	420	409	414	521	509	515	437	412	426
28	476	412	436	433	420	425	528	521	525	451	412	438
29	500	468	486	447	433	440	538	528	532	447	431	437
30	468	418	442	464	446	455	546	536	542	439	429	435
31	431	415	420	---	---	---	550	546	548	447	438	441
MONTH	500	275	341	575	247	420	619	424	498	783	412	536

ARKANSAS RIVER BASIN
07178000 BIRD CREEK NEAR OWASSO, OK--Continued

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SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	457	450	454	457	361	394	542	530	534	273	221	251
2	458	453	456	428	302	329	558	541	547	295	261	271
3	453	449	451	356	310	333	575	425	520	333	283	309
4	457	453	454	367	354	360	618	501	573	328	309	315
5	458	454	457	379	368	372	525	484	494	322	308	311
6	462	458	460	392	379	386	521	499	510	313	279	294
7	461	457	459	410	392	403	508	496	501	283	279	282
8	461	458	459	442	314	394	525	508	513	280	268	274
9	466	461	463	342	263	290	577	525	553	293	271	279
10	466	464	465	320	278	294	568	171	321	298	287	294
11	466	458	462	314	232	260	317	138	212	291	283	287
12	458	441	450	268	232	248	139	119	129	286	280	284
13	446	441	443	293	259	276	175	139	151	287	278	283
14	451	447	440	315	293	301	262	175	228	294	282	289
15	453	450	451	345	315	330	310	262	293	297	287	292
16	457	452	455	366	345	356	307	285	290	298	286	290
17	458	454	456	395	366	378	293	288	290	306	291	296
18	459	455	457	405	395	399	290	285	287	365	306	328
19	459	444	455	448	405	426	292	285	288	442	365	416
20	533	413	443	467	448	460	296	284	293	469	438	454
21	434	315	356	467	456	464	294	275	283	474	428	446
22	451	404	420	467	464	466	297	276	286	442	426	433
23	431	295	341	498	467	479	297	273	279	456	440	444
24	298	257	273	505	494	498	299	286	292	462	441	453
25	303	280	292	513	505	510	288	280	283	472	458	466
26	340	303	323	527	484	510	280	274	277	458	244	356
27	361	340	354	565	457	515	275	226	265	465	344	437
28	363	360	361	564	506	541	244	219	228	509	465	483
29	---	---	---	515	497	506	288	227	256	509	407	457
30	---	---	---	520	498	507	357	212	266	457	311	387
31	---	---	---	540	520	534	---	---	---	511	449	481
MONTH	533	257	422	565	232	404	618	119	341	511	221	353

ARKANSAS RIVER BASIN
07178000 BIRD CREEK NEAR OWASSO, OK--Continued

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PHI, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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

ARKANSAS RIVER BASIN
07178000 BIRD CREEK NEAR OWASSO, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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

ARKANSAS RIVER BASIN
07178000 BIRD CREEK NEAR OWASSO, OK--Continued

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PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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

ARKANSAS RIVER BASIN
07178000 BIRD CREEK NEAR OWASSO, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	21.0	19.5	20.0	10.0	8.5	9.5	6.5	5.0	6.0	5.0	3.5	4.0
2	20.5	19.5	20.0	10.0	9.0	9.5	8.0	6.5	7.0	4.0	3.5	4.0
3	20.5	19.0	20.0	10.5	9.0	9.5	9.0	7.0	8.5	4.0	3.5	3.5
4	21.0	19.0	19.5	11.0	9.0	10.0	9.5	8.0	8.5	3.5	3.0	3.5
5	21.0	19.0	20.0	10.5	9.0	9.5	9.5	8.5	9.0	4.5	3.0	3.5
6	21.5	19.5	20.5	9.5	7.5	8.5	8.5	8.0	8.0	4.0	3.0	4.0
7	22.0	20.5	21.0	9.0	7.5	8.0	8.5	7.5	7.5	3.0	2.0	2.5
8	22.5	21.0	21.5	9.5	8.0	8.5	7.5	6.5	7.0	3.0	1.5	2.0
9	21.5	19.0	20.5	9.5	8.5	9.0	9.5	7.5	8.5	3.0	2.0	2.5
10	19.0	18.0	18.5	9.5	8.0	8.5	9.0	5.0	8.5	3.0	2.5	2.5
11	18.0	17.0	17.5	10.5	9.0	10.0	9.0	8.0	8.5	3.0	2.5	3.0
12	18.0	17.0	17.5	11.5	10.5	11.0	9.0	8.0	8.5	4.0	3.0	3.0
13	19.0	17.5	18.5	12.0	11.5	11.5	8.5	8.0	8.0	5.0	3.5	4.0
14	19.0	17.5	18.5	12.0	11.0	11.5	8.0	7.0	7.5	4.5	3.5	3.5
15	19.0	18.0	18.5	11.0	10.5	11.0	7.0	6.5	6.5	4.0	2.5	3.0
16	18.5	18.0	18.5	10.5	9.5	10.0	7.0	6.5	6.5	3.0	2.5	3.0
17	18.0	17.5	18.0	9.5	9.0	9.0	7.0	6.5	7.0	2.5	1.0	2.0
18	18.0	17.5	18.0	9.0	8.0	8.5	7.0	6.0	6.5	1.5	1.0	1.0
19	18.0	17.5	17.5	9.5	8.5	9.0	6.5	5.5	6.0	1.5	.5	1.0
20	18.0	17.0	17.5	9.0	8.0	8.5	6.5	5.5	6.0	2.0	1.0	1.5
21	17.5	16.0	16.5	9.0	7.5	8.0	6.0	5.0	5.5	2.5	1.5	2.0
22	17.0	15.0	16.0	8.0	7.5	7.5	5.5	4.5	5.0	3.0	2.0	2.5
23	16.0	14.5	15.5	9.5	7.5	8.5	5.0	4.0	4.5	3.5	2.5	3.5
24	16.0	14.0	15.0	9.0	7.0	8.0	5.0	4.0	4.0	4.5	3.5	4.0
25	16.0	14.0	14.5	7.0	6.0	6.5	5.0	3.5	4.0	6.0	4.5	5.5
26	15.5	14.0	14.5	6.5	5.0	6.0	5.5	3.5	4.5	7.5	6.0	7.0
27	14.5	13.0	13.5	6.0	5.0	5.5	5.0	4.0	4.5	7.5	6.5	7.5
28	14.5	12.5	13.5	6.0	4.5	5.0	4.0	3.5	3.5	6.5	5.5	6.0
29	14.0	11.0	12.0	6.0	4.5	5.0	4.5	3.0	3.5	6.0	5.0	5.5
30	11.0	9.5	10.5	6.0	4.5	5.0	4.0	2.5	3.5	5.5	4.5	5.0
31	10.5	9.0	9.5	---	---	---	4.5	2.5	3.5	5.0	3.5	4.0
MONTH	22.5	9.0	17.2	12.0	4.5	8.5	9.5	2.5	6.3	7.5	.5	3.5

ARKANSAS RIVER BASIN
07178000 BIRD CREEK NEAR OWASSO, OK--Continued

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WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	4.5	3.0	3.5	5.5	5.0	5.5	15.5	13.0	14.0	12.5	11.5	12.0
2	4.5	3.0	3.5	5.0	4.0	5.0	16.0	14.5	15.0	12.5	12.5	12.5
3	4.5	2.5	3.5	7.5	5.5	6.0	16.0	14.5	15.0	14.0	12.5	13.5
4	5.0	3.5	4.0	9.0	7.5	8.5	15.5	14.5	15.0	16.0	14.0	15.0
5	6.0	4.0	5.0	11.0	9.0	10.0	15.0	13.0	14.0	17.0	15.5	16.5
6	6.0	4.0	5.0	12.5	10.5	11.5	13.5	12.0	13.0	18.5	17.0	17.5
7	6.0	4.5	5.0	13.0	12.0	12.5	14.0	12.0	13.0	18.0	16.5	17.5
8	5.0	4.0	4.5	12.0	6.0	9.5	14.5	12.5	13.0	16.5	15.0	15.5
9	4.0	2.5	3.0	6.0	4.5	5.0	15.0	13.5	14.5	16.5	15.5	16.0
10	3.5	2.0	2.5	7.5	5.0	6.0	15.5	14.5	15.0	16.5	16.0	16.5
11	3.5	2.0	2.5	9.0	7.0	8.0	14.5	6.5	12.5	17.0	16.5	16.5
12	3.5	2.5	3.0	10.0	9.0	9.5	12.5	8.0	11.5	18.0	16.5	17.5
13	4.5	2.5	3.0	11.0	9.5	10.5	13.5	8.0	12.0	18.0	17.5	17.5
14	4.5	3.0	4.0	12.0	11.0	11.5	16.0	8.0	14.0	19.0	17.5	18.0
15	6.0	3.5	4.5	13.0	12.0	12.5	17.0	16.0	16.5	20.0	18.0	19.0
16	7.0	4.0	5.5	14.0	12.5	13.0	16.5	13.5	14.5	20.5	19.0	19.5
17	8.5	5.5	6.5	15.0	13.0	14.0	15.5	14.5	15.0	22.5	19.0	20.5
18	9.5	7.0	8.0	16.5	14.0	15.0	16.0	15.0	15.5	23.5	20.5	22.0
19	10.0	8.5	9.5	17.0	15.5	16.0	16.0	15.5	16.0	25.0	22.0	23.5
20	11.5	9.5	10.5	17.5	16.5	17.0	16.0	15.5	16.0	25.5	23.0	24.0
21	11.0	10.5	11.0	18.0	16.0	17.0	16.0	14.0	15.0	25.0	23.0	24.0
22	10.5	9.0	9.5	18.0	16.0	17.0	16.0	14.5	15.0	25.5	23.0	24.0
23	9.0	8.0	8.5	18.5	16.0	17.5	15.5	14.5	15.0	25.0	23.0	24.0
24	8.0	6.5	7.0	17.5	15.5	16.5	16.0	14.5	15.0	25.5	23.5	24.5
25	7.0	6.0	6.5	16.5	15.0	15.5	15.5	15.0	15.0	26.0	24.0	25.5
26	6.5	5.5	6.0	15.5	14.0	14.5	16.0	15.0	15.5	25.0	23.0	24.0
27	6.0	5.0	5.5	14.0	13.0	13.5	15.5	14.5	15.0	25.5	23.5	24.5
28	5.5	5.5	5.5	13.5	12.0	13.0	15.0	14.0	14.5	25.5	24.5	25.0
29	---	---	---	13.5	11.5	12.5	15.5	13.5	14.5	25.0	23.0	24.0
30	---	---	---	13.5	11.5	12.5	13.5	11.5	12.0	25.5	23.0	24.0
31	---	---	---	14.5	11.5	13.0	---	---	---	27.0	24.5	26.0
MONTH	11.5	2.0	5.6	18.5	4.0	11.9	17.0	6.5	14.4	27.0	11.5	20.0

ARKANSAS RIVER BASIN
07178000 BIRD CREEK NEAR OWASSO, OK--Continued

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OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.4	7.1	7.2	10.0	8.5	9.2	11.8	10.8	11.2	12.1	10.6	11.2
2	7.2	7.0	7.1	10.2	8.8	9.4	11.0	10.4	10.6	11.9	10.9	11.3
3	7.4	7.0	7.2	10.4	9.1	9.7	10.8	8.9	10.2	12.4	11.1	11.7
4	8.0	7.3	7.6	10.2	9.0	9.5	10.7	10.0	10.4	12.3	11.2	11.7
5	8.5	7.8	8.0	9.8	8.7	9.2	10.0	7.8	9.5	13.3	11.3	12.1
6	8.5	7.8	8.0	9.9	8.9	9.3	10.5	9.8	10.2	12.9	11.4	12.1
7	8.5	7.7	8.0	9.1	8.5	8.9	11.0	9.9	10.5	13.8	11.9	12.6
8	8.2	7.5	7.7	8.7	8.2	8.4	11.6	10.5	11.0	13.8	12.2	13.0
9	8.0	7.4	7.6	8.9	8.2	8.5	11.4	10.4	10.9	14.0	12.4	13.2
10	8.5	7.6	8.0	8.5	8.2	8.3	11.7	10.5	11.0	13.8	12.9	13.2
11	8.9	7.7	8.1	9.2	8.3	8.8	11.8	10.5	11.1	13.7	13.0	13.3
12	8.9	8.2	8.5	8.6	8.1	8.4	12.1	10.2	10.9	13.7	12.4	12.9
13	8.8	8.0	8.3	8.2	7.7	8.0	11.1	10.5	10.8	13.8	12.2	12.9
14	8.8	8.0	8.3	---	---	---	11.0	10.3	10.6	13.6	12.1	12.8
15	8.3	7.8	8.0	---	---	---	11.5	11.0	11.4	13.5	11.9	12.6
16	7.8	7.3	7.6	---	---	---	11.5	11.4	11.5	12.5	11.8	12.2
17	7.6	6.4	7.3	9.9	9.3	9.6	11.4	11.1	11.2	13.8	12.1	12.9
18	6.7	6.1	6.3	10.2	7.5	10.0	11.4	10.9	11.1	14.0	12.7	13.3
19	7.3	6.0	6.6	10.1	10.0	10.0	11.2	10.8	11.0	14.2	13.1	13.6
20	7.3	6.5	6.8	10.0	9.7	9.9	11.5	10.8	11.1	14.4	13.4	13.8
21	7.7	6.7	7.1	10.0	9.6	9.8	11.5	10.8	11.1	14.6	13.6	13.9
22	8.0	7.0	7.4	10.0	9.7	9.8	11.6	10.7	11.1	13.9	13.3	13.6
23	8.4	7.0	7.5	10.0	9.6	9.7	11.6	10.7	11.3	13.6	13.0	13.3
24	8.4	7.2	7.7	10.0	9.6	9.8	11.9	10.8	11.1	13.0	12.4	12.8
25	8.4	7.3	7.7	10.4	9.8	10.1	11.8	10.8	11.2	12.9	12.1	12.4
26	8.7	7.3	7.9	10.7	9.8	10.3	11.8	10.8	11.2	12.5	11.2	11.8
27	8.9	7.6	8.2	10.8	10.1	10.4	11.8	10.7	11.1	12.4	11.0	11.5
28	9.3	7.8	8.4	11.2	7.9	10.3	11.5	10.7	11.0	12.4	11.3	11.8
29	9.1	7.8	8.3	11.7	10.7	11.1	11.4	10.6	10.9	12.8	11.5	12.0
30	9.6	8.3	8.8	11.8	10.9	11.3	11.5	10.2	10.7	13.2	12.0	12.5
31	9.7	8.8	9.1	---	---	---	11.7	10.4	10.9	13.3	12.4	12.7
MONTH	9.7	6.0	7.8	---	---	---	12.1	7.8	10.9	14.6	10.6	12.6

ARKANSAS RIVER BASIN
07178000 BIRD CREEK NEAR OWASSO, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	13.5	12.5	12.8	12.1	11.1	11.3	9.7	7.4	8.8	9.5	8.9	9.2
2	13.7	12.6	13.0	11.7	11.5	11.6	9.1	8.1	8.5	9.6	9.1	9.3
3	13.8	12.6	13.1	11.9	11.2	11.5	---	---	---	9.8	9.3	9.6
4	13.8	12.6	13.1	11.2	10.5	10.8	9.0	8.7	8.8	9.7	9.4	9.6
5	13.8	12.6	13.1	10.6	10.0	10.3	8.7	8.5	8.6	9.6	9.3	9.4
6	13.9	12.4	13.0	10.0	9.3	9.7	9.5	8.4	8.6	9.6	8.7	9.2
7	13.3	12.2	12.6	9.5	9.2	9.3	10.3	8.8	9.5	---	---	---
8	12.6	11.7	12.2	10.6	9.1	9.8	10.6	9.0	9.7	---	---	---
9	13.1	11.6	12.3	11.5	10.5	11.2	9.6	8.7	9.2	---	---	---
10	13.3	12.0	12.6	11.5	10.9	11.4	8.7	6.4	7.3	---	---	---
11	13.6	12.3	12.9	11.0	10.5	10.7	---	---	---	---	---	---
12	13.8	12.7	13.2	10.6	10.3	10.5	---	---	---	---	---	---
13	14.0	12.9	13.3	10.4	10.1	10.2	---	---	---	---	---	---
14	14.0	12.8	13.2	10.3	9.8	10.0	---	---	---	---	---	---
15	13.9	12.7	13.1	9.8	9.6	9.7	---	---	---	---	---	---
16	13.6	12.3	12.9	9.6	9.3	9.5	---	---	---	---	---	---
17	13.4	11.8	12.5	9.5	9.0	9.3	---	---	---	---	---	---
18	12.8	11.4	12.2	9.4	8.5	9.0	---	---	---	---	---	---
19	11.4	10.2	11.0	9.1	8.2	8.6	---	---	---	---	---	---
20	10.3	8.4	9.4	9.0	8.1	8.4	---	---	---	---	---	---
21	9.6	8.7	9.2	9.8	7.9	8.7	10.4	10.0	10.3	---	---	---
22	10.0	7.4	9.2	9.9	8.1	8.9	10.6	10.0	10.3	---	---	---
23	10.4	8.3	9.9	9.7	8.1	8.7	10.6	10.1	10.4	8.8	7.5	7.9
24	12.4	7.2	10.3	8.7	7.7	8.1	10.5	10.1	10.3	8.1	6.9	7.4
25	11.2	7.4	10.7	8.9	7.5	8.1	10.5	10.2	10.4	7.5	6.3	6.9
26	11.4	11.2	11.3	8.2	7.7	7.9	10.3	10.0	10.1	6.7	2.9	4.8
27	11.5	11.3	11.4	7.9	7.1	7.5	10.0	9.7	9.8	7.0	4.1	5.7
28	11.5	11.3	11.4	9.1	7.8	8.5	10.0	9.3	9.6	7.2	5.7	6.4
29	---	---	---	9.5	8.5	8.9	9.5	9.3	9.4	6.5	5.6	6.1
30	---	---	---	9.7	7.5	8.7	9.5	9.0	9.3	6.2	5.3	5.7
31	---	---	---	10.2	7.5	9.2	---	---	---	7.1	5.8	6.3
MONTH	14.0	7.2	12.0	12.1	7.1	9.5	---	---	---	---	---	---

ARKANSAS RIVER BASIN
07178000 BIRD CREEK NEAR OWASSO, OK--Continued

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OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.4	5.5	6.4	7.6	5.7	6.6	7.0	6.7	6.8	---	---	---
2	7.3	5.7	6.4	7.7	6.0	6.6	7.4	6.6	6.9	---	---	---
3	7.8	5.4	6.4	6.9	5.6	6.2	6.9	6.2	6.6	---	---	---
4	7.5	5.5	6.3	7.9	5.3	6.4	7.4	6.0	6.5	---	---	---
5	5.7	2.9	4.2	7.3	5.7	6.4	7.6	5.8	6.7	---	---	---
6	6.5	4.8	5.5	6.6	5.4	6.0	7.9	6.1	6.8	---	---	---
7	6.7	4.8	5.6	7.4	5.2	6.2	7.5	6.4	6.9	---	---	---
8	7.0	5.2	6.0	6.3	3.8	5.3	7.7	6.3	6.9	---	---	---
9	6.1	4.5	5.5	5.0	4.0	4.6	7.4	6.7	7.0	---	---	---
10	5.9	4.4	5.2	5.3	5.0	5.2	7.6	6.7	7.0	---	---	---
11	5.8	5.6	5.7	5.4	5.2	5.3	8.1	6.7	7.3	---	---	---
12	5.8	5.5	5.7	5.5	3.1	5.3	8.1	6.4	7.2	---	---	---
13	5.8	5.3	5.5	6.0	2.8	4.8	8.1	6.4	7.2	---	---	---
14	5.5	5.2	5.3	5.6	4.1	4.5	7.7	6.4	6.9	---	---	---
15	6.7	5.3	5.9	5.7	5.1	5.4	8.0	6.4	7.1	7.1	5.9	6.1
16	6.8	5.9	6.2	5.7	5.5	5.7	8.2	6.5	7.3	6.3	5.3	5.8
17	7.2	5.8	6.3	5.7	5.4	5.6	8.2	6.7	7.3	7.6	5.5	6.3
18	6.9	5.9	6.1	5.6	5.3	5.4	8.4	6.8	7.5	7.6	5.2	5.8
19	7.5	5.7	6.4	5.7	5.3	5.5	7.9	6.8	7.3	7.7	6.0	6.8
20	7.8	6.0	6.8	5.8	5.3	5.5	7.1	4.6	6.2	7.6	6.6	7.0
21	8.0	5.8	6.8	6.1	4.1	5.4	7.5	4.7	5.4	7.8	6.9	7.2
22	7.5	5.9	6.7	6.2	4.4	5.1	6.6	5.5	6.2	8.1	7.0	7.6
23	7.8	5.6	6.3	6.4	4.6	5.6	8.6	6.6	7.5	8.0	6.9	7.4
24	7.9	5.5	6.6	6.4	6.2	6.3	8.6	8.4	8.5	8.3	7.3	7.8
25	7.3	5.5	6.2	6.4	5.7	6.0	8.7	8.4	8.6	8.7	7.8	8.2
26	7.3	5.5	6.2	6.0	5.1	5.6	8.7	6.8	8.3	9.3	8.2	8.6
27	6.9	5.6	6.1	6.0	5.2	5.6	7.8	6.5	7.1	9.4	8.1	8.6
28	7.1	5.4	6.1	6.7	6.0	6.4	8.0	7.7	7.9	9.6	8.2	8.7
29	7.9	5.8	7.1	6.9	6.7	6.8	---	---	---	9.9	8.3	8.9
30	7.6	5.8	6.6	6.9	6.8	6.8	---	---	---	9.9	8.3	8.9
31	---	---	---	7.0	6.8	6.9	---	---	---	---	---	---
MONTH	8.0	2.9	6.1	7.9	2.8	5.8	---	---	---	---	---	---

ARKANSAS RIVER BASIN

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

LOCATION.--Lat 36°13'14", long 95°51'30", in SW 1/4 SE 1/4 sec.7, T.20 N., R.14 E., Tulsa County, Hydrologic Unit 11070107, near left downstream abutment of 46th Street North bridge, 0.1 mi downstream from small left bank tributary, 0.2 mi upstream from small right bank tributary, 9.0 mi northeast of downtown Tulsa post office, and at mile 1.9.

DRAINAGE AREA.--59.9 mi².

WATER DISCHARGE RECORDS

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

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

REMARKS.--No estimated daily discharges. Records good. U.S. Geological Survey satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 3,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Apr. 11	1800	4,680	18.01*	July 14	2015	6,000	16.50*
May 26	0400	4,510	13.86	July 21	1015	4,490	14.50*
May 29	1100	4,460	13.78	July 26	1515	4,340	14.99*

*in backwater, discharge from peak at auxiliary gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	3.0	5.4	5.6	8.2	356	19	82	21	2.5	14	133
2	27	2.7	254	5.9	7.7	210	114	314	15	90	11	50
3	7.5	3.0	34	16	8.2	59	221	159	13	9.7	8.4	27
4	5.1	2.9	97	8.1	7.2	38	36	55	123	4.2	11	19
5	4.6	4.0	27	5.7	7.8	31	255	37	29	2.4	13	213
6	3.9	4.2	19	5.3	6.3	25	49	28	359	2.2	9.2	89
7	3.1	2.6	13	4.6	5.4	21	33	37	26	2.6	21	39
8	8.7	2.3	11	4.8	5.0	978	28	25	15	409	13	25
9	5.3	2.3	11	4.7	3.7	480	28	21	403	16	8.2	20
10	3.0	2.3	11	5.5	4.6	316	62	20	35	8.3	8.3	15
11	2.5	1.7	8.7	9.8	5.9	99	2560	17	19	5.5	7.1	11
12	2.8	11	9.2	8.1	8.4	114	1240	17	14	4.6	5.9	8.6
13	2.7	42	446	4.9	6.8	67	1790	24	10	451	5.1	6.8
14	2.3	595	103	3.6	6.7	51	80	119	8.0	1310	4.2	6.3
15	2.2	37	34	3.4	6.3	41	36	61	6.5	235	4.1	324
16	251	69	24	3.7	6.5	35	26	16	10	40	4.2	261
17	63	158	19	14	7.0	34	22	13	5.9	36	4.0	31
18	14	33	15	5.3	6.0	30	19	9.5	37	19	3.9	13
19	10	19	14	4.7	145	26	17	8.4	13	11	4.0	9.0
20	27	14	12	5.5	200	25	16	9.1	6.1	9.6	468	7.3
21	14	12	12	6.2	21	23	15	6.9	6.3	1380	25	5.9
22	5.9	10	10	6.1	625	21	15	4.9	5.7	85	9.4	254
23	4.2	9.4	8.3	5.5	115	21	14	4.5	4.6	31	6.4	32
24	3.8	8.1	8.3	5.4	38	18	13	4.5	4.3	19	5.1	24
25	3.1	6.7	7.6	5.5	28	20	12	6.2	4.1	484	4.4	13
26	2.7	5.7	7.1	268	21	516	165	1380	3.2	1180	587	10
27	2.4	6.9	6.8	38	20	104	55	41	2.8	76	48	8.7
28	2.1	7.5	5.9	16	83	36	109	18	3.3	52	18	8.6
29	2.2	6.5	6.3	11	---	27	747	1370	4.9	30	11	5.5
30	7.4	6.3	5.4	9.9	---	24	619	85	3.0	21	12	4.8
31	4.6	---	6.1	7.9	---	21	---	32	---	16	316	---
TOTAL	504.4	1088.1	1251.1	508.7	1413.7	3867	8415	4025.0	1210.7	6042.6	1669.9	1674.5
MEAN	16.3	36.3	40.4	16.4	50.5	125	280	130	40.4	195	53.9	55.8
MAX	251	595	446	268	625	978	2560	1380	403	1380	587	324
MIN	2.1	1.7	5.4	3.4	3.7	18	12	4.5	2.8	2.2	3.9	4.8
AC-FT	1000	2160	2480	1010	2800	7670	16690	7980	2400	11990	3310	3320
CFSM	.27	.61	.67	.27	.84	2.08	4.68	2.17	.67	3.25	.90	.93
IN.	.31	.68	.78	.32	.88	2.40	5.23	2.50	.75	3.75	1.04	1.04

ARKANSAS RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1994, BY WATER YEAR (WY)

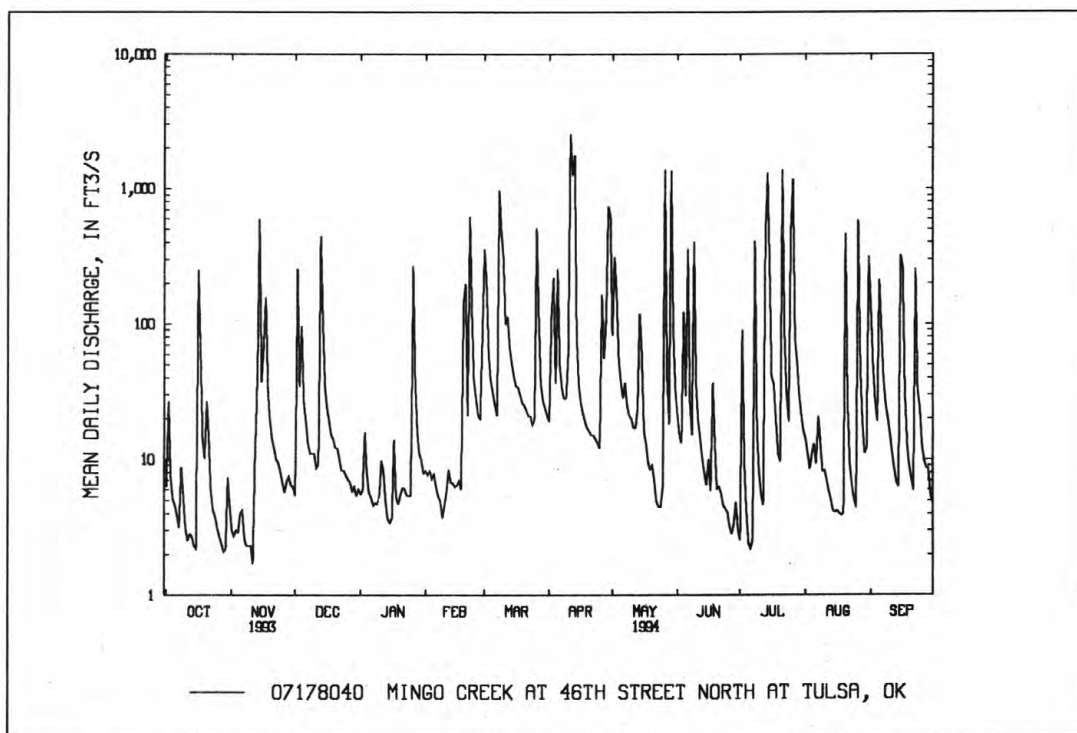
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	29.3	74.9	120	62.5	64.0	134	132	129	76.3	53.6	49.6	76.7
MAX	80.6	173	302	101	128	288	280	318	204	195	166	134
(WY)	1992	1993	1988	1993	1989	1988	1994	1993	1992	1994	1989	1993
MIN	13.0	5.50	4.31	16.4	11.0	16.4	16.0	32.7	6.23	4.69	5.80	23.1
(WY)	1993	1990	1990	1994	1991	1991	1989	1988	1988	1991	1991	1992

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1988-94
ANNUAL TOTAL	33394.3	31670.7	
ANNUAL MEAN	91.5	86.8	83.5
HIGHEST ANNUAL MEAN			119
LOWEST ANNUAL MEAN			43.4
HIGHEST DAILY MEAN	4110	May 9	^a 4110 May 9 1993
LOWEST DAILY MEAN	1.6	Aug 27	.64 Oct 17 1992
ANNUAL SEVEN-DAY MINIMUM	2.4	Aug 9	.69 Oct 16 1992
INSTANTANEOUS PEAK FLOW		6000	9920 Aug 20 1989
INSTANTANEOUS PEAK STAGE		^b 18.01	^c 21.92 Aug 20 1989
ANNUAL RUNOFF (AC-FT)	66240	62820	60490
ANNUAL RUNOFF (CFSM)	1.53	1.45	1.39
ANNUAL RUNOFF (INCHES)	20.74	19.67	18.94
10 PERCENT EXCEEDS	208	216	165
50 PERCENT EXCEEDS	21	13	14
90 PERCENT EXCEEDS	2.7	4.0	2.6

^aSome backwater discharge computed from auxiliary gage.

^bAffected by backwater.

^cFrom high-water mark.



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

WATER QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1987 to current year.

pH: May 1987 to current year.

WATER TEMPERATURE: May 1987 to current year.

DISSOLVED OXYGEN: May 1987 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,560 microsiemens, May 13, 1990; minimum, 60 microsiemens, Aug. 20, 1989.

pH: Maximum, 9.4 units, Jan. 14, 1989; minimum, 5.9 units, Oct. 25, 1988.

WATER TEMPERATURE: Maximum, 34.0°C, July 5, 1990; minimum, 0.0°C, several days during winter months.

DISSOLVED OXYGEN: Maximum, 16.8 mg/l, Dec. 19, 1988; minimum, 0.2 mg/l, Aug. 24, 1990.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,070 microsiemens, Jan. 23; minimum, 86 microsiemens, July 14.

pH: Maximum recorded (more than 20 percent missing record), 8.5 units, May 26, 29, July 14; minimum recorded, 7.0 units, May 31, July 11.

WATER TEMPERATURE: Maximum, 31.5°C, June 28; minimum, 0.5°C, Jan. 8, 16-19, Feb. 9, 10.

DISSOLVED OXYGEN: Maximum, 14.9 mg/L, Feb. 11; minimum, 1.9 mg/L, June 19.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	588	554	566	570	548	566	780	472	751	737	730	733
2	596	314	467	573	568	569	630	250	328	745	733	742
3	551	506	529	580	573	575	444	347	404	747	710	733
4	619	551	581	595	580	585	476	364	422	723	707	710
5	658	619	639	614	595	604	566	465	522	763	723	746
6	674	658	668	645	612	626	604	566	585	766	760	763
7	666	628	651	685	645	663	637	603	615	760	739	749
8	628	511	570	704	685	697	649	637	644	741	737	739
9	534	513	526	711	704	707	677	647	658	739	713	728
10	560	534	546	711	704	707	690	677	683	715	703	711
11	569	558	562	704	697	701	701	690	694	717	700	705
12	592	569	580	742	699	709	707	472	696	716	683	692
13	610	592	600	730	350	625	622	243	309	689	684	687
14	617	610	614	377	176	268	483	268	397	697	686	692
15	620	617	619	484	377	436	578	483	535	703	697	700
16	627	197	365	513	375	485	627	578	606	702	671	686
17	275	182	234	427	304	355	660	627	643	683	613	638
18	391	275	328	529	427	483	686	660	672	694	618	661
19	478	391	439	588	529	563	694	686	692	794	694	740
20	490	426	452	623	588	609	703	693	697	929	794	859
21	539	490	527	653	623	638	717	698	702	976	929	966
22	522	516	519	668	653	660	731	717	726	1030	975	1000
23	527	520	524	687	668	678	731	726	729	1070	1030	1060
24	527	524	525	704	687	697	740	726	734	1040	868	950
25	528	522	525	718	704	712	729	724	726	868	810	832
26	531	526	529	729	718	723	730	719	724	810	256	571
27	534	530	532	738	728	731	726	714	721	490	377	446
28	539	531	533	738	730	734	722	715	718	562	490	533
29	543	539	542	747	735	739	746	719	733	611	562	590
30	546	533	541	759	747	754	747	727	736	661	611	637
31	554	541	552	---	---	---	737	727	731	706	661	676
MONTH	674	182	529	759	176	620	780	243	630	1070	256	731

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

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SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	757	706	736	402	292	345	690	684	687	534	407	478
2	750	735	739	489	355	417	689	218	633	575	245	484
3	744	732	738	563	489	530	431	218	341	471	257	382
4	770	744	759	633	563	602	522	431	484	563	471	523
5	771	765	767	678	633	658	538	214	374	609	563	591
6	769	754	763	687	677	680	482	362	428	636	609	627
7	758	754	756	707	672	677	580	482	533	637	626	630
8	766	753	759	707	183	316	626	580	610	644	600	625
9	788	766	775	454	364	414	650	589	635	615	599	608
10	803	788	798	480	342	425	650	303	505	630	613	618
11	836	802	821	493	342	416	542	147	293	638	630	635
12	836	787	807	562	492	520	458	200	355	655	634	641
13	795	788	790	625	562	595	563	458	511	673	652	660
14	833	795	819	649	625	639	631	563	606	666	216	621
15	838	798	826	665	649	659	646	631	642	382	214	314
16	798	710	746	677	658	668	665	646	656	452	382	417
17	710	331	677	681	662	673	666	656	661	483	452	467
18	704	681	696	686	664	673	665	656	659	497	483	488
19	696	280	630	677	657	664	673	651	655	527	497	515
20	455	271	365	685	675	679	718	649	656	549	518	536
21	535	455	499	687	678	683	673	659	664	564	549	559
22	531	202	330	703	684	694	687	671	676	564	556	560
23	497	395	446	715	692	701	688	680	685	564	558	560
24	574	497	536	716	702	710	691	687	688	587	563	572
25	651	574	614	719	708	711	700	691	696	593	481	584
26	701	651	679	725	191	486	706	250	605	481	118	214
27	735	701	716	483	299	427	457	256	381	381	301	351
28	738	402	684	543	483	510	490	313	411	429	381	402
29	---	---	---	610	543	576	409	170	303	437	103	261
30	---	---	---	667	610	641	407	188	279	394	243	330
31	---	---	---	686	667	681	---	---	---	471	394	440
MONTH	838	202	688	725	183	583	718	147	544	673	103	506

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

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	530	471	501	705	677	694	597	590	594	322	278	304
2	539	525	529	704	270	426	601	589	591	410	322	369
3	550	539	546	391	358	374	607	593	603	469	410	440
4	552	194	450	408	391	399	683	414	571	516	469	493
5	377	222	310	424	408	413	579	525	568	533	228	423
6	389	195	277	430	424	426	584	567	574	385	250	330
7	418	337	388	439	275	411	592	545	576	454	385	426
8	471	418	440	419	127	246	597	580	590	487	454	476
9	---	---	---	460	338	412	601	588	597	516	466	486
10	---	---	---	509	249	461	588	574	583	515	478	500
11	---	---	---	571	509	542	581	564	573	555	515	541
12	---	---	---	600	566	578	584	576	580	596	555	582
13	532	501	519	600	132	289	591	572	581	626	596	613
14	541	531	536	421	86	295	588	568	575	638	623	629
15	545	529	538	404	133	295	585	574	580	636	138	488
16	554	541	548	471	404	441	594	582	586	339	146	246
17	587	548	567	546	471	508	595	586	591	431	339	400
18	618	456	584	538	515	529	598	584	590	461	431	446
19	456	380	393	552	535	544	602	593	597	482	461	476
20	392	379	386	557	548	552	601	166	270	489	476	482
21	395	379	387	562	113	261	419	285	362	501	487	493
22	469	383	421	437	293	382	462	261	418	583	150	275
23	542	469	505	499	437	473	475	423	444	339	227	286
24	564	542	550	534	499	515	514	466	484	400	339	368
25	578	554	562	932	202	420	537	487	514	462	400	432
26	595	575	580	375	146	257	492	140	303	503	462	491
27	625	594	600	634	254	413	295	187	256	518	500	512
28	643	625	638	541	253	479	342	295	319	511	201	491
29	643	613	631	579	541	565	374	342	361	510	199	472
30	686	283	596	595	576	584	396	233	381	518	470	510
31	---	---	---	595	586	589	381	193	231	---	---	---
MONTH	---	---	---	932	86	444	683	140	498	638	138	449

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

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PHI, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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

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

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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

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[illegible]

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	21.5	19.0	20.5	8.0	7.0	7.5	9.5	5.0	6.0	5.0	3.5	4.5
2	21.5	16.5	19.0	9.0	7.5	8.5	11.5	8.0	11.0	5.0	3.5	4.5
3	19.5	17.5	18.5	11.0	9.0	9.5	12.5	11.0	12.0	4.5	3.5	3.5
4	20.0	17.5	19.0	12.0	10.0	11.0	12.0	9.5	11.0	3.5	3.0	3.5
5	20.5	18.5	19.5	11.0	8.5	9.5	10.5	8.5	9.5	4.5	2.0	3.0
6	21.0	19.0	20.0	8.5	6.5	7.5	9.5	7.0	8.0	4.5	3.0	4.0
7	22.0	20.0	21.0	8.0	6.0	7.0	8.0	6.5	7.0	3.0	1.0	1.5
8	22.0	20.5	21.5	8.5	6.5	7.5	7.5	6.0	7.0	2.0	.5	1.5
9	20.5	16.0	18.0	10.0	8.5	9.0	11.0	7.5	9.5	3.0	1.0	2.0
10	16.5	15.0	15.5	10.0	8.0	9.0	10.5	9.0	9.5	4.0	2.5	3.5
11	16.5	14.0	15.0	11.5	9.0	10.0	9.5	8.0	8.5	4.5	3.0	3.5
12	17.5	15.0	16.0	13.0	11.5	12.0	9.0	7.5	8.5	4.5	3.5	4.0
13	18.0	17.0	17.5	13.5	11.5	12.0	9.0	8.0	8.0	5.5	3.5	4.5
14	17.5	16.0	17.0	12.5	11.0	11.5	8.5	5.5	6.5	5.0	3.5	4.0
15	18.0	16.5	17.0	11.5	10.0	11.0	6.0	5.0	5.5	3.5	2.5	3.0
16	20.0	17.0	18.5	10.0	8.0	9.0	6.5	5.5	6.0	3.0	2.0	2.0
17	20.0	18.5	19.0	8.5	8.0	8.5	7.0	6.5	7.0	2.0	.5	1.0
18	18.5	17.5	18.0	10.0	8.0	9.0	7.0	5.5	6.0	1.0	.5	.5
19	17.5	17.0	17.0	10.0	8.5	9.0	6.0	5.0	6.0	1.5	.5	1.0
20	17.5	16.5	17.0	9.0	7.5	8.0	6.0	4.5	5.5	2.5	1.5	2.0
21	17.0	15.0	15.5	8.5	7.0	7.5	5.0	4.0	4.5	3.0	1.0	2.0
22	15.5	13.5	14.5	8.0	7.0	7.5	4.5	3.5	4.5	4.0	2.0	3.0
23	15.0	14.0	14.5	10.0	7.0	8.5	4.5	2.5	3.5	4.5	3.5	4.0
24	15.0	13.5	14.5	9.5	6.5	8.0	4.0	3.0	3.5	5.5	4.5	4.5
25	15.5	13.0	14.5	6.5	4.5	5.5	4.5	3.0	4.0	7.0	5.5	6.5
26	15.0	13.5	14.0	4.5	3.0	3.5	5.5	3.0	4.0	13.0	7.0	10.0
27	14.0	12.0	13.0	4.5	2.5	4.0	5.5	4.0	4.5	12.5	8.5	10.0
28	13.0	11.0	12.0	5.0	2.5	4.0	4.5	2.5	3.5	8.5	5.5	6.5
29	13.0	9.5	11.5	5.5	3.0	4.5	3.5	2.0	3.0	5.5	4.0	5.0
30	9.5	7.5	8.5	6.0	3.5	4.5	3.5	1.5	2.5	5.0	3.5	4.5
31	8.0	6.0	7.0	---	---	---	5.0	2.0	3.5	3.5	2.0	2.5
MONTH	22.0	6.0	16.3	13.5	2.5	8.1	12.5	1.5	6.4	13.0	.5	3.7

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

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WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	3.5	1.5	2.5	6.5	4.0	5.5	16.5	11.5	14.0	14.5	11.5	13.0
2	4.0	1.5	3.0	8.0	3.0	5.0	17.5	13.0	15.5	15.5	12.0	13.5
3	5.0	2.0	3.5	10.5	7.5	9.0	14.0	11.0	12.5	16.0	11.5	13.5
4	6.0	3.0	4.5	14.5	8.0	11.5	16.5	12.0	14.5	19.5	16.0	18.5
5	6.5	4.0	5.5	16.0	10.5	13.0	16.0	9.0	11.5	22.0	16.0	19.0
6	6.5	3.5	5.0	16.5	12.5	14.5	11.0	7.5	9.0	23.0	18.5	20.5
7	6.5	4.5	5.5	16.5	12.0	14.5	14.0	7.5	10.5	23.0	19.0	20.5
8	5.0	2.5	4.0	12.5	1.5	6.0	15.0	11.0	13.0	19.0	16.0	17.5
9	2.5	.5	1.0	7.0	1.5	4.0	16.5	14.5	15.5	19.0	17.5	18.5
10	2.0	.5	1.0	12.0	4.0	7.5	17.0	15.0	16.0	21.0	17.5	19.5
11	3.0	1.0	2.0	12.5	7.0	9.5	16.0	13.0	14.5	22.0	19.5	20.5
12	4.5	2.5	3.5	12.5	10.0	11.0	15.5	11.5	12.5	23.5	20.5	22.0
13	5.0	2.0	3.5	14.0	11.5	12.5	14.5	12.0	12.5	23.0	22.0	22.5
14	5.5	2.5	4.0	16.0	11.5	13.5	20.5	14.5	18.0	24.0	22.0	23.0
15	6.5	3.5	5.0	16.5	12.0	14.0	20.5	18.0	19.0	24.5	21.5	23.0
16	7.5	4.0	6.0	16.0	11.5	14.0	19.5	15.5	17.5	24.0	21.0	22.5
17	9.5	5.0	8.0	17.5	12.5	15.0	19.5	16.5	18.5	26.0	22.5	24.0
18	11.5	8.5	10.0	17.5	15.0	16.5	21.0	18.0	19.5	25.5	23.0	24.5
19	13.0	11.5	12.0	19.0	15.5	17.5	22.5	19.0	21.0	25.0	22.5	24.0
20	13.5	12.0	12.5	19.0	17.0	18.0	23.0	19.5	21.5	24.5	21.5	23.0
21	12.0	10.5	11.0	18.0	15.5	17.0	24.5	20.5	22.5	24.5	21.5	23.0
22	11.5	8.0	9.0	17.5	14.5	16.0	23.5	21.0	21.5	24.5	22.0	23.5
23	9.0	4.5	7.0	19.0	15.0	17.0	22.5	19.5	21.0	25.0	22.0	23.5
24	6.5	3.5	5.0	18.0	13.0	15.0	23.5	20.5	22.0	25.5	23.5	24.5
25	6.0	4.0	5.0	14.5	11.5	13.0	23.0	21.0	21.5	27.0	23.5	25.0
26	6.0	3.5	4.5	14.0	11.5	12.5	23.0	20.0	21.5	24.5	19.5	21.0
27	5.0	3.5	4.5	12.0	10.5	11.0	22.5	17.0	19.0	24.0	22.5	23.0
28	6.5	4.5	5.5	12.5	9.0	11.0	17.0	13.5	15.5	22.5	20.5	21.5
29	---	---	---	11.5	9.0	10.0	15.5	10.0	12.5	23.5	19.5	21.5
30	---	---	---	12.5	10.0	11.5	12.5	10.5	11.0	24.5	22.5	23.5
31	---	---	---	14.0	10.5	12.5	---	---	---	29.5	23.0	26.0
MONTH	13.5	.5	5.5	19.0	1.5	12.2	24.5	7.5	16.5	29.5	11.5	21.3

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	28.0	25.0	26.5	30.5	28.5	29.5	28.0	25.5	26.5	24.5	21.5	22.5
2	28.5	26.5	27.5	29.5	24.5	27.0	28.0	26.0	27.0	23.0	21.5	22.0
3	28.0	26.0	27.0	29.5	26.5	28.0	28.5	26.0	27.5	23.5	22.0	22.5
4	27.5	24.0	26.0	31.0	28.5	29.5	28.5	26.5	27.5	26.0	22.5	24.0
5	27.5	23.5	25.5	30.0	28.0	29.0	27.5	25.5	26.5	26.0	24.0	25.0
6	27.0	22.0	23.5	29.5	28.0	29.0	27.0	24.5	25.5	26.0	23.5	24.5
7	29.5	24.0	26.5	30.0	27.0	28.5	27.0	25.0	26.0	24.5	22.5	24.0
8	28.5	26.5	27.5	28.5	24.0	25.5	27.5	24.5	26.0	25.0	23.0	24.0
9	---	---	---	26.5	24.5	25.5	28.5	26.0	27.0	25.5	23.0	24.5
10	---	---	---	28.5	25.0	26.5	29.0	26.5	28.0	25.0	23.5	24.5
11	---	---	---	28.5	26.0	27.5	29.0	26.5	28.0	25.5	23.0	24.5
12	---	---	---	29.0	26.5	28.0	29.5	27.0	28.5	26.0	24.0	25.0
13	29.0	26.5	28.5	28.5	24.5	26.0	30.0	27.5	29.0	26.5	25.0	26.0
14	28.5	26.5	27.5	28.5	22.5	25.5	29.5	27.0	28.5	27.0	25.0	26.0
15	28.5	26.0	27.0	25.5	22.5	24.0	27.0	24.5	26.0	26.5	25.0	25.5
16	28.5	26.5	27.5	29.5	25.0	27.0	26.5	24.0	25.5	25.0	23.5	24.0
17	29.5	26.5	28.0	29.0	25.5	27.5	27.0	24.5	26.0	24.5	22.0	23.0
18	29.0	27.0	28.0	29.5	26.0	28.0	27.5	25.0	26.5	24.0	22.0	23.0
19	29.0	26.0	27.5	30.5	27.5	29.0	28.0	26.5	27.5	23.5	21.5	23.0
20	29.5	27.0	28.5	30.0	27.5	29.0	27.5	24.5	25.5	23.5	22.0	23.0
21	30.0	27.5	28.5	29.5	23.0	25.0	27.5	24.5	26.0	24.0	22.0	23.0
22	30.0	28.0	29.0	27.5	25.0	26.0	27.0	24.5	26.0	23.0	18.5	20.0
23	30.0	28.5	29.0	31.0	25.5	28.0	27.0	24.5	26.0	19.0	18.0	18.5
24	29.5	27.0	28.0	30.5	28.5	29.5	27.5	26.0	27.0	18.0	17.0	17.5
25	30.5	27.0	29.0	29.0	25.5	27.0	28.0	26.0	27.0	18.5	16.0	17.0
26	31.0	28.5	29.5	27.0	23.0	25.0	27.5	23.5	26.0	19.5	17.5	18.5
27	30.0	27.5	28.5	24.0	22.0	23.5	29.5	27.0	28.0	20.0	18.0	19.0
28	31.5	28.5	30.0	26.5	24.0	25.5	29.0	27.0	28.0	21.0	18.5	19.5
29	30.5	27.5	29.5	26.5	22.5	24.5	29.0	26.5	28.0	22.5	20.0	21.5
30	30.5	28.0	29.0	26.0	23.5	25.0	29.0	26.0	28.0	24.0	21.5	22.5
31	---	---	---	27.0	24.5	26.0	26.5	24.5	25.0	---	---	---
MONTH	---	---	---	31.0	22.0	26.9	30.0	23.5	26.9	27.0	16.0	22.6

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

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OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	9.1	6.7	7.9	10.3	9.3	9.7	12.2	10.7	11.7	13.0	11.5	12.3
2	8.3	6.9	7.3	9.8	8.9	9.3	10.9	8.7	9.3	12.9	11.5	12.2
3	8.1	6.6	7.4	9.5	8.5	8.9	8.7	7.9	8.2	12.4	11.5	12.0
4	8.0	6.2	7.2	9.1	8.2	8.6	9.1	8.0	8.7	12.6	11.6	12.0
5	7.7	6.2	7.1	9.2	8.3	8.8	8.8	8.5	8.6	13.1	11.3	12.2
6	7.5	5.9	6.8	9.5	8.7	9.1	9.4	8.3	8.8	12.6	11.0	11.9
7	7.3	5.9	6.5	9.7	9.1	9.4	9.8	9.2	9.4	13.1	11.5	12.2
8	6.8	5.4	6.0	9.4	8.6	9.1	10.1	9.2	9.6	13.7	11.8	12.8
9	7.5	5.3	6.3	8.9	8.1	8.5	9.6	8.7	9.2	13.9	12.3	13.3
10	8.1	6.3	7.1	8.8	8.2	8.4	9.5	8.5	8.9	13.6	12.2	12.9
11	8.0	6.9	7.2	8.7	7.8	8.2	9.8	8.6	9.1	13.0	11.8	12.3
12	8.7	7.1	7.7	7.8	6.9	7.4	---	---	---	12.9	11.6	12.1
13	7.9	6.8	7.3	7.6	6.2	6.9	---	---	---	12.8	10.9	11.9
14	8.2	6.8	7.4	9.7	7.6	9.2	11.0	10.5	10.6	12.5	11.3	12.0
15	7.9	6.8	7.3	8.9	8.3	8.6	11.5	10.2	11.0	12.9	11.6	12.3
16	7.6	6.3	6.8	10.5	8.9	9.5	11.7	11.2	11.5	12.5	11.6	12.1
17	6.7	5.7	6.1	10.5	10.0	10.3	11.8	11.2	11.5	12.8	11.4	12.0
18	6.4	5.7	6.0	10.2	9.5	9.9	12.2	11.2	11.6	13.6	11.8	12.8
19	6.7	6.1	6.4	9.9	9.1	9.5	12.1	11.0	11.4	13.2	11.6	12.4
20	7.2	6.2	6.6	9.8	9.3	9.5	12.2	10.9	11.5	11.6	10.6	11.0
21	8.1	6.9	7.4	10.4	9.3	9.8	11.7	10.7	11.2	10.8	10.2	10.5
22	8.3	7.3	7.8	10.8	9.7	10.2	12.0	11.0	11.4	10.4	9.8	10.1
23	8.6	7.3	8.0	11.1	9.7	10.4	12.1	10.9	11.4	9.8	9.1	9.5
24	8.4	7.6	7.9	10.6	9.6	10.0	12.3	11.2	11.7	10.0	9.6	9.8
25	8.6	7.5	7.9	11.5	9.8	10.7	12.7	11.2	11.9	9.9	9.0	9.4
26	9.4	7.4	8.2	11.9	10.7	11.4	---	---	---	10.0	8.5	9.0
27	9.0	7.5	8.2	12.1	10.9	11.5	---	---	---	8.9	8.2	8.5
28	8.3	7.5	7.9	12.2	11.0	11.6	---	---	---	10.1	8.9	9.5
29	8.6	7.6	8.1	12.6	11.3	12.0	---	---	---	10.8	10.1	10.5
30	9.3	7.8	8.5	12.7	11.6	12.1	13.4	12.6	13.2	11.2	10.4	10.8
31	9.8	8.9	9.4	---	---	---	13.4	11.8	12.6	12.1	11.0	11.6
MONTH	9.8	5.3	7.3	12.7	6.2	9.6	---	---	---	13.9	8.2	11.4

DAY	MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN
	FEBRUARY				MARCH				APRIL				MAY		
1	12.8	11.6	12.1	---	---	---		---	---	---		8.6	7.7	8.2	
2	12.6	11.7	12.2	---	---	---		---	---	---		8.3	7.2	7.6	
3	13.6	11.7	12.4	---	---	---		---	---	---		8.4	7.1	8.1	
4	13.4	11.7	12.4	---	---	---		---	---	---		7.4	6.3	6.9	
5	13.5	11.5	12.5	---	---	---		9.4	8.8	9.2		7.5	6.4	6.9	
6	13.5	11.4	12.5	---	---	---		10.3	9.2	9.7		7.7	5.9	6.6	
7	13.5	11.3	12.4	---	---	---		10.7	8.7	9.8		7.1	5.2	6.0	
8	12.7	11.5	12.0	11.8	8.4	10.3		10.9	8.3	9.3		7.8	6.1	6.9	
9	13.9	12.1	13.0	11.8	10.4	11.3		9.0	7.4	8.3		7.6	6.0	6.8	
10	14.5	12.8	13.8	11.3	8.2	10.1		8.1	6.9	7.5		7.8	6.5	7.0	
11	14.9	13.2	14.2	10.7	9.1	10.0		9.6	7.3	8.0		7.3	5.9	6.4	
12	14.6	13.0	13.7	10.3	9.1	9.6		8.7	7.7	8.4		7.4	5.4	6.2	
13	14.8	12.6	13.7	10.9	8.9	9.7		8.5	8.0	8.2		6.7	5.2	5.8	
14	14.5	12.7	13.5	11.1	8.7	9.6		8.4	6.8	7.4		6.3	4.6	5.4	
15	14.7	11.6	13.2	11.5	8.3	9.6		7.4	6.5	6.9		5.3	4.6	4.9	
16	14.6	12.0	13.4	11.7	8.0	9.6		8.1	6.7	7.3		5.6	4.3	4.8	
17	14.5	11.5	13.1	11.8	7.9	9.4		9.1	6.7	7.5		5.8	4.4	4.9	
18	13.8	11.0	12.4	10.0	7.1	8.2		8.0	6.5	7.2		5.7	4.1	4.8	
19	---	---	---	---	---	---		8.4	6.1	7.1		6.3	4.2	5.1	
20	---	---	---	---	---	---		7.9	6.3	7.0		6.5	4.2	5.2	
21	---	---	---	---	---	---		8.1	5.9	6.8		6.8	4.3	5.4	
22	---	---	---	---	---	---		7.3	5.4	6.2		7.4	4.2	5.7	
23	---	---	---	---	---	---		8.1	5.6	6.6		7.4	4.4	5.8	
24	---	---	---	---	---	---		7.9	5.7	6.6	---	---	---	---	
25	---	---	---	---	---	---		6.3	5.4	5.8		8.5	4.4	5.9	
26	---	---	---	---	---	---		7.5	5.2	6.0		6.1	4.7	5.3	
27	---	---	---	---	---	---		5.9	4.2	4.9		5.1	4.4	4.7	
28	---	---	---	---	---	---		7.6	4.7	6.2		5.8	4.6	5.2	
29	---	---	---	---	---	---		9.0	6.0	7.6		6.8	4.5	5.6	
30	---	---	---	---	---	---		8.9	8.2	8.6		5.8	5.1	5.3	
31	---	---	---	---	---	---		---	---	---		5.5	4.4	5.0	
MONTH	---	---	---	---	---	---		---	---	---		---	---	---	

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

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OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	6.1	4.3	5.1	8.7	4.8	6.1	7.6	5.4	6.3	5.5	4.8	5.1
2	5.9	4.2	5.0	7.3	4.3	5.8	7.2	5.0	6.0	5.9	4.8	5.3
3	6.2	4.5	5.1	---	---	---	7.2	4.9	5.9	5.5	4.6	4.9
4	5.7	4.1	4.8	---	---	---	7.2	4.7	5.5	6.0	4.5	5.1
5	4.1	3.1	3.5	---	---	---	6.6	4.6	5.4	5.4	4.3	4.8
6	5.1	3.1	4.5	6.9	3.7	5.2	7.1	4.7	5.8	5.6	4.8	5.2
7	4.3	3.4	3.8	9.1	3.1	5.2	6.4	4.9	5.4	5.9	4.5	5.1
8	4.0	3.0	3.5	7.3	3.9	5.4	6.4	4.7	5.4	5.9	4.6	5.2
9	---	---	---	5.0	3.8	4.4	6.3	3.9	5.0	5.8	4.5	5.1
10	---	---	---	6.3	4.1	5.0	6.1	3.6	4.7	6.4	4.6	5.4
11	---	---	---	7.0	3.9	5.3	5.9	3.7	4.8	6.5	4.7	5.6
12	---	---	---	7.3	4.2	5.6	6.0	3.7	4.8	6.6	4.8	5.7
13	5.8	4.3	5.2	6.6	5.1	5.8	6.0	3.7	4.9	6.4	4.8	5.7
14	7.3	4.4	5.7	7.0	4.6	5.5	5.8	3.7	4.6	6.5	4.8	5.6
15	7.9	4.8	6.2	6.0	5.4	5.8	5.9	4.2	5.0	6.0	4.7	5.2
16	7.6	4.8	6.0	5.9	4.8	5.3	6.0	4.3	5.1	7.2	4.7	5.3
17	7.8	4.7	6.1	6.1	4.5	5.1	6.2	4.4	5.2	5.5	4.4	4.9
18	6.5	3.0	5.1	6.3	4.6	5.3	6.4	4.5	5.4	5.4	4.4	4.9
19	3.1	1.9	2.6	6.2	4.4	5.1	5.8	4.2	5.0	5.8	4.4	5.0
20	5.0	2.4	3.4	5.8	4.2	4.8	5.5	4.5	5.0	6.0	4.4	5.2
21	5.8	2.9	4.1	6.2	4.3	5.3	5.1	4.0	4.5	6.0	4.4	5.2
22	6.7	3.3	4.9	5.8	4.9	5.3	5.5	4.0	4.6	6.4	4.3	5.6
23	6.3	4.0	5.1	6.2	4.7	5.3	6.0	3.9	4.9	---	---	---
24	6.9	4.1	5.4	5.8	4.2	5.0	6.8	4.0	5.3	---	---	---
25	7.2	4.1	5.4	7.4	4.9	5.6	6.6	4.3	5.4	---	---	---
26	7.8	4.0	5.4	7.9	4.7	6.1	5.9	4.2	4.8	---	---	---
27	6.8	4.5	5.5	6.9	6.0	6.5	4.6	3.7	4.0	---	---	---
28	7.8	4.1	5.9	7.2	5.7	6.3	5.1	3.4	4.1	---	---	---
29	7.8	4.7	6.2	7.1	5.8	6.3	5.4	3.6	4.4	---	---	---
30	7.9	4.7	5.8	7.2	5.3	6.2	5.8	3.7	4.7	---	---	---
31	---	---	---	7.6	5.5	6.3	5.2	4.1	4.8	---	---	---
MONTH	---	---	---	---	---	---	7.6	3.4	5.1	---	---	---

ARKANSAS RIVER BASIN

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK

LOCATION.--Lat 36°13'23", long 95°49'09", in SE 1/4 SE 1/4 sec.9, T.20 N., R.14 E., Tulsa County, Hydrologic Unit 11070107, near left downstream abutment of bridge, 2.3 mi downstream from Elm Creek, 5 mi northwest of Catoosa High School, and at mile 9.5.

DRAINAGE AREA.--1,103 mi²

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 545.00 ft above sea level.

REMARKS.--Records fair. U.S. Geological Survey's satellite telemeter at station. Some regulation by Skiatook Lake (station 07177400).

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than 9,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Apr. 13	1400	18,600	28.81	July 26	1900	11,400	22.14
July 22	1100	9,230	19.72				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	245	101	102	113	169	1030	238	e4500	324	219	442	444
2	305	93	469	107	162	1910	276	e2000	291	348	272	364
3	284	94	389	130	161	1070	768	1140	270	229	243	312
4	271	100	428	120	158	707	496	893	436	215	278	287
5	267	74	346	113	159	525	674	840	526	215	284	447
6	263	62	306	111	156	414	408	1250	804	211	254	433
7	261	120	258	106	155	351	402	1380	396	207	279	323
8	305	134	201	128	149	2530	307	1580	305	1600	316	306
9	315	134	183	130	149	3790	299	1510	791	989	557	364
10	306	175	166	135	148	3230	4240	1370	1860	406	391	282
11	307	218	149	135	160	4870	10300	1310	602	290	300	284
12	306	224	138	136	164	2750	16700	1290	337	243	265	269
13	297	266	666	130	159	1350	18100	1260	246	2850	248	254
14	285	1070	711	132	158	956	10300	1030	266	6500	234	244
15	274	430	810	139	155	749	2210	967	338	2320	224	460
16	468	416	453	158	156	547	2020	835	304	549	221	822
17	323	673	315	185	159	475	1970	379	279	413	218	374
18	194	887	249	179	162	393	1860	228	251	353	215	268
19	179	524	215	178	174	335	1770	251	235	302	214	285
20	192	326	195	186	1470	302	1660	243	212	234	1550	367
21	171	238	180	184	2380	280	2840	233	213	4400	3910	356
22	127	198	169	188	1860	260	3390	230	211	7980	843	598
23	100	176	155	197	2280	241	3780	225	229	1350	877	391
24	116	160	150	193	2030	219	3530	224	231	684	943	360
25	121	141	134	201	803	206	3410	223	227	2990	909	342
26	119	122	132	453	506	683	3440	2000	219	7430	2080	338
27	111	118	128	283	404	561	3450	527	215	7820	1150	328
28	89	115	127	215	360	487	3380	281	221	1460	756	323
29	79	111	121	193	---	363	2160	1760	219	791	700	317
30	80	107	114	180	---	288	e5000	581	216	593	378	314
31	94	---	115	170	---	242	---	389	---	495	567	---
TOTAL	6854	7607	8274	5208	15106	32114	109378	30929	11274	54686	20118	10856
MEAN	221	254	267	168	539	1036	3646	998	376	1764	649	362
MAX	468	1070	810	453	2380	4870	18100	4500	1860	7980	3910	822
MIN	79	62	102	106	148	206	238	223	211	207	214	244
AC-FT	13590	15090	16410	10330	29960	63700	217000	61350	22360	108500	39900	21530

e Estimated

ARKANSAS RIVER BASIN

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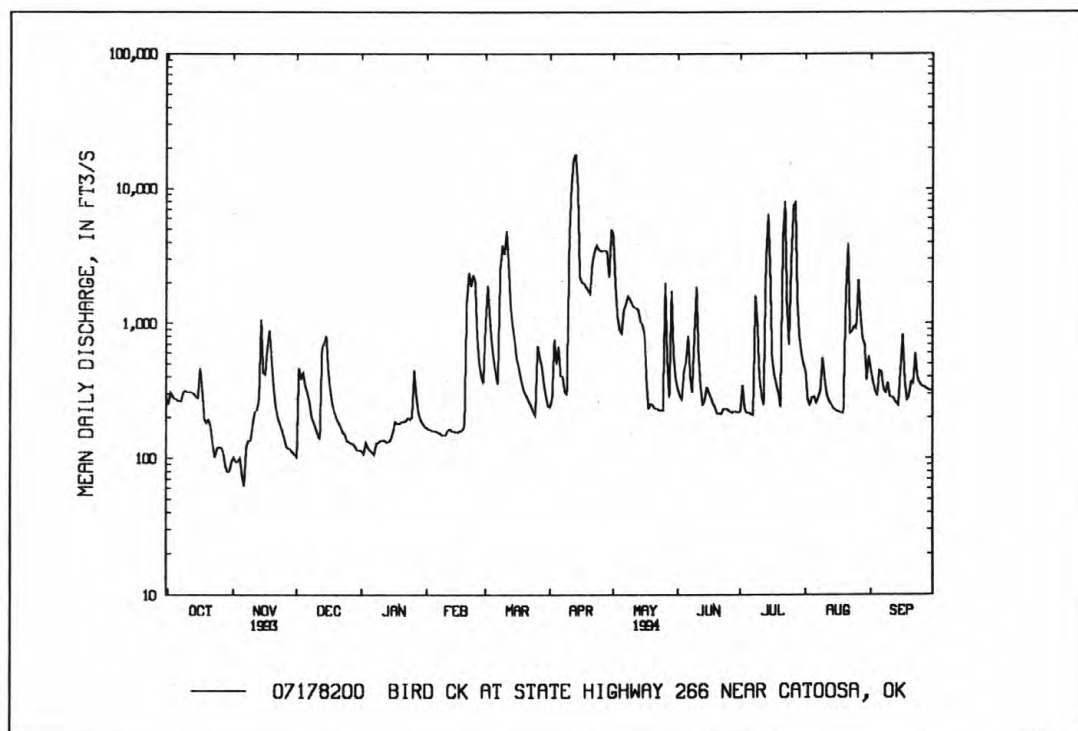
07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	288	488	824	756	875	1841	2088	2001	1768	658	339	401
MAX	414	987	1854	2349	1580	6393	3646	4834	3355	1764	649	731
(WY)	1992	1993	1993	1993	1993	1990	1994	1993	1992	1994	1994	1993
MIN	168	226	152	168	144	151	641	526	376	214	208	221
(WY)	1993	1991	1990	1994	1991	1991	1991	1992	1994	1991	1991	1992

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1990-94

ANNUAL TOTAL	533693	312404	
ANNUAL MEAN	1462	856	1027
HIGHEST ANNUAL MEAN			1653
LOWEST ANNUAL MEAN			418
HIGHEST DAILY MEAN	25900	May 11	18100
LOWEST DAILY MEAN	62	Nov 6	62
ANNUAL SEVEN-DAY MINIMUM	88	Oct 31	88
INSTANTANEOUS PEAK FLOW			18600
INSTANTANEOUS PEAK STAGE			28.81
ANNUAL RUNOFF (AC-FT)	1059000	619700	743800
10 PERCENT EXCEEDS	3740	2010	2720
50 PERCENT EXCEEDS	477	297	289
90 PERCENT EXCEEDS	153	130	142



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

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: August 1988 to current year.

pH: August 1988 to current year.

WATER TEMPERATURE: August 1988 to current year.

DISSOLVED OXYGEN: August 1988 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,300 microsiemens, Nov. 4, 1992; minimum, 56 microsiemens, July 18, 1989.

pH: Maximum, 9.4 units, July 17, 1989; minimum, 6.0 units, May 12, 1991.

WATER TEMPERATURE: Maximum, 32°C, Aug. 1, 1993; minimum, 1.5°C, Dec. 23, 1989, Jan. 20, 1993.

DISSOLVED OXYGEN: Maximum, 14.4 mg/l, Jan. 20, 1992; minimum, 2.6 mg/l, Apr. 18, 1991.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum 800 microsiemens, Jan. 13; minimum 58 microsiemens, July 13.

pH: Maximum recorded 8.2 units, April 27; minimum recorded 7.1 units, several days during the year.

WATER TEMPERATURE: Maximum 30.5°C, June 28, July 4, 5; minimum 2.0°C, Jan. 18.

DISSOLVED OXYGEN: Maximum recorded (more than 20 percent missing record) 13.0 mg/L, Jan. 20-22; minimum recorded, 3.8 mg/L, June 5, but may have been lower July 14 when probe failed..

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	393	355	373	575	528	544	593	560	581	652	630	638
2	399	357	382	548	522	536	611	369	479	643	625	633
3	387	349	371	552	530	542	538	436	494	646	628	636
4	397	365	384	577	531	557	565	516	540	662	644	653
5	389	367	381	593	554	577	583	518	548	667	647	656
6	411	381	395	641	593	612	528	489	515	681	655	670
7	409	379	398	662	599	646	546	520	530	700	676	689
8	398	364	385	599	547	567	547	523	536	714	698	701
9	388	342	368	561	547	554	576	547	561	708	688	698
10	366	334	353	570	537	552	586	565	578	694	682	689
11	358	328	348	603	400	507	602	580	590	712	680	695
12	355	333	347	414	355	394	620	582	609	733	699	707
13	359	333	350	434	385	412	626	361	473	800	733	772
14	371	337	355	526	242	350	573	361	463	792	691	731
15	381	349	367	525	338	432	575	508	538	691	639	670
16	497	315	369	514	478	496	552	510	529	651	628	644
17	370	305	326	509	390	428	541	517	529	642	622	631
18	432	370	404	445	380	413	558	530	542	622	571	595
19	428	404	410	467	423	443	564	539	552	589	567	580
20	485	428	452	531	447	470	567	543	557	579	540	560
21	497	475	485	547	514	531	572	554	563	552	536	545
22	541	497	524	531	500	518	588	565	576	547	529	540
23	550	515	537	528	508	521	597	575	587	561	500	531
24	564	508	542	534	510	524	604	579	594	540	520	534
25	542	503	525	535	509	524	610	586	600	542	524	536
26	557	511	533	533	505	522	607	585	596	666	361	507
27	573	537	562	538	505	521	610	583	603	513	378	464
28	582	552	571	546	518	534	623	598	613	529	487	505
29	624	562	595	555	531	546	635	611	625	541	513	530
30	646	597	618	572	545	558	638	619	628	559	509	535
31	624	575	602	---	---	---	642	624	633	543	519	535
MONTH	646	305	439	662	242	511	642	361	560	800	361	613

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

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SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	541	527	535	580	355	437	607	591	601	---	---	---
2	554	539	549	424	341	374	599	589	592	---	---	---
3	554	534	549	384	343	364	601	395	488	369	298	338
4	556	546	551	420	384	408	610	483	545	382	352	368
5	558	534	550	454	420	436	620	362	493	383	351	368
6	572	530	553	473	448	457	546	448	512	388	336	358
7	556	532	549	489	466	477	550	534	543	342	322	331
8	552	529	545	546	267	386	582	550	567	331	311	319
9	559	533	547	388	293	322	606	580	589	322	303	314
10	551	539	546	335	311	321	612	184	330	330	320	325
11	551	531	544	323	210	280	260	152	216	327	317	322
12	549	533	543	295	268	283	134	112	121	322	312	318
13	555	519	542	347	295	320	---	---	---	323	311	318
14	552	519	539	367	347	354	---	---	---	395	321	333
15	538	522	531	412	367	385	---	---	---	451	305	329
16	549	524	538	436	406	422	---	---	---	334	319	328
17	549	530	543	462	434	446	---	---	---	431	331	360
18	549	524	542	490	462	477	311	296	306	445	419	433
19	545	519	538	523	486	495	317	298	308	504	435	457
20	562	354	434	545	521	527	336	306	323	544	504	517
21	468	326	358	545	525	537	321	291	301	546	531	536
22	474	314	401	555	535	546	316	293	305	538	491	511
23	566	328	423	571	546	554	359	282	310	523	503	516
24	328	282	301	589	568	578	394	357	375	523	508	516
25	360	311	338	605	588	591	387	375	381	532	520	525
26	409	360	381	633	320	538	458	323	378	526	193	293
27	443	409	421	542	350	460	411	271	330	475	296	412
28	465	435	448	580	495	546	310	254	285	522	473	492
29	---	---	---	580	542	556	---	---	---	524	134	363
30	---	---	---	576	550	559	---	---	---	440	307	361
31	---	---	---	605	574	582	---	---	---	521	440	475
MONTH	572	282	494	633	210	452	---	---	---	---	---	---

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

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	536	521	525	454	430	447	360	342	350	370	322	347
2	530	512	519	510	416	455	432	360	388	396	356	372
3	514	501	509	437	408	421	448	408	431	412	370	387
4	521	382	494	444	417	432	424	406	415	414	402	409
5	418	317	368	436	417	428	523	404	456	442	326	396
6	427	295	368	442	416	431	450	416	433	398	320	354
7	456	395	418	441	424	436	452	416	437	410	366	383
8	493	456	479	438	230	308	456	412	430	418	382	404
9	497	249	403	329	257	278	444	384	404	420	370	386
10	473	259	373	331	302	312	398	376	388	418	350	375
11	388	333	357	362	331	344	418	390	399	420	372	394
12	429	378	397	389	347	359	428	404	418	420	382	402
13	455	429	437	389	58	261	440	412	425	414	400	407
14	459	435	451	246	108	150	442	420	433	416	398	409
15	470	419	434	263	151	216	460	224	392	428	230	393
16	541	421	465	344	263	294	---	---	---	344	236	307
17	439	415	429	375	344	356	---	---	---	458	344	385
18	455	430	440	387	362	377	---	---	---	551	448	504
19	510	433	470	406	358	376	---	---	---	448	406	427
20	465	436	446	406	387	395	---	---	---	424	352	394
21	477	465	471	406	123	247	312	164	243	370	336	353
22	499	466	481	194	101	124	288	266	276	426	278	332
23	484	454	473	229	194	219	296	272	286	354	310	342
24	468	450	459	257	222	234	288	276	283	376	336	356
25	472	438	460	266	163	219	288	274	282	370	332	351
26	461	428	444	200	166	176	288	208	257	360	328	348
27	449	428	440	200	140	165	362	228	260	350	326	342
28	450	425	440	256	200	232	302	278	288	352	330	344
29	451	431	441	288	256	268	304	288	299	356	332	347
30	455	431	447	336	288	318	350	302	326	352	324	342
31	---	---	---	346	326	338	396	278	320	---	---	---
MONTH	541	249	445	510	58	310	---	---	---	551	230	376

ARKANSAS RIVER BASIN

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

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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

ARKANSAS RIVER BASIN

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

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

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

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PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	21.5	20.0	20.5	11.5	11.0	11.5	10.0	8.5	9.5	8.0	6.0	7.5
2	21.5	20.0	20.5	12.5	10.5	11.5	11.0	9.5	10.5	8.0	7.0	7.5
3	20.5	19.0	19.5	13.0	11.5	12.5	11.0	9.0	10.5	7.5	6.0	7.0
4	21.0	19.5	20.0	13.5	11.5	13.0	10.5	10.5	10.5	6.5	5.5	6.0
5	21.5	19.5	20.5	13.5	12.5	13.0	10.5	9.5	10.0	6.5	5.5	6.0
6	22.0	20.5	21.0	13.0	11.5	12.0	10.5	9.0	9.5	7.5	6.0	7.0
7	22.5	21.0	21.5	11.5	9.5	11.0	9.5	8.5	9.0	6.5	5.0	5.5
8	22.5	21.5	22.0	11.0	9.0	10.5	9.5	8.5	9.0	5.5	4.0	5.0
9	22.0	19.5	20.5	12.0	10.5	11.5	11.0	9.5	10.5	6.0	4.0	5.0
10	19.5	18.5	18.5	12.0	10.5	11.5	---	---	---	6.5	4.5	6.0
11	18.5	17.5	18.0	12.0	10.5	11.5	---	---	---	7.0	6.0	6.5
12	19.0	17.5	18.0	13.5	12.0	12.5	---	---	---	7.0	6.0	6.5
13	19.5	18.5	19.0	13.5	12.5	13.0	---	---	---	7.5	6.0	7.0
14	19.5	18.0	19.0	13.0	11.0	12.0	9.5	7.5	8.5	7.0	5.0	6.5
15	19.5	18.5	19.0	12.0	11.0	11.5	7.5	7.0	7.0	6.0	4.0	5.0
16	19.5	18.0	19.0	11.5	11.0	11.0	8.0	7.0	7.5	5.0	4.0	4.5
17	19.0	18.5	19.0	11.0	9.5	10.0	8.5	8.0	8.0	4.5	2.5	3.5
18	19.0	18.5	19.0	10.0	9.0	9.5	8.5	7.5	8.0	3.0	2.0	3.0
19	19.5	19.0	19.0	10.5	9.5	10.0	8.0	7.0	7.5	3.5	2.5	3.0
20	19.5	19.0	19.0	10.0	9.0	9.5	8.5	7.5	8.0	4.0	3.5	4.0
21	19.0	17.5	18.0	10.0	9.0	9.5	8.0	7.0	7.5	4.5	3.5	4.0
22	18.0	17.0	17.5	10.0	9.0	9.5	7.5	6.5	7.5	5.0	4.5	5.0
23	18.0	16.5	17.5	11.0	9.5	10.5	7.0	6.0	6.5	6.0	5.0	5.5
24	17.5	16.5	17.0	11.5	9.5	10.5	7.0	6.0	7.0	7.0	5.5	6.5
25	17.5	16.0	17.0	9.5	7.5	9.0	7.0	6.0	7.0	8.5	7.0	7.5
26	17.5	16.0	17.0	8.0	7.0	7.5	7.0	6.0	7.0	11.5	8.5	9.5
27	16.5	15.0	16.0	8.0	6.5	7.5	8.0	6.5	7.5	11.0	8.0	9.5
28	16.5	14.5	15.5	8.5	7.0	8.0	7.5	5.5	7.0	8.0	5.5	6.5
29	16.5	14.0	15.0	9.0	7.0	8.0	7.0	5.5	6.0	6.5	5.0	5.5
30	14.0	12.5	13.0	9.5	8.0	8.5	6.5	5.5	6.0	6.0	4.5	5.5
31	12.5	11.0	12.0	---	---	---	7.0	5.5	6.5	5.0	3.5	4.5
MONTH	22.5	11.0	18.3	13.5	6.5	10.6	---	---	---	11.5	2.0	5.9

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[illegible]

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	27.0	25.0	26.0	30.0	29.0	29.5	27.0	25.0	26.0	24.0	23.5	24.0
2	28.0	25.5	26.5	30.0	28.0	29.0	27.5	25.5	26.5	24.5	23.5	24.0
3	28.0	26.0	27.0	30.0	28.5	29.5	28.0	26.5	27.0	24.5	23.5	24.0
4	27.5	26.0	27.0	30.5	29.5	30.0	28.0	27.0	27.5	26.0	24.0	24.5
5	27.0	25.5	26.0	30.5	29.5	30.0	28.0	26.5	27.0	26.0	24.5	25.0
6	27.0	24.0	25.5	30.0	29.0	29.5	27.0	26.0	26.5	26.0	24.5	25.0
7	28.0	25.0	26.5	29.5	28.0	29.0	27.0	26.0	26.5	26.0	24.0	25.0
8	28.0	26.5	27.5	29.0	25.0	26.5	28.0	25.5	26.5	26.0	24.5	25.0
9	28.0	23.0	25.5	27.5	25.0	26.0	28.5	26.5	27.5	25.5	24.0	25.0
10	26.0	23.0	25.0	27.5	25.0	26.0	28.5	26.5	27.5	25.5	24.0	24.5
11	25.0	23.5	24.0	27.5	26.0	26.5	29.0	27.0	28.0	26.0	24.5	25.0
12	26.5	24.0	25.0	28.0	26.5	27.0	29.0	27.5	28.5	26.0	25.0	25.5
13	27.5	25.5	26.5	28.5	23.5	26.0	29.5	28.0	28.5	26.5	25.5	26.0
14	27.5	26.5	27.0	25.5	23.5	24.0	29.5	28.0	28.5	26.5	25.5	26.0
15	28.0	26.5	27.0	25.5	23.0	24.0	28.0	26.0	27.0	26.5	25.0	26.0
16	28.0	26.5	27.5	27.5	25.0	26.0	27.5	25.5	26.5	25.5	21.0	25.0
17	29.0	26.5	27.5	27.5	26.5	27.0	27.5	26.0	27.0	25.0	23.5	24.5
18	29.0	27.5	28.0	29.0	26.5	27.5	27.5	26.0	26.5	24.5	23.0	23.5
19	28.5	26.5	27.5	29.5	27.0	28.5	27.5	27.0	27.5	24.0	23.0	23.5
20	29.0	28.0	28.5	29.0	27.5	28.0	27.5	25.0	26.0	24.5	22.5	23.5
21	29.0	28.0	28.5	28.5	23.5	25.5	25.5	24.0	25.0	24.5	23.0	24.0
22	29.5	28.5	29.0	25.0	23.0	23.5	25.5	24.0	24.5	24.5	21.0	22.5
23	29.5	28.5	29.0	27.0	25.0	26.0	26.5	20.0	24.5	21.5	21.0	21.0
24	29.5	27.5	28.5	28.5	26.5	27.5	21.5	19.5	20.5	21.0	20.0	20.0
25	29.5	28.0	29.0	28.0	24.5	26.5	21.5	20.0	21.0	20.5	19.0	20.0
26	30.0	28.5	29.5	25.0	23.5	24.5	24.0	20.5	22.0	21.5	19.5	20.5
27	29.5	28.5	29.0	24.5	23.5	24.0	24.5	22.5	24.0	21.5	20.0	20.5
28	30.5	29.0	29.5	25.0	23.5	24.5	23.5	22.0	22.5	22.5	20.5	21.0
29	30.0	28.5	29.5	25.0	24.0	24.5	22.5	21.0	22.0	23.0	21.0	22.0
30	30.0	29.0	29.5	26.0	24.0	25.0	24.0	21.5	22.5	23.0	21.5	22.5
31	---	---	---	26.5	24.0	25.0	25.0	23.0	24.0	---	---	---
MONTH	30.5	23.0	27.4	30.5	23.0	26.6	29.5	19.5	25.6	26.5	19.0	23.6

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

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OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.6	7.3	7.5	9.4	7.9	8.9	9.9	9.5	9.8	11.3	10.6	11.0
2	8.1	7.5	7.8	9.2	8.6	8.9	10.1	9.2	9.5	11.2	10.6	10.8
3	8.3	8.0	8.2	9.5	8.5	8.9	10.2	8.8	9.5	11.2	10.8	10.9
4	8.7	7.8	8.0	9.1	8.4	8.9	9.7	9.6	9.7	11.7	11.0	11.3
5	8.7	7.4	7.6	8.5	7.8	8.3	9.8	9.5	9.7	11.7	11.0	11.3
6	7.7	7.1	7.5	8.3	7.5	7.8	10.3	9.6	9.9	11.6	10.9	11.3
7	7.7	6.8	7.3	9.3	7.8	8.5	10.3	10.0	10.2	11.9	10.9	11.3
8	7.5	6.6	7.0	9.4	8.8	9.1	10.5	10.2	10.4	12.6	11.5	12.1
9	7.2	6.5	6.8	9.1	8.6	8.8	10.5	10.0	10.3	12.7	12.1	12.3
10	7.7	6.9	7.2	9.1	8.6	8.8	10.0	9.8	9.9	12.4	11.6	12.0
11	7.8	6.9	7.3	9.1	8.5	8.8	10.3	9.9	10.2	11.8	11.4	11.5
12	7.7	7.0	7.3	9.1	7.9	8.5	10.6	10.3	10.4	11.8	11.5	11.6
13	7.4	6.8	7.2	8.4	7.6	8.0	11.3	10.4	10.8	12.0	11.5	11.7
14	---	---	---	---	---	---	11.0	10.4	10.6	11.9	11.4	11.6
15	---	---	---	---	---	---	11.4	11.0	11.3	12.2	11.7	11.9
16	---	---	---	---	---	---	11.4	11.2	11.4	12.1	11.5	11.8
17	---	---	---	10.0	9.5	9.8	11.2	11.0	11.1	12.6	11.4	11.8
18	---	---	---	10.2	9.6	10.1	11.2	10.8	11.0	12.8	12.4	12.6
19	---	---	---	10.2	10.1	10.1	11.2	10.9	11.1	12.9	12.6	12.8
20	---	---	---	10.1	9.9	10.1	11.1	10.8	11.0	13.0	12.4	12.8
21	---	---	---	10.0	9.7	9.8	11.3	11.0	11.3	13.0	12.5	12.8
22	---	---	---	9.9	9.5	9.7	11.4	11.2	11.3	13.0	12.2	12.5
23	---	---	---	9.8	9.4	9.6	11.6	11.3	11.5	12.5	11.7	11.9
24	---	---	---	9.4	9.1	9.3	11.7	11.4	11.6	11.9	11.2	11.5
25	---	---	---	10.0	9.4	9.7	11.7	11.4	11.6	11.4	10.8	11.2
26	---	---	---	10.1	9.9	10.0	12.0	11.5	11.7	11.5	8.9	10.5
27	---	---	---	10.3	10.0	10.2	11.7	11.2	11.5	10.5	9.5	9.7
28	---	---	---	10.3	10.0	10.1	11.5	11.2	11.3	11.2	10.2	10.6
29	8.9	8.1	8.5	10.2	9.9	10.1	11.9	10.9	11.3	11.4	10.8	11.1
30	8.8	7.8	8.3	10.2	9.8	10.0	11.6	10.9	11.2	11.7	10.9	11.2
31	9.3	8.6	8.9	---	---	---	11.6	11.0	11.2	11.9	11.4	11.6
MONTH	---	---	---	---	---	---	12.0	8.8	10.8	13.0	8.9	11.6

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

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

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[illegible]

ARKANSAS RIVER BASIN

07185000 NEOSHO RIVER NEAR COMMERCE, OK

LOCATION.--Lat 36°55'43", long 94°57'26", in SW 1/4 SE 1/4 sec.5, T.28 N., R.22 E., Ottawa County, Hydrologic Unit 11070206, on downstream side of right pier of county road bridge, 1.3 mi upstream from Mud Creek, 2.2 mi downstream from Four Mile Creek, 4.5 mi west of Commerce, and at mile 153.4.

DRAINAGE AREA.--5,876 mi².

PERIOD OF RECORD.--June 1939 to current year.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 748.97 ft above sea level (U.S. Army Corps of Engineers' datum). Since February 1989, supplementary water-stage recorder 1000 ft to the left at same datum used when flow exceeds 21 ft GH.

REMARKS.--Records good. Flow regulated to some extent since 1963 by John Redmond Reservoir in Kansas, 190 mi upstream. U.S. Army Corps of Engineers' satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Apr. 13	0400	106,000	25.67	May 2	0500	43,900	20.74

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16200	576	582	588	1200	1380	712	38400	535	e220	e380	1240
2	4520	492	944	550	1060	2010	646	43400	450	e215	e310	5380
3	4250	419	1730	499	919	2820	702	41200	394	e205	e270	2050
4	5120	373	1730	460	701	2640	645	38300	376	e195	e245	842
5	4810	349	1950	442	587	1920	871	30300	364	e188	e220	508
6	4660	333	2010	428	546	1520	1000	14000	370	e184	e199	356
7	5160	328	1360	603	507	2770	1010	19300	1010	e180	e185	274
8	5120	445	1010	937	490	1690	1020	25400	1280	e175	e172	230
9	4720	499	880	750	490	1640	1020	15400	1460	318	e160	207
10	3910	417	1110	736	490	3270	9390	8260	2740	647	e150	188
11	2420	346	1110	664	487	3070	34400	7420	3970	658	e140	174
12	1920	341	926	577	538	1720	83000	6730	3040	569	130	159
13	1810	540	1300	543	564	1150	101000	6390	2520	471	119	158
14	1750	3860	3770	502	551	1000	73700	6570	2350	318	108	155
15	1720	7590	3700	633	506	959	45800	6340	2180	e295	101	164
16	1690	7820	2280	788	447	915	27100	6980	1590	e255	95	238
17	1950	8160	2140	792	402	868	10500	6510	1170	e230	90	167
18	3820	12100	2130	795	382	848	5040	5430	878	e220	89	145
19	4190	8870	1970	797	388	818	3550	4690	878	402	89	139
20	2670	4240	1850	796	5010	765	3180	3390	598	1370	90	136
21	1960	2610	1750	781	17500	695	4340	2770	427	2400	96	129
22	1490	1940	1670	674	8960	657	4280	2090	340	7800	107	125
23	1150	1640	1580	463	8790	648	4070	1490	e320	3400	103	103
24	856	1450	1510	457	7950	646	3930	1120	e310	1780	133	94
25	704	1200	1470	466	4910	607	2830	1020	e290	1390	197	93
26	636	891	1420	1320	3480	631	2420	970	e280	3620	314	98
27	599	741	1390	5200	2200	940	2240	892	e270	4230	1020	87
28	579	668	1360	4180	1540	1420	4180	742	e260	1310	639	83
29	548	622	1320	2480	---	1420	22100	663	e240	823	715	83
30	640	590	1130	1730	---	1090	31500	644	e230	630	545	83
31	665	---	714	1410	---	836	---	622	---	459	378	---
TOTAL	92237	70450	49796	32041	71595	43363	486176	347433	31120	35157	7589	13888
MEAN	2975	2348	1606	1034	2557	1399	16210	11210	1037	1134	245	463
MAX	16200	12100	3770	5200	17500	3270	101000	43400	3970	7800	1020	5380
MIN	548	328	582	428	382	607	645	622	230	175	89	83
AC-FT	183000	139700	98770	63550	142000	86010	964300	689100	61730	69730	15050	27550

e Estimated

ARKANSAS RIVER BASIN

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07185000 NEOSHO RIVER NEAR COMMERCE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3333	3121	2145	1917	2540	4402	5665	5848	6333	5058	1713	2837
MAX	33400	19190	17280	10090	13980	21630	23270	29560	15820	53350	11680	16930
(WY)	1987	1986	1993	1973	1985	1973	1945	1961	1982	1951	1993	1951
MIN	.000	1.60	6.33	8.60	24.9	11.9	62.6	395	289	21.1	.000	1.52
(WY)	1957	1940	1940	1957	1954	1956	1981	1956	1980	1954	1954	1953

SUMMARY STATISTICS 1993 CALENDAR YEAR

1994 WATER YEAR

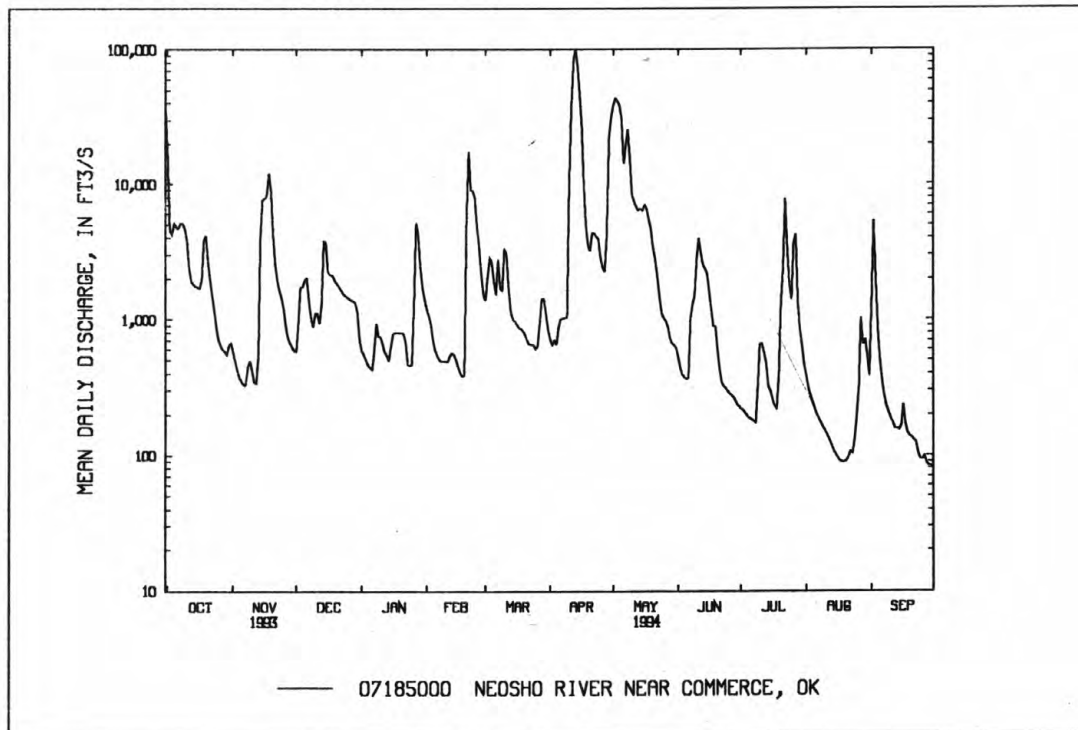
WATER YEARS 1940-94

ANNUAL TOTAL	3357663		1280845									
ANNUAL MEAN	9199		3509									
HIGHEST ANNUAL MEAN												
LOWEST ANNUAL MEAN												
HIGHEST DAILY MEAN	74200	Sep 27	101000	Apr 13	251000							
LOWEST DAILY MEAN	328	Nov 7	83	Sep 28-30	a.00							
ANNUAL SEVEN-DAY MINIMUM	387	Nov 6	89	Sep 24	.00							
INSTANTANEOUS PEAK FLOW			106000	Apr 13	b267000							
INSTANTANEOUS PEAK STAGE			25.67	Apr 13	c34.03							
ANNUAL RUNOFF (AC-FT)	6660000		2541000		2712000							
10 PERCENT EXCEEDS	16900		6440		11200							
50 PERCENT EXCEEDS	6640		871		905							
90 PERCENT EXCEEDS	1140		175		55							

^aIn 1953-54 and 1956.

^bComputed by flood-routing methods from hydrograph defined at Miami, mile 144.2, by several discharge measurements, gage-height record, and by comparison with computed inflow into Lake O' the Cherokees.

^cFrom floodmark.



ARKANSAS RIVER BASIN

07188000 SPRING RIVER NEAR QUAPAW, OK

LOCATION.--Lat 36°56'04", long 94°44'49", in NE 1/4 SW 1/4 sec.5, T.28 N., R.24 E., Ottawa County, Hydrologic Unit 11070207, near downstream right abutment of county road bridge, 0.1 mi upstream from Rock Creek, 3.0 mi southeast of Quapaw, and at mile 13.9. Records include flow of Rock Creek.

DRAINAGE AREA.--2,510 mi², includes that of Rock Creek.

PERIOD OF RECORD.--July 1939 to current year.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 746.25 ft above sea level. Nonrecording gage on right bank at same datum used May 20 to Nov. 16, 1943.

REMARKS.--Records good. Occasional releases from floodgates at old Riverton Hydroelectric plant, 15 mi upstream. U.S. Army Corps of Engineers' satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge 18,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Apr. 13	0100	107,000	34.38	May 8	1100	20,500	16.76
May 1	0700	25,200	18.20				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6390	e590	1760	1240	1600	2530	1760	22800	1100	609	505	4220
2	4840	e580	2260	1210	1510	3370	1680	11500	1070	606	493	6530
3	5720	e570	2870	1200	1450	3410	1740	7450	1040	621	485	1770
4	4860	e560	2980	1190	1340	2840	1730	4820	1040	611	480	1110
5	3230	e550	2810	1180	1210	2500	1760	4200	1150	576	488	726
6	2210	e530	2990	1150	1290	2300	1900	3770	1150	552	518	684
7	1710	e520	2510	1100	1260	2670	2160	14800	1920	543	537	638
8	e1450	e510	2200	1090	1200	4550	2210	19700	4490	536	495	642
9	e1300	e490	2050	1070	1150	3680	2140	11600	12500	819	470	456
10	e1250	e480	1930	1060	1120	3970	14800	5390	4650	972	447	487
11	e1200	e470	1850	1040	1090	3900	44300	4080	2550	681	441	481
12	e1150	e460	1770	1030	1060	3760	91400	3600	1690	593	409	476
13	e1070	e520	2080	1020	1040	3540	92000	3370	1440	563	360	527
14	e1020	1360	5870	994	1020	3080	46300	3070	1310	571	360	469
15	e990	8010	4520	984	996	2920	18100	2610	1180	587	376	339
16	e940	6330	3280	970	975	2720	8560	2550	1090	698	387	440
17	e910	8050	2400	978	968	2520	6720	2320	1040	853	382	419
18	e890	12200	2100	985	964	2370	5280	2100	966	693	375	410
19	e860	7260	2020	962	958	2230	4600	1980	863	706	374	391
20	e820	4490	1900	942	1590	2110	4060	1870	759	618	371	375
21	e800	3530	1810	944	2580	2000	3480	1630	973	827	395	365
22	e790	3090	1720	933	4590	1920	3260	1580	776	2630	677	391
23	e780	2780	1640	1040	10100	1670	3390	1560	810	1320	450	436
24	e760	2500	1570	1410	8240	1650	3140	1490	789	872	516	422
25	e740	2310	1520	1600	5380	1690	2870	1440	762	698	474	409
26	e700	2110	1480	1830	3310	1740	2680	1360	735	1060	378	534
27	e680	1920	1430	2780	2830	2120	2570	1290	590	778	369	506
28	e650	1950	1370	3300	2490	2660	2860	1230	628	662	407	341
29	e630	1880	1300	2480	---	2300	6670	1200	633	594	416	315
30	e610	1800	1220	1910	---	1940	18600	1190	620	548	399	309
31	e600	---	1260	1740	---	1840	---	1150	---	526	1310	---
TOTAL	50550	78400	68470	41362	63311	82500	402720	148700	50314	23523	14544	25618
MEAN	1631	2613	2209	1334	2261	2661	13420	4797	1677	759	469	854
MAX	6390	12200	5870	3300	10100	4550	92000	22800	12500	2630	1310	6530
MIN	600	460	1220	933	958	1650	1680	1150	590	526	360	309
AC-FT	100300	155500	135800	82040	125600	163600	798800	294900	99800	46660	28850	50810
CFSM	.65	1.04	.88	.53	.90	1.06	5.35	1.91	.67	.30	.19	.34
IN.	.75	1.16	1.01	.61	.94	1.22	5.97	2.20	.75	.35	.22	.38

e Estimated

ARKANSAS RIVER BASIN

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07188000 SPRING RIVER NEAR QUAPAW, OK--Continued

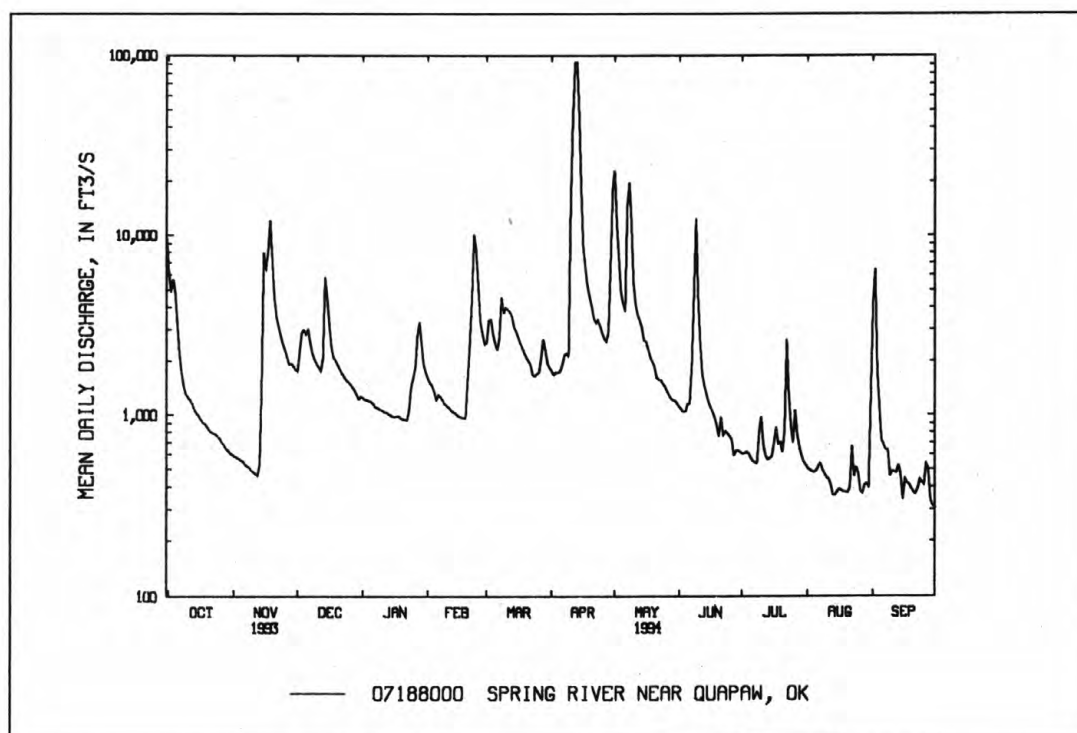
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1664	2227	1760	1529	2099	2964	3420	3469	2878	1778	808	1501
MAX	14880	14810	10720	6495	13300	12050	15100	26940	12140	10140	8622	18390
(WY)	1987	1986	1993	1973	1985	1973	1945	1943	1957	1976	1950	1993
MIN	75.8	111	116	116	129	123	169	481	233	34.3	29.3	76.0
(WY)	1957	1954	1964	1964	1954	1954	1954	1964	1954	1954	1954	1953

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1940-94

ANNUAL TOTAL	1932001	1050012	
ANNUAL MEAN	5293	2877	2172
HIGHEST ANNUAL MEAN			6623
LOWEST ANNUAL MEAN			191
HIGHEST DAILY MEAN	210000	Sep 26	92000 Apr 13
LOWEST DAILY MEAN	460	Nov 12	309 Sep 30
ANNUAL SEVEN-DAY MINIMUM	493	Nov 7	373 Aug 13
INSTANTANEOUS PEAK FLOW			107000 Apr 13
INSTANTANEOUS PEAK STAGE			34.38 Apr 13
ANNUAL RUNOFF (AC-FT)	3832000	2083000	1573000
ANNUAL RUNOFF (CFSM)	2.11	1.15	.87
ANNUAL RUNOFF (INCHES)	28.63	15.56	11.76
10 PERCENT EXCEEDS	9640	4590	4300
50 PERCENT EXCEEDS	2870	1240	830
90 PERCENT EXCEEDS	786	470	202

^aFrom floodmark.



ARKANSAS RIVER BASIN

07189000 ELK RIVER NEAR TIFF CITY, MO

LOCATION.--Lat 36°37'53", long 94°35'12", in NE 1/4 NE 1/4 sec.22, T.22 N., R.34 W., McDonald County, Hydrologic Unit 11070208, near right abutment of bridge on State Highway 43, 0.8 mi downstream from Blackfoot Branch, 2.8 mi upstream from Buffalo Creek, 3.0 mi southeast of Tiff City, and at mile 15.8.

DRAINAGE AREA.--872 mi².

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 14	2200	17,800	15.90	Apr. 12	1400	26,000	18.92

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1530	314	877	694	1090	1690	1800	6070	466	189	307	178
2	1410	292	979	660	1030	2050	1670	3750	442	225	253	225
3	1580	281	1410	643	987	2130	1770	2850	414	227	231	201
4	1260	256	1730	620	929	2000	1930	2300	413	206	208	165
5	1100	232	2270	576	876	1800	2140	1990	437	191	193	147
6	979	209	2300	532	817	1630	3190	1770	396	182	181	149
7	883	191	1940	499	763	3990	3100	1640	395	180	171	144
8	816	177	1690	472	716	5270	2550	1530	426	188	161	138
9	786	167	1520	442	684	6430	2220	1380	485	186	154	130
10	741	152	1420	428	640	5220	2590	1250	463	184	146	121
11	682	144	1330	419	596	5270	13300	1140	446	173	142	111
12	619	139	1260	404	554	7210	23100	1100	415	164	138	105
13	557	153	1220	395	531	7230	9820	1260	390	203	130	101
14	499	8230	1420	368	488	5580	5850	1530	364	197	123	98
15	458	10200	1670	356	458	4100	4620	1250	348	196	123	99
16	463	4430	1660	351	430	3130	3640	1080	328	261	123	136
17	469	5560	1530	409	403	2590	2900	977	311	251	117	127
18	477	5170	1440	445	386	2330	2520	890	297	227	112	110
19	487	3530	1360	454	387	2110	2280	829	293	210	109	104
20	492	2580	1300	448	626	1960	2060	777	281	194	124	97
21	536	2000	1240	439	817	1830	1910	728	268	184	143	92
22	655	1700	1190	427	1400	1680	1810	696	263	186	157	94
23	659	1590	1140	422	3590	1580	1800	653	259	180	152	95
24	613	1470	1100	427	3200	1490	1730	613	247	171	143	95
25	593	1320	1050	427	2500	1430	1650	628	239	184	135	96
26	553	1210	1010	599	2000	1470	1620	611	233	188	129	99
27	500	1120	952	1150	1690	3300	1540	568	219	398	126	99
28	447	1040	885	1350	1550	3540	1530	541	218	391	119	97
29	412	979	817	1320	---	2670	1650	519	206	329	110	92
30	385	928	769	1240	---	2180	6120	525	198	275	104	88
31	351	---	726	1170	---	1950	---	505	---	252	117	---
TOTAL	21992	55764	41205	18586	30138	96840	114410	41950	10160	6772	4681	3633
MEAN	709	1859	1329	600	1076	3124	3814	1353	339	218	151	121
MAX	1580	10200	2300	1350	3590	7230	23100	6070	485	398	307	225
MIN	351	139	726	351	386	1430	1530	505	198	164	104	88
AC-FT	43620	110600	81730	36870	59780	192100	226900	83210	20150	13430	9280	7210
CFSM	.81	2.13	1.52	.69	1.23	3.58	4.37	1.55	.39	.25	.17	.14
IN.	.94	2.38	1.76	.79	1.29	4.13	4.88	1.79	.43	.29	.20	.15

ARKANSAS RIVER BASIN
07189000 ELK RIVER NEAR TIFF CITY, MO--Continued

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1994, BY WATER YEAR (WY)

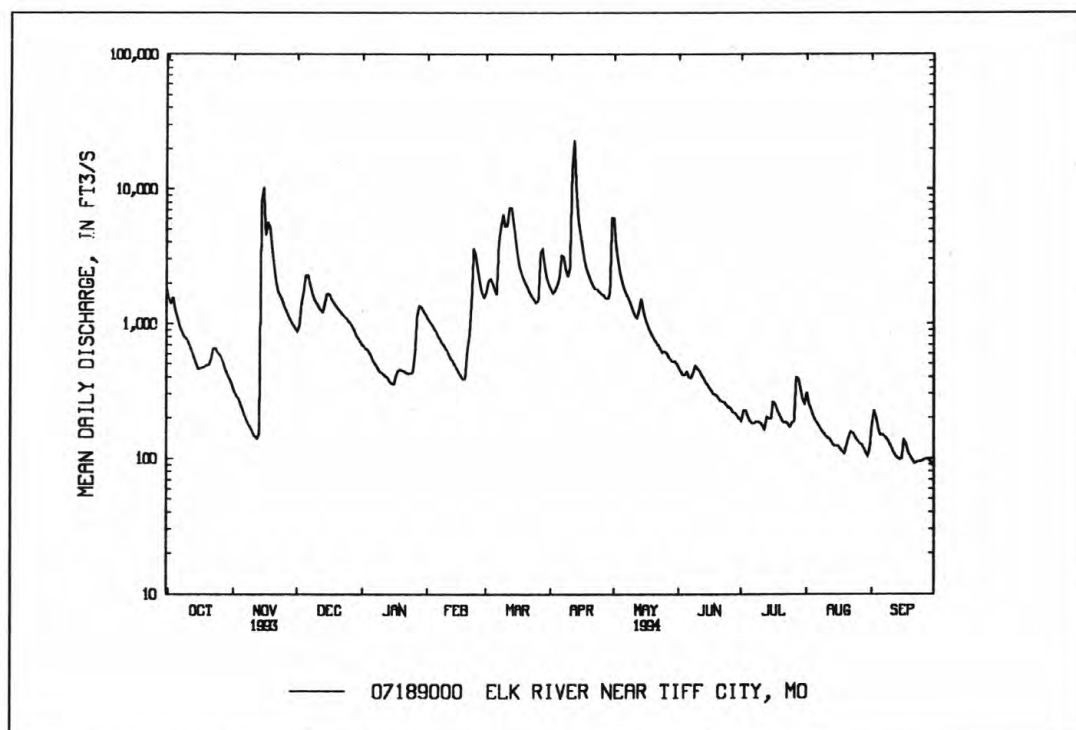
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	436	725	787	677	868	1342	1664	1539	936	483	270	304
MAX	2938	4094	3651	2509	2971	5020	6119	8964	4160	2565	2418	2164
(WY)	1942	1975	1993	1985	1951	1945	1945	1943	1974	1976	1950	1993
MIN	25.7	49.8	58.5	55.9	70.7	75.7	145	227	78.6	14.3	12.0	30.9
(WY)	1957	1964	1964	1964	1954	1956	1956	1964	1954	1954	1954	1953

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1940-94

ANNUAL TOTAL	623743		446131									
ANNUAL MEAN	1709		1222							835		
HIGHEST ANNUAL MEAN										1881	1993	
LOWEST ANNUAL MEAN										135	1954	
HIGHEST DAILY MEAN	16300		Jul 7	23100	Apr 12	68600	Apr 19 1941					
LOWEST DAILY MEAN	137		Aug 30	88	Sep 30	5.1	Sep 5 1954					
ANNUAL SEVEN-DAY MINIMUM	143		Aug 27	95	Sep 24	5.6	Sep 2 1954					
INSTANTANEOUS PEAK FLOW				26000	Apr 12	^a 137000	Apr 19 1941					
INSTANTANEOUS PEAK STAGE				18.92	Apr 12	^b 28.40	Apr 19 1941					
ANNUAL RUNOFF (AC-FT)	1237000			884900		604900						
ANNUAL RUNOFF (CFSM)	1.96			1.40		.96						
ANNUAL RUNOFF (INCHES)	26.61			19.03		13.01						
10 PERCENT EXCEEDS	3370			2580		1750						
50 PERCENT EXCEEDS	1200			568		339						
90 PERCENT EXCEEDS	278			136		85						

^aFrom rating curve extended above 60,000 ft³/s on basis of slope-area measurement of peak flow.

^bFrom flood mark.



ARKANSAS RIVER BASIN

07190000 LAKE O' THE CHEROKEES AT LANGLEY, OK

LOCATION.--Lat 36°28'07", long 95°02'28", in SW 1/4 SW 1/4 sec.14, T.23 N., R.21 E., Mayes County, Hydrologic Unit 11070206, on upstream side of pier at intake structure near right end of Pensacola Dam on Neosho River at Langley, 9.9 mi upstream from Big Cabin Creek, and at mile 77.0.

DRAINAGE AREA.--10,298 mi².

PERIOD OF RECORD.--March 1940 to current year. Prior to October 1940, published as Grand Lake at Langley.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1.10 ft above sea level (U.S. Army Corps of Engineers' benchmark). Prior to Nov. 14, 1941, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by multiple-arch concrete dam, with tops of taintor-type spillway gates at gage height 755.0 ft. Storage began Mr. 21, 1940; power-pool was first filled Apr. 19, 1941. Capacity between gage heights 682.0 ft, sill of powerhouse penstock, and 745.0 ft, maximum power pool is 1,492,000 acre-ft. Capacity between gage heights 745.0 ft and 755.0 ft is 525,200 acre-ft, and is reserved for flood control. Dead storage below gage height 662.0 ft is 682.0 ft is 180,200 acre-ft. Figures given herein represent total contents. Reservoir is utilized for power development and flood control. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,213,000 acre-ft, May 25, 1957, gage height, 755.27 ft; minimum since power-pool was first filled, 642,900 acre-ft, Sept. 28, 1954, gage height, 713.41 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,159,000 acre-ft, Apr. 15, gage height, 754.36 ft; minimum, 1,486,000 acre-ft, Aug. 30 and Sept. 21, gage height, 740.82.

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

730	1,086,000	745	1,672,000
735	1,257,000	750	1,917,000
740	1,425,000	755	2,197,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1986000	1541000	1594000	1544000	1542000	1618000	1550000	1714000	1672000	1672000	1577000	1491000
2	1903000	1541000	1587000	1544000	1541000	1610000	1555000	1731000	1673000	1673000	1571000	1502000
3	1835000	1541000	1582000	1538000	1540000	1606000	1552000	1748000	1672000	1677000	1567000	1494000
4	1786000	1548000	1580000	1537000	1541000	1602000	1553000	1769000	1672000	1673000	1553000	1494000
5	1757000	1543000	1573000	1538000	1542000	1594000	1548000	1795000	1674000	1674000	1546000	1492000
6	1739000	1541000	1567000	1549000	1543000	1584000	1549000	1784000	1675000	1672000	1539000	1493000
7	1726000	1541000	1562000	1542000	1540000	1598000	1543000	1798000	1674000	1662000	1533000	1493000
8	1719000	1542000	1561000	1545000	1542000	1612000	1541000	1818000	1676000	1654000	1526000	1493000
9	1712000	1542000	1558000	1546000	1539000	1616000	1533000	1812000	1683000	1646000	1520000	1493000
10	1703000	1541000	1552000	1542000	1539000	1629000	1569000	1788000	1673000	1637000	1514000	1493000
11	1691000	1541000	1543000	1541000	1541000	1640000	1720000	1764000	1676000	1623000	1507000	1491000
12	1679000	1541000	1543000	1540000	1542000	1651000	1910000	1743000	1674000	1611000	1499000	1492000
13	1668000	1544000	1538000	1541000	1541000	1660000	2098000	1728000	1672000	1605000	1494000	1493000
14	1658000	1559000	1541000	1541000	1542000	1663000	2155000	1713000	1673000	1592000	1496000	1491000
15	1650000	1591000	1545000	1538000	1540000	1661000	2130000	1696000	1674000	1587000	1495000	1491000
16	1636000	1610000	1540000	1544000	1541000	1654000	2064000	1688000	1674000	1581000	1495000	1492000
17	1628000	1633000	1541000	1540000	1545000	1644000	1956000	1684000	1674000	1578000	1494000	1492000
18	1622000	1671000	1541000	1539000	1546000	1638000	1873000	1678000	1674000	1575000	1493000	1491000
19	1621000	1692000	1541000	1540000	1545000	1626000	1823000	1671000	1674000	1574000	1492000	1491000
20	1616000	1694000	1541000	1543000	1548000	1616000	1790000	1662000	1672000	1577000	1496000	1491000
21	1606000	1690000	1539000	1543000	1571000	1603000	1767000	1652000	1673000	1576000	1495000	1489000
22	1602000	1682000	1537000	1542000	1587000	1588000	1745000	1642000	1672000	1584000	1494000	1491000
23	1596000	1674000	1541000	1546000	1616000	1576000	1727000	1643000	1672000	1583000	1494000	1490000
24	1588000	1662000	1544000	1543000	1635000	1562000	1708000	1650000	1672000	1584000	1492000	1490000
25	1577000	1652000	1545000	1542000	1643000	1550000	1692000	1654000	1668000	1581000	1493000	1490000
26	1570000	1635000	1552000	1541000	1640000	1549000	1681000	1660000	1673000	1590000	1493000	1492000
27	1566000	1622000	1549000	1543000	1632000	1544000	1672000	1660000	1672000	1588000	1489000	1494000
28	1564000	1611000	1539000	1543000	1624000	1548000	1643000	1662000	1672000	1581000	1494000	1492000
29	1559000	1606000	1540000	1541000	---	1553000	1640000	1668000	1673000	1582000	1489000	1492000
30	1549000	1601000	1541000	1539000	---	1549000	1680000	1672000	1672000	1583000	1492000	1492000
31	1543000	---	1540000	1539000	---	1548000	---	1675000	---	1583000	1490000	---

ARKANSAS RIVER BASIN

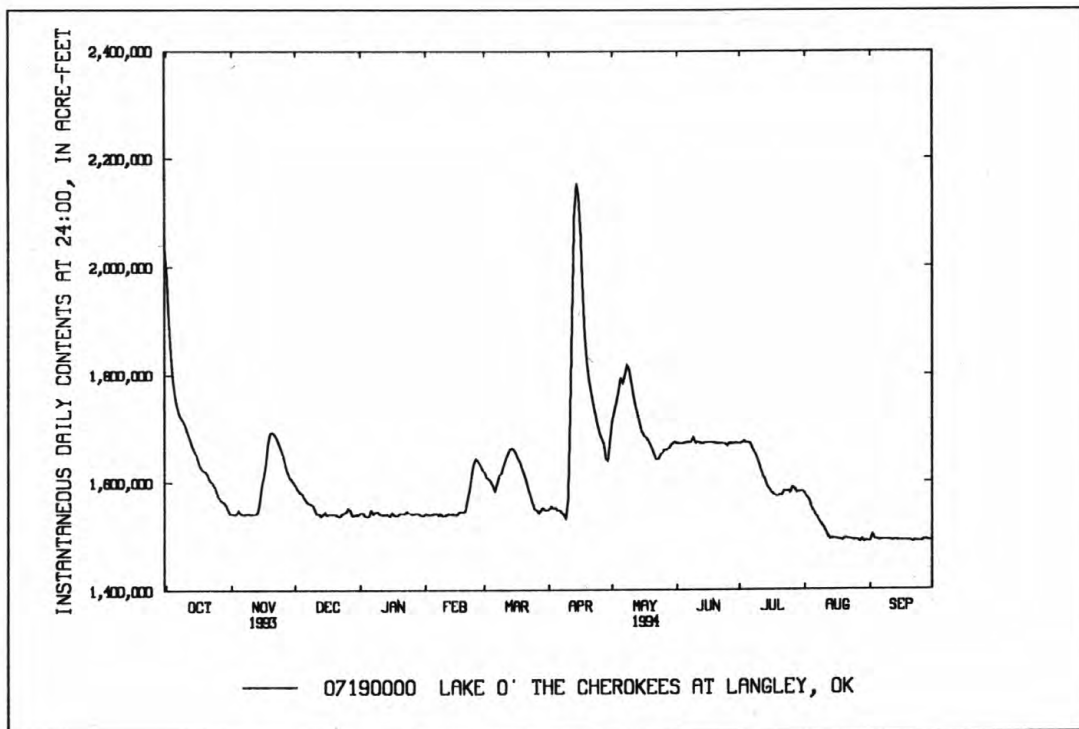
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07190000 LAKE O' THE CHEROKEES AT LANGLEY, OK--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	1986000	1694000	1594000	1549000	1643000	1663000	2155000	1818000	1683000	1677000	1577000	1502000
MIN	1543000	1541000	1537000	1537000	1539000	1544000	1533000	1642000	1668000	1574000	1489000	1489000
(+)	742.13	743.43	742.07	742.04	743.96	742.25	745.16	745.06	745.01	743.05	740.91	740.95
(++)	-492,000	+58,000	-61,000	-1,000	+85,000	-76,000	+132,000	-5,000	-3,000	-89,000	-93,000	+2,000
CAL YR 1993	MAX 2163000	MIN 1537000	(++) -320,000									
WTR YR 1994	MAX 2155000	MIN 1489000	(++) -543,000									

(+) ELEVATION, IN FEET, AT END OF MONTH

(++) CHANGE IN CONTENTS, IN ACRE-FEET



ARKANSAS RIVER BASIN

07190500 NEOSHO RIVER NEAR LANGLEY, OK

LOCATION.--Lat 36°26'20", long 95°02'54", in SW 1/4, SE 1/4 sec.27, T.23 N., R.21 E., Mayes County, Hydrologic Unit 11070209, in concrete stilling well on left bank, 0.5 mi upstream from bridge on State Highway 82, 1.5 mi south of Langley, 3.6 mi downstream from Pensacola Dam, 6.3 mi upstream from Big Cabin Creek, and at mile 73.4.

DRAINAGE AREA.--10,335 mi².

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 607.65 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Feb. 16, 1940, nonrecording gage at site 0.1 mi upstream at same datum. Feb. 10, 1954 to Sept. 30, 1963, water-stage recorder at site 0.5 mi downstream at same datum. Auxiliary water-stage recorders at sites 2.0 and 3.0 mi upstream at same datum.

REMARKS.--Records good. Low flow values of 25 ft³/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 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67900	3870	8190	2830	3470	12600	3450	48700	3830	597	4490	5970
2	51100	3150	10200	4100	5110	12800	4910	55400	2250	1860	5180	7540
3	44200	2240	10400	5850	4960	12800	7280	53000	2530	703	5680	11300
4	36000	2360	10500	2870	4020	12700	5610	45900	2250	464	5810	2250
5	25600	2740	11700	1640	2560	12600	10800	38200	2310	730	4630	3930
6	19800	2540	12100	547	3440	12500	9100	34400	2640	1450	4370	1480
7	17400	2570	10600	3180	5500	12500	11600	31700	3560	5000	4160	1360
8	14000	1600	7130	1890	3210	12600	9210	36900	7300	8680	4920	603
9	13400	3400	7700	2970	3880	12600	9100	38300	12000	5500	4360	857
10	13300	2640	9660	4330	1750	12700	11600	31400	12600	6640	4390	1010
11	12900	2890	9930	3770	918	12100	31900	28000	7790	9010	4780	1170
12	12800	3700	5890	2620	3170	12100	84900	26600	6910	8390	4320	242
13	11300	3000	9300	2850	2440	11900	121000	24200	5100	8530	3760	133
14	10600	8000	10500	2660	2400	11900	125000	22700	3530	8690	316	1920
15	10200	12300	10700	2780	4280	12200	108000	21700	4830	8520	68	224
16	11900	12500	11800	1820	1530	12600	91200	17700	3790	1570	483	2290
17	10300	12500	8010	3900	89	12600	76700	13700	3190	5310	578	925
18	10200	12600	6860	3380	709	12600	55500	13000	4120	3800	986	1210
19	9180	12300	7140	1870	5730	12600	40100	12300	2070	379	367	120
20	9910	11800	7010	896	7000	12500	31400	11400	2990	109	1010	804
21	10400	11800	7030	2270	11500	12600	27100	11400	1930	5580	1260	1010
22	7610	11900	6200	2230	12300	12700	24700	11400	1390	8020	1600	442
23	6610	12000	3540	1290	12500	12500	22300	3560	1000	7700	731	488
24	8500	11900	2550	4620	12600	12600	20600	25	1620	3710	1710	774
25	9220	12000	3580	4600	12600	11200	17400	1200	965	2780	216	438
26	6980	12000	2230	7240	12600	8360	14000	2270	857	4770	2350	206
27	5260	11900	6930	9150	12600	10600	11800	1880	1620	9480	2260	56
28	4800	10600	8490	10900	12500	8910	23100	1990	1350	7370	1620	1700
29	6330	7250	4270	9660	---	6580	31900	1240	171	1270	2260	272
30	7350	7320	3120	8040	---	8550	37400	1560	1300	1790	1210	287
31	6270	---	2300	4380	---	6090	---	637	---	1630	5180	---
TOTAL	491320	227370	235560	121133	165366	360190	1078660	642362	107793	140032	85055	51011
MEAN	15850	7579	7599	3908	5906	11620	35960	20720	3593	4517	2744	1700
MAX	67900	12600	12100	10900	12600	12800	125000	55400	12600	9480	5810	11300
MIN	4800	1600	2230	547	89	6090	3450	25	171	109	68	56
AC-FT	974500	451000	467200	240300	328000	714400	2140000	1274000	213800	277800	168700	101200

ARKANSAS RIVER BASIN

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07190500 NEOSHO RIVER NEAR LANGLEY, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1994, BY WATER YEAR (WY)

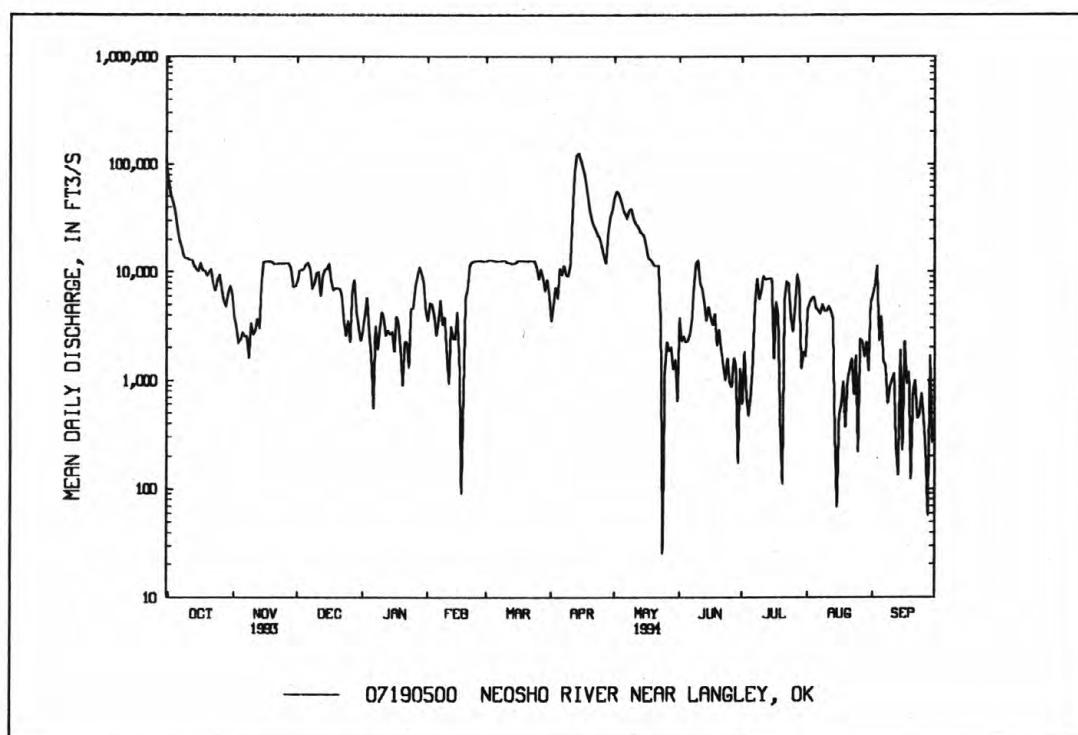
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6251	6587	5609	4803	5968	8514	11410	11490	10670	9009	4403	5330
MAX	51120	38870	35580	21440	23460	33250	50780	77710	32490	67920	20910	30350
(WY)	1987	1986	1993	1993	1949	1973	1945	1943	1957	1951	1950	1993
MIN	37.5	63.0	40.9	144	243	321	38.1	71.4	33.1	26.5	25.6	77.1
(WY)	1981	1957	1981	1954	1981	1967	1971	1940	1940	1940	1940	1953

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1940-94
ANNUAL TOTAL	6974660	3705852	
ANNUAL MEAN	19110	10150	7505
HIGHEST ANNUAL MEAN			21710
LOWEST ANNUAL MEAN			210
HIGHEST DAILY MEAN	155000	Sep 28	125000 Apr 14
LOWEST DAILY MEAN	1600	Nov 8	25 May 24
ANNUAL SEVEN-DAY MINIMUM	2460	Nov 2	488 Sep 21
INSTANTANEOUS PEAK FLOW			135000 Apr 14
INSTANTANEOUS PEAK STAGE			32.39 Apr 14
ANNUAL RUNOFF (AC-FT)	13830000	7351000	5437000
10 PERCENT EXCEEDS	31900	21000	16600
50 PERCENT EXCEEDS	14800	5890	3840
90 PERCENT EXCEEDS	6960	909	104

^aCaused by closure of Pensacola Dam.

^bFrom computation of outflow from Lake O' the Cherokees.

^cFrom floodmark.



ARKANSAS RIVER BASIN

07191000 BIG CABIN CREEK NEAR BIG CABIN, OK

LOCATION.--Lat 36°34'06", long 95°09'07", in NE 1/4, NE 1/4 sec.15, T.24 N., R.20 E., Craig County, Hydrologic Unit 11070209, near downstream 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 upstream from Mustang Creek, and at mile 13.0.

DRAINAGE AREA.--450 mi².

PERIOD OF RECORD.--October 1947 to current year.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 622.00 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Sept. 30, 1972, water-stage recorder at site 4.5 mi downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Low flow sustained in part by sewage from city of Vinita. U.S. Army Corps of Engineer's satellite telemeter at station.

EXTREMES FOR OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1943, reached a stage of 34.96 ft at former site; discharge, 63,000 ft³/s, by slope-area measurement of peak flow.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Apr. 12	0900	27,700	40.94	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	36	47	42	110	579	103	2300	25	6.3	18	182
2	100	36	580	43	97	1960	92	514	24	6.7	12	124
3	86	37	577	44	87	680	310	327	22	6.7	10	99
4	73	38	365	47	79	369	369	235	21	6.2	8.3	62
5	64	39	474	49	78	258	943	171	19	5.6	7.1	40
6	55	38	247	49	77	201	672	135	25	5.2	6.6	40
7	47	35	159	52	70	368	303	3490	23	5.0	6.3	29
8	49	34	120	49	64	1580	200	2010	18	6.9	5.5	21
9	45	33	104	46	60	1750	210	389	20	7.2	5.1	15
10	43	33	93	46	50	2900	1040	234	20	6.8	4.6	12
11	41	36	82	44	47	2120	10200	161	18	6.5	4.3	11
12	37	40	73	47	46	723	24300	124	13	6.3	4.2	9.1
13	34	40	181	48	47	475	5920	1020	6.7	18	3.9	8.1
14	37	527	760	48	48	409	646	2320	5.8	102	3.8	7.2
15	37	711	428	45	48	281	766	437	5.1	793	3.9	6.5
16	50	295	231	46	48	211	599	244	4.3	139	3.9	16
17	56	1160	168	50	48	178	316	141	3.6	52	3.8	83
18	45	601	134	48	49	155	231	95	3.8	31	3.7	38
19	41	267	113	45	51	131	176	69	144	21	3.8	16
20	37	168	102	43	727	121	140	55	28	14	6.0	8.8
21	36	116	91	40	513	107	119	46	12	15	6.8	5.9
22	33	94	79	41	2880	97	104	39	7.6	46	5.5	5.9
23	33	82	72	45	2960	87	95	34	5.1	56	4.8	6.4
24	38	70	64	58	984	77	86	30	3.8	37	4.7	5.0
25	38	62	60	70	460	75	75	27	3.6	24	4.5	4.6
26	38	56	60	1580	289	407	132	27	3.8	20	40	4.9
27	41	52	56	3320	199	1400	196	23	4.7	1210	100	5.1
28	42	49	51	592	176	422	208	21	5.8	188	67	5.3
29	43	47	48	288	---	218	554	23	6.3	83	30	5.5
30	43	46	44	198	---	150	7040	26	6.4	50	23	5.4
31	36	---	43	145	---	118	---	24	---	28	52	---
TOTAL	1517	4878	5706	7308	10392	18607	56145	14791	508.4	3002.4	463.1	881.7
MEAN	48.9	163	184	236	371	600	1871	477	16.9	96.9	14.9	29.4
MAX	119	1160	760	3320	2960	2900	24300	3490	144	1210	100	182
MIN	33	33	43	40	46	75	75	21	3.6	5.0	3.7	4.6
AC-FT	3010	9680	11320	14500	20610	36910	111400	29340	1010	5960	919	1750
CFSM	.11	.36	.41	.52	.82	1.33	4.16	1.06	.04	.22	.03	.07
IN.	.13	.40	.47	.60	.86	1.54	4.64	1.22	.04	.25	.04	.07

ARKANSAS RIVER BASIN

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

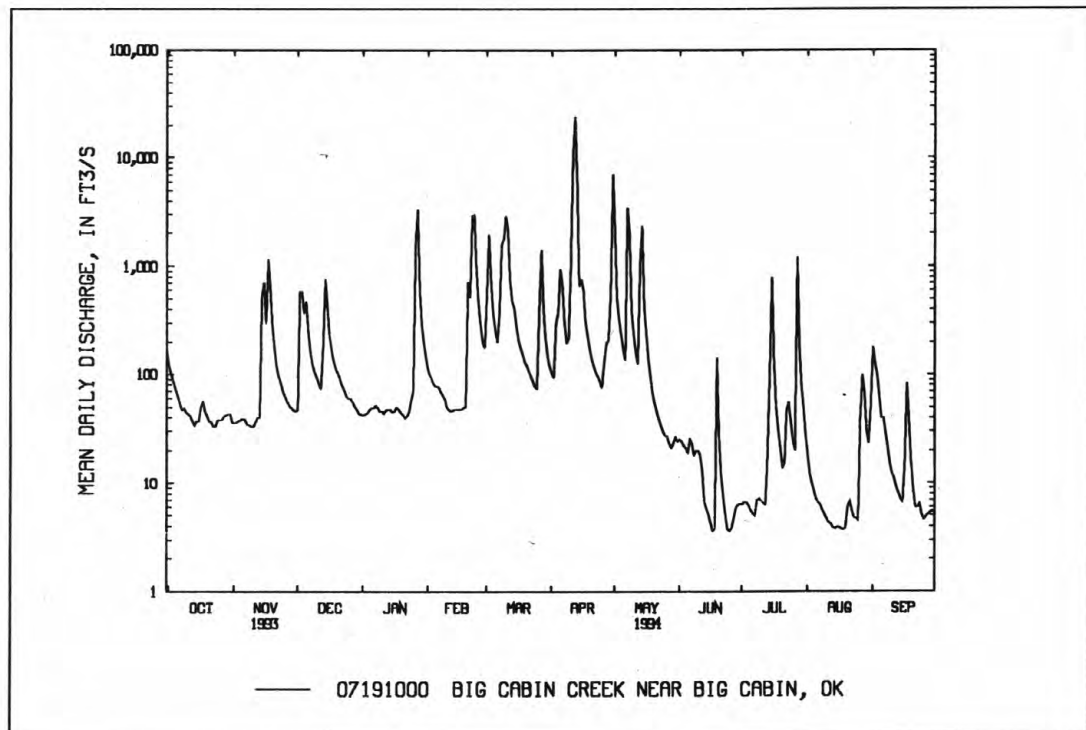
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	265	384	308	225	321	583	485	586	409	224	91.3	225
MAX	4250	2844	2552	1157	2940	2621	1931	3580	2817	1947	1757	1891
(WY)	1960	1986	1993	1973	1985	1990	1983	1961	1948	1958	1948	1961
MIN	.22	.89	1.52	1.29	1.50	1.37	29.9	20.3	2.47	.53	.41	.22
(WY)	1957	1956	1956	1954	1954	1956	1954	1963	1988	1954	1954	1954

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1948-94

ANNUAL TOTAL	272232.9	124199.6	
ANNUAL MEAN	746	340	342
HIGHEST ANNUAL MEAN			1044
LOWEST ANNUAL MEAN			37.9
HIGHEST DAILY MEAN	20200	Sep 26	24300 Apr 12
LOWEST DAILY MEAN	3.1	Aug 4	3.6 Jun 17,25
ANNUAL SEVEN-DAY MINIMUM	3.7	Aug 25	3.8 Aug 13
INSTANTANEOUS PEAK FLOW			27700 Apr 12
INSTANTANEOUS PEAK STAGE			40.94 Apr 12
ANNUAL RUNOFF (AC-FT)	540000	246300	247600
ANNUAL RUNOFF (CFSM)	1.66	.76	.76
ANNUAL RUNOFF (INCHES)	22.50	10.27	10.32
10 PERCENT EXCEEDS	1680	585	500
50 PERCENT EXCEEDS	144	49	32
90 PERCENT EXCEEDS	15	5.8	1.6

^aGage height, 34.55 ft at former site.



ARKANSAS RIVER BASIN

07191220 SPAVINAW CREEK NEAR SYCAMORE, OK

LOCATION.--Lat 36°20'07", long 94°38'27", in NE 1/4 NW 1/4 sec.4, T.21 N., R.25 E., Delaware County, Hydrologic Unit 11070209, on right bank 1.8 mi upstream from Cherokee Creek, 4.8 mi northeast of Row, 6.5 mi southeast of Sycamore, and at mile 35.0.

DRAINAGE AREA.--133 mi².

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

EXTREMES OUTSIDE PERIOD OF RECORD.--According to local residents, a flood of approximately the same magnitude as the July 27, 1975 flood occurred in the early 1880's.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s.

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 14	0915	4,200	10.48	Apr. 11	0130	4,750	11.47

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	60	144	126	140	269	244	407	81	42	36	25
2	103	59	169	126	136	321	235	315	76	40	34	25
3	122	58	213	126	132	332	273	264	74	39	34	25
4	116	58	233	125	129	310	298	226	80	38	34	25
5	102	57	255	123	125	286	297	199	82	37	33	26
6	93	57	249	121	122	265	288	177	79	37	33	25
7	88	56	230	119	119	249	276	165	74	36	32	25
8	83	55	213	116	116	397	263	153	71	38	32	25
9	81	54	200	113	113	554	253	143	72	37	31	24
10	81	53	186	112	111	520	792	135	81	39	30	24
11	78	53	174	111	108	597	2620	129	80	39	30	23
12	74	53	165	110	106	790	2120	150	76	39	29	23
13	70	73	172	108	104	723	885	153	73	42	28	22
14	67	2400	197	106	102	587	594	141	69	44	28	22
15	65	903	204	105	100	493	480	136	63	54	e26	21
16	65	549	203	106	99	424	394	127	60	58	e25	23
17	65	611	195	108	97	376	337	118	59	57	e25	24
18	65	498	186	108	96	339	297	111	58	55	e24	23
19	65	393	178	106	96	310	268	105	57	50	e24	e23
20	66	323	170	105	114	290	245	101	57	47	e23	e22
21	72	280	163	104	133	271	227	98	58	44	e23	e22
22	79	247	156	103	332	256	212	95	57	42	e22	e22
23	80	225	151	103	520	244	199	93	56	40	28	e23
24	78	210	146	103	419	235	185	91	55	39	29	e23
25	74	196	142	103	351	228	175	89	53	38	28	e24
26	71	184	139	113	300	239	166	87	51	37	e27	25
27	69	173	137	136	265	347	156	86	49	36	e26	23
28	67	164	135	160	247	342	149	83	48	36	e26	23
29	65	156	132	163	---	309	157	84	46	36	e26	22
30	63	149	129	156	---	281	501	86	44	37	e25	22
31	62	---	128	148	---	259	---	84	---	37	25	---
TOTAL	2422	8407	5494	3672	4832	11443	13586	4431	1939	1290	876	704
MEAN	78.1	280	177	118	173	369	453	143	64.6	41.6	28.3	23.5
MAX	122	2400	255	163	520	790	2620	407	82	58	36	26
MIN	62	53	128	103	96	228	149	83	44	36	22	21
AC-FT	4800	16680	10900	7280	9580	22700	26950	8790	3850	2560	1740	1400
CFSM	.59	2.11	1.33	.89	1.30	2.78	3.41	1.07	.49	.31	.21	.18
IN.	.68	2.35	1.54	1.03	1.35	3.20	3.80	1.24	.54	.36	.25	.20

e Estimated

ARKANSAS RIVER BASIN
07191220 SPAVINAW CREEK NEAR SYCAMORE, OK

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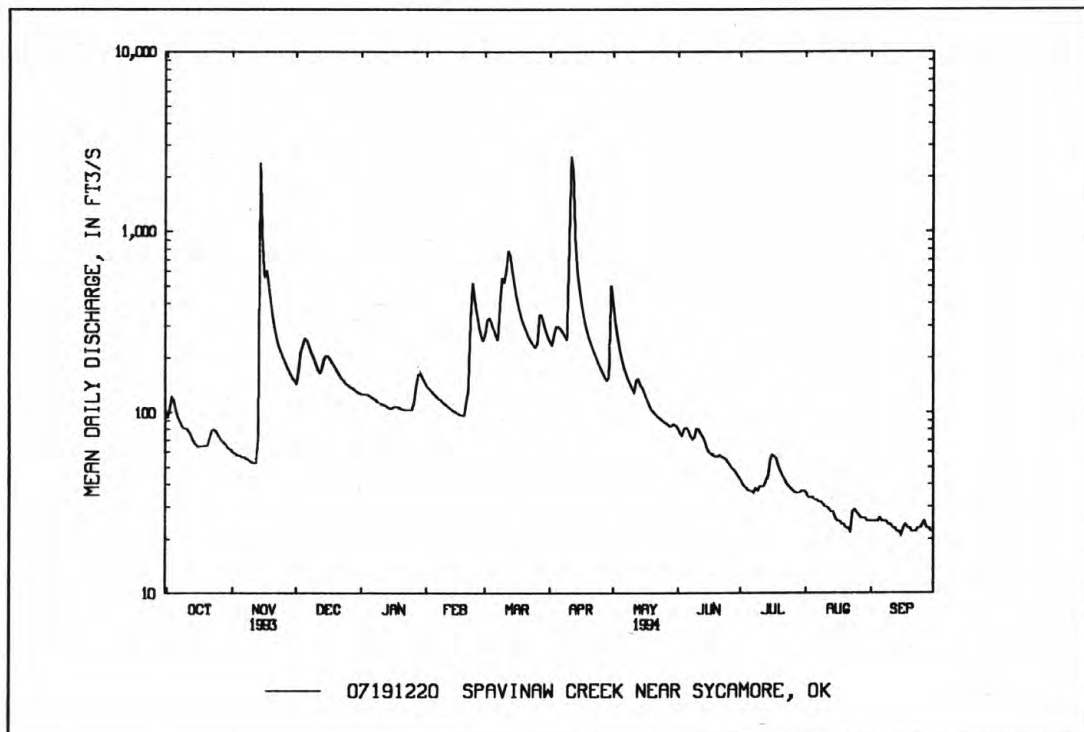
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1994, BY WATER YEAR (WY)

MEAN	60.9	118	136	105	120	192	213	147	141	62.3	30.7	53.8
MAX	382	683	585	297	301	563	600	550	880	483	78.5	248
(WY)	1987	1974	1993	1973	1985	1973	1973	1990	1974	1975	1975	1986
MIN	4.84	8.56	10.5	9.34	12.4	12.7	21.7	19.0	14.5	10.1	6.27	5.75
(WY)	1964	1964	1967	1981	1964	1967	1981	1967	1972	1966	1980	1963

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1962-94

ANNUAL TOTAL	75823	59096	
ANNUAL MEAN	208	162	115
HIGHEST ANNUAL MEAN			265 1974
LOWEST ANNUAL MEAN			18.0 1967
HIGHEST DAILY MEAN	2400	Nov 14	2620 Apr 11 11700 Jul 27 1975
LOWEST DAILY MEAN	27	Aug 30	21 Sep 15 1.3 Aug 9 1964
ANNUAL SEVEN-DAY MINIMUM	28	Aug 28	23 Sep 10 1.6 Aug 3 1964
INSTANTANEOUS PEAK FLOW			4750 Apr 11 39800 Jul 27 1975
INSTANTANEOUS PEAK STAGE			11.47 Apr 11 22.07 Jul 27 1975
INSTANTANEOUS LOW FLOW			21 ^a Sep 14 1.2 Aug 9 1964
ANNUAL RUNOFF (AC-FT)	150400	117200	83070
ANNUAL RUNOFF (CFSM)	1.56	1.22	.86
ANNUAL RUNOFF (INCHES)	21.21	16.53	11.71
10 PERCENT EXCEEDS	398	317	236
50 PERCENT EXCEEDS	149	103	55
90 PERCENT EXCEEDS	52	25	14

^aAlso on Sept. 15, 16, and 30.



ARKANSAS RIVER BASIN

07191300 SPAVINAW LAKE AT SPAVINAW, OK

LOCATION.--Lat 36°22'59", long 95°02'52", in SW 1/4 SE 1/4 sec.15, T.22 N., R.21 E., Mayes County, Hydrologic Unit 11070209, right of intake tower on face of dam on Spavinaw Creek at Spavinaw, and at mile 5.5.

DRAINAGE AREA.--386 mi² (U.S. Army Corps of Engineers).

PERIOD OF RECORD.--October 1991 to current year.

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

REMARKS.--Reservoir is formed by earth dam with uncontrolled concrete spillway. Much of Tulsa municipal-water supply is drawn from lake. Levels are maintained in Spavinaw Lake by releases from Lake Eucha. Storage began 1924; conservation pool first filled November 1924. Capacity 41,200 acre-ft at elevation 682 ft. Dead storage, 15,300 acre-ft at elevation 662 ft. Figures given herein represent total contents. Reservoir is used for water supply, recreation, and fish and wildlife. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 39,400 acre-ft, Dec. 14, 1992, elevation 683.30 ft; minimum, 25,900 acre-ft, Nov. 23, 1991, elevation, 677.15 ft.

EXTREMES FOR OUTSIDE PERIOD OF RECORD.--Flood of April 1942 reached a stage of 689.13 ft, contents unknown.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 38,800 acre-ft, Apr. 12, elevation 683.15 ft; minimum, 29,800 acre-ft, July 18, elevation 679.55 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 1993 TO SEPTEMBER 1994
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30800	30600	30800	30700	30900	31100	31000	31900	30800	30800	30300	30700
2	30700	30600	30900	30800	30800	31100	31000	31500	30700	30800	30200	30700
3	30800	30600	30900	30800	30800	31200	31000	31300	30700	30800	30200	30800
4	30800	30500	31000	30700	30800	31100	31100	31200	30800	30800	30300	30800
5	30900	30400	31000	30800	30800	31100	31100	31100	30700	30700	30300	30800
6	30900	30300	31000	30700	30800	31000	31100	31100	30800	30700	30300	30700
7	30900	30300	31000	30700	30800	31000	31100	31000	30800	30600	30600	30700
8	30900	30200	31000	30700	30800	31400	31100	31000	30700	30600	30600	30700
9	30800	30200	31000	30700	30700	31700	31000	31000	30800	30500	30500	30600
10	30800	30400	31000	30700	30700	31700	32400	30900	30800	30400	30400	30600
11	30800	30400	31000	30700	30700	31900	37900	30900	30800	30300	30300	30600
12	30800	30500	31000	30700	30700	32400	34100	30900	30800	30200	30200	30600
13	30800	30500	31000	30700	30700	32200	32500	31000	30800	30300	30200	30500
14	30800	32200	30900	30700	30700	31900	32000	31000	30700	30200	30200	30400
15	30800	32100	30900	30600	30700	31600	31700	30900	30700	30100	30200	30500
16	30800	31600	31000	30700	30700	31400	31500	31000	30700	30000	30200	30700
17	30800	31500	30900	30700	30700	31300	31400	30900	30700	29900	30200	30700
18	30800	31400	30900	30700	30700	31200	31300	30800	30700	29900	30200	30600
19	30800	31200	30900	30700	30800	31100	31100	30800	30700	30000	30300	30600
20	30800	31100	30900	30700	30800	31100	31100	30800	30700	30300	30500	30600
21	30800	31100	30900	30700	30800	31000	31000	30800	30700	30600	30400	30700
22	30800	31000	30800	30700	31100	31000	31000	30800	30700	30700	30400	30700
23	30800	31000	30800	30700	31600	31000	31000	30800	30600	30700	30400	30700
24	30800	30900	30800	30700	31500	30900	31000	30800	30600	30700	30400	30700
25	30800	30900	30800	30700	31300	30900	31000	30800	30600	30700	30400	30700
26	30700	30900	30800	30800	31100	31100	31000	30800	30600	30700	30400	30700
27	30700	30800	30800	30800	31100	31100	30900	30800	30500	30700	30400	30600
28	30700	30800	30700	30900	31000	31200	30900	30800	30600	30600	30300	30600
29	30600	30800	30700	30900	---	31100	31100	30800	30600	30600	30300	30500
30	30600	30800	30800	30900	---	31100	32300	30800	30700	30500	30400	30400
31	30600	---	30800	30900	---	31000	---	30800	---	30400	30700	---

ARKANSAS RIVER BASIN

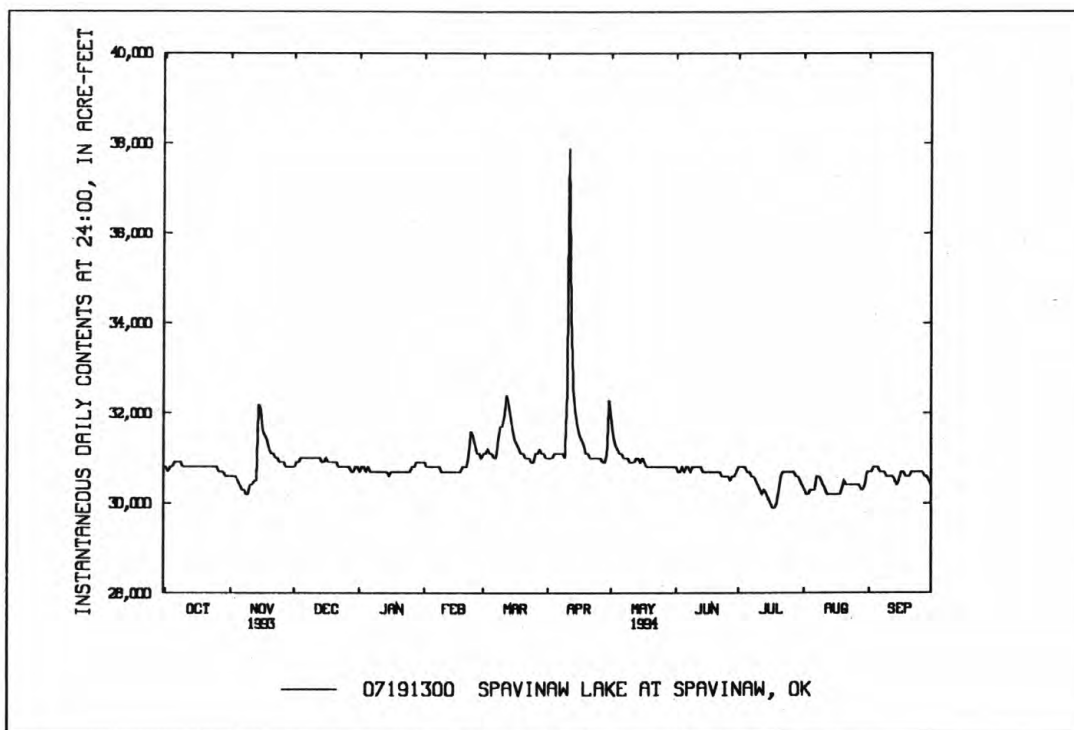
193

07191300 SPAVINAW LAKE AT SPAVINAW, OK--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	30900	32200	31000	30900	31600	32400	37900	31900	30800	30800	30700	30800
MIN	30600	30200	30700	30600	30700	30900	30900	30800	30500	29900	30200	30400
(†)	679.88	680.20	680.17	680.27	680.43	680.42	681.10	680.18	680.12	679.88	680.07	679.89
(††)	-200	+200	-0-	+100	+100	-0-	+1,300	-1,500	-100	-300	+300	-300
CAL YR 1993	MAX 34800		MIN 30000		(††) -100							
WTR YR 1994	MAX 37900		MIN 29900		(††) -400							

(†) ELEVATION, IN FEET, AT END OF MONTH

(††) CHANGE IN CONTENTS, IN ACRE-FEET



ARKANSAS RIVER BASIN

07191400 LAKE HUDSON NEAR LOCUST GROVE, OK

LOCATION.--Lat 36°13'48", long 95°10'55", in SE 1/4 NW 1/4 sec.9, T.20 N., R. 20 E., Mayes County, Hydrologic Unit 11070209, at left side of Robert S. Kerr dam on Neosho River, 2.0 mi northwest of Locust Grove, 3.5 mi downstream from Saline Creek, and at mile 47.3.

DRAINAGE AREA.--11,534 mi².

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Remote-controlled indicator and nonrecording gage. Datum of gage is sea level.

REMARKS.--Reservoir is formed by earth dam and concrete spillway controlled by seventeen 22-foot taintor gates. Storage began Nov. 12, 1963; power pool first filled June 12, 1964. Capacity, 444,500 acre-ft at elevation 636.0 ft, top of taintor gages, 200,300 acre-ft at elevation 619.0 ft, power pool, and 48,630 acre-ft at elevation 599.0 ft, top of spillway crest. Figures given herein represent total contents. Reservoir was designed for flood control and power development. U.S. Army Corps of Engineers' satellite telemeter at station.

COOPERATION.--Records provided by Grand River Dam Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 443,600 acre-ft, Oct. 4, 1986, elevation, 635.95 ft; minimum since power pool first filled, 153,200 acre-ft, Mar. 24, 1988, elevation, 614.31 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 319,200 acre-ft, Apr. 16, elevation, 628.43 ft; minimum, 190,600 acre-ft, Dec. 8, elevation, 618.09 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	622.89	245,300	-
Oct. 31.....	619.07	201,100	-44,200
Nov. 30.....	619.08	201,200	+100
Dec. 31.....	619.26	203,200	+2,000
CAL YR 93	-	-	-82,000
Jan. 31.....	619.21	202,600	-600
Feb. 28.....	619.18	202,300	-300
Mar. 31.....	619.77	208,800	+6,500
Apr. 30.....	619.62	207,200	-1,600
May 31.....	619.30	203,600	-3,600
June 30.....	619.36	204,300	+700
July 31.....	619.34	204,100	+200
Aug. 31.....	619.13	201,700	-2,400
Sept. 30.....	619.24	203,000	+1,300
WTR YR 94	-	-	-42,300



ARKANSAS RIVER BASIN

07191500 NEOSHO RIVER NEAR CHOUTEAU, OK

LOCATION.--Lat 36°13'46", long 95°10'57", in SE 1/4 NW 1/4 sec.9, T.20 N., R.20 E., Mayes County, Hydrologic Unit 11070209, on left bank, 100 ft downstream from Robert S. Kerr Dam, 2.2 mi northwest of Locust Grove, 10.0 mi northeast of Chouteau, and at mile 47.2.

DRAINAGE AREA.--11,534 mi².

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 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e62700	e5320	e6170	e3210	e4030	e14000	e1620	41800	4970	163	2710	5720
2	e53700	e5020	e13000	e4110	e4470	e16200	e6450	51700	896	2020	6630	5700
3	e51000	e2040	e12300	e7600	e4980	e11800	e7800	e20800	2690	1570	4840	10300
4	e31300	e4360	e8090	e2750	e4580	e13300	e7640	43900	624	219	5410	3660
5	e23300	e2800	e14300	e260	e2030	e13800	e15500	32400	3870	161	4270	2760
6	e19700	e3350	e12100	e150	e3850	e14800	e10700	24800	2750	211	4680	2670
7	17100	e1460	e14600	e2320	e5960	e12500	e11900	32300	4390	4640	3770	147
8	13700	e950	e3050	e1800	e3130	e15300	e9740	39100	5240	9490	4750	113
9	13100	e2520	e3830	e2220	e3830	e15100	e1160	42500	10600	5870	2830	101
10	e14600	e870	e10900	e5280	e3340	e17400	e15600	35600	11700	5040	5530	699
11	e16900	e1180	e9090	e4480	e150	e16600	e42300	30300	7500	8130	2410	1360
12	e14800	e1870	e7490	e1510	e1110	e15400	e86900	28700	6830	8170	2450	936
13	e11600	e1720	e7360	e3020	e990	e15500	e106000	25500	4760	8190	5210	153
14	e9540	e8420	e15100	e2720	e3170	e16300	e110000	26100	4570	7620	369	101
15	e9840	e13300	e8890	e3380	e4240	e16700	e93800	23700	2410	7390	140	752
16	e11400	e13900	e10900	e1240	e1170	e18100	e90800	24600	2400	2120	506	2530
17	e11700	e11000	e9350	e3710	e100	e17900	e84100	15500	3530	5450	151	862
18	e6840	e14700	e7030	e3470	e100	e13800	e61600	14100	4200	4660	1630	769
19	e7070	e12200	e7550	e2600	e6860	e13900	e42100	14600	1320	169	190	126
20	e7820	e13500	e5670	e150	e7400	e13000	e32300	11100	2760	150	160	424
21	e10600	e13200	e7430	e970	e11800	e13200	e29000	11300	1400	3320	144	301
22	e7080	e11200	e6580	e530	e13100	e12100	28600	10300	2930	8830	2210	446
23	6130	e10600	e3180	e1110	e15400	e11600	25600	7340	339	6660	186	123
24	8120	e12400	e1590	e3240	e16400	e14100	28100	252	395	2910	1750	100
25	8880	e11100	e4090	e6710	e17000	e9580	25400	222	1180	1790	186	687
26	e6480	e13800	e2600	e8450	e13400	e9290	20300	2940	362	5190	1850	121
27	e4170	e10300	e7510	e13900	e12700	e13700	17600	672	1010	10200	1130	98
28	e4120	e12400	e7290	e11200	e13600	e10200	18000	1420	1460	7310	1360	1900
29	e4910	e9090	e4830	e10000	---	e6480	32000	2790	198	614	1680	270
30	e7530	e5910	e2250	e8790	---	e7640	38200	1470	165	1410	1910	117
31	e5810	---	e1530	e3830	---	e3550	---	632	---	1450	8680	---
TOTAL	481540	230480	235650	124710	178890	412840	1100810	618438	97449	131117	79722	44046
MEAN	15530	7683	7602	4023	6389	13320	36690	19950	3248	4230	2572	1468
MAX	62700	14700	15100	13900	17000	18100	110000	51700	11700	10200	8680	10300
MIN	4120	870	1530	150	100	3550	1160	222	165	150	140	98
AC-FT	955100	457200	467400	247400	354800	818900	2183000	1227000	193300	260100	158100	87370

e Estimated

ARKANSAS RIVER BASIN

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07191500 NEOSHO RIVER NEAR CHOUTEAU, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6136	8852	8638	6843	7770	12430	14280	11140	12500	8506	4514	4962
MAX	59840	40780	40400	23350	23640	39260	46000	39060	30920	28710	15140	28460
(WY)	1987	1986	1993	1973	1985	1973	1973	1990	1974	1976	1993	1993
MIN	169	83.3	87.5	189	79.4	75.8	160	122	735	1067	603	591
(WY)	1964	1964	1964	1981	1964	1964	1971	1964	1972	1991	1991	1983

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1964-94

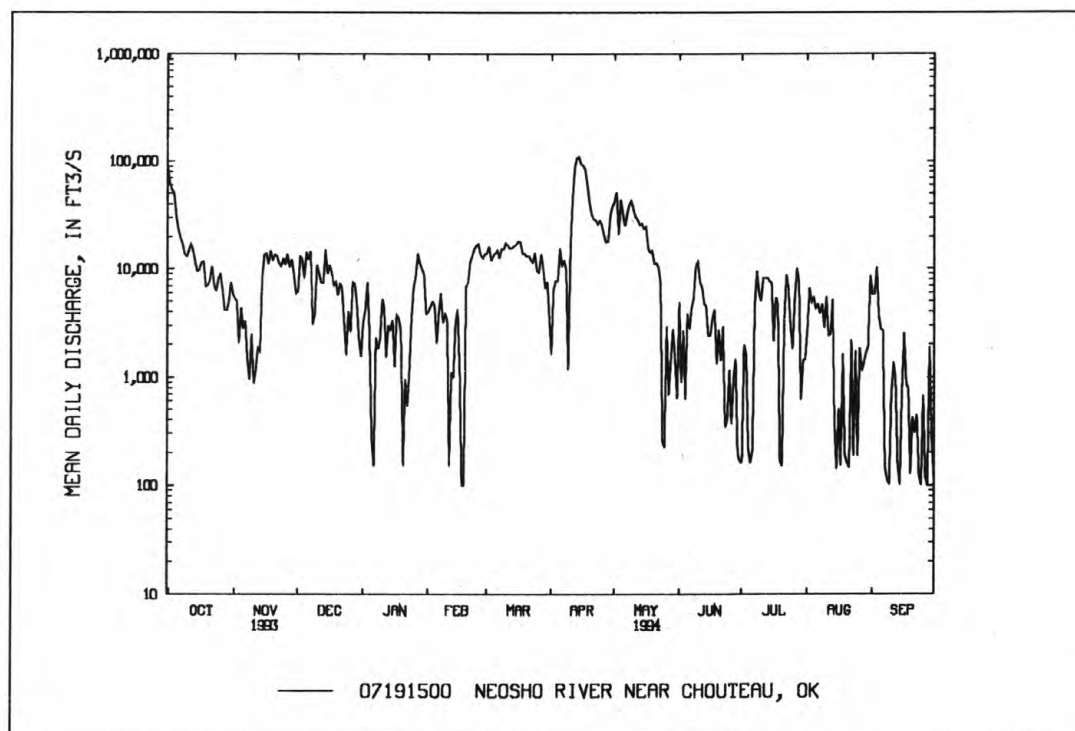
ANNUAL TOTAL	7082150	3735692	
ANNUAL MEAN	19400	10230	^a 8875
HIGHEST ANNUAL MEAN			22240 1993
LOWEST ANNUAL MEAN			1924 1981
HIGHEST DAILY MEAN	136000	Sep 27 110000	Apr 14 136000 Sep 27 1993
LOWEST DAILY MEAN	870	Nov 10 98	Sep 27 ^b 12 Nov 13 1963
ANNUAL SEVEN-DAY MINIMUM	1510	Nov 7 268	Sep 21 45 Feb 21 1964
INSTANTANEOUS PEAK FLOW		110000	Apr 14 ^c 136000 Sep 27 1993
INSTANTANEOUS PEAK STAGE		^d 30.13	Apr 15 34.38 Feb 25 1985
ANNUAL RUNOFF (AC-FT)	14050000	7410000	6430000
10 PERCENT EXCEEDS	34300	23500	21500
50 PERCENT EXCEEDS	16100	5810	4800
90 PERCENT EXCEEDS	6160	324	170

^aSince regulation by Lake Hudson.

^bMinimum daily for period of record, caused by closure of Robert S. Kerr Dam.

^cMaximum discharge for period of record, 400,000 ft³/s, May 20, 1943, gage height 45.00 ft, site and datum then in use, from rating curve extended above 140,000 ft³/s on basis of slope-area measurement of peak flow.

^dAffected by backwater.



ARKANSAS RIVER BASIN

07195500 ILLINOIS RIVER NEAR WATTS, OK

LOCATION.--Lat 36°07'48", long 94°34'19", in NW 1/4 NE 1/4 sec.18, T.19 N., R.26 E., Adair County, Hydrologic Unit 11110103, near right bank on downstream side of pier of bridge on U.S. Highway 59, 1.5 mi north of Watts, 4.5 mi downstream from Cincinnati Creek, and at mile 106.2.

DRAINAGE AREA.--635 mi².

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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,500 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 14	2000	13,700	16.26	Nov. 15	1200	7,080	11.20

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	622	441	619	433	548	1580	1060	2040	357	596	231	197
2	671	433	706	420	513	2170	974	1330	339	410	218	191
3	859	447	1010	427	491	1780	1120	1100	465	281	214	172
4	686	441	1780	429	469	1470	1180	961	645	242	208	160
5	601	419	1810	415	461	1280	1110	833	1190	218	203	153
6	543	389	1380	405	439	1130	2060	743	682	208	199	159
7	495	368	1160	391	421	1030	1540	683	533	205	193	161
8	473	348	1020	372	412	2720	1260	634	464	296	183	157
9	492	351	919	358	405	4130	1120	e600	448	358	176	152
10	534	340	847	349	392	3250	1040	e570	595	254	170	148
11	462	327	769	352	372	3710	1220	531	443	220	163	141
12	434	337	706	350	371	3950	3680	529	383	209	157	133
13	406	578	779	344	377	2990	2280	750	346	353	156	133
14	383	9960	1320	335	369	2350	1660	634	326	660	152	134
15	365	5850	1140	330	364	1920	1410	655	308	411	149	130
16	583	2970	1000	332	357	1620	1250	602	305	375	150	132
17	2600	5880	914	450	348	1430	1070	523	292	292	146	128
18	1280	2980	842	477	345	1270	968	480	291	261	141	123
19	1040	2080	782	398	351	1140	895	448	279	248	151	118
20	2150	1620	734	375	496	1060	834	423	276	232	308	119
21	2300	1340	695	364	e1800	980	785	409	267	239	390	121
22	1430	1150	653	358	4640	904	744	394	270	291	250	129
23	1100	1030	616	359	3560	856	711	376	265	247	203	135
24	925	931	590	366	2030	819	669	367	254	226	185	141
25	805	857	559	381	1530	791	636	375	252	421	174	143
26	717	804	532	440	1230	1760	618	609	239	690	173	142
27	641	762	513	1030	1040	4800	592	528	224	854	167	137
28	582	722	498	907	963	2430	779	436	223	498	156	133
29	546	681	480	757	---	1720	753	414	216	343	147	130
30	513	650	460	670	---	1390	2870	409	209	303	144	128
31	476	---	445	598	---	1190	---	375	---	268	156	---
TOTAL	25714	45486	26278	13972	25094	59620	36888	19761	11386	10709	5813	4280
MEAN	829	1516	848	451	896	1923	1230	637	380	345	188	143
MAX	2600	9960	1810	1030	4640	4800	3680	2040	1190	854	390	197
MIN	365	327	445	330	345	791	592	367	209	205	141	118
AC-FT	51000	90220	52120	27710	49770	118300	73170	39200	22580	21240	11530	8490
CFSM	1.31	2.39	1.33	.71	1.41	3.03	1.94	1.00	.60	.54	.30	.22
IN.	1.51	2.66	1.54	.82	1.47	3.49	2.16	1.16	.67	.63	.34	.25

c Estimated

ARKANSAS RIVER BASIN

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07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1994, BY WATER YEAR (WY)

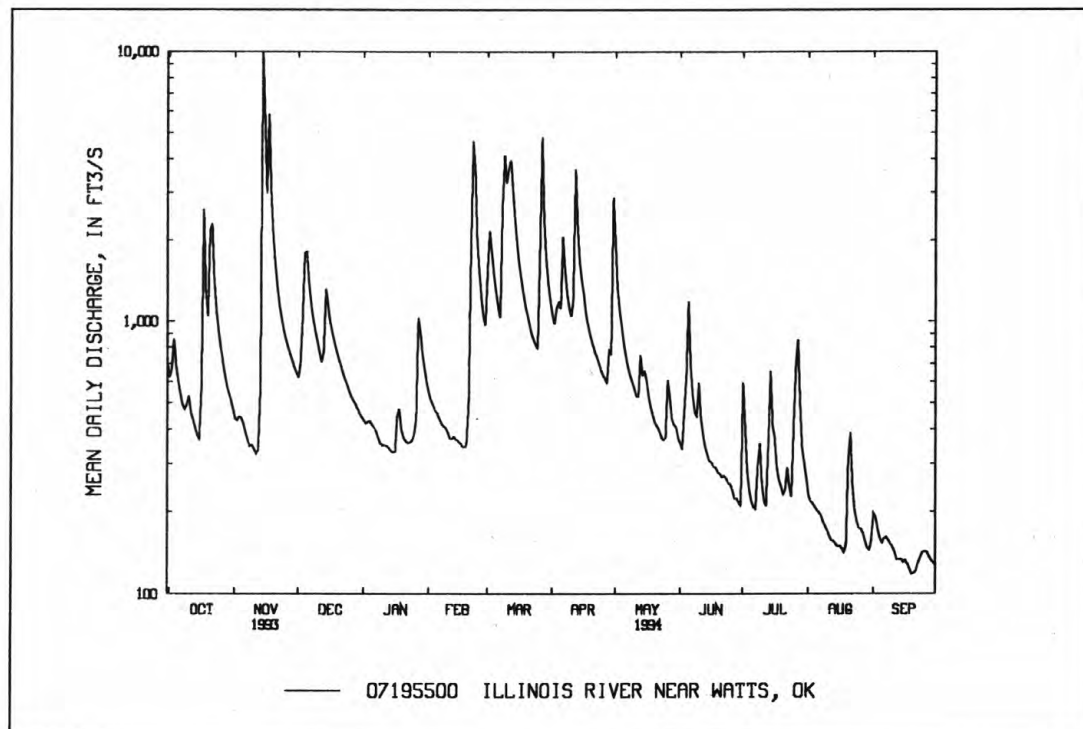
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	383	656	693	534	680	992	1045	1004	648	349	241	291
MAX	2734	3087	2786	1658	1818	2934	3347	4286	3225	1807	1172	1393
(WY)	1987	1974	1988	1969	1975	1973	1957	1961	1974	1958	1961	1986
MIN	20.9	65.6	60.4	61.4	75.1	114	176	144	113	50.7	33.2	14.9
(WY)	1957	1964	1956	1956	1964	1956	1963	1977	1963	1964	1956	1956

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1956-94

ANNUAL TOTAL	424421	285001	
ANNUAL MEAN	1163	781	626
HIGHEST ANNUAL MEAN			1247
LOWEST ANNUAL MEAN			151
HIGHEST DAILY MEAN	13700	May 10	9960
LOWEST DAILY MEAN	164	Sep 7	118
ANNUAL SEVEN-DAY MINIMUM	181	Aug 27	124
INSTANTANEOUS PEAK FLOW			13700
INSTANTANEOUS PEAK STAGE			16.26
INSTANTANEOUS LOW FLOW			115
ANNUAL RUNOFF (AC-FT)	841800	565300	453200
ANNUAL RUNOFF (CFSM)	1.83	1.23	.99
ANNUAL RUNOFF (INCHES)	24.86	16.70	13.38
10 PERCENT EXCEEDS	2130	1620	1250
50 PERCENT EXCEEDS	816	469	287
90 PERCENT EXCEEDS	273	158	92

^aFrom rating curve extended above 51,000 ft³/s.

^bAlso occurred Sept. 19 and Oct. 14, 1956.



ARKANSAS RIVER BASIN
07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1989 to current year.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
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OCT

21... 1315 1028 80020 2210 281 7.6 9.5 16.5 -- 750 9.5 99

NOV

14... 1630 1028 80020 12700 150 7.4 11.5 13.5 170 740 8.0 79

DEC

15... 1430 1028 80020 1130 230 7.6 3.5 8.0 6.6 740 11.2 97

FEB

16... 1615 1028 80020 359 291 8.2 19.0 8.0 -- 751 12.4 106

APR

06... 1030 1028 80020 2460 200 7.5 1.5 9.5 34 746 9.2 82

JUN

29... 1730 1028 80020 202 299 8.2 30.0 28.5 4.0 748 7.8 103

AUG

25... 1630 1028 80020 180 318 7.9 28.0 25.5 6.7 755 8.3 103

DATE	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	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 AD- SORP- TION RATIO (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT (MG/L AS HCO3) (00453)	CAR- BONATE WATER DIS IT (MG/L AS CO3) (00452)	ALKA- LITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)
------	--	--	--	---	---	---	--	--	---	--	--

OCT

21... 2.0 -- -- -- -- -- -- -- -- 91 0 74

NOV

14... 1.6 51 8 18 1.5 3.0 10 0.2 5.4 53 0 43

DEC

15... -- 100 31 38 2.0 6.2 11 0.3 2.4 88 0 72

FEB

16... -- -- -- -- -- -- -- -- -- 121 0 99

APR

06... -- 86 16 32 1.5 5.0 11 0.2 2.5 85 0 70

JUN

29... -- 120 9 46 1.8 10 15 0.4 3.3 138 0 113

AUG

25... -- 120 17 46 1.8 11 16 0.4 3.6 128 0 105

ARKANSAS RIVER BASIN
07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	CHLO-	FLUO-	SILICA,	RESIDUE	SUM OF	SOLIDS,	SOLIDS,	NITRO-	NITRO-	NITRO-
	SULFATE	RIDE,	RIDE,	DIS-	AT 180	DIS-	DIS-	GEN,	GEN,	GEN,
	DIS-	DIS-	DIS-	SOLVED	DEG. C	SOLVED	SOLVED	NITRATE	NITRATE	NITRATE
	(MG/L	(MG/L	(MG/L	(MG/L	DIS-	(TONS	(TONS	TOTAL	SOLVED	SOLVED
	AS SO4)	AS CL)	AS F)	AS	(MG/L)	PER	PER	(MG/L	(MG/L	(MG/L
	(00945)	(00940)	(00950)	(00955)	(70300)	(70301)	(70303)	(00620)	(00618)	(71851)
										(00613)
OCT										
21...	--	--	--	--	--	--	--	1.60	--	--
NOV										
14...	6.7	4.6	0.10	6.1	93	77	0.13	3190	1.09	1.09
DEC										
15...	11	7.3	<0.10	7.4	126	128	0.17	384	2.20	--
FEB										
16...	--	--	--	--	--	--	--	2.55	2.55	11
APR										
06...	7.5	6.2	<0.10	5.9	129	114	0.18	857	2.49	2.49
JUN										
29...	9.7	12	0.20	10	175	169	0.24	95.4	1.70	--
AUG										
25...	10	13	<0.10	8.8	170	164	0.23	82.6	1.40	--
DATE	NITRO-	NITRO-	NITRO-	NITRO-	NITRO-	NITRO-	NITRO-	NITRO-	NITRO-	PHOS-
	GEN,	GEN,	GEN,	GEN,	GEN,	GEN,	GEN,	GEN,AM-	GEN,AM-	PHORUS
	NITRITE	NO2+NO3	NO2+NO3	AMMONIA	AMMONIA	AMMONIA	ORGANIC	ORGANIC	ORGANIC	TOTAL
	DIS-	NO2+NO3	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	(MG/L
	SOLVED	TOTAL	SOLVED	SOLVED	SOLVED	TOTAL	SOLVED	TOTAL	TOTAL	AS P)
	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	
	AS NO2)	AS N)	AS N)	AS N)	AS NH4)	AS N)	AS N)	AS N)	AS N)	
	(71856)	(00630)	(00631)	(00608)	(71846)	(00605)	(00607)	(00625)	(00623)	(00665)
OCT										
21...	--	1.60	1.60	0.040	0.05	0.56	0.36	0.60	0.40	2.2
NOV										
14...	0.03	1.10	1.10	0.010	0.01	1.7	0.49	1.7	0.50	2.8
DEC										
15...	--	2.20	2.20	0.030	0.04	0.27	--	0.30	<0.20	2.5
FEB										
16...	0.16	2.60	2.60	0.020	0.03	--	--	<0.20	<0.20	--
APR										
06...	0.03	2.50	2.50	0.050	0.06	0.45	--	0.50	<0.20	3.0
JUN										
29...	--	1.70	1.70	0.020	0.03	0.18	--	0.20	<0.20	1.9
AUG										
25...	--	1.40	1.40	0.030	0.04	0.17	--	0.20	<0.20	1.6

ARKANSAS RIVER BASIN
07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHODIS- 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)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
OCT 21...	0.150	0.140	0.43	--	--	--	--	--	--	--	--
NOV 14...	0.250	0.240	0.74	<1	28	<0.5	<10	<1.0	<5	<3	<10
DEC 15...	0.060	0.090	0.28	<1	39	0.8	20	<1.0	<5	<3	<10
FEB 16...	0.080	0.080	0.25	--	--	--	--	--	--	--	--
APR 06...	0.160	0.170	0.52	<1	36	<0.5	20	<1.0	<5	<3	<10
JUN 29...	0.140	0.130	0.40	1	52	<0.5	40	1.0	<5	<3	<10
AUG 25...	0.150	0.120	0.37	1	51	<0.5	40	<1.0	<5	<3	<10
DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 21...	--	--	--	--	--	--	--	--	--	--	--
NOV 14...	180	<10	<4	44	<0.1	<10	<10	2.0	26	<6	5
DEC 15...	31	<10	<4	26	<0.1	<10	<10	<1.0	45	<6	6
FEB 16...	--	--	--	--	--	--	--	--	--	--	--
APR 06...	45	<10	<4	13	<0.1	<10	<10	<1.0	37	<6	5
JUN 29...	<3	<10	<4	68	<0.1	10	<10	<1.0	49	<6	<3
AUG 25...	7	<10	<4	72	<0.1	<10	<10	<1.0	50	<6	4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

[illegible]



ARKANSAS RIVER BASIN
07195865 SAGER CREEK NEAR WEST SILOAM SPRINGS, OK--Continued

WATER-QUALITY RECORDS

LOCATION.--Lat 36°12'06", long 94°36'18", in NE 1/4 NE 1/4 sec.23, T.20 N, R.25 E., Delaware County, Hydrologic Unit 11110103, at county road bridge, 1.4 mi upstream from Flint Creek and 2.5 mi northwest of West Siloam Springs.

DRAINAGE AREA.--18.9 mi².

PERIOD OF RECORD.--May 1991 to current year.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
DEC											
15...	0935	14.5	9.0	740	1028	1028	31	5.25	280	10.8	7.6
15...	0937	12.5	9.0	740	1028	1028	31	5.25	280	10.8	7.6
15...	0939	10.5	9.0	740	1028	1028	31	5.25	280	10.8	7.6
15...	0941	8.50	9.0	740	1028	1028	31	5.25	280	10.8	7.6
15...	0943	6.50	9.0	740	1028	1028	31	5.25	280	10.8	7.6
15...	0945	4.50	9.0	740	1028	1028	31	5.25	280	10.8	7.6
15...	0947	2.50	9.0	740	1028	1028	31	5.25	280	10.8	7.6
15...	0949	0.50	9.0	740	1028	1028	31	5.25	280	10.8	7.6

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT												
20...	1700	1028	80020	17	398	7.7	14.5	18.0	--	745	8.5	92
DEC												
15...	1030	1028	80020	31	280	7.6	3.0	9.0	1.6	740	10.8	96
FEB												
16...	1045	1028	80020	9.0	446	7.6	12.0	7.0	--	751	12.4	104
APR												
05...	1830	1028	80020	86	260	7.5	5.0	12.5	2.0	737	9.3	90
JUN												
30...	0930	1028	80020	7.4	444	7.6	26.5	23.5	0.30	740	7.2	87
AUG												
15...	1500	1028	80020	4.8	472	8.1	26.0	24.5	0.20	745	9.0	111

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	NITRO- GEN DIS- SOLVED	HARD- NESS TOTAL (MG/L AS CACO3)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	POTAS- SIUM, DIS- SOLVED	BICAR- BONATE WATER FIELD	CAR- BONATE WATER FIELD	ALKA- LINITY WAT DIS TOT IT FIELD
DATE	(00602)	(00900)	(00904)	(00915)	(00925)	(00930)	(00932)	(00931)	(00935)	(00453)	(00452) (39086)

OCT												
20...	6.7	--	--	--	--	--	--	--	--	121	0	99
DEC												
15...	3.9	100	23	37	1.8	12	20	0.5	4.3	94	0	77
FEB												
16...	9.1	--	--	--	--	--	--	--	--	114	0	93
APR												
05...	4.7	95	19	35	1.8	10	18	0.4	4.1	93	0	76
JUN												
30...	6.8	130	30	49	2.4	29	31	1	8.1	125	0	102
AUG												
15...	--	140	38	50	2.5	33	33	1	10	119	0	97

	SULFATE	CHLO- RIDE,	FLUO- RIDE,	SILICA, DIS-	SOLIDS, RESIDUE AT 180	SOLIDS, SUM OF CONSTITUENTS,	SOLIDS, DIS-	SOLIDS, DIS-	NITRO- GEN, NITRATE	NITRO- GEN, NITRATE	NITRO- GEN, NITRATE	NITRO- GEN, NITRITE
	DIS-	DIS-	DIS-	SOLVED	DEG. C	TUENTS,	SOLVED	SOLVED	GEN, NITRATE	DIS-	DIS-	DIS-
DATE	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(TONS) PER	(TONS) PER	TOTAL (MG/L)	SOLVED (MG/L)	SOLVED (MG/L)	SOLVED (MG/L)
	AS SO4)	AS CL)	AS F)	SIO2)	(MG/L)	(MG/L)	AC-FT'	DAY)	AS N)	AS N)	AS NO3)	AS N)
	(00945)	(00940)	(00950)	(00955)	(70300)	(70301)	(70303)	(70302)	(00620)	(00618)	(71851)	(00613)
OCT 20... <0.010	--	--	--	--	--	--	--	--	6.40	--	--	
DEC 15... <0.010	11	17	0.10	6.7	164	153	0.22	13.7	3.60	--	--	
FEB 16... 0.050	--	--	--	--	--	--	--	--	8.75	8.75	39	
APR 05... 0.010	9.9	16	<0.10	5.6	158	149	0.21	36.9	4.39	4.39	19	
JUN 30... <0.010	11	48	0.30	8.9	263	250	0.36	5.27	6.60	--	--	
AUG 15... <0.010	12	55	0.10	9.6	278	262	0.38	3.60	6.50	--	--	

ARKANSAS RIVER BASIN
07195865 SAGER CREEK NEAR WEST SILOAM SPRINGS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT											
20...	--	6.40	6.40	0.020	0.03	0.28	0.28	0.30	0.30	6.7	0.780
DEC											
15...	--	3.60	3.60	0.020	0.03	0.38	0.28	0.40	0.30	4.0	0.300
FEB											
16...	0.16	8.80	8.80	0.020	0.03	0.38	0.28	0.40	0.30	9.2	0.600
APR											
05...	0.03	4.40	4.40	0.020	0.03	0.58	0.28	0.60	0.30	5.0	0.340
JUN											
30...	--	6.60	6.60	0.020	0.03	--	0.18	<0.20	0.20	--	0.640
AUG											
15...	--	6.50	6.50	0.030	0.04	--	--	<0.20	<0.20	--	0.660
DATE	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTH, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTH, 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)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
OCT											
20...	0.770	0.740	2.3	--	--	--	--	--	--	--	--
DEC											
15...	0.250	0.270	0.83	<1	41	2	20	<1.0	<5	<3	<10
FEB											
16...	0.530	0.510	1.6	--	--	--	--	--	--	--	--
APR											
05...	0.270	0.260	0.80	<1	42	<0.5	30	<1.0	<5	<3	<10
JUN											
30...	0.650	0.610	1.9	1	63	<0.5	70	1.0	<5	<3	<10
AUG											
15...	0.640	--	2.1	1	59	<0.5	70	1.0	<5	<3	<10

ARKANSAS RIVER BASIN
07195865 SAGER CREEK NEAR WEST SILOAM SPRINGS, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	
	OCT 20...	--	--	--	--	--	--	--	--	--	--	
	DEC 15...	34	<10	<4	2	<0.1	<10	<10	<1.0	52	<6	7
	FEB 16...	--	--	--	--	--	--	--	--	--	--	--
APR 05...	16	<10	<4	2	<0.1	<10	10	<1.0	49	<6	<3	
JUN 30...	<3	20	<4	3	0.4	<10	10	<1.0	66	<6	3	
AUG 15...	<3	<10	<4	1	<0.1	<10	<10	<1.0	70	<6	5	
DATE	PCB, TOTAL (UG/L) (39516)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- CHLOR- DANE, TOTAL (UG/L) (39350)	PYRIFOS TOTAL RECOVER (UG/L) (38932)	2,4-D, TOTAL (UG/L) (39730)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DEF TOTAL (UG/L) (39040)	DI- AZINON, TOTAL (UG/L) (39570)	
	APR 05...	<0.1	<0.10	<0.010	<0.1	<0.01	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01
	JUN 30...	<0.1	<0.10	<0.010	<0.1	<0.01	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01
	DATE	DI- ELDRIN TOTAL (UG/L) (39380)	DI- SYSTON TOTAL (UG/L) (39011)	2, 4-DP TOTAL (UG/L) (82183)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN WATER REC (UG/L) (39390)	WATER ETHION, TOTAL (UG/L) (39398)	FONOFOS (DY- FONATE) HEPTA- WHOLE TOT.REC (UG/L) (82614)	CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)
APR 05...	<0.010	<0.01	<0.01	<0.010	<0.010	<0.01	<0.01	<0.010	<0.010	<0.010	<0.01	
JUN 30...	<0.010	<0.01	<0.01	<0.010	<0.010	<0.01	<0.01	<0.010	<0.010	<0.010	<0.01	
DATE	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METHYL PARA- THION, TOTAL (UG/L) (39600)	MIREX, TOTAL (UG/L) (39755)	PARA- THION, TOTAL (UG/L) (39540)	PER- THANE TOTAL (UG/L) (39034)	PHORATE TOTAL (UG/L) (39023)	SILVEX, TOTAL (UG/L) (39760)	2,4,5-T TOTAL (UG/L) (39740)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)		
	APR 05...	<0.01	<0.01	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01	<1	<0.01	
	JUN 30...	<0.01	<0.01	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01	<1	<0.01	

ARKANSAS RIVER BASIN

07196000 FLINT CREEK NEAR KANSAS, OK

LOCATION.--Lat 36°11'11", long 94°42'24", in SW 1/4 NW 1/4 sec.25, T.20 N., R.24 E., Delaware County, Hydrologic Unit 11110103, upstream from bridge on U.S. Highway 412, at left bank 6.0 mi southeast of Kansas, 6.0 mi downstream from Sager Creek, and at mile 2.2.

DRAINAGE AREA.--110 mi².

PERIOD OF RECORD.--August 1955 to September 1976, April 1979 to September 1990, October 1992 to current year.

GAGE.--Water-stage recorder. Datum of gage is 854.59 ft above sea level.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s and maximum:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 14	0500	3,580	8.91	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	58	76	50	75	243	166	340	107	51	47	39
2	76	61	121	49	70	306	157	257	98	54	41	36
3	85	61	152	52	65	270	229	215	99	53	37	34
4	75	57	201	51	63	233	212	186	149	49	34	32
5	70	57	211	49	60	202	219	166	130	47	32	30
6	66	55	183	48	56	179	255	152	109	47	31	31
7	61	53	158	48	55	164	197	142	98	45	30	31
8	61	53	135	45	56	945	194	135	91	59	28	31
9	59	56	122	44	55	781	183	127	101	57	28	31
10	55	57	109	44	51	624	226	123	102	54	28	30
11	55	57	93	45	49	716	839	118	93	47	27	28
12	53	57	84	45	48	755	1340	119	85	47	29	28
13	50	98	93	45	46	593	620	128	79	58	28	28
14	48	2430	124	43	46	477	447	127	76	78	27	27
15	47	818	112	42	45	394	381	125	74	64	26	54
16	51	586	105	43	45	331	304	115	73	55	26	161
17	58	778	100	51	42	288	260	110	70	48	27	82
18	55	480	92	45	40	259	230	103	68	43	27	60
19	55	348	86	40	42	229	211	97	66	42	27	51
20	67	267	81	39	75	208	196	93	65	38	45	47
21	72	216	76	39	81	192	180	87	64	40	42	43
22	67	186	73	39	522	176	168	82	66	44	37	43
23	65	160	70	40	494	165	154	80	64	40	36	41
24	63	141	68	42	331	157	143	79	60	39	33	38
25	60	124	64	43	258	147	137	161	59	54	30	35
26	59	110	62	64	207	292	134	865	55	64	31	33
27	57	98	62	104	175	448	128	245	51	59	32	33
28	56	90	61	108	164	303	124	162	54	50	29	32
29	56	85	59	101	---	243	141	145	52	45	30	31
30	59	79	54	92	---	207	488	136	50	41	31	31
31	58	---	52	84	---	182	---	118	---	59	34	---
TOTAL	1880	7776	3139	1674	3316	10709	8663	5138	2408	1571	990	1251
MEAN	60.6	259	101	54.0	118	345	289	166	80.3	50.7	31.9	41.7
MAX	85	2430	211	108	522	945	1340	865	149	78	47	161
MIN	47	53	52	39	40	147	124	79	50	38	26	27
AC-FT	3730	15420	6230	3320	6580	21240	17180	10190	4780	3120	1960	2480
CFSM	.55	2.36	.92	.49	1.08	3.14	2.63	1.51	.73	.46	.29	.38
IN.	.64	2.63	1.06	.57	1.12	3.62	2.93	1.74	.81	.53	.33	.42

ARKANSAS RIVER BASIN

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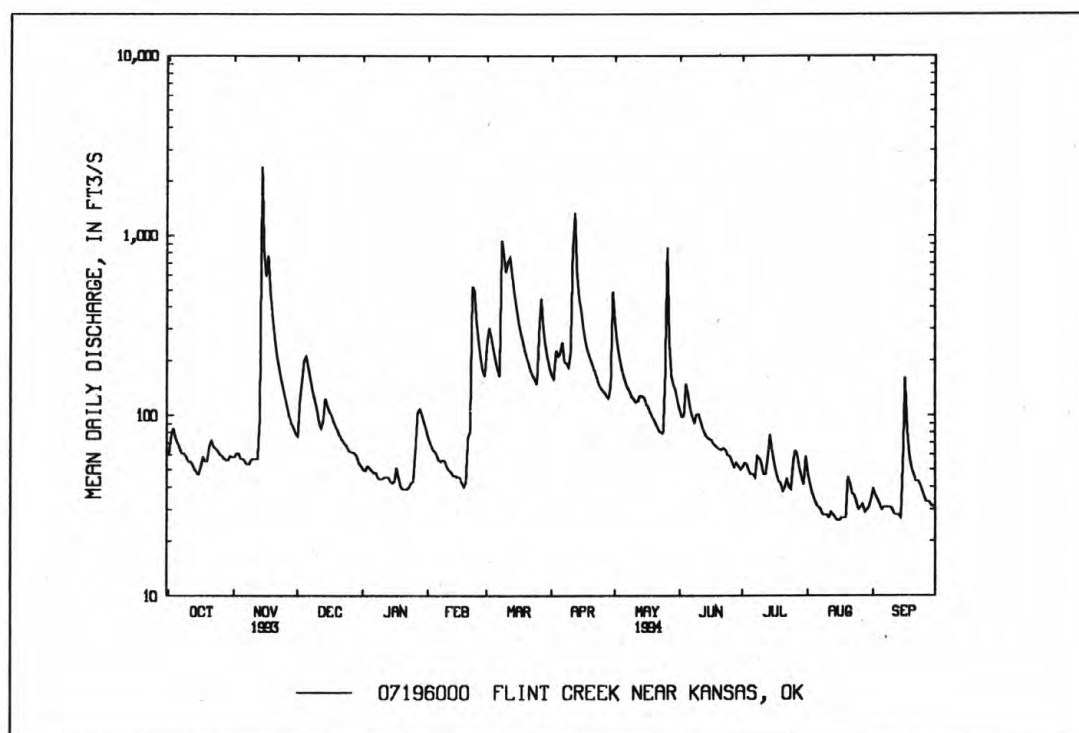
07196000 FLINT CREEK NEAR KANSAS, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	80.2	136	137	106	119	182	194	190	143	61.2	46.6	63.7
MAX	415	850	624	385	331	593	577	783	1066	262	369	416
(WY)	1987	1974	1985	1969	1968	1973	1973	1961	1974	1958	1961	1986
MIN	.73	9.87	11.4	10.3	16.4	11.5	13.0	37.5	25.1	11.7	4.84	1.27
(WY)	1957	1956	1956	1956	1956	1956	1956	1964	1972	1980	1956	1956

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1956-94
ANNUAL TOTAL	66558	48515	
ANNUAL MEAN	182	133	122
HIGHEST ANNUAL MEAN		296	1974
LOWEST ANNUAL MEAN		22.3	1956
HIGHEST DAILY MEAN	2430	Nov 14	14500
LOWEST DAILY MEAN	29	Aug 29	.60
ANNUAL SEVEN-DAY MINIMUM	31	Aug 25	.66
INSTANTANEOUS PEAK FLOW		3580	^a 44400
INSTANTANEOUS PEAK STAGE		8.91	Nov 14
ANNUAL RUNOFF (AC-FT)	132000	96230	88390
ANNUAL RUNOFF (CFSM)	1.66	1.21	1.11
ANNUAL RUNOFF (INCHES)	22.51	16.41	15.07
10 PERCENT EXCEEDS	345	258	245
50 PERCENT EXCEEDS	124	65	55
90 PERCENT EXCEEDS	45	33	17

^aBased on contracted opening measurement.



ARKANSAS RIVER BASIN
07196000 FLINT CREEK NEAR KANSAS, OK--Continued

WATER-QUALITY RECORDS

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

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
JUN											
30...	1401	1.00	26.5	740	1028	1028	50	6.28	264	7.1	7.9
30...	1402	3.00	26.0	740	1028	1028	50	6.28	264	7.2	7.9
30...	1403	5.00	26.0	740	1028	1028	50	6.28	264	7.4	7.9
30...	1404	7.00	26.0	740	1028	1028	50	6.28	264	7.4	7.9
30...	1405	9.00	26.0	740	1028	1028	50	6.28	264	7.4	7.9
30...	1406	11.0	26.0	740	1028	1028	50	6.28	264	7.5	7.9
30...	1407	13.0	26.0	740	1028	1028	50	6.28	264	7.4	7.9
30...	1408	15.0	26.0	740	1028	1028	50	6.28	264	7.4	7.9
30...	1409	17.0	26.0	740	1028	1028	50	6.28	264	7.5	7.9
30...	1410	19.0	26.0	740	1028	1028	50	6.28	264	7.3	7.9
30...	1411	21.0	26.0	740	1028	1028	50	6.28	264	7.3	7.9
30...	1412	23.0	26.0	740	1028	1028	50	6.28	264	7.3	7.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT											
21...	1200	1028	80020	70	278	7.6	14.5	16.0	750	8.6	89
DEC											
14...	1630	1028	80020	126	246	7.6	1.5	9.0	740	11.8	105
FEB											
15...	1715	1028	80020	45	266	7.8	15.5	9.0	750	13.5	119
APR											
05...	1500	1028	80020	214	206	7.5	7.0	13.0	737	10.1	99
JUN											
30...	1345	1028	80020	50	264	7.9	33.0	26.0	740	7.4	94
AUG											
15...	1200	1028	80020	25	284	8.0	22.0	23.0	749	10.0	119

ARKANSAS RIVER BASIN
07196000 FLINT CREEK NEAR KANSAS, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	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 TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
OCT 21...	--	122	0	100	2.40	--	--	<0.010	--	2.40
DEC 14...	--	79	0	65	2.90	--	--	<0.010	--	2.90
FEB 15...	--	103	0	84	2.86	2.86	13	0.040	0.13	2.90
APR 05...	--	88	0	72	2.40	--	--	<0.010	--	2.40
JUN 30...	1.7	112	0	92	1.50	--	--	<0.010	--	1.50
AUG 15...	--	108	0	88	1.40	--	--	<0.010	--	1.40
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 DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHOSOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHOSOLVED (MG/L AS PO4) (00660)
OCT 21...	2.40	0.030	0.04	--	<0.20	<0.20	0.100	0.100	0.110	0.34
DEC 14...	2.90	0.010	0.01	--	<0.20	<0.20	0.110	0.080	0.100	0.31
FEB 15...	2.90	0.020	0.03	--	<0.20	<0.20	0.080	0.080	0.080	0.25
APR 05...	2.40	<0.010	--	--	<0.20	<0.20	0.080	0.060	0.060	0.18
JUN 30...	1.50	0.020	0.03	0.18	<0.20	0.20	0.120	0.110	0.100	0.31
AUG 15...	1.40	0.030	0.04	--	<0.20	<0.20	0.080	0.080	0.090	0.28

ARKANSAS RIVER BASIN

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK

LOCATION.--Lat 35°55'22", long 94°55'24", in SE 1/4 NE 1/4 sec.26, T.17 N., R.22 E., Cherokee County, Hydrologic Unit 11110103, near center of channel on downstream side of pier of bridge, 0.2 mi downstream from U.S. Highway 62, 2.2 mi northeast of Tahlequah, 6.5 mi upstream from Baron Fork, and at mile 55.8.

DRAINAGE AREA.--959 mi².

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

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 15	1900	16,300	13.37				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	905	630	906	644	826	1450	1830	4180	635	249	426	250
2	835	590	916	626	769	2360	1630	2980	577	366	380	241
3	828	577	1050	614	725	2980	1550	2250	532	506	340	259
4	958	559	1480	609	694	2490	1670	1860	586	378	319	255
5	882	551	2320	604	668	2060	1700	1610	797	311	302	241
6	788	538	2340	593	651	1760	1730	1420	1150	270	290	232
7	716	514	1910	577	630	1530	2490	1290	876	248	447	221
8	663	490	1610	568	605	2130	2040	1200	707	320	457	217
9	640	461	1450	549	584	6830	1780	1120	629	310	338	217
10	624	444	1300	531	572	6210	1620	1040	602	365	299	215
11	637	436	1190	521	558	5420	1740	991	657	338	279	208
12	613	433	1100	515	543	6130	4210	947	603	287	262	198
13	577	504	1050	511	528	5830	6040	927	530	294	246	188
14	544	5960	1130	500	518	4410	3670	1080	479	327	233	180
15	515	15200	1560	491	509	3490	2790	1090	446	625	222	185
16	736	7640	1460	486	500	2860	2330	1050	423	507	215	639
17	1040	5930	1300	485	491	2440	2010	1000	400	455	208	703
18	2420	7910	1200	524	481	2130	1750	912	386	384	203	475
19	1600	4160	1120	576	475	1900	1580	847	373	330	200	376
20	1380	3000	1050	544	567	1730	1460	798	366	297	285	326
21	2360	2350	988	514	991	1580	1370	760	355	290	338	291
22	2460	1920	942	502	1750	1470	1280	725	341	280	436	285
23	1730	1680	898	499	4950	1380	1220	698	332	280	412	277
24	1380	1470	858	491	4440	1290	1160	677	326	302	341	270
25	1180	1330	823	487	2880	1250	1110	658	316	308	297	265
26	1030	1230	791	537	2150	1330	1050	909	304	408	276	259
27	910	1140	763	703	1700	3820	1010	1240	296	680	263	251
28	833	1070	737	1080	1450	6210	986	978	285	821	249	243
29	763	1010	713	1110	---	3440	1110	822	270	721	233	237
30	716	960	686	991	---	2580	2050	745	261	546	218	234
31	678	---	660	901	---	2120	---	694	---	453	215	---
TOTAL	31941	70687	36301	18883	32205	92610	57966	37498	14840	12256	9229	8438
MEAN	1030	2356	1171	609	1150	2987	1932	1210	495	395	298	281
MAX	2460	15200	2340	1110	4950	6830	6040	4180	1150	821	457	703
MIN	515	433	660	485	475	1250	986	658	261	248	200	180
AC-FT	63350	140200	72000	37450	63880	183700	115000	74380	29440	24310	18310	16740
CFSM	1.07	2.46	1.22	.64	1.20	3.12	2.01	1.26	.52	.41	.31	.29
IN.	1.24	2.74	1.41	.73	1.25	3.59	2.25	1.45	.58	.48	.36	.33

ARKANSAS RIVER BASIN

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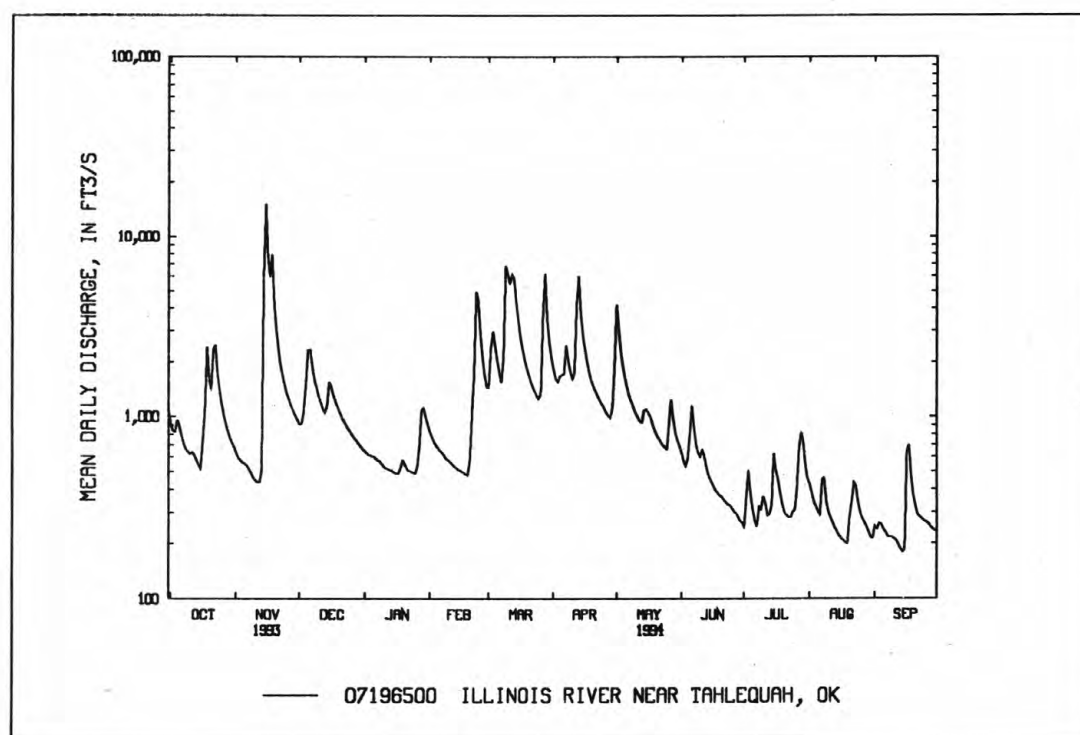
07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	552	899	908	815	1112	1456	1607	1677	1002	478	359	362
MAX	5222	4659	4258	2916	4661	6695	6864	8397	5993	2491	3907	1913
(WY)	1987	1974	1993	1937	1938	1945	1945	1950	1974	1958	1948	1974
MIN	7.05	75.3	77.5	74.0	113	147	151	189	80.1	22.9	10.5	3.15
(WY)	1957	1964	1956	1956	1964	1940	1954	1936	1936	1954	1936	1954

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1936-94
ANNUAL TOTAL	639126	422854	
ANNUAL MEAN	1751	1159	936
HIGHEST ANNUAL MEAN			1980
LOWEST ANNUAL MEAN			193
HIGHEST DAILY MEAN	18400	May 11	15200
LOWEST DAILY MEAN	254	Sep 2	180
ANNUAL SEVEN-DAY MINIMUM	271	Aug 29	199
INSTANTANEOUS PEAK FLOW			16300
INSTANTANEOUS PEAK STAGE			13.37
ANNUAL RUNOFF (AC-FT)	1268000	838700	678300
ANNUAL RUNOFF (CFSM)	1.83	1.21	.98
ANNUAL RUNOFF (INCHES)	24.79	16.40	13.27
10 PERCENT EXCEEDS	3240	2350	1930
50 PERCENT EXCEEDS	1280	686	407
90 PERCENT EXCEEDS	416	264	113

^aFrom rating curve extended above 77,000 ft³/s, on basis of slope-area measurement of peak flow.



ARKANSAS RIVER BASIN
07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-61, 1975-79, 1989 to current year.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS - CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE - CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT											
19...	1330	1028	80020	1520	209	7.2	16.0	17.5	--	745	7.0
NOV											
23...	0900	1028	80020	1700	205	7.6	13.5	11.5	--	745	9.6
DEC											
21...	0915	1028	80020	991	230	7.1	-1.0	7.0	0.70	756	11.7
JAN											
25...	0915	1028	80020	485	254	8.0	12.5	8.0	--	747	11.6
FEB											
24...	1000	1028	80020	4540	166	7.2	6.5	7.5	31	750	10.4
MAR											
22...	1030	1028	80020	1470	209	7.8	11.0	12.5	2.5	749	9.5
APR											
26...	1230	1028	80020	1050	220	8.6	27.5	19.0	--	743	10.4
MAY											
16...	1630	1028	80020	1040	216	8.9	26.5	22.0	--	750	13.2
JUN											
22...	1000	1028	80020	349	250	7.7	29.0	26.0	1.8	750	6.1
JUL											
27...	0900	1028	80020	700	259	7.9	16.5	22.0	--	750	8.1
AUG											
24...	1500	1028	80020	337	274	7.8	30.0	27.0	--	750	8.5
SEP											
08...	0830	1028	80020	217	279	7.7	23.0	23.0	--	760	7.0

ARKANSAS RIVER BASIN
07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	E. COLI WHOLE UREASE (COL / 100 ML) (31633)	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)
OCT											
19...	75	1.9	310	650	--	84	8	31	1.7	5.3	12
NOV											
23...	90	--	81	960	--	87	0	32	1.7	4.7	10
DEC											
21...	97	--	K11	K11	--	89	0	33	1.6	5.4	11
JAN											
25...	99	--	K9	K6	--	100	4	38	1.8	7.3	13
FEB											
24...	88	2.0	520	3700	--	68	10	25	1.4	4.3	12
MAR											
22...	91	--	K24	K56	--	92	15	34	1.6	4.7	10
APR											
26...	115	--	34	43	37	89	9	33	1.6	5.4	11
MAY											
16...	154	--	130	91	22	92	25	34	1.7	5.6	11
JUN											
22...	77	--	93	100	87	100	2	39	1.8	7.0	12
JUL											
27...	94	--	220	290	220	100	1	38	1.8	9.0	16
AUG											
24...	109	--	--	--	--	110	16	41	2.0	9.7	16
SEP											
08...	81	--	200	220	180	110	6	41	2.0	10	16

ARKANSAS RIVER BASIN
07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA- LILITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
OCT											
19...	0.3	2.7	93	0	77	9.1	6.8	0.10	8.0	124	118
NOV											
23...	0.2	2.9	115	0	94	8.5	5.7	0.20	8.1	123	131
DEC											
21...	0.2	2.1	109	0	89	9.3	7.0	<0.10	5.1	130	127
JAN											
25...	0.3	2.3	120	0	98	9.4	9.8	<0.10	2.1	145	140
FEB											
24...	0.2	2.4	71	0	58	8.6	5.8	<0.10	6.0	101	96
MAR											
22...	0.2	2.3	93	0	76	8.0	6.6	<0.10	6.3	125	121
APR											
26...	0.2	2.3	93	2	79	8.0	7.2	<0.10	2.3	124	115
MAY											
16...	0.3	2.7	71	5	66	8.1	7.3	<0.10	3.0	121	107
JUN											
22...	0.3	2.8	126	0	103	8.4	9.0	<0.10	10	149	146
JUL											
27...	0.4	2.8	123	0	101	9.6	12	<0.10	9.5	175	148
AUG											
24...	0.4	3.4	115	0	94	9.7	13	<0.10	9.4	160	149
SEP											
08...	0.4	3.6	127	0	104	10	13	<0.10	9.8	164	155

ARKANSAS RIVER BASIN
07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	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 TOTAL (MG/L AS N) (00630)	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)
OCT 19...	0.17	509	1.59	1.59	7.0	0.010	0.03	1.60	1.60	0.030	0.04
NOV 23...	0.17	565	2.40	--	--	<0.010	--	2.40	2.40	0.010	0.01
DEC 21...	0.18	348	2.10	--	--	<0.010	--	2.10	2.10	0.010	0.01
JAN 25...	0.20	190	2.19	2.19	9.7	0.010	0.03	2.20	2.20	0.020	0.03
FEB 24...	0.14	1240	1.69	1.69	7.5	0.010	0.03	1.70	1.70	0.040	0.05
MAR 22...	0.17	496	2.59	2.59	11	0.010	0.03	2.60	2.60	<0.010	--
APR 26...	0.17	352	1.60	--	--	<0.010	--	1.60	1.60	0.020	0.03
MAY 16...	0.16	340	1.10	--	--	<0.010	--	1.10	1.10	0.020	0.03
JUN 22...	0.20	140	1.20	--	--	<0.010	--	1.20	1.20	0.020	0.03
JUL 27...	0.24	331	1.10	--	--	<0.010	--	1.10	1.10	0.030	0.04
AUG 24...	0.22	146	0.780	--	--	<0.010	--	0.780	0.780	0.010	0.01
SEP 08...	0.22	96.1	0.660	--	--	<0.010	--	0.660	0.660	0.020	0.03

ARKANSAS RIVER BASIN
07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS- (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)
OCT 19...	0.47	0.27	0.50	0.30	2.1	0.120	0.110	0.100	0.31	<1	37
NOV 23...	--	--	<0.20	<0.20	--	0.070	0.060	0.070	0.21	--	--
DEC 21...	--	--	<0.20	<0.20	--	0.060	0.040	0.050	0.15	<1	33
JAN 25...	--	--	<0.20	<0.20	--	<0.010	0.030	0.040	0.12	--	--
FEB 24...	0.46	0.26	0.50	0.30	2.2	0.150	0.080	0.080	0.25	<1	29
MAR 22...	--	--	<0.20	<0.20	--	0.070	0.080	0.060	0.18	<1	32
APR 26...	--	--	<0.20	<0.20	--	0.020	0.030	0.020	0.06	--	--
MAY 16...	--	--	<0.20	<0.20	--	<0.010	<0.010	0.010	0.03	--	--
JUN 22...	--	--	<0.20	<0.20	--	0.110	0.080	0.090	0.28	<1	47
JUL 27...	--	--	<0.20	<0.20	--	0.100	0.090	0.100	0.31	--	--
AUG 24...	0.19	--	0.20	<0.20	0.98	0.100	0.100	0.060	0.18	2	49
SEP 08...	--	--	<0.20	<0.20	--	0.090	0.090	0.070	0.21	--	--

ARKANSAS RIVER BASIN
07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	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)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT 19...	<0.5	--	<1.0	<5	<3	<10	40	<10	<4	4
NOV 23...	--	--	--	--	--	--	17	--	--	6
DEC 21...	<0.5	10	<1.0	<5	<3	<10	6	<10	<4	4
JAN 25...	--	--	--	--	--	--	<3	--	--	2
FEB 24...	<0.5	20	<1.0	<5	<3	<10	54	<10	<4	4
MAR 22...	<0.5	<10	<1.0	<5	<3	<10	15	<10	<4	3
APR 26...	--	--	--	--	--	--	14	--	--	4
MAY 16...	--	--	--	--	--	--	13	--	--	3
JUN 22...	<0.5	30	2.0	<5	3	<10	19	<10	<4	6
JUL 27...	--	--	--	--	--	--	17	--	--	6
AUG 24...	<0.5	--	1.0	<5	<3	<10	<3	<10	<4	9
SEP 08...	--	--	--	--	--	--	16	--	--	6

ARKANSAS RIVER BASIN
07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

ARKANSAS RIVER BASIN
07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	PCB, TOTAL (UG/L) (39516)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	CHLOR- PYRIFOS TOTAL RECOVER (UG/L) (38932)	2,4-D, TOTAL (UG/L) (39730)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DEF TOTAL (UG/L) (39040)	DI- AZINON, TOTAL (UG/L) (39570)
APR 26...	<0.1	<0.10	<0.010	<0.1	<0.01	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01
JUN 22...	<0.1	<0.10	<0.010	<0.1	<0.01	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01
DATE	DI- ELDRIN TOTAL (UG/L) (39380)	DI- SYSTON TOTAL (UG/L) (39011)	2, 4-DP TOTAL (UG/L) (82183)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	WATER ETHION, TOTAL (UG/L) (39398)	FONOFOS (DY- FONATE) HEPTA- WHOLE TOT.REC (UG/L) (82614)	CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)
APR 26...	<0.010	<0.01	<0.01	<0.010	<0.010	<0.01	<0.01	<0.010	<0.010	<0.010	<0.01
JUN 22...	<0.010	<0.01	<0.01	<0.010	<0.010	<0.01	<0.01	<0.010	<0.010	<0.010	<0.01
DATE	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METHYL PARA- THION, TOTAL (UG/L) (39600)	MIREX, TOTAL (UG/L) (39755)	PARA- THION, TOTAL (UG/L) (39540)	PER- THANE TOTAL (UG/L) (39034)	PHORATE TOTAL (UG/L) (39023)	SILVEX, TOTAL (UG/L) (39760)	2,4,5-T TOTAL (UG/L) (39740)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)	
APR 26...	<0.01	<0.01	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01	<1	<0.01	
JUN 22...	<0.01	<0.01	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01	<1	<0.01	
DATE	2,4,5-T DIS- SOLVED (UG/L) (39742)	2,4-D, DIS- SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTA- ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO- MACIL, WATER, DISS, REC (UG/L) (04029)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)
MAY 16... <0.01	<0.05	<0.05	<0.05	<0.01	<0.00	0.01	<0.05	<0.01	<0.05	<0.05	

ARKANSAS RIVER BASIN
07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

	CAR- BARYL WATER FLTRD 0.7 U	CARBO- FURAN WATER FLTRD 0.7 U	CHLOR- PYRIFOS DIS- SOLVED (UG/L)	CYANA- ZINE, WATER, DISS, (UG/L)	DCPA WATER FLTRD 0.7 U	P,P' DDE (UG/L)	DI- AZINON, DIS- (UG/L)	DICAMBA WATER, FLTRD, GF 0.7U (UG/L)	DI- ELDRIN DIS- (UG/L)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U (UG/L)	DIMETH- OATE WATER FLTRD 0.7 U (UG/L)
DATE	GF, REC (82680)	GF, REC (82674)	GF, REC (38933)	REC (04041)	GF, REC (82682)	DISSOLV (34653)	SOLVED (39572)	REC (38442)	SOLVED (39381)	GF, REC (82660)	GG, REC (82662)

MAY

16... <0.05 <0.01 <0.01 <0.01 <0.00 <0.01 0.01 <0.05 <0.01 <0.01 <0.02

	DISUL- FOTON WATER FLTRD 0.7 U	EPTC WATER FLTRD 0.7 U	ETHAL- FLUR- ALIN WAT FLT 0.7 U	ETHO- PROP WATER FLTRD 0.7 U	FLUO- METURON WATER, FLTRD, GF 0.7U REC	FONOFOS WATER DISS (UG/L)	ALPHA BHC DIS- (UG/L)	LINDANE DIS- (UG/L)	LIN- URON WATER FLTRD 0.7 U (UG/L)	LINURON WATER, FLTRD, GF 0.7U (UG/L)	MALA- THION, DIS- SOLVED (UG/L)
DATE	GF, REC (82677)	GF, REC (82668)	GF, REC (82663)	GF, REC (82672)	REC (38811)	REC (04095)	SOLVED (34253)	SOLVED (39341)	GF, REC (82666)	REC (38478)	SOLVED (39532)

MAY

16... <0.06 <0.00 <0.01 <0.01 <0.05 <0.01 <0.01 <0.01 <0.04 <0.05 <0.01

	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L)	METHIO- CARB, WATER, FLTRD, GF 0.7U REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U (UG/L)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	METHYL PARA- THION WAT FLT 0.7 U (UG/L)
DATE	(38482)	(38487)	(38501)	(39415)	(82630)	(82671)	(82684)	(38866)	(39542)	(82667)

MAY

16... <0.05 <0.05 <0.05 <0.01 <0.01 <0.01 <0.01 <0.05 <0.02 <0.03

	PEB- ULATE WATER FILTRD 0.7 U	PENDI- METH- ALIN WAT FLT 0.7 U	PER- METHRIN CIS WAT FLT 0.7 U	PHORATE WATER FLTRD 0.7 U	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U (UG/L)	PRO- POXUR, WATER, FLTRD, GF 0.7U REC (UG/L)
DATE	GF, REC (82669)	GF, REC (82683)	GF, REC (82687)	GF, REC (82664)	REC (04037)	GF, REC (82676)	REC (04024)	GF, REC (82679)	GF, REC (82685)	REC (38538)

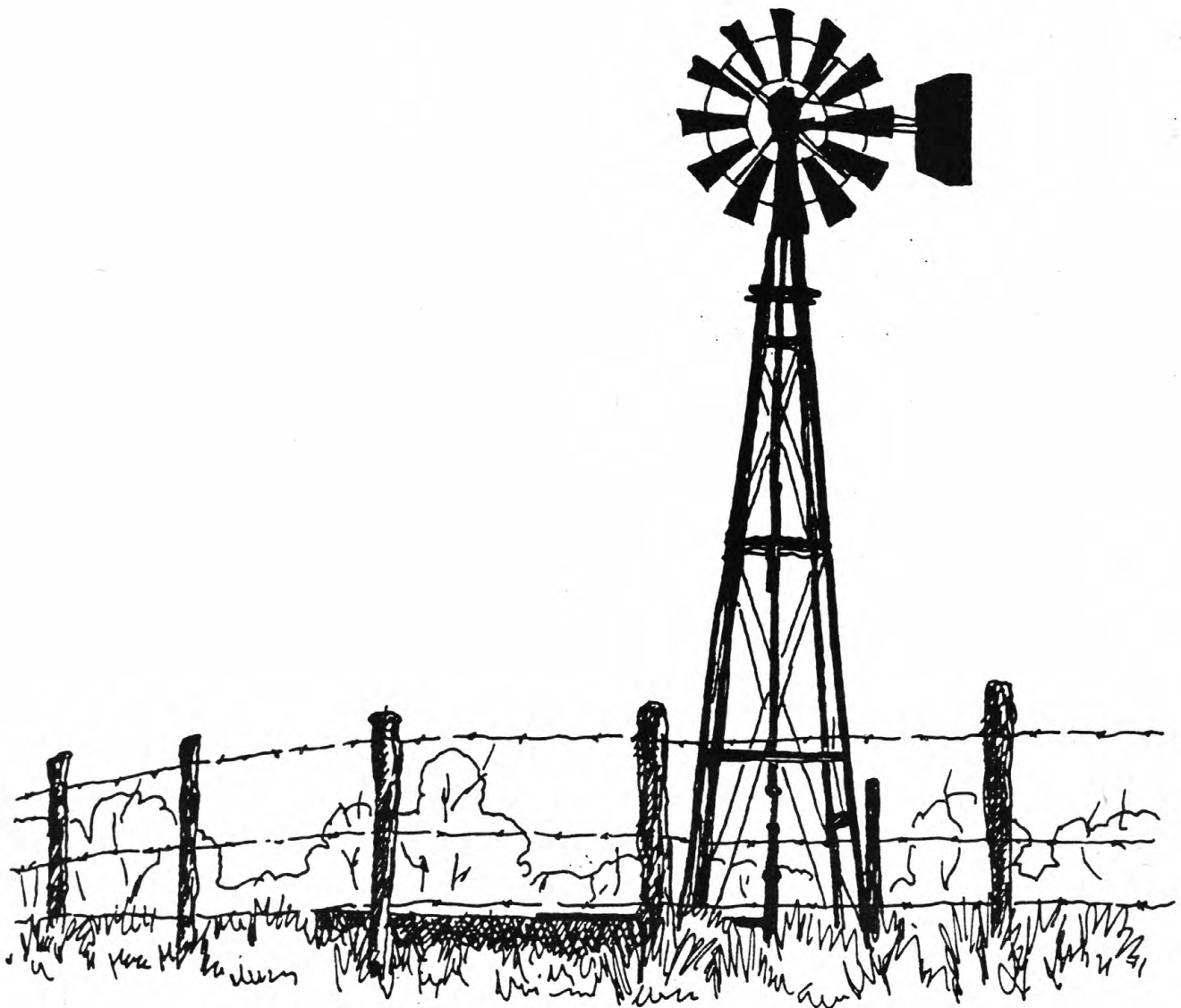
MAY

16... <0.01 <0.02 <0.02 <0.01 <0.01 <0.01 <0.02 <0.02 <0.01 <0.05

	SILVEX, DIS- SOLVED (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U (UG/L)	TER- BACIL WATER FLTRD 0.7 U (UG/L)	TER- BUFOS WATER FLTRD 0.7 U (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U (UG/L)	DIAZ- INON D10 SRG WAT FLT 0.7 U (UG/L)	HCH ALPHA D6 SRG WAT FLT 0.7 U (UG/L)	TERBUTH YLAZINE SURROGT WAT FLT 0.7 U (UG/L)
DATE	(39762)	(04035)	(82670)	(82665)	(82675)	(82681)	(82678)	(91063)	(91065)	(91064)

MAY

16... <0.05 0.14 <0.02 <0.03 <0.01 <0.01 <0.01 90 70 88



ARKANSAS RIVER BASIN

07196973 PEACHEATER CREEK AT CHRISTIE, OK

LOCATION.--Lat 35°57'17", long 94°41'46", in SW 1/4 NE 1/4 sec.13, T.17 N., R.24 E., Adair County, Hydrologic Unit 11110103, on the left downstream wingwall of bridge on U.S. Highway 62, .4 mi upstream from Baron Fork, 9.1 mi west of Westville, and 19.3 mi east of Tahlequah.

DRAINAGE AREA.--25.0 mi².

PERIOD OF RECORD.--September 1992 to current year.

GAGE.--Water-stage recorder. Datum of gage is 810.72 ft above sea level.

REMARKS.--No estimated daily discharges. Records good.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1930 reached a stage of about 20.8 ft at present site and datum; information supplied by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 14	0300	1.430	8.41	No other peaks above base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	14	29	17	16	47	46	44	11	3.1	14	5.3
2	9.6	13	31	16	16	68	41	43	10	3.4	12	4.6
3	8.4	12	33	16	16	67	38	41	10	3.4	11	3.9
4	7.9	10	40	15	15	63	34	37	9.7	3.2	10	3.3
5	7.3	9.2	46	15	14	54	37	33	9.2	3.0	9.8	3.0
6	6.5	8.7	47	15	14	47	44	29	8.8	2.8	8.1	3.7
7	6.1	8.1	46	14	13	41	42	26	8.3	2.9	8.0	3.2
8	6.0	7.3	44	14	12	63	40	22	8.1	16	7.3	2.9
9	5.7	6.9	41	14	12	79	39	21	8.4	11	7.1	2.7
10	5.3	6.2	38	13	11	88	39	20	7.9	11	6.9	2.4
11	5.1	5.8	35	13	11	108	54	19	7.8	9.6	5.9	2.1
12	4.8	5.6	33	13	10	113	103	18	7.1	8.5	4.9	1.8
13	4.5	43	35	13	10	97	87	17	6.8	10	3.7	1.7
14	4.2	614	40	13	9.7	81	74	17	6.2	11	3.2	1.6
15	3.9	173	39	12	9.5	70	63	16	6.6	13	3.1	1.5
16	43	153	39	13	9.2	63	53	15	7.8	11	2.7	4.5
17	212	173	39	13	9.5	58	47	15	6.4	10	2.5	2.9
18	118	131	37	12	9.9	53	42	14	6.1	9.9	2.4	2.2
19	80	105	35	12	11	49	39	13	7.1	8.8	3.7	1.9
20	102	85	33	12	17	46	34	13	6.3	8.1	13	1.7
21	93	72	30	13	19	42	32	13	5.6	9.3	11	1.5
22	74	63	27	12	94	40	29	13	5.1	8.3	10	1.6
23	55	57	25	12	105	38	27	13	4.8	7.4	10	1.6
24	42	51	23	12	79	36	25	13	4.2	6.6	9.3	1.7
25	34	47	22	12	61	34	24	13	3.9	17	8.4	1.8
26	30	43	21	14	50	83	22	13	3.7	16	7.4	1.7
27	27	39	20	16	42	121	21	12	3.5	17	6.7	1.5
28	25	37	19	16	40	93	21	12	3.5	17	5.6	1.4
29	22	34	18	17	---	74	22	13	3.2	16	4.4	1.3
30	19	32	17	17	---	60	47	12	3.2	16	3.6	1.2
31	16	---	17	17	---	52	---	11	---	16	5.5	---
TOTAL	1087.2	2058.8	999	433	735.8	2028	1266	611	200.3	306.3	221.2	72.2
MEAN	35.1	68.6	32.2	14.0	26.3	65.4	42.2	19.7	6.68	9.88	7.14	2.41
MAX	212	614	47	17	105	121	103	44	11	17	14	5.3
MIN	3.9	5.6	17	12	9.2	34	21	11	3.2	2.8	2.4	1.2
AC-FT	2160	4080	1980	859	1460	4020	2510	1210	397	608	439	143

ARKANSAS RIVER BASIN

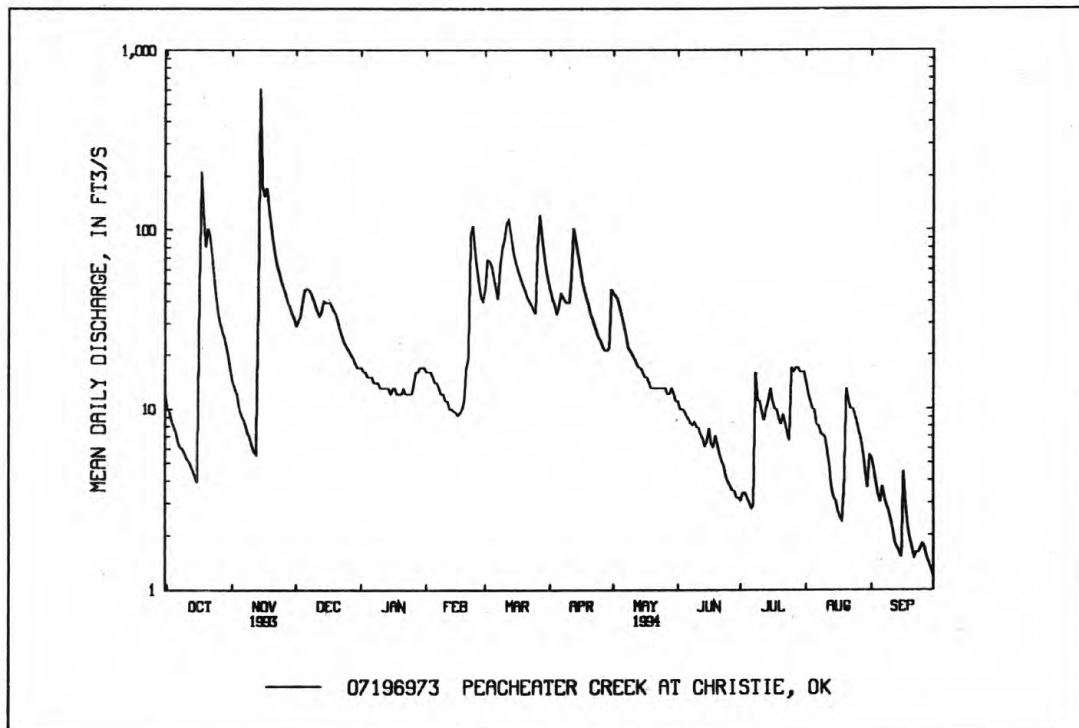
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07196973 PEACHEATER CREEK AT CHRISTIE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	19.0	52.1	67.4	36.1	44.7	57.7	53.9	62.2	28.7	11.3	5.74	15.3
MAX	35.1	68.6	103	58.3	63.1	65.4	65.5	105	50.8	12.7	7.14	28.1
(WY)	1994	1994	1993	1993	1993	1994	1993	1993	1993	1993	1994	1993
MIN	2.90	35.6	32.2	14.0	26.3	50.1	42.2	19.7	6.68	9.88	4.34	2.41
(WY)	1993	1993	1994	1994	1994	1993	1994	1994	1994	1994	1993	1994

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1993-94
ANNUAL TOTAL	17381.2	10018.8	
ANNUAL MEAN	47.6	27.4	37.8
HIGHEST ANNUAL MEAN			48.2 1993
LOWEST ANNUAL MEAN			27.4 1994
HIGHEST DAILY MEAN	678	May 10	614 Nov 14
LOWEST DAILY MEAN	1.9	Sep 12	1.2 Sep 30
ANNUAL SEVEN-DAY MINIMUM	2.6	Sep 6	1.5 Sep 24
INSTANTANEOUS PEAK FLOW		1430	Nov 14
INSTANTANEOUS PEAK STAGE		8.41	Nov 14
ANNUAL RUNOFF (AC-FT)	34480	19870	27390
10 PERCENT EXCEEDS	94	63	80
50 PERCENT EXCEEDS	35	14	18
90 PERCENT EXCEEDS	4.8	3.3	3.3



ARKANSAS RIVER BASIN
07197000 BARON FORK AT ELDON, OK

LOCATION.--Lat 35°55'16", long 94°50'18", in NE 1/4 SE 1/4 sec.27, T.17 N., R.23 E., Cherokee County, Hydrologic Unit 11110103, on downstream left abutment of bridge on State Highway 51, 0.4 mi southeast of Eldon, 6.0 mi downstream from Tyner Creek, and at mile 8.8.

DRAINAGE AREA.--307 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1948 to current year. Prior to October 1970 published as Barren Fork at Eldon.

REVISED RECORDS.--WDR OK-93-1: 1990 (M).

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

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 15, 1945, reached a stage of 23.8 ft, from information provided by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 14	1930	9,240	13.55	No other peak above base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	328	282	349	204	270	734	550	860	125	50	141	79
2	304	264	353	196	251	1260	488	617	115	51	115	74
3	321	255	431	195	240	1190	469	577	113	51	98	70
4	302	242	737	191	229	984	494	545	111	49	88	64
5	265	228	889	182	219	828	455	460	116	46	82	61
6	237	208	767	176	210	717	493	397	108	44	75	61
7	216	195	666	170	200	623	463	348	98	43	112	58
8	201	185	585	162	189	1420	434	309	97	85	153	55
9	201	175	529	156	182	2090	413	281	102	102	113	54
10	228	167	482	152	176	1710	400	260	96	89	94	54
11	214	160	437	149	166	2110	422	241	90	76	83	51
12	196	156	401	145	162	2050	1080	226	92	68	76	48
13	182	184	409	144	167	1560	954	215	86	71	68	46
14	169	6480	633	138	170	1220	769	214	78	105	63	44
15	158	3400	606	135	165	997	653	218	78	133	60	49
16	871	1970	542	133	160	828	563	203	73	129	56	111
17	3110	3850	497	142	153	722	493	185	71	116	54	92
18	1520	2110	460	148	149	641	440	171	70	100	51	73
19	1060	1500	432	147	149	564	401	159	73	93	51	65
20	1650	1130	406	139	480	508	366	148	76	83	98	61
21	1800	916	378	135	656	461	334	143	70	83	155	57
22	1230	775	351	130	2140	418	307	136	67	87	144	56
23	946	680	328	131	2400	385	284	130	67	82	118	54
24	770	589	304	137	1490	359	267	127	65	75	100	54
25	651	522	288	144	1100	333	253	127	62	100	89	53
26	551	482	271	165	850	476	243	130	59	141	84	52
27	477	443	258	590	707	1960	231	150	57	205	78	50
28	424	417	245	482	617	1280	222	144	56	170	71	48
29	380	394	233	388	---	949	234	136	54	135	66	46
30	345	371	220	336	---	758	913	137	53	119	61	44
31	311	---	212	298	---	638	---	133	---	126	67	---
TOTAL	19618	28730	13699	6140	14047	30773	14088	8127	2478	2907	2764	1784
MEAN	633	958	442	198	502	993	470	262	82.6	93.8	89.2	59.5
MAX	3110	6480	889	590	2400	2110	1080	860	125	205	155	111
MIN	158	156	212	130	149	333	222	127	53	43	51	44
AC-FT	38910	56990	27170	12180	27860	61040	27940	16120	4920	5770	5480	3540
CFSM	2.06	3.12	1.44	.65	1.63	3.23	1.53	.85	.27	.31	.29	.19
IN.	2.38	3.48	1.66	.74	1.70	3.73	1.71	.98	.30	.35	.33	.22

ARKANSAS RIVER BASIN

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07197000 BARON FORK AT ELDON, OK--Continued

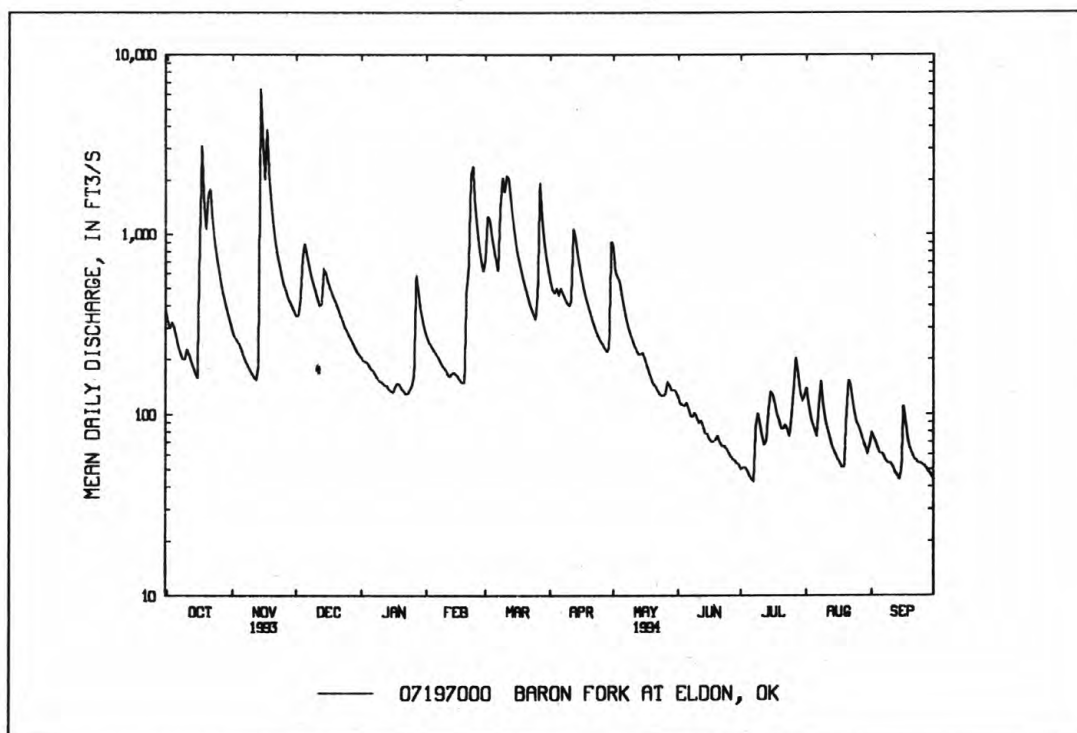
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	182	311	318	277	387	538	584	651	322	147	75.2	115
MAX	2077	1499	1692	977	1441	1702	2105	2605	1575	903	437	927
(WY)	1987	1975	1988	1991	1951	1973	1957	1957	1957	1958	1992	1970
MIN	1.96	10.4	14.0	14.6	24.6	43.3	81.0	62.5	25.0	8.75	3.80	3.10
(WY)	1957	1964	1964	1964	1964	1967	1954	1977	1977	1954	1954	1956

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1949-94

ANNUAL TOTAL	255606	145155	
ANNUAL MEAN	700	398	325
HIGHEST ANNUAL MEAN			734
LOWEST ANNUAL MEAN			55.7
HIGHEST DAILY MEAN	11900	May 10	6480
LOWEST DAILY MEAN	41	Aug 23	43
ANNUAL SEVEN-DAY MINIMUM	46	Aug 18	48
INSTANTANEOUS PEAK FLOW			9240
INSTANTANEOUS PEAK STAGE			13.55
ANNUAL RUNOFF (AC-FT)	507000	287900	235500
ANNUAL RUNOFF (CFSM)	2.28	1.30	1.06
ANNUAL RUNOFF (INCHES)	30.97	17.59	14.39
10 PERCENT EXCEEDS	1400	899	707
50 PERCENT EXCEEDS	482	196	118
90 PERCENT EXCEEDS	81	61	21

^aAlso occurred Oct. 8, 21-28, 1956.



ARKANSAS RIVER BASIN
07197000 BARON FORK AT ELDON, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948, 1958-60, 1991 to current year.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

		AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT											
20...	1000	1028	80020	1530	184	7.4	16.0	17.5	--	745	8.4
NOV											
14...	1330	1028	80020	8370	120	7.5	13.5	12.0	190	740	8.8
DEC											
15...	1645	1028	80020	589	181	7.8	4.5	9.0	0.60	740	11.7
FEB											
23...	1515	1028	80020	2180	148	7.3	0.0	8.5	--	750	10.7
MAY											
11...	1430	1028	80020	241	*177	8.3	27.0	17.5	0.70	750	11.0
17...	1530	1028	80020	186	180	8.3	29.5	22.0	--	750	10.4
JUN											
29...	1030	1028	80020	54	192	7.4	25.0	24.0	0.30	748	7.7
AUG											
25...	1100	1028	80020	90	205	7.6	28.0	23.5	--	755	8.2
SEP											
06...	1130	1028	80020	64	206	7.4	24.0	23.0	--	756	8.5
	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	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)
OCT											
20...	90	--	--	--	--	--	--	--	--	--	--
NOV											
14...	84	1.2	--	--	--	47	9	17	1.1	1.6	6
DEC											
15...	104	--	--	--	--	84	24	31	1.6	2.8	7
FEB											
23...	93	--	--	--	--	--	--	--	--	--	--
MAY											
11...	117	--	--	--	--	78	13	29	1.4	2.5	6
17...	121	--	K7	77	K12	81	0	30	1.4	2.5	6
JUN											
29...	93	--	--	--	--	87	7	32	1.6	2.8	6
AUG											
25...	98	--	--	--	--	--	--	--	--	--	--
SEP											
06...	100	--	40	180	85	94	3	35	1.7	3.1	6

*SPECIFIC CONDUCTANCE, LAB (µs/cm)

ARKANSAS RIVER BASIN
07197000 BARON FORK AT ELDON, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
OCT 20...	--	--	85	0	70	--	--	--	--	--	--
NOV 14...	0.1	3.3	46	0	38	4.9	2.8	0.10	6.5	79	65
DEC 15...	0.1	1.5	73	0	60	7.0	3.7	<0.10	6.8	103	98
FEB 23...	--	--	64	0	53	--	--	--	--	--	--
MAY 11...	0.1	1.6	80	0	66	6.2	3.6	<0.10	5.8	101	94
17...	0.1	1.7	103	0	85	6.0	3.6	<0.10	6.1	101	106
JUN 29...	0.1	1.8	97	0	80	5.3	3.8	0.20	9.4	112	108
AUG 25...	--	--	102	0	83	--	--	--	--	--	--
SEP 06...	0.1	2.1	111	0	91	5.0	4.7	<0.10	9.8	126	118
DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	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 TOTAL (MG/L AS N) (00630)	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)
OCT 20...	--	--	2.00	--	--	<0.010	--	2.00	2.00	0.020	0.03
NOV 14...	0.11	1790	1.00	--	--	<0.010	--	1.00	1.00	0.010	0.01
DEC 15...	0.14	164	1.60	--	--	<0.010	--	1.60	1.60	0.020	0.03
FEB 23...	--	--	1.59	1.59	7.0	0.010	0.03	1.60	1.60	0.020	0.03
MAY 11...	0.14	65.7	0.900	--	--	<0.010	--	0.900	0.900	0.020	0.03
17...	0.14	50.7	0.880	--	--	<0.010	--	0.880	0.880	0.010	0.01
JUN 29...	0.15	16.3	0.680	--	--	<0.010	--	0.680	0.680	0.020	0.03
AUG 25...	--	--	0.500	--	--	<0.010	--	0.500	0.500	0.020	0.03
SEP 06...	0.17	21.8	0.480	--	--	<0.010	--	0.480	0.480	0.030	0.04

ARKANSAS RIVER BASIN
07197000 BARON FORK AT ELDON, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS- (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTH, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTH, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)
OCT 20...	0.28	--	0.30	<0.20	2.3	0.120	0.070	0.060	0.18	--	--
NOV 14...	0.79	0.19	0.80	0.20	1.8	0.320	0.100	0.110	0.34	<1	21
DEC 15...	--	--	<0.20	<0.20	--	0.040	0.020	0.020	0.06	<1	28
FEB 23...	0.38	--	0.40	<0.20	2.0	0.100	0.040	0.030	0.09	--	--
MAY 11...	--	--	<0.20	<0.20	--	0.020	0.010	0.020	0.06	<1	28
17...	--	--	<0.20	<0.20	--	<0.010	<0.010	<0.010	--	--	--
JUN 29...	--	--	<0.20	<0.20	--	0.030	0.020	0.030	0.09	<1	34
AUG 25...	--	--	<0.20	<0.20	--	0.020	0.020	0.010	0.03	--	--
SEP 06...	--	--	<0.20	<0.20	--	0.050	0.050	0.030	0.09	--	--

DATE	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	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)	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)
OCT 20...	--	--	--	--	--	--	--	--	--	--	--
NOV 14...	<0.5	<10	<1.0	<5	<3	<10	75	10	<4	10	<0.1
DEC 15...	0.8	<10	<1.0	<5	<3	<10	8	<10	<4	3	<0.1
FEB 23...	--	--	--	--	--	--	--	--	--	--	--
MAY 11...	<0.5	<10	<1.0	<5	<3	<10	4	<10	<4	4	<0.1
17...	--	--	--	--	--	--	<3	--	--	3	--
JUN 29...	<0.5	10	<1.0	<5	<3	<10	<3	<10	<4	7	<0.1
AUG 25...	--	--	--	--	--	--	--	--	--	--	--
SEP 06...	--	--	--	--	--	--	10	--	--	4	--

ARKANSAS RIVER BASIN
07197000 BARON FORK AT ELDON, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	MOLYB-	NICKEL,	SILVER,	STRON-	VANA-	ZINC,	CARBON,	CARBON,		SEDI-	SED.
	DENUM,			TIUM,	DIUM,		ORGANIC	ORGANIC		MENT,	SUSP.
	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	SUS-	SEDI-	DIS-	SIEVE
	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	TOTAL	MENT,	SUS-	DIAM.
	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(MG/L	(MG/L	PENDE	PENDE	% FINER
	AS MO)	AS NI)	AS AG)	AS SR)	AS V)	AS ZN)	AS C)	AS C)	(MG/L)	(T/DAY)	.062 MM
	(01060)	(01065)	(01075)	(01080)	(01085)	(01090)	(00681)	(00689)	(80154)	(80155)	(70331)
OCT											
20...	--	--	--	--	--	--	--	--	--	--	--
NOV											
14...	<10	<10	2.0	24	<6	14	--	--	--	--	--
DEC											
15...	<10	<10	<1.0	37	<6	<3	--	--	--	--	--
FEB											
23...	--	--	--	--	--	--	--	--	--	--	--
MAY											
11...	<10	<10	<1.0	36	<6	<3	--	--	--	--	--
17...	--	--	--	--	--	--	1.0	0.1	3	1.5	95
JUN											
29...	<10	<10	<1.0	40	<6	<3	--	--	--	--	--
AUG											
25...	--	--	--	--	--	--	--	--	--	--	--
SEP											
06...	--	--	--	--	--	--	0.5	0.1	2	0.35	--
			2,4-DB	ALA-	DEETHYL	ATRA-	METHYL	BEN-	BENTA-		CAR-
			WATER,	CHLOR,		ZINE,	AZIN-	FLUR-	ZON,	BRO-	BARYL
	2,4,5-T	2,4-D,	FLTRD,	WATER,	WATER,	WATER,	PHOS	ALIN	WATER,	MACIL,	WATER
	DIS-	DIS-	GF 0.7U	DISS,	DISS,	DISS,	WAT FLT	WAT FLD	FLTRD,	WATER,	FLTRD
DATE	SOLVED	SOLVED	REC	REC,	REC	REC	0.7 U	0.7 U	GF 0.7U	DISS,	DISS,
	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
	(39742)	(39732)	(38746)	(46342)	(04040)	(39632)	(82686)	(82673)	(38711)	(04029)	(04028)
											(82680)
MAY											
17...	<0.05	<0.05	<0.05	<0.01	<0.0	<0.02	<0.05	<0.01	<0.05	<0.05	<0.01
											<0.05
	CARBO-		CYANA-	DCPA		DI-	DICAMBA		2,6-DI-	DIMETH-	DISUL-
	FURAN		ZINE,	WATER		WATER,		DI-	ETHYL	OATE	FOTON
	WATER	CHLOR-	WATER,	FLTRD	P,P'	AZINON,	FLTRD,	ELDRIN	ANILINE	WATER	WATER
	FLTRD	PYRIFOS	DISS,	0.7 U	DDE	DIS-	GF 0.7U	DIS-	0.7 U	0.7 U	0.7 U
DATE	GF, REC	SOLVED	REC	GF, REC	DISSOLV	SOLVED	REC	SOLVED	GF, REC	GG, REC	GF, REC
	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
	(82674)	(38933)	(04041)	(82682)	(34653)	(39572)	(38442)	(39381)	(82660)	(82662)	(82677)
											(82668)
MAY											
17...	<0.01	<0.01	<0.01	<0.0	<0.01	<0.01	<0.05	<0.01	<0.01	<0.02	<0.06
											<0.0

ARKANSAS RIVER BASIN
07197000 BARON FORK AT ELDON, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

	ETHAL- FLUR- ALIN WAT FLT 0.7 U	ETHO- PROP WATER FLTRD 0.7 U	FLUO- METURON WATER, FLTRD, GF 0.7U	FONOFOS WATER DISS REC	ALPHA BHC DIS- SOLVED	LINDANE DIS- SOLVED	LIN- URON WATER FLTRD 0.7 U	LINURON WATER, FLTRD, GF 0.7U	MALA- THION, DIS- SOLVED	MCPA, WATER, FLTRD, GF 0.7U	MCPB, WATER, FLTRD, GF 0.7U	METHIO- CARB, WATER, FLTRD, GF 0.7U
DATE	GF, REC (UG/L)	GF, REC (UG/L)	REC (UG/L)	REC (UG/L)	SOLVED (UG/L)	SOLVED (UG/L)	GF, REC (UG/L)	REC (UG/L)	SOLVED (UG/L)	REC (UG/L)	REC (UG/L)	REC (UG/L)
	(82663)	(82672)	(38811)	(04095)	(34253)	(39341)	(82666)	(38478)	(39532)	(38482)	(38487)	(38501)

MAY

17... <0.01 <0.01 <0.05 <0.01 <0.01 <0.01 <0.04 <0.05 <0.01 <0.05 <0.05 <0.05

	METRI- METO- LACHLOR WATER	BUZIN SENCOR WATER	MOL- INATE WATER FLTRD 0.7 U	NAPROP- AMIDE WATER FLTRD 0.7 U	OXAMYL, WATER, FLTRD, GF 0.7U	PARA- THION, DIS- SOLVED	METHYL PARA- THION WAT FLT 0.7 U	PEB- ULATE WATER FILTRD 0.7 U	PENDI- METH- ALIN WAT FLT 0.7 U	PER- CIS WAT FLT 0.7 U	PHORATE WATER FLTRD 0.7 U	PRO- METON, WATER, DISS, REC (UG/L)
DATE	DISSOLV (UG/L)	DISSOLV (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	REC (UG/L)	SOLVED (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	REC (UG/L)
	(39415)	(82630)	(82671)	(82684)	(38866)	(39542)	(82667)	(82669)	(82683)	(82687)	(82664)	(04037)

MAY

17... <0.01 <0.01 <0.01 <0.01 <0.05 <0.02 <0.03 <0.01 <0.02 <0.02 <0.01 <0.01

	PRON- AMIDE WATER FLTRD 0.7 U	PROP- CHLOR, WATER, DISS, REC	PRO- PANIL WATER FLTRD 0.7 U	PRO- PARGITE WATER FLTRD 0.7 U	PRO- POXUR, WATER, FLTRD, GF 0.7U	SILVEX, DIS- SOLVED	SI- MAZINE, WATER, DISS, REC	TEBU- THIURON WATER FLTRD 0.7 U	TER- BACIL WATER FLTRD 0.7 U	TER- BUFOS WATER FLTRD 0.7 U	THIO- BENCARB WATER FLTRD 0.7 U	TRIAL- LATE WATER FLTRD 0.7 U
DATE	GF, REC (UG/L)	REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	REC (UG/L)	SOLVED (UG/L)	REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)
	(82676)	(04024)	(82679)	(82685)	(38538)	(39762)	(04035)	(82670)	(82665)	(82675)	(82681)	(82678)

MAY

17... <0.01 <0.02 <0.02 <0.01 <0.05 <0.05 <0.01 <0.02 <0.03 <0.01 <0.01 <0.01



Old gage, Council Creek at Stillwater, Oklahoma

ARKANSAS RIVER BASIN

07198000 ILLINOIS RIVER NEAR GORE, OK

LOCATION.--Lat 35°34'23", long 95°04'07", in NE 1/4 SW 1/4 sec.27, T.13 N., R.21 E., Sequoyah County, Hydrologic Unit 11110103, on right bank 4.2 mi downstream from Tenkiller Ferry Dam, 4.5 mi northeast of Gore, and at mile 8.5.

DRAINAGE AREA.--1,626 mi².

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.--No estimated daily discharges. Records good. Except for 16 mi³ 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 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	178	2770	3970	24	1700	4250	5650	3770	2700	79	437	163
2	879	671	1400	23	1280	4340	5630	3910	2090	72	675	171
3	854	55	2080	880	1210	4840	5710	178	2210	46	703	77
4	412	1700	2640	2180	1210	5810	4950	59	673	71	707	78
5	606	75	2410	1670	54	5860	4300	253	671	105	638	77
6	590	36	2740	686	36	5860	4280	310	587	510	147	385
7	672	32	3870	2120	897	5850	4220	282	2470	268	755	822
8	928	31	3890	44	1000	6000	4100	361	1390	382	1040	773
9	1360	1240	3230	27	1200	6060	4070	275	973	229	633	400
10	1240	446	2920	1020	988	5940	4110	911	1530	102	320	88
11	601	107	2310	1150	1710	6120	4090	2030	1650	287	801	23
12	768	1160	2270	1040	1120	6730	4000	2040	1340	82	1280	643
13	1360	2920	2060	1050	1100	6700	1040	2060	1200	189	886	836
14	1280	3590	2020	609	1620	7840	919	2040	997	104	29	1260
15	2460	6400	3070	270	958	8860	922	2040	34	249	1540	1640
16	1850	8700	3070	31	900	8820	51	2020	263	80	322	887
17	1990	8530	2480	1080	850	8770	41	2530	149	75	94	203
18	2430	8450	2330	2410	863	4680	1960	3740	24	463	167	25
19	2930	8390	2180	1100	985	1680	1990	3770	19	1340	23	933
20	3160	8390	2000	342	756	3100	2430	2200	439	1360	79	1170
21	3960	8380	1830	40	2580	3990	4170	2040	883	964	21	748
22	2960	8350	1920	23	3410	4060	4110	2160	453	293	138	1390
23	3280	7120	1580	23	1730	4060	4140	2100	450	82	470	428
24	3850	5420	1540	22	3350	4050	4130	1910	370	18	515	281
25	3760	3940	1430	538	4170	4060	3880	1000	147	520	659	29
26	3910	3930	1480	1260	4170	4100	2380	2720	69	88	157	227
27	3290	4040	2290	1730	4170	4140	2070	3220	540	77	344	670
28	3940	3960	94	1690	4190	4140	2100	2230	458	91	24	1410
29	3920	4090	29	1680	---	4070	2190	2110	449	239	1080	366
30	3990	4110	474	1670	---	4610	2210	2740	224	116	1240	338
31	3990	---	35	1150	---	5630	---	2330	---	19	905	---
TOTAL	67398	117033	65642	27582	48207	165020	95843	59339	25452	8600	16829	16541
MEAN	2174	3901	2117	890	1722	5323	3195	1914	848	277	543	551
MAX	3990	8700	3970	2410	4190	8860	5710	3910	2700	1360	1540	1640
MIN	178	31	29	22	36	1680	41	59	19	18	21	23
AC-FT	133700	232100	130200	54710	95620	327300	190100	117700	50480	17060	33380	32810

ARKANSAS RIVER BASIN

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07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

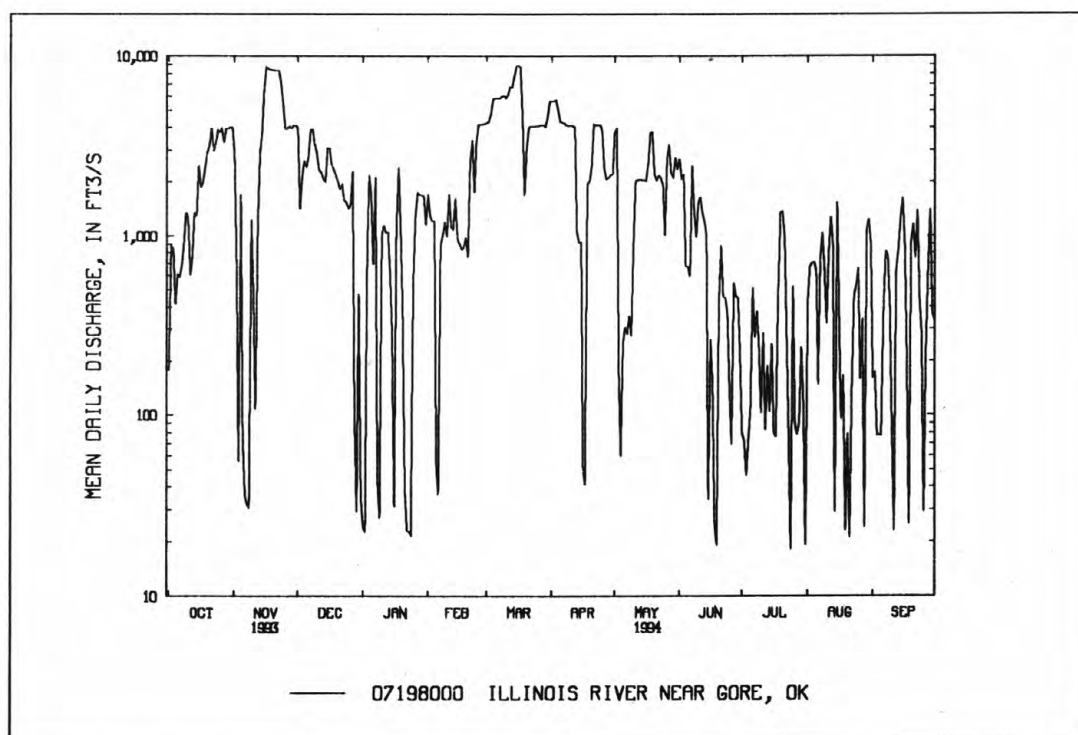
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	826	1233	1693	1611	1648	1983	2694	2310	1821	1237	857	679
MAX	8165	4538	9652	5869	5740	5323	8340	10940	7177	8046	2358	2174
(WY)	1987	1992	1974	1988	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

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1954-94
ANNUAL TOTAL	1172403	713486	
ANNUAL MEAN	3212	1955	1548
HIGHEST ANNUAL MEAN			3199
LOWEST ANNUAL MEAN			280
HIGHEST DAILY MEAN	10800	Mar 3	8860
LOWEST DAILY MEAN	25	Sep 11	18
ANNUAL SEVEN-DAY MINIMUM	158	Sep 1	121
INSTANTANEOUS PEAK FLOW			9120
INSTANTANEOUS PEAK STAGE			15.05
ANNUAL RUNOFF (AC-FT)	2325000	1415000	1121000
10 PERCENT EXCEEDS	6490	4230	3650
50 PERCENT EXCEEDS	3370	1240	930
90 PERCENT EXCEEDS	345	74	80

^aMaximum discharge, 180,000 ft³/s, May 11, 1950, from rating curve extended above 42,000 ft³/s by velocity-area.

^bMaximum gage height, 34.6 ft, May 11, 1950, from floodmark, present site, and datum.



ARKANSAS RIVER BASIN
07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948, 1952, 1954 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1947 to September 1948, October 1953 to September 1963.

WATER TEMPERATURE: October 1947 to September 1948, October 1953 to September 1963, October 1992 to current year.

REMARKS.--Samples were collected bimonthly and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field. Prior to October 1992 records of continuous water temperature were collected 4.2 mi upstream.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily 396 microsiemens, Aug. 12, 1956; minimum daily 123 microsiemens, July 14, 1957.

WATER TEMPERATURE: Maximum 24.0°C, Sept. 28-30, Oct. 1, 2, 1958, Aug. 29, 1993; minimum 3.0°C Jan. 17, 1994.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum 23.0°C, June 19, July 3; minimum 3.0°C, Jan. 17.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
JUN										
14...	0815	15.0	754	1028	1028	38	6.97	262	7.0	7.1
14...	0817	15.0	754	1028	1028	38	6.97	261	6.9	7.1
14...	0819	15.0	754	1028	1028	38	6.97	262	7.0	7.1
14...	0821	15.0	754	1028	1028	38	6.97	262	7.0	7.2
14...	0823	15.0	754	1028	1028	38	6.97	264	7.0	7.3
14...	0825	15.0	754	1028	1028	38	6.97	265	7.2	7.3
14...	0827	15.0	754	1028	1028	38	6.97	264	7.2	7.3
14...	0829	15.0	754	1028	1028	38	6.97	265	7.2	7.3
14...	0831	15.0	754	1028	1028	38	6.97	263	7.2	7.4
14...	0833	15.0	754	1028	1028	38	6.97	262	7.1	7.4
14...	0835	15.0	754	1028	1028	38	6.97	262	6.9	7.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT												
18...	1345	1028	80020	3860	178	7.1	21.5	20.5	--	750	4.3	49
DEC												
01...	1400	1028	80020	3770	181	7.5	18.5	15.0	3.6	752	9.4	95
FEB												
24...	1200	1028	80020	4120	183	8.2	10.5	7.5	1.5	754	13.0	109
APR												
12...	1540	1028	80020	4060	194	8.1	16.5	12.0	0.80	754	10.0	94
JUN												
14...	0800	1028	80020	38	*279	7.6	24.5	15.0	0.60	754	7.0	70
AUG												
10...	0830	1028	80020	32	282	7.7	22.0	16.0	0.30	760	6.9	70

*SPECIFIC CONDUCTANCE, LAB (µs/cm)

ARKANSAS RIVER BASIN
07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	HARD- NESS TOTAL (MG/L AS (00900)	HARD- NESS NONCARB DISSOLV FLD. AS (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 AD- SORP- TION RATIO (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT (MG/L AS HCO3) (00453)	CAR- BONATE WATER DIS IT (MG/L AS CO3) (00452)	ALKA- LITY WAT DIS TOT IT (MG/L AS CACO3) (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
------	---	---	--	--	--	--	---	--	---	--	---

OCT											
18...	--	--	--	--	--	--	--	82	0	67	--
DEC											
01...	74	--	27	1.6	4.0	10	0.2	2.5	--	--	7.6
FEB											
24...	81	9	30	1.5	3.9	9	0.2	2.4	88	0	72
APR											
12...	79	7	29	1.5	4.1	10	0.2	2.2	87	0	72
JUN											
14...	94	17	34	2.2	15	25	0.7	2.3	94	0	77
AUG											
10...	96	17	35	2.1	14	24	0.6	2.3	96	0	79

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
------	---	--	---	--	---	---	---	---	---	---	---	--

OCT											
18...	--	--	--	--	--	--	0.410	0.410	1.8	0.010	0.03
DEC											
01...	4.4	0.10	105	95	0.14	1070	0.690	--	--	<0.010	--
FEB											
24...	5.2	<0.10	98	97	0.13	1090	0.840	--	--	<0.010	--
APR											
12...	5.9	<0.10	105	99	0.14	1150	1.06	1.06	4.7	0.040	0.13
JUN											
14...	24	<0.10	146	136	0.20	15.0	0.950	--	--	<0.010	--
AUG											
10...	26	<0.10	152	139	0.21	13.1	0.990	0.990	4.4	0.010	0.03

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,AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)
------	---	---	---	--	--	--	---	--	---	---	---

OCT											
18...	0.420	0.130	0.17	0.27	0.40	--	0.82	0.050	0.020	0.020	0.06
DEC											
01...	0.690	0.050	0.06	0.25	0.30	<0.20	0.99	0.030	0.020	0.020	0.06
FEB											
24...	0.840	0.010	0.01	0.19	0.20	<0.20	1.0	<0.010	<0.010	<0.010	--
APR											
12...	1.10	0.100	0.13	0.10	0.20	<0.20	1.3	0.020	0.010	0.020	0.06
JUN											
14...	0.950	0.040	0.05	--	<0.20	<0.20	--	0.040	0.010	0.010	0.03
AUG											
10...	1.00	0.040	0.05	0.26	0.30	<0.20	1.3	0.030	0.020	0.020	0.06

ARKANSAS RIVER BASIN
07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

ARKANSAS RIVER BASIN
07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

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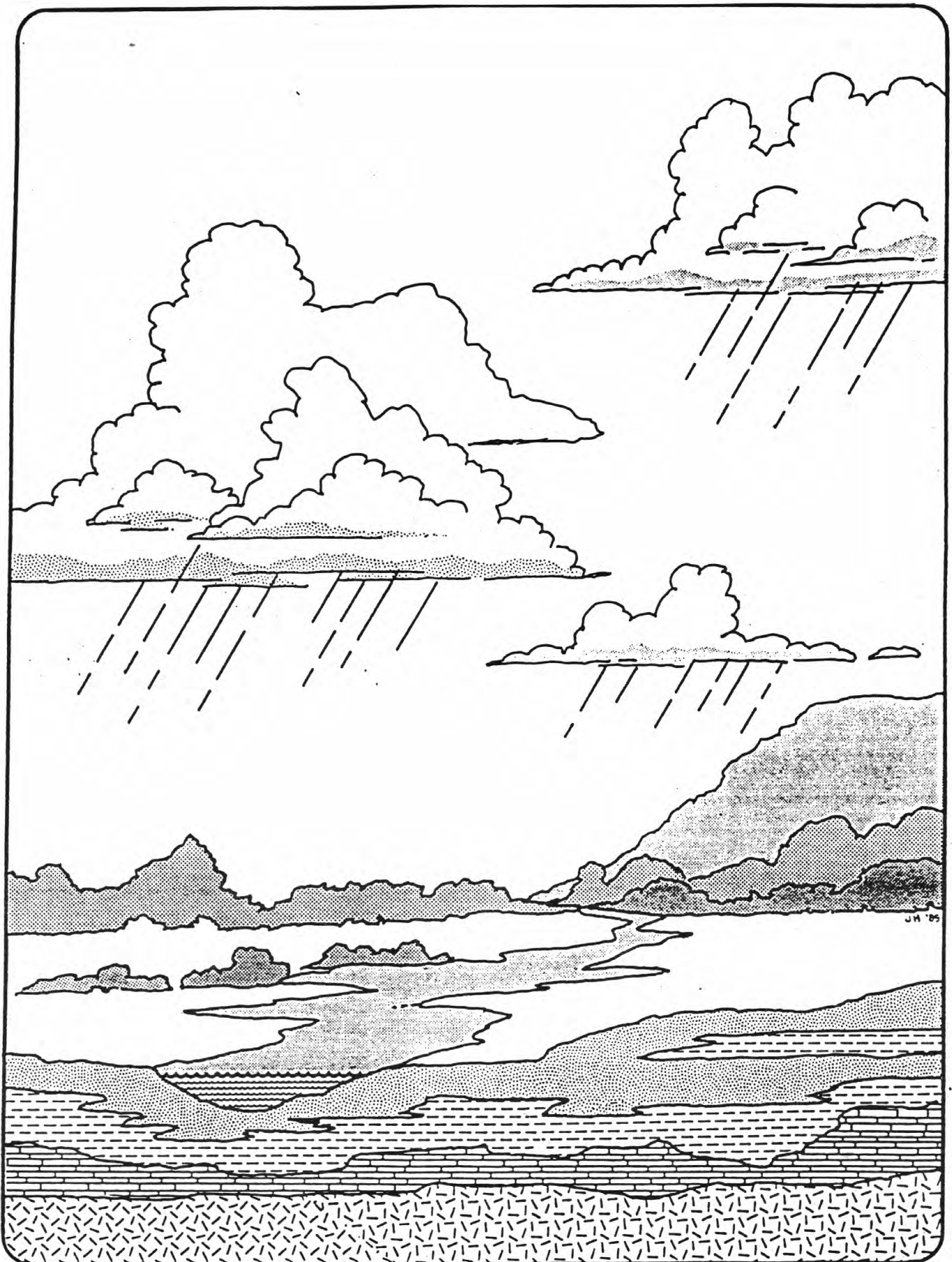
WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	7.0	6.5	6.5	6.5	6.5	6.5	10.0	9.5	9.5	12.0	11.0	11.5
2	9.5	6.0	7.5	7.0	6.5	6.5	9.5	9.5	9.5	12.5	11.0	11.5
3	9.0	6.0	7.5	7.0	6.5	6.5	10.0	9.5	10.0	12.5	12.0	12.0
4	9.0	6.5	7.5	7.0	6.5	7.0	11.0	9.5	10.0	14.0	12.0	13.0
5	10.5	8.0	9.0	7.0	6.5	7.0	10.0	9.5	9.5	17.5	12.5	14.5
6	10.5	6.5	8.5	7.0	6.5	7.0	10.0	10.0	10.0	17.0	12.5	14.0
7	9.5	6.5	7.5	9.5	6.5	7.0	10.5	9.5	10.0	15.5	12.5	14.0
8	9.0	6.5	7.5	9.5	7.0	7.5	10.5	9.5	10.0	15.0	12.0	13.0
9	9.0	4.5	6.5	7.5	7.0	7.5	10.0	10.0	10.0	15.5	12.5	13.5
10	8.5	6.0	7.0	7.5	7.0	7.5	10.0	9.5	10.0	14.0	11.5	12.5
11	9.0	6.0	6.5	7.5	7.0	7.5	10.0	10.0	10.0	13.0	12.0	12.5
12	9.0	6.0	7.0	7.5	7.0	7.5	12.0	9.5	10.0	13.0	12.0	12.5
13	8.5	5.5	7.0	7.5	7.5	7.5	12.0	10.0	11.0	13.0	11.5	12.5
14	8.5	5.5	7.0	8.0	7.5	7.5	12.0	10.5	11.0	13.0	12.0	12.5
15	8.5	6.0	7.5	8.0	7.5	8.0	12.0	10.5	11.0	13.0	12.0	12.5
16	8.5	6.0	7.5	8.0	8.0	8.0	13.5	10.5	12.0	13.0	12.0	12.5
17	8.5	6.5	7.5	8.0	8.0	8.0	15.5	12.0	13.5	13.0	12.0	12.5
18	8.5	6.5	7.5	11.0	7.5	9.0	14.5	11.0	12.0	12.5	11.5	12.0
19	9.0	7.0	8.0	11.5	8.0	9.5	12.0	10.5	11.5	12.5	12.0	12.0
20	9.0	7.0	8.0	11.0	8.0	9.0	12.0	10.5	11.0	13.5	12.0	13.0
21	9.0	7.0	7.5	9.0	8.0	8.5	11.0	10.5	11.0	13.0	12.0	12.5
22	9.0	7.0	8.0	8.5	8.0	8.5	11.0	10.5	11.0	13.0	12.0	12.5
23	9.5	7.0	8.0	9.0	8.0	8.5	11.0	11.0	11.0	13.0	12.0	12.5
24	8.0	6.5	7.0	9.0	8.0	8.5	12.0	10.5	11.0	13.0	12.5	13.0
25	7.0	6.5	7.0	9.0	8.5	9.0	12.5	11.0	11.0	14.5	12.5	13.0
26	7.0	6.5	6.5	9.0	9.0	9.0	13.0	11.0	11.5	15.5	12.5	13.0
27	7.0	6.5	6.5	9.5	9.0	9.5	12.5	11.0	11.5	14.0	12.0	13.0
28	6.5	6.5	6.5	10.0	9.0	9.5	12.5	11.5	12.0	14.5	12.5	13.0
29	---	---	---	9.5	9.0	9.5	12.0	11.0	11.5	13.5	12.5	13.0
30	---	---	---	10.0	9.5	9.5	12.0	11.0	11.5	13.5	12.5	13.0
31	---	---	---	10.0	9.5	9.5	---	---	---	13.5	12.5	13.0
MONTH	10.5	4.5	7.3	11.5	6.5	8.1	15.5	9.5	10.8	17.5	11.0	12.8

ARKANSAS RIVER BASIN
07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	14.0	12.5	13.0	21.0	17.0	18.0	22.0	15.5	18.5	18.0	16.0	17.0
2	14.0	13.0	13.5	22.0	18.0	19.0	18.0	15.0	16.5	18.5	16.5	17.0
3	14.0	13.0	13.5	23.0	18.5	19.5	18.5	14.5	16.5	19.5	16.5	17.5
4	18.0	13.5	14.5	22.5	18.5	19.5	18.0	14.5	16.0	21.5	17.5	19.0
5	15.0	13.5	14.0	20.5	17.0	19.0	17.5	15.0	16.5	21.0	17.5	19.0
6	15.0	14.0	14.0	21.5	15.5	18.5	19.5	16.0	17.0	21.5	16.0	18.5
7	14.5	13.0	13.5	22.0	15.5	18.0	19.0	15.5	17.5	18.0	15.0	16.5
8	16.0	13.5	14.5	19.5	15.5	17.5	18.5	15.0	16.5	17.0	15.0	16.0
9	16.0	13.5	14.5	19.0	15.0	17.0	18.5	15.0	16.5	19.5	15.5	16.5
10	15.5	13.5	14.0	20.0	16.0	17.0	17.5	15.0	16.0	20.0	15.5	17.5
11	15.0	13.5	14.0	20.5	15.5	18.0	18.0	14.5	16.0	21.0	16.5	19.0
12	15.0	13.5	14.5	19.0	16.5	17.5	17.5	15.0	16.5	20.0	16.0	18.0
13	16.0	13.5	14.5	21.0	17.0	19.0	17.0	15.0	16.0	17.5	15.5	16.5
14	16.5	14.0	15.0	21.0	16.5	18.5	20.5	15.5	18.0	17.0	15.0	16.0
15	19.0	15.0	17.0	19.0	15.0	17.0	19.5	15.0	17.0	17.0	15.0	16.0
16	22.5	16.0	19.0	19.0	16.0	17.0	19.0	15.5	16.5	17.0	15.0	16.0
17	21.5	16.5	17.5	21.5	18.0	18.5	18.0	15.5	16.5	19.0	15.5	17.0
18	21.5	16.5	19.0	19.5	15.0	17.5	21.5	16.5	18.0	20.0	15.5	17.5
19	23.0	19.5	21.0	18.5	14.5	16.5	21.0	17.0	19.0	20.5	16.0	17.5
20	22.0	15.5	19.0	18.0	14.5	16.0	20.5	17.5	19.5	18.0	15.5	16.5
21	17.5	14.5	16.0	17.5	14.5	16.0	21.0	17.0	19.0	17.0	15.5	16.0
22	20.0	15.0	16.5	19.5	15.5	17.0	22.5	17.5	19.0	17.0	14.5	15.5
23	20.0	15.0	16.5	18.5	16.5	17.0	21.0	15.5	18.0	17.0	15.0	16.0
24	20.0	15.0	16.5	22.5	18.5	20.5	21.0	16.0	17.5	16.0	14.0	15.0
25	20.5	15.5	17.0	22.0	15.0	19.5	18.0	15.5	17.0	16.0	14.0	15.0
26	22.5	17.5	19.5	19.0	16.5	17.5	18.5	16.0	17.0	19.0	14.0	16.0
27	21.5	15.5	18.0	17.5	16.5	17.0	21.5	16.5	18.0	19.5	14.0	16.5
28	20.5	15.0	17.0	21.0	16.5	18.0	22.0	17.0	19.5	16.5	15.0	15.5
29	20.5	15.0	17.0	19.5	15.5	17.0	22.5	16.5	19.0	19.0	15.0	17.0
30	21.0	16.0	17.5	20.0	16.0	17.0	19.5	15.5	17.0	19.0	15.5	16.5
31	---	---	---	20.5	16.5	18.5	18.0	15.5	17.0	---	---	---
MONTH	23.0	12.5	16.0	23.0	14.5	17.9	22.5	14.5	17.4	21.5	14.0	16.8



ARKANSAS RIVER BASIN

07228500 CANADIAN RIVER AT BRIDGEPORT, OK

LOCATION.--Lat 35°32'37", long 98°19'03", SE 1/4 NW 1/4 sec.1, T.12 N., R.11 W., Caddo County, Hydrologic Unit 11090202, on downstream side of pier near center of bridge on U.S. Highway 281, 3.3 mi east of Bridgeport, 1.6 mi downstream from Lump-mouth Creek, and at mile 263.3.

DRAINAGE AREA.--25,276 mi², of which 4,801 mi² is probably noncontributing.

PERIOD OF RECORD.--October 1944 to September 1964; October 1969 to current year.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,360.00 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1947, at site 3.8 mi upstream at datum 24.25 ft higher. Oct. 1, 1947 to Sept. 30, 1948, nonrecording gage and Oct. 1, 1948, to September 1964, Oct. 1, 1969, to Dec. 17, 1980, at site 4.0 mi upstream and at datum 24.25 ft higher.

REMARKS.--Records poor. Flow regulated since October 1964 by Lake Meredith (station 07227900) located in Texas.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1914 reached a stage of about 19.4 ft, a higher stage probably occurred during flood in October 1904.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e21	e47	e82	102	e130	234	183	577	e325	e27	13	82
2	e19	e45	e80	104	e150	243	179	550	287	e25	e14	e30
3	e17	e44	e190	107	188	234	174	559	235	e23	e11	e20
4	e15	e44	e115	109	189	223	173	384	254	e21	e10	e14
5	e14	e43	e100	135	190	219	171	320	212	e19	e10	e11
6	e13	e43	90	112	197	213	174	288	174	18	e10	e10
7	e55	e45	84	114	200	208	176	286	151	e15	e9.1	e10
8	146	e42	82	104	e185	285	173	257	157	e20	e8.5	e13
9	e98	e42	86	102	e163	297	175	234	144	e17	e8.0	e10
10	e70	e40	86	112	e150	291	215	224	128	e18	e7.7	e9.0
11	e65	e38	84	114	e179	279	562	213	126	e18	e7.4	e8.6
12	e60	e78	88	119	213	307	417	193	129	e21	e7.4	e8.0
13	62	e148	100	122	203	298	330	187	128	18	e6.9	e7.7
14	e67	e125	104	122	199	283	335	181	175	17	e6.4	e7.6
15	e65	e173	98	122	200	286	342	183	e149	16	e5.8	e11
16	e62	e140	98	119	209	273	312	186	e123	37	e5.5	e9.0
17	e62	e123	100	e121	219	270	287	184	e109	52	e6.8	e8.0
18	e60	e117	100	e118	219	269	261	206	e100	e25	e8.5	e7.6
19	e57	e113	100	e117	216	255	237	274	e86	e16	e6.4	e7.5
20	e55	e111	102	e129	213	242	219	238	84	e19	e5.7	e7.4
21	e59	e104	102	e140	212	235	206	209	e62	e16	e5.2	e7.8
22	e63	e109	102	e160	224	225	202	188	e58	e15	e4.9	e9.0
23	e61	e102	104	e183	239	215	201	176	e52	e14	e4.8	e7.7
24	e58	e98	104	e162	238	199	188	275	e48	e14	e4.7	e7.2
25	e54	e94	107	e145	238	191	226	343	e45	e13	e4.6	e6.9
26	e53	e90	104	e130	226	197	273	998	e40	e16	e4.6	e6.5
27	e52	e84	104	e121	218	206	217	458	e34	e15	e4.5	e6.8
28	e51	e84	104	e130	218	198	527	388	e32	e15	e4.4	e7.6
29	e50	e83	107	e139	---	193	563	724	e36	14	4.3	e6.8
30	e48	e82	104	e125	---	190	1170	531	e31	13	4.1	e6.4
31	e48	---	104	e110	---	189	---	390	---	13	16	---
TOTAL	1680	2531	3115	3849	5625	7447	8868	10404	3714	600	230.2	364.1
MEAN	54.2	84.4	100	124	201	240	296	336	124	19.4	7.43	12.1
MAX	146	173	190	183	239	307	1170	998	325	52	16	82
MIN	13	38	80	102	130	189	171	176	31	13	4.1	6.4
AC-FT	3330	5020	6180	7630	11160	14770	17590	20640	7370	1190	457	722

c Estimated

ARKANSAS RIVER BASIN

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07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	203	202	157	208	225	427	335	826	491	114	110	151
MAX	2412	1525	651	1162	462	1907	1005	4188	2212	500	1036	1170
(WY)	1987	1975	1988	1988	1975	1973	1973	1987	1983	1979	1974	1986
MIN	7.01	17.5	16.2	22.5	36.8	60.8	20.5	13.4	12.9	3.18	.14	1.14
(WY)	1979	1971	1979	1979	1981	1977	1971	1971	1970	1970	1970	1984

SUMMARY STATISTICS 1993 CALENDAR YEAR

1994 WATER YEAR

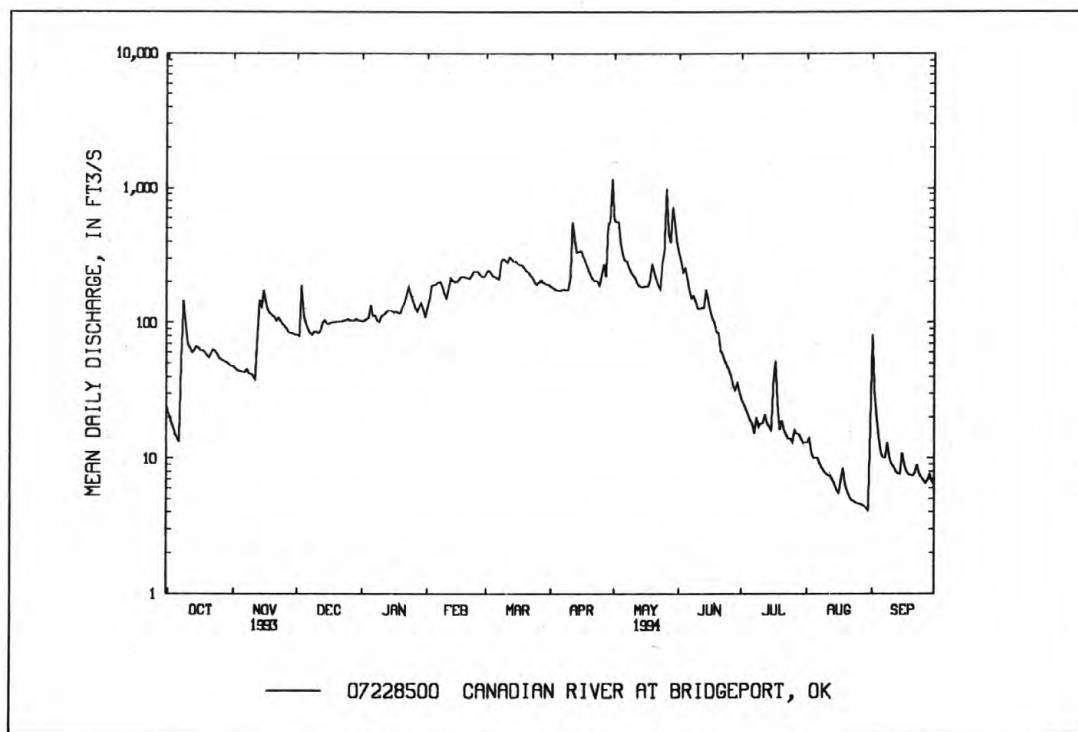
WATER YEARS 1970-94

ANNUAL TOTAL	152018	48427.3	
ANNUAL MEAN	416	133	^a 288
HIGHEST ANNUAL MEAN			1018 1987
LOWEST ANNUAL MEAN			70.2 1981
HIGHEST DAILY MEAN	31400	May 9 1170	Apr 30 42100 May 29 1987
LOWEST DAILY MEAN	12	Aug 23 4.1	Aug 30 .00 at times
ANNUAL SEVEN-DAY MINIMUM	15	Aug 17 4.5	Aug 24 .00 Aug 3 1970
INSTANTANEOUS PEAK FLOW		2150	Apr 30 ^b 86100 May 17 1982
INSTANTANEOUS PEAK STAGE		11.83	Apr 30 ^c 17.55 May 17 1982
ANNUAL RUNOFF (AC-FT)	301500	96060	208500
10 PERCENT EXCEEDS	499	273	455
50 PERCENT EXCEEDS	210	104	94
90 PERCENT EXCEEDS	24	8.0	10

^aPrior to regulation, water years 1945-64, 469 ft³/s.

^bMaximum discharge for period of record, 150,000 ft³/s, June 23, 1948, from rating curve extended above 50,000 ft³/s.

^cMaximum gage height for period of record, 38.85 ft (present datum) June 23, 1948, from flood mark.



ARKANSAS RIVER BASIN
07229200 CANADIAN RIVER AT PURCELL, OK

LOCATION.--Lat 35°00'50", long 97°20'50", in NW 1/4 sec.7, T.6 N., R.1 W., Cleveland County, Hydrologic Uni 11090202, near left bank on downstream side of pier of U.S. Highway 77, 0.5 mi east of Purcell, 1.0 mi upstream from Walnut Creek, and at mile 184.9.

DRAINAGE AREA.--25,939 mi², of which 4,801 mi² probably is noncontributing.

PERIOD OF RECORD.--October 1959 to June 1961, October 1979 to September 1983, October 1985 to current year.

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	118	137	173	210	319	e270	277	3090	e1100	e67	e18	336
2	106	140	363	201	288	354	288	2120	e950	e55	e16	153
3	99	145	476	199	298	287	265	2740	e800	e51	e15	e82
4	96	147	310	198	283	248	260	1970	e700	e44	e14	212
5	102	143	258	208	261	234	263	1110	e610	e35	e15	216
6	105	134	233	207	265	235	251	836	e580	e32	e13	290
7	104	144	227	199	275	225	251	664	e500	e30	e13	155
8	170	151	222	178	267	1550	250	e600	e700	e38	e14	113
9	134	150	217	189	e260	2130	258	e560	e600	313	e13	343
10	123	151	219	e200	e280	1840	261	e600	e800	272	e12	165
11	249	153	216	e190	300	789	1210	e560	e500	135	e12	171
12	281	191	239	e180	306	369	4380	e640	e350	e85	e12	113
13	196	228	482	e175	276	312	1400	e580	233	e102	e12	e73
14	163	346	410	e170	296	311	734	e510	e256	e84	e12	e57
15	156	310	349	e165	281	e300	484	e450	e251	257	e12	e89
16	160	451	298	e165	252	e290	429	e425	e259	471	e12	166
17	149	333	288	e160	246	294	359	405	e330	226	e12	94
18	150	237	280	e160	257	296	260	356	e337	132	113	e64
19	179	189	269	153	308	318	274	292	e271	e77	122	e46
20	217	e186	256	132	605	335	346	320	e266	e84	86	e42
21	177	e190	260	203	513	293	366	344	e232	e92	e56	e36
22	172	e250	249	227	1280	287	335	389	e258	e77	e33	116
23	161	188	245	237	482	306	287	302	e203	e54	e24	126
24	168	174	255	243	e400	310	262	271	e161	e42	e18	106
25	162	173	250	248	e360	258	296	e270	e150	e62	e15	e69
26	156	182	248	e270	e325	314	329	e500	e118	e52	e13	e59
27	143	174	241	e350	e300	470	287	2660	e99	e47	e12	e58
28	141	163	239	e340	e280	393	1380	1330	e87	e35	e12	e56
29	135	175	221	e330	---	325	2130	1130	e79	e27	e12	e48
30	130	178	210	e320	---	291	4620	e1900	e70	e21	13	e33
31	130	---	225	e310	---	278	---	e1400	---	e19	e50	---
TOTAL	4732	5913	8428	6717	9863	14512	22792	29324	11850	3118	806	3687
MEAN	153	197	272	217	352	468	760	946	395	101	26.0	123
MAX	281	451	482	350	1280	2130	4620	3090	1100	471	122	343
MIN	96	134	173	132	246	225	250	270	70	19	12	33
AC-FT	9390	11730	16720	13320	19560	28780	45210	58160	23500	6180	1600	7310

e Estimated

ARKANSAS RIVER BASIN

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07229200 CANADIAN RIVER AT PURCELL, OK--Continued

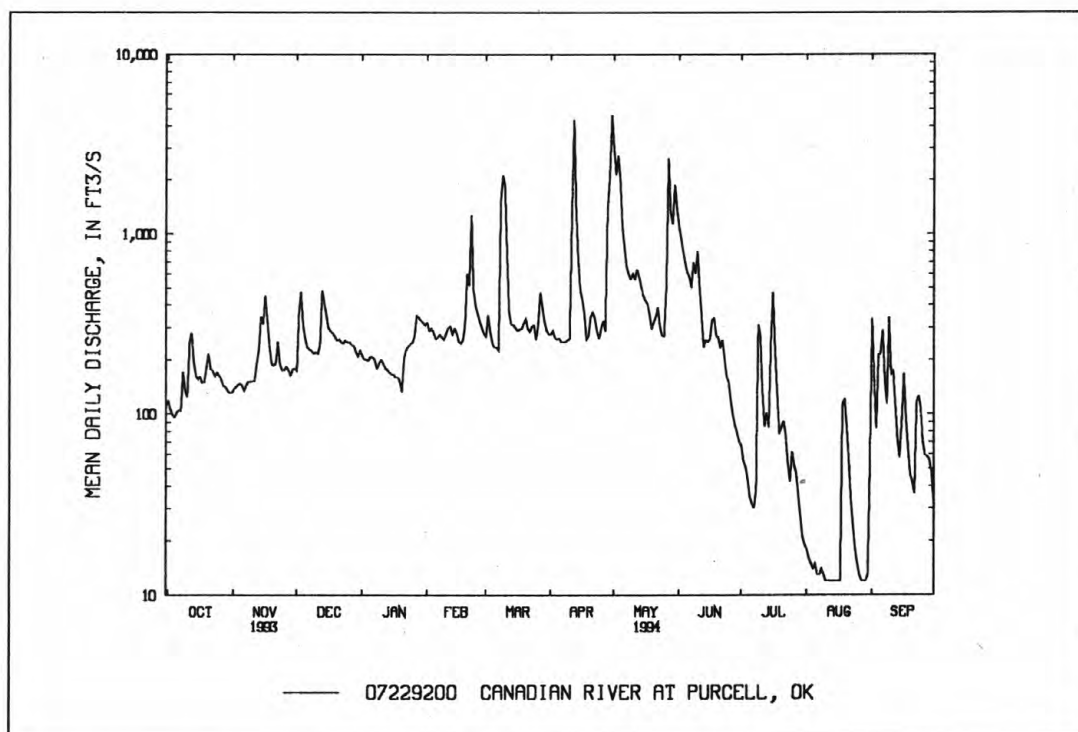
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	751	488	697	609	610	964	741	2281	1235	342	186	385
MAX	7083	2648	2602	2055	1865	2638	2219	7717	5863	1216	758	993
(WY)	1987	1987	1992	1987	1987	1990	1990	1993	1989	1987	1992	1988
MIN	2.84	11.9	106	23.7	21.3	113	38.1	73.1	309	41.4	2.00	2.54
(WY)	1981	1981	1983	1981	1981	1981	1981	1981	1988	1980	1980	1980

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1980-94
ANNUAL TOTAL	446974	121742	
ANNUAL MEAN	1225	334	776
HIGHEST ANNUAL MEAN			2287
LOWEST ANNUAL MEAN			117
HIGHEST DAILY MEAN	61300	May 9	4620
LOWEST DAILY MEAN	50	Aug 22	12
ANNUAL SEVEN-DAY MINIMUM	56	Aug 17	12
INSTANTANEOUS PEAK FLOW		8910	Apr 11
INSTANTANEOUS PEAK STAGE		9.78	Apr 11
ANNUAL RUNOFF (AC-FT)	886600	241500	562200
10 PERCENT EXCEEDS	2080	588	1420
50 PERCENT EXCEEDS	400	235	290
90 PERCENT EXCEEDS	120	40	32

^aNo flow at times in 1980.

^bFrom high-water mark.



ARKANSAS RIVER BASIN

07229900 LAKE THUNDERBIRD NEAR NORMAN, OK

LOCATION.--Lat 35°13'24", long 97°13'02", in NW 1/4 SE 1/4 sec.29, T.9 N., R.1 E., Cleveland County, Hydrologic Unit 11090203, near center of dam on Little River, just downstream from Hog Creek, 13 mi east of Norman, and at mile 96.4.

DRAINAGE AREA.--256 mi².

PERIOD OF RECORD.--March 1965 to current year.

GAGE.--Nonrecording gage at outlet structure and at pump house. Datum of gage is sea level.

REMARKS.--Reservoir is formed by earth dam. Regulated storage began Mar. 1, 1965; minimum conservation pool first filled September 1965. Capacity, 196,200 acre-ft at elevation 1,049.4 ft, crest of drop inlet; 119,600 acre-ft at elevation 1,039.0 ft, top of conservation pool; 13,640 acre-ft at elevation 1,010.0 ft, minimum conservation pool. Dead storage, 13,500 acre-ft below elevation 997.0 ft, sill of gated outlet. Figures given herein represent total contents. Reservoir is used for flood control, irrigation (inactive), and municipal water supplies diverted to Del City, Midwest City, and Norman. U.S. Army Corps of Engineers satellite telemeter at station.

COOPERATION.--Elevations and data on diversions furnished by Central Oklahoma Master Conservancy District.

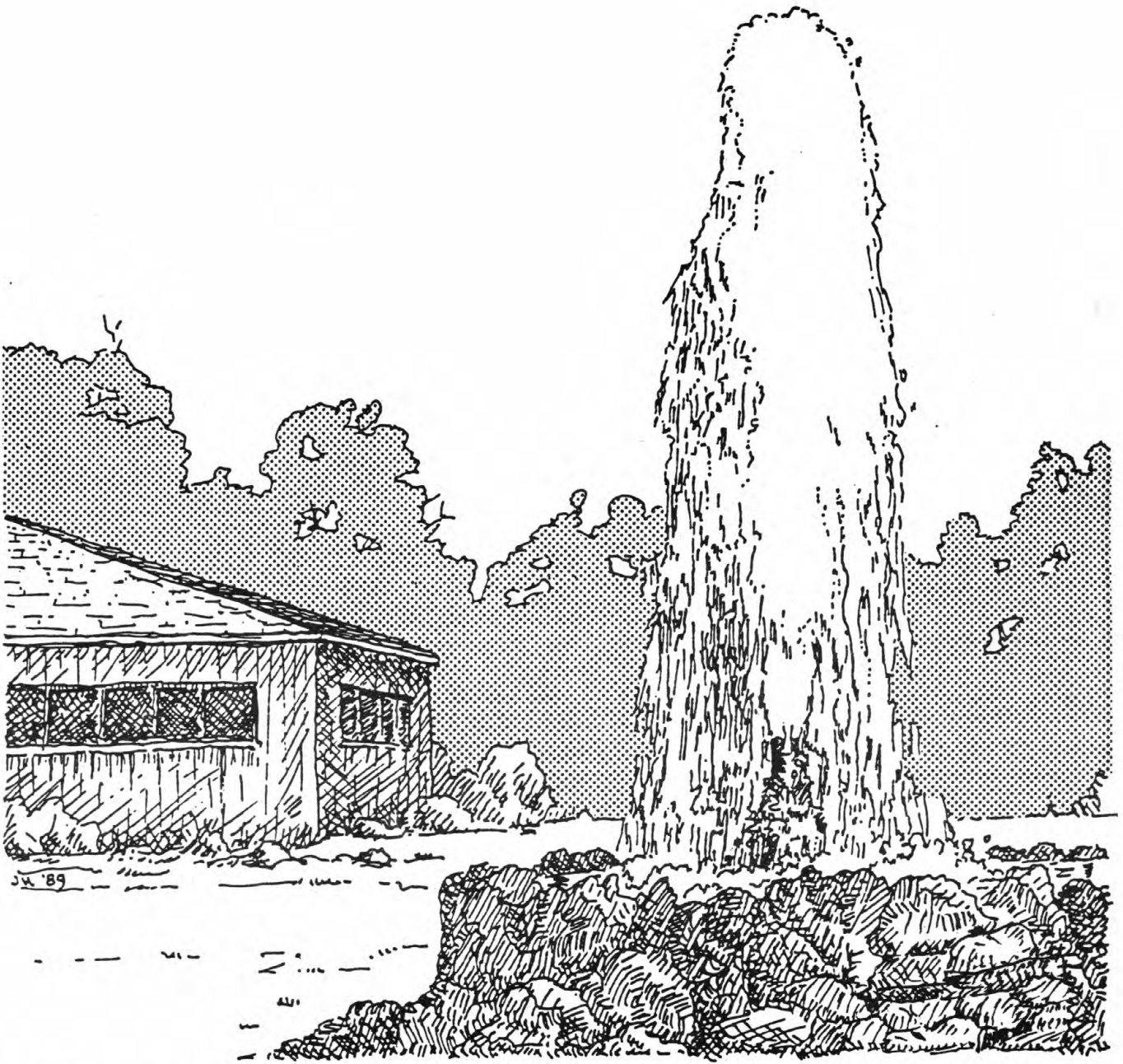
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 187,400 acre-ft, May 5, 1990, elevation, 1,048.38 ft; minimum since conservation pool first reached, 15,370 acre-ft, Nov. 30, 1965, elevation, 1,011.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 126,200 acre-ft, Mar. 10, elevation, 1,040.09 ft; minimum, 108,400 acre-ft, Sept. 30 elevation, 1,037.13 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

Date	*Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Diversions (acre-feet)
Sept. 30	1038.45	116,100	-	-
Oct. 31	1038.03	113,600	-2,500	1,637
Nov. 30	1037.99	113,400	-200	1,360
Dec. 31	1038.60	117,000	+3,600	1,349
CAL YR 93	-	-	-2,800	
Jan. 31	1038.67	117,400	+400	1,360
Feb. 28	1039.04	119,700	+2,300	1,222
Mar. 31	1039.13	120,200	+500	1,403
Apr. 30	1039.51	122,500	+2,300	1,546
May 31	1039.12	120,200	-2,300	1,735
June 30	1038.60	117,000	-3,200	2,236
July 31	1038.22	114,800	-2,200	2,188
Aug. 31	1037.36	109,800	-5,000	2,300
Sept. 30	1037.13	108,400	-1,400	1,645
WTR YR 94	-	-	-7,700	

*Elevation at 0800



Vendome Well, Chickasaw National Recreation Area, in the 1930's

ARKANSAS RIVER BASIN

07230000 LITTLE RIVER BELOW LAKE THUNDERBIRD NEAR NORMAN, OK

LOCATION.--Lat 35°13'18", long 97°12'49", in NE 1/4 SE 1/4 sec.29, T.9 N., R.1 E., Cleveland County, Hydrologic Unit, 11090203, at right bank of outlet channel, 170 ft upstream from State Highway 9, 1,200 ft downstream from Lake Thunderbird, 1.0 mi upstream from Prairie Creek, 13.0 mi east of Norman, and at mile 96.2.

DRAINAGE AREA.--257 mi².

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.--Records good. Flow regulated by Lake Thunderbird since March 1965 (station 07229900). In prior years, occasional small diversions above station for irrigation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.98	.79	.72	.79	.88	96	.84	.88	.82	.85	.85	.84
2	.98	.79	.92	.79	.88	243	.79	86	.84	.80	.84	.82
3	.94	.79	.94	.78	.88	291	.79	249	.85	.80	.85	.79
4	.97	.79	.70	.78	.88	160	.80	527	.84	.82	.87	.79
5	.94	.78	.69	.78	.88	.93	.79	809	.86	.83	.86	.93
6	.92	.79	.70	.79	.88	.88	.79	626	1.0	.83	.88	.79
7	.95	.82	.70	.79	.88	102	.79	510	.87	.86	.87	.79
8	.97	.79	.70	.79	.88	35	.79	253	.87	.87	.84	.79
9	.88	.79	.71	.79	.86	1.1	.79	.91	.90	1.4	.81	.79
10	.92	.79	.75	.79	.88	175	.79	.88	.98	.88	.82	.79
11	.91	.79	.76	.79	.88	363	1.2	.88	.86	.84	.82	.79
12	.88	.90	.78	.79	.83	483	.79	.88	.86	.86	.83	.79
13	.88	.79	.85	.79	.88	480	.79	.88	.86	.85	.79	.79
14	.92	.83	.69	.79	.88	480	.79	.88	.88	1.3	.79	.79
15	.98	.78	.70	.79	.88	541	.77	.88	.87	.91	.79	.91
16	.93	.82	.70	.79	.88	589	.74	.88	.87	.91	.80	.88
17	.88	.70	.70	.79	.88	413	.79	.88	.88	.84	.86	.84
18	.86	.70	.70	.79	.88	168	.79	.86	.88	.88	.84	.79
19	.93	.66	.70	.79	1.0	77	.79	.82	.88	.88	.84	.84
20	.78	.70	.66	.79	.89	.88	.76	.79	.88	.88	.87	.79
21	.77	.70	.70	e.80	.98	.88	.77	.79	.88	.89	.83	.79
22	.78	.70	.68	e.81	131	.88	.79	.79	.88	.88	.79	.93
23	.79	.70	.70	e.82	294	.88	.79	.79	.86	.88	.83	.84
24	.79	.69	.69	e.83	247	.88	.79	.85	.88	.87	.79	.82
25	.79	.69	.74	e.85	170	.88	.79	.92	.86	.89	.79	.82
26	.78	.70	.79	.86	169	.95	.79	.89	.85	.87	.79	.83
27	.78	.70	.79	.87	168	.88	.78	.86	.85	.88	.79	.82
28	.79	.70	.79	.84	69	.87	.90	.84	.88	.83	.79	.81
29	.80	.70	.79	.88	---	.86	1.2	1.1	.86	.88	.79	.98
30	.79	.70	.79	.88	---	.88	.94	.84	.87	.88	.79	.75
31	.79	---	.79	.86	---	.87	---	.81	---	.87	.92	---
TOTAL	27.05	22.57	23.02	25.07	1266.64	4709.50	24.71	3080.78	26.22	27.71	25.62	24.72
MEAN	.87	.75	.74	.81	45.2	152	.82	99.4	.87	.89	.83	.82
MAX	.98	.90	.94	.88	294	589	1.2	809	1.0	1.4	.92	.98
MIN	.77	.66	.66	.78	.83	.86	.74	.79	.82	.80	.79	.75
AC-FT	54	45	46	50	2510	9340	49	6110	52	55	51	49

e Estimated

ARKANSAS RIVER BASIN

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07230000 LITTLE RIVER BELOW LAKE THUNDERBIRD NEAR NORMAN, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	34.5	47.7	40.0	41.8	42.1	88.3	88.0	119	128	28.3	15.7	6.08
MAX	489	626	431	438	324	548	625	936	512	323	266	96.5
(WY)	1987	1984	1993	1985	1993	1985	1985	1990	1975	1989	1992	1989
MIN	.16	.18	.16	.17	.18	.18	.25	.20	.21	.19	.22	.20
(WY)	1966	1967	1966	1966	1967	1966	1966	1966	1967	1967	1967	1966

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1966-94

ANNUAL TOTAL	52218.43	9283.61	
ANNUAL MEAN	143	25.4	^a 56.7
HIGHEST ANNUAL MEAN			251 1985
LOWEST ANNUAL MEAN			.22 1966
HIGHEST DAILY MEAN	953 May 20	809 May 5	1280 May 14 1990
LOWEST DAILY MEAN	.66 Nov 19	.66 ^b Nov 19	^c .10 Oct 1 1965
ANNUAL SEVEN-DAY MINIMUM	.69 Dec 18	.69 Dec 18	.10 Oct 19 1965
INSTANTANEOUS PEAK FLOW		818 ^e May 4	^d 1450 May 10 1990
INSTANTANEOUS PEAK STAGE		6.03 ^e May 4	^f 8.62 Oct 26 1983
ANNUAL RUNOFF (AC-FT)	103600	18410	41060
10 PERCENT EXCEEDS	504	1.0	224
50 PERCENT EXCEEDS	1.2	.84	.61
90 PERCENT EXCEEDS	.78	.76	.30

^aPrior to regulation, water years 1953-64, 58.9 ft³/s.

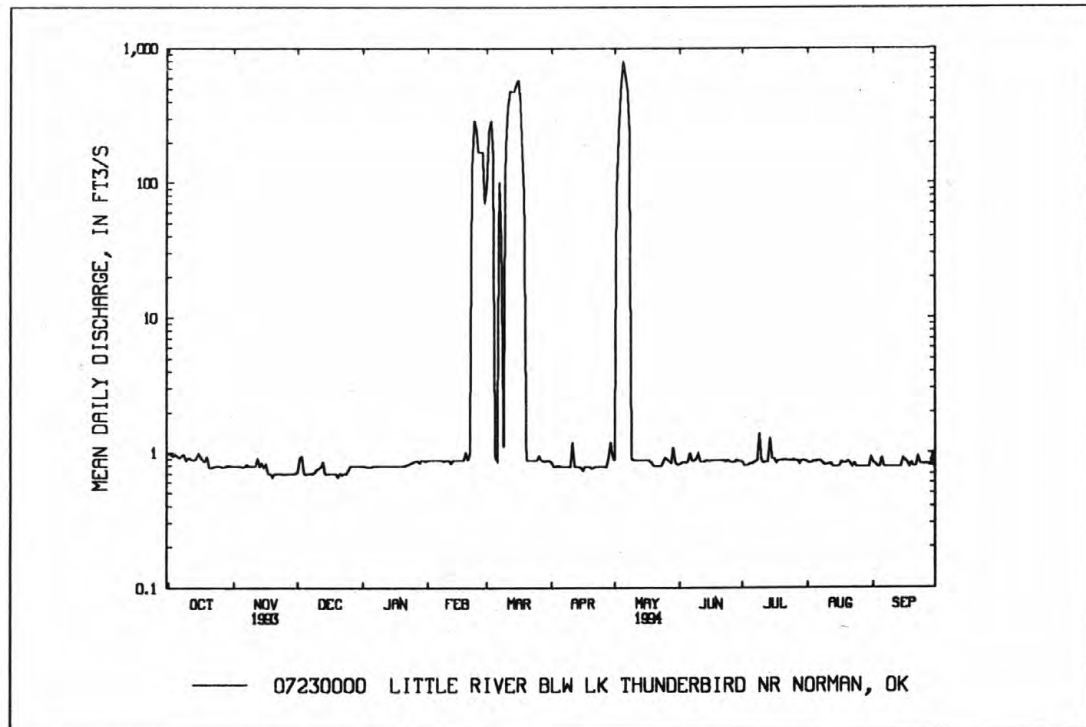
^bAlso occurred December 20.

^cNo flow at times in 1954-56, 1964.

^dMaximum discharge for period of record 34,600 ft³/s May 25, 1957, from rating curve extended above 15,000 ft³/s.

^eAlso occurred May 5.

^fFrom high-water mark. Maximum gage height for period of record 28.85 ft May 25, 1957, from high-water mark.



ARKANSAS RIVER BASIN

07230500 LITTLE RIVER NEAR TECUMSEH, OK

LOCATION.--Lat 35°10'21", long 96°55'54", NE 1/4 NE 1/4 sec. 13, T.8 N., R.3 E., Pottawatomie County, Hydrologic Unit 11090203, on downstream side of center pier of bridge on U.S. Highway 177, 1.5 mi downstream from Dance Creek, 5.0 mi south of Tecumseh, and at mile 77.2.

DRAINAGE AREA.--456 mi².

PERIOD OF RECORD.--October 1943 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 898.52 ft above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Records fair. Flow regulated or diverted since 1965 by Lake Thunderbird, 19.2 mi upstream (station 07229900). U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1932 reached a stage of 25.58 ft, from floodmark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e46	36	22	25	22	285	e38	186	45	10	5.6	9.8
2	e43	36	139	26	25	497	e37	706	35	15	5.3	8.6
3	e40	37	323	29	27	474	e36	710	30	13	5.1	7.3
4	e38	37	151	30	24	383	e35	702	92	11	5.2	7.1
5	e35	37	67	28	23	96	e34	1130	35	8.5	6.1	7.4
6	33	36	47	27	23	52	33	959	145	7.0	5.7	11
7	30	36	39	25	22	57	33	826	137	6.8	6.0	8.2
8	33	41	35	24	e20	1330	32	700	75	12	6.5	7.0
9	31	38	34	28	e20	685	33	e280	e45	24	5.7	11
10	29	38	33	27	e21	478	37	e140	e35	30	5.3	8.6
11	31	38	30	26	e21	597	125	e80	e25	16	5.1	6.9
12	31	47	29	25	e22	757	172	e60	e22	11	5.0	6.3
13	31	80	363	25	e23	665	61	e45	e20	11	4.8	6.1
14	30	90	147	24	24	627	43	e40	e18	14	4.7	5.9
15	30	71	62	23	23	663	37	e37	16	73	4.7	5.7
16	32	89	51	23	23	693	33	e34	16	22	4.5	29
17	31	104	47	24	22	650	30	31	16	14	4.5	11
18	31	43	40	e20	22	350	28	30	15	10	4.9	6.3
19	36	30	36	e25	35	e200	27	28	15	8.6	4.9	5.3
20	56	25	33	e29	114	e140	26	26	14	7.1	5.3	5.0
21	45	23	31	32	89	e90	26	25	14	6.8	6.0	4.9
22	39	23	29	28	777	e75	25	23	12	8.5	5.4	8.9
23	39	23	27	27	398	e65	24	22	12	7.2	5.0	9.2
24	35	22	27	28	363	e60	23	21	11	6.5	5.0	6.4
25	34	21	27	28	237	e56	24	66	11	6.9	4.9	5.6
26	33	22	27	28	209	e52	37	36	10	8.7	4.7	5.4
27	32	22	27	27	207	e49	71	28	9.9	6.9	4.6	5.2
28	32	23	26	24	191	e46	34	24	9.6	6.2	4.5	5.1
29	33	23	25	23	---	e43	167	361	9.5	5.9	4.5	5.0
30	33	22	24	e20	---	e41	732	251	9.0	5.8	4.5	4.9
31	34	---	24	e21	---	e39	---	100	---	5.8	7.1	---
TOTAL	1086	1213	2022	799	3027	10295	2093	7707	959.0	399.2	161.1	234.1
MEAN	35.0	40.4	65.2	25.8	108	332	69.8	249	32.0	12.9	5.20	7.80
MAX	56	104	363	32	777	1330	732	1130	145	73	7.1	29
MIN	29	21	22	20	20	39	23	21	9.0	5.8	4.5	4.9
AC-FT	2150	2410	4010	1580	6000	20420	4150	15290	1900	792	320	464

c Estimated

ARKANSAS RIVER BASIN

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07230500 LITTLE RIVER NEAR TECUMSEH, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	121	110	108	96.1	122	204	244	334	258	60.9	38.1	56.9
MAX	898	628	851	844	783	1086	1265	1687	676	505	493	477
(WY)	1984	1984	1993	1985	1985	1990	1990	1990	1985	1989	1992	1970
MIN	.009	2.27	2.12	2.74	2.45	4.49	5.55	9.25	5.53	1.38	.000	.22
(WY)	1979	1981	1979	1981	1967	1966	1981	1981	1972	1967	1972	1980

SUMMARY STATISTICS 1993 CALENDAR YEAR

ANNUAL TOTAL	121422.1
ANNUAL MEAN	333
HIGHEST ANNUAL MEAN	
LOWEST ANNUAL MEAN	
HIGHEST DAILY MEAN	4630
LOWEST DAILY MEAN	7.8
ANNUAL SEVEN-DAY MINIMUM	8.0
INSTANTANEOUS PEAK FLOW	
INSTANTANEOUS PEAK STAGE	
ANNUAL RUNOFF (AC-FT)	240800
10 PERCENT EXCEEDS	965
50 PERCENT EXCEEDS	76
90 PERCENT EXCEEDS	12

1994 WATER YEAR

ANNUAL TOTAL	29995.4
ANNUAL MEAN	82.2
HIGHEST ANNUAL MEAN	
LOWEST ANNUAL MEAN	
HIGHEST DAILY MEAN	1330
LOWEST DAILY MEAN	4.5
ANNUAL SEVEN-DAY MINIMUM	4.7
INSTANTANEOUS PEAK FLOW	1940
INSTANTANEOUS PEAK STAGE	11.91
ANNUAL RUNOFF (AC-FT)	105800
10 PERCENT EXCEEDS	494
50 PERCENT EXCEEDS	17
90 PERCENT EXCEEDS	1.4

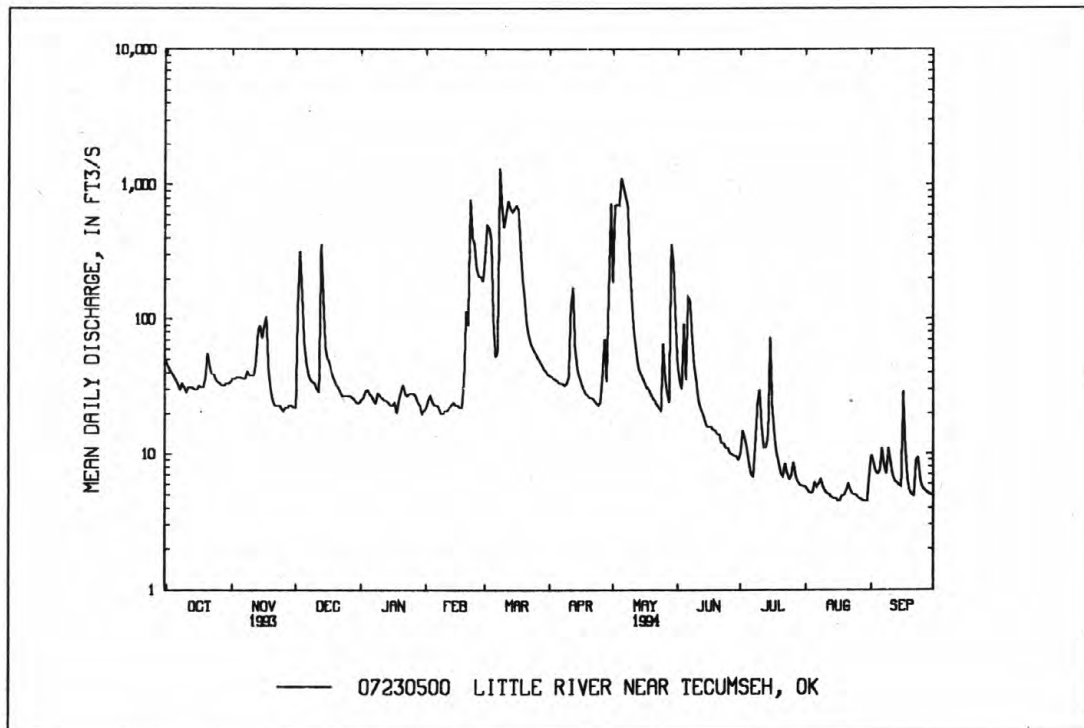
WATER YEARS 1966-94

^a 146	
511	1985
9.34	1981
9740	May 3 1990
.00	Jun 23 1966
.00	Jun 23 1966
^b 14000	May 3 1990
^c 19.24	Oct 20 1984

^aPrior to regulation, water years 1944-64, 149 ft³/s.

^bMaximum discharge for period of record 32,400 ft³/s, May 25, 1957.

^cMaximum gage height for period of record 19.68, May 18, 1949.



ARKANSAS RIVER BASIN

07231000 LITTLE RIVER NEAR SASAKWA, OK

LOCATION.--Lat 34°59'02", long 96°33'01", NE 1/4 sec.22, T.6 N., R.7 E., Seminole County, Hydrologic Unit 11090203, near left abutment on downstream side of county road bridge, 2.8 mi northwest of Sasakwa, 8.7 mi downstream from Salt Creek, and at mile 24.1.

DRAINAGE AREA.--865 mi².

PERIOD OF RECORD.--September 1942 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 744.34 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Apr. 11, 1946, nonrecording gage at same site and datum. Prior to Oct. 1, 1979, gage at same site and datum, 5.00 ft higher.

REMARKS.--Records poor. Flow regulated by Lake Thunderbird (station 07229900) 72.3 mi upstream since March 1965.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	30	44	78	50	532	117	1220	176	19	e10	21
2	93	30	370	81	51	1170	114	1360	118	18	e9.0	18
3	83	31	1390	85	61	910	116	3610	90	17	e8.2	16
4	68	35	1070	87	64	705	107	2120	370	21	e7.6	14
5	62	35	512	87	66	561	106	1250	298	21	12	10
6	57	34	304	83	62	318	98	1240	161	19	e10	9.9
7	53	33	216	74	61	244	93	1000	299	18	28	11
8	51	33	167	64	61	2670	92	830	230	19	34	10
9	47	32	150	66	55	4030	91	696	126	75	22	10
10	44	33	137	73	45	3160	95	359	178	61	14	17
11	42	35	121	74	46	1520	211	268	120	55	e10	10
12	40	36	110	72	71	1100	289	238	76	48	e9.2	e9.0
13	40	47	421	71	70	1080	268	211	65	33	e8.2	e8.5
14	39	95	907	69	62	985	159	187	57	98	e7.4	e8.2
15	37	127	573	66	59	903	121	156	48	136	e7.0	10
16	36	101	275	64	56	871	103	136	45	139	e6.5	199
17	36	189	205	63	55	884	99	122	42	91	e6.1	97
18	36	141	170	52	55	736	89	107	39	61	e5.8	41
19	38	99	148	57	57	400	81	95	41	39	e5.6	27
20	56	71	133	60	110	346	79	88	56	27	e5.3	15
21	60	58	119	70	182	232	82	80	41	23	e5.0	10
22	53	53	111	75	1230	173	75	74	36	19	e4.8	11
23	44	48	101	72	1440	157	73	69	34	18	e4.7	14
24	39	46	96	70	815	150	70	66	31	15	e4.6	18
25	38	44	94	73	591	133	68	72	28	14	e4.5	16
26	36	42	93	82	361	159	69	122	25	14	4.4	13
27	34	39	92	79	296	272	72	102	22	15	e4.4	e9.0
28	32	40	87	69	275	216	125	79	20	14	e4.4	e8.5
29	31	43	84	65	---	170	183	412	19	14	e4.4	e8.2
30	31	43	79	61	---	138	1960	702	20	12	e4.4	e7.8
31	30	---	77	58	---	123	---	355	---	e11	e4.4	---
TOTAL	1487	1723	8456	2200	6407	25048	5305	17426	2911	1184	275.9	677.1
MEAN	48.0	57.4	273	71.0	229	808	177	562	97.0	38.2	8.90	22.6
MAX	101	189	1390	87	1440	4030	1960	3610	370	139	34	199
MIN	30	30	44	52	45	123	68	66	19	11	4.4	7.8
AC-FT	2950	3420	16770	4360	12710	49680	10520	34560	5770	2350	547	1340

c Estimated

ARKANSAS RIVER BASIN

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07231000 LITTLE RIVER NEAR SASAKWA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1994, BY WATER YEAR (WY)

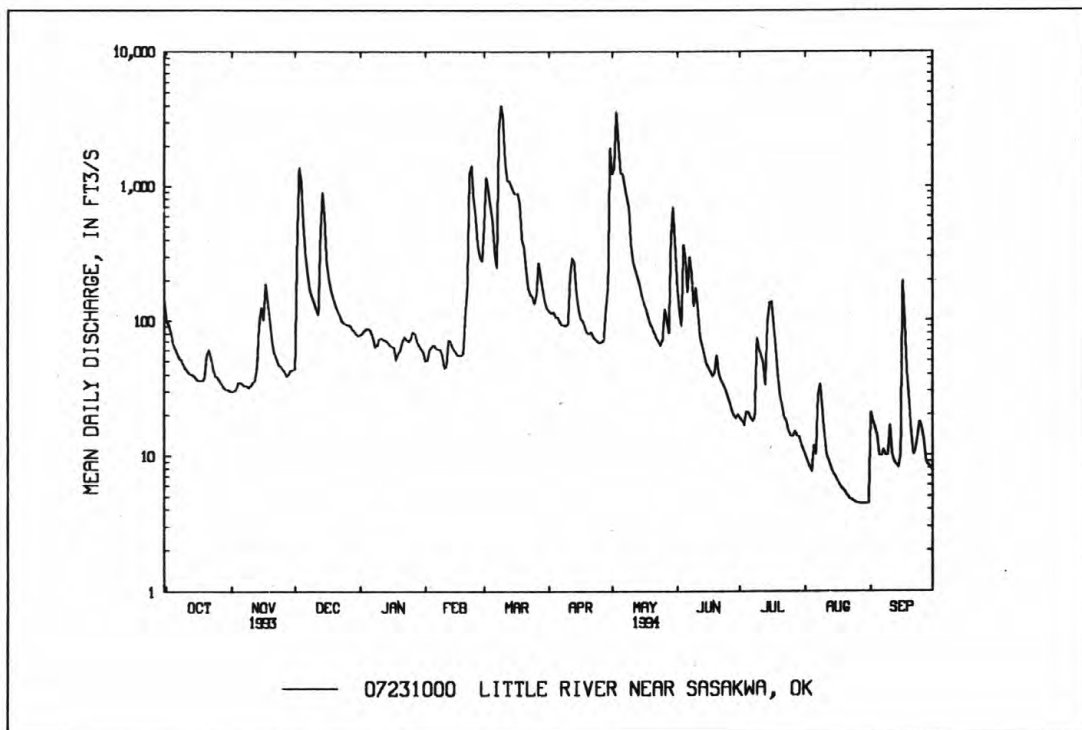
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	278	310	293	216	346	523	602	848	620	121	72.8	135
MAX	2523	1705	2095	1307	1852	2618	3591	2762	1814	684	904	753
(WY)	1971	1993	1993	1985	1993	1990	1990	1990	1982	1989	1992	1970
MIN	.000	.009	.30	1.69	1.80	7.39	17.2	30.7	11.2	2.00	.004	.005
(WY)	1979	1981	1979	1967	1967	1967	1981	1981	1966	1967	1980	1980

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1966-94
ANNUAL TOTAL	257522.8	73100.0	
ANNUAL MEAN	706	200	^a 363
HIGHEST ANNUAL MEAN			996
LOWEST ANNUAL MEAN			19.0
HIGHEST DAILY MEAN	7340	Feb 16	4030
LOWEST DAILY MEAN	6.3	Aug 18	4.4
ANNUAL SEVEN-DAY MINIMUM	6.3	Aug 17	4.4
INSTANTANEOUS PEAK FLOW			4910
INSTANTANEOUS PEAK STAGE			18.16
ANNUAL RUNOFF (AC-FT)	510800	145000	263100
10 PERCENT EXCEEDS	1520	457	987
50 PERCENT EXCEEDS	315	66	48
90 PERCENT EXCEEDS	26	10	.88

^aPrior to regulation, water year 1943-64, 410 ft³/s.

^bMaximum discharge for period of record 44,600 ft³/s, May 11, 1950.

^cMaximum gage height for period of record 33.48 ft, May 11, 1950.



ARKANSAS RIVER BASIN
07231500 CANADIAN RIVER AT CALVIN, OK

LOCATION.--Lat 34°58'40", long 96°14'36", in NW 1/4 SW 1/4 sec.22, T.6 N., R.10 E., Hughes County, Hydrologic Unit 11090202, on downstream left bank at north end of bridge on U.S. Highway 75, 0.5 mi northeast of Calvin, 2.6 mi upstream from Shawnee Creek, 8.4 mi downstream from Little River, and at mile 94.1.

DRAINAGE AREA.--27,952 mi², of which 4,801 mi² is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1905 to December 1908 (gage heights and discharge measurements only, except for period July 1905 to December 1906), October 1938 to September 1942, July 1944 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected in this vicinity since 1904 are contained in reports of National Weather Service.

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

GAGE.--Water-stage recorder and nonrecording gage. Datum of gage is 682.72 ft above sea level. January 1905 to December 1908, nonrecording gage at site 0.7 mi upstream at datum 4.00 ft higher. Oct. 1, 1938 to Aug. 12, 1944, nonrecording gage at site 0.2 mi downstream and at same datum. Aug. 13, 1944 to July 31, 1977, water-stage recorder at site 0.2 mi downstream and datum 2.00 ft higher. Aug. 1, 1977 to Nov. 15, 1988, water-stage recorder 0.2 mi downstream and at present datum.

REMARKS.--Records poor. Occasional slight regulation by dams in New Mexico and Texas since 1964; Lake Thunderbird (station 07229900) since March 1965. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	756	263	e680	357	574	776	794	e5980	e2320	e170	e254	e70
2	688	268	e678	357	574	e2340	759	7140	e1550	203	e270	e76
3	646	269	e760	357	574	e1700	1030	13200	e1260	e182	e233	e145
4	533	271	e1450	357	574	e1430	1140	4550	e1180	e177	e214	335
5	463	274	e1700	363	574	e1360	1040	2870	e1610	e172	e208	307
6	417	275	e1030	378	574	e1340	852	2340	e1170	e169	e335	e293
7	357	280	e855	378	574	e1300	686	e2160	e1000	e168	491	e286
8	323	280	e790	378	574	e4800	667	e2280	e1900	e168	378	e280
9	323	285	e745	378	574	14800	663	e2330	e1250	e190	e300	e282
10	328	286	e710	378	574	e13900	681	e2200	e830	298	e255	e293
11	324	288	e680	378	544	e1260	1400	e1890	e710	486	e224	e311
12	311	314	e660	381	527	e1150	e4100	e1700	e620	506	e197	330
13	301	400	e700	397	558	e1030	e12500	e1560	e550	527	e174	315
14	269	1110	1870	416	615	e930	e3700	e1440	e510	333	e162	e300
15	359	1060	1270	416	639	e900	e1750	e1340	e480	1060	e151	e295
16	361	1150	851	416	639	e725	e1120	e1280	e465	758	e145	780
17	307	1880	664	416	639	e642	e930	e1230	e460	670	e138	1950
18	292	1580	600	416	639	e850	850	e1150	e460	419	e134	926
19	297	1330	511	416	627	e885	797	e1090	e455	458	e130	479
20	339	1100	492	416	660	e935	738	e1080	e450	357	e190	300
21	413	941	479	416	739	e1000	693	e1040	440	e304	e270	e275
22	448	852	451	448	2140	e880	655	e975	343	e289	e155	e266
23	410	781	435	482	4170	e870	633	e895	341	e271	e125	e255
24	356	721	392	486	2900	864	613	e840	298	e264	e102	e285
25	320	713	377	501	1630	802	615	e895	276	e260	88	e281
26	311	709	364	580	1520	772	624	e1080	267	e280	e81	e270
27	296	698	364	639	1100	1200	623	e1720	205	e300	e78	e260
28	291	696	364	625	772	1670	758	e2600	e188	e290	e75	e256
29	267	675	364	599	---	1350	2060	e2190	e176	e285	e73	e250
30	258	e650	359	583	---	1030	e6160	e2000	e174	e263	e71	e247
31	263	---	357	574	---	893	---	e3550	---	e255	e71	---
TOTAL	11627	20399	22002	13682	26798	64384	49631	76595	21938	10532	5772	10998
MEAN	375	680	710	441	957	2077	1654	2471	731	340	186	367
MAX	756	1880	1870	639	4170	14800	12500	13200	2320	1060	491	1950
MIN	258	263	357	357	527	642	613	840	174	168	71	70
AC-FT	23060	40460	43640	27140	53150	127700	98440	151900	43510	20890	11450	21810

e Estimated

ARKANSAS RIVER BASIN

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07231500 CANADIAN RIVER AT CALVIN, OK--Continued

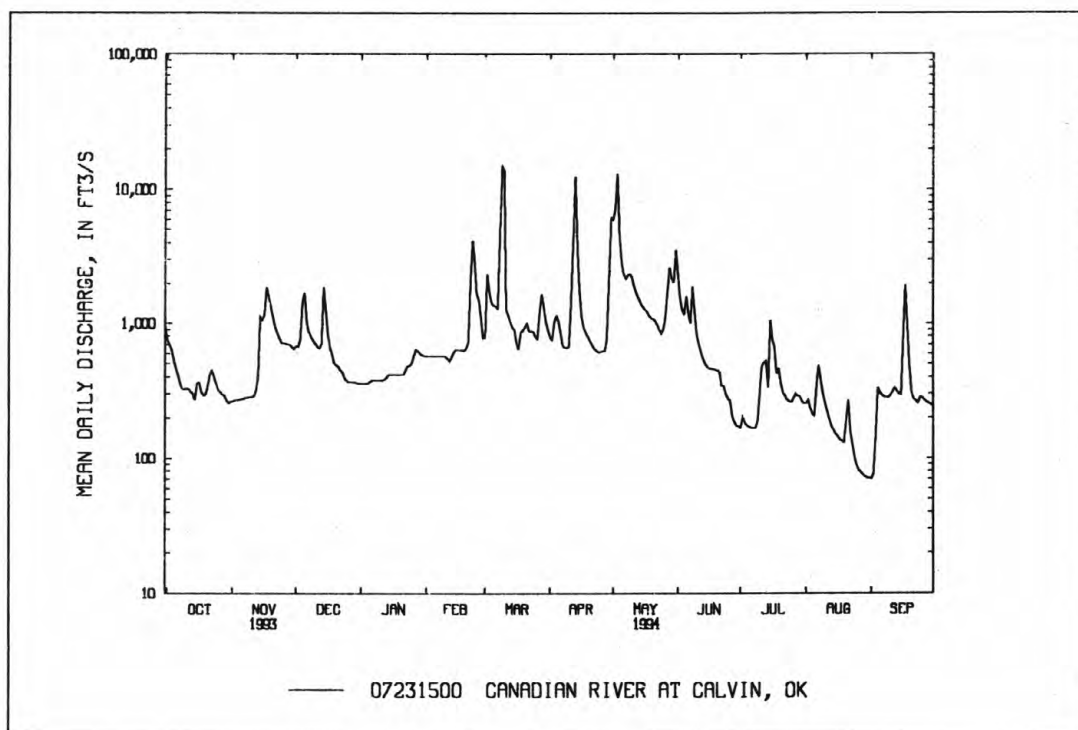
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1699	1113	1024	823	1235	1788	2465	4464	3233	1370	789	1215
MAX	21530	6529	9355	5429	7059	9793	15110	20640	15350	9669	8398	6467
(WY)	1942	1993	1993	1985	1985	1985	1990	1990	1941	1950	1906	1941
MIN	.10	3.82	7.76	16.4	23.4	20.9	45.7	195	33.7	10.8	.068	.000
(WY)	1957	1967	1967	1940	1967	1967	1956	1966	1966	1966	1980	1956

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1906-94

ANNUAL TOTAL	1267333	334358	1773
ANNUAL MEAN	3472	916	5513
HIGHEST ANNUAL MEAN			184
LOWEST ANNUAL MEAN			1981
HIGHEST DAILY MEAN	76600	May 10	14800
LOWEST DAILY MEAN	106	Aug 23	70
ANNUAL SEVEN-DAY MINIMUM	138	Aug 17	73
INSTANTANEOUS PEAK FLOW			20800
INSTANTANEOUS PEAK STAGE			8.66
ANNUAL RUNOFF (AC-FT)	2514000	663200	1284000
10 PERCENT EXCEEDS	7220	1700	4010
50 PERCENT EXCEEDS	1820	533	362
90 PERCENT EXCEEDS	309	212	23

^aFrom floodmark, site and datum then in use.



ARKANSAS RIVER BASIN
07231500 CANADIAN RIVER AT CALVIN, OK--Continued

(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1944, December 1950 to February 1953, October 1959 to April 1961, July 1965 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1965 to January 1982.

WATER TEMPERATURE: July 1965 to January 1982.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
JUN											
15...	1000	48.0	25.0	750	1028	1028	480	2.91	1110	8.4	8.7
15...	1005	32.0	25.0	750	1028	1028	480	2.91	1120	8.4	8.6
15...	1010	16.0	25.0	750	1028	1028	480	2.91	1120	8.4	8.6
15...	1015	30.0	25.5	750	1028	1028	480	2.91	1110	8.0	8.4
15...	1020	60.0	25.5	750	1028	1028	480	2.91	1110	8.1	8.5
15...	1025	90.0	25.5	750	1028	1028	480	2.91	1120	8.2	8.5
15...	1030	120	25.5	750	1028	1028	480	2.91	1120	8.2	8.5
15...	1035	150	25.5	750	1028	1028	480	2.91	1120	8.1	8.5
15...	1040	180	25.5	750	1028	1028	480	2.91	1120	8.1	8.5
15...	1045	210	25.5	750	1028	1028	480	2.91	1120	7.9	8.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT											
19...	1500	1028	80020	292	969	8.1	16.5	18.5	4.0	748	9.0
DEC											
21...	1200	1028	80020	491	*930	7.9	6.0	6.5	23	750	12.5
APR											
11...	1230	1028	80020	751	1270	8.3	21.0	20.0	2.0	742	8.7
JUN											
15...	0930	1028	80020	480	1130	8.5	26.5	25.5	9.8	750	8.4
AUG											
08...	1530	1028	80020	292	875	--	32.0	32.0	7.5	750	10.9

*SPECIFIC CONDUCTANCE, LAB (µs/cm)

ARKANSAS RIVER BASIN
07231500 CANADIAN RIVER AT CALVIN, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS (MG/L) CACO3 (MG/L) AS CA) (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 AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	
OCT 19...	98	96	100	290	93	64	32	88	39	2	3.4
DEC 21...	104	--	--	310	72	78	27	64	31	2	2.8
APR 11...	98	30	22	350	140	76	38	110	41	3	3.8
JUN 15...	105	K39	K17	360	160	87	35	90	35	2	5.0
AUG 08...	153	890	700	210	61	46	22	90	48	3	3.5
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)	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 19...	243	0	199	100	130	0.40	7.7	569	546	0.77	449
DEC 21...	286	0	235	110	96	0.30	10	562	533	0.76	745
APR 11...	248	0	203	180	170	0.40	6.5	684	707	0.93	1390
JUN 15...	229	7	200	200	120	0.50	12	698	670	0.95	905
AUG 08...	157	10	145	48	150	0.30	9.4	483	457	0.66	381
DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	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)
OCT 19...	--	--	--	<0.010	--	--	<0.050	0.020	0.03	0.78	0.80
DEC 21...	0.710	0.710	3.1	0.020	0.07	0.730	0.730	0.110	0.14	0.49	0.60
APR 11...	--	--	--	<0.010	--	--	<0.050	0.040	0.05	0.46	0.50
JUN 15...	--	--	--	<0.010	--	--	<0.050	0.020	0.03	0.78	0.80
AUG 08...	--	--	--	<0.010	--	--	<0.050	0.020	0.03	1.4	1.4

ARKANSAS RIVER BASIN
07231500 CANADIAN RIVER AT CALVIN, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
OCT 19...	0.80	0.120	<0.010	<0.010	--	<10	240	<3	<3	12
DEC 21...	1.3	0.090	0.040	0.050	0.15	20	240	<3	<3	9
APR 11...	0.50	0.120	0.020	0.010	0.03	--	--	--	--	--
JUN 15...	0.80	0.200	0.030	0.030	0.09	10	250	<3	<3	16
AUG 08...	1.4	0.180	0.030	<0.010	--	<10	160	<3	5	7
DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	SEDI- MENT, DIS- SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 19...	5	<10	2	<1	<1.0	730	<6	565	445	26
DEC 21...	18	<10	2	<1	<1.0	710	<6	229	304	30
APR 11...	--	--	--	--	--	--	--	155	314	57
JUN 15...	1	<10	2	<1	<1.0	940	12	89	115	91
AUG 08...	1	<10	1	<1	<1.0	500	<6	251	198	58



Discharge from air shaft pipe, Tar Creek area, northeastern Oklahoma

ARKANSAS RIVER BASIN

07232250 BEAVER RIVER NEAR FELT, OK

LOCATION.--Lat 36°37'47", long 102°40'52", NE 1/4 NE 1/4 sec.24, T.2 N., R.3 E., Cimarron County, Hydrologic Unit 11100101, on downstream side of pier of bridge on U.S. Highway 64, 8.0 miles northeast of Felt, 11.0 miles southwest of Boise City, and at mile 754.9.

DRAINAGE AREA.--879 mi².

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage 4,246.05 ft above sea level.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--14 years, 0.74 ft³/s, 536 acre-ft/yr.

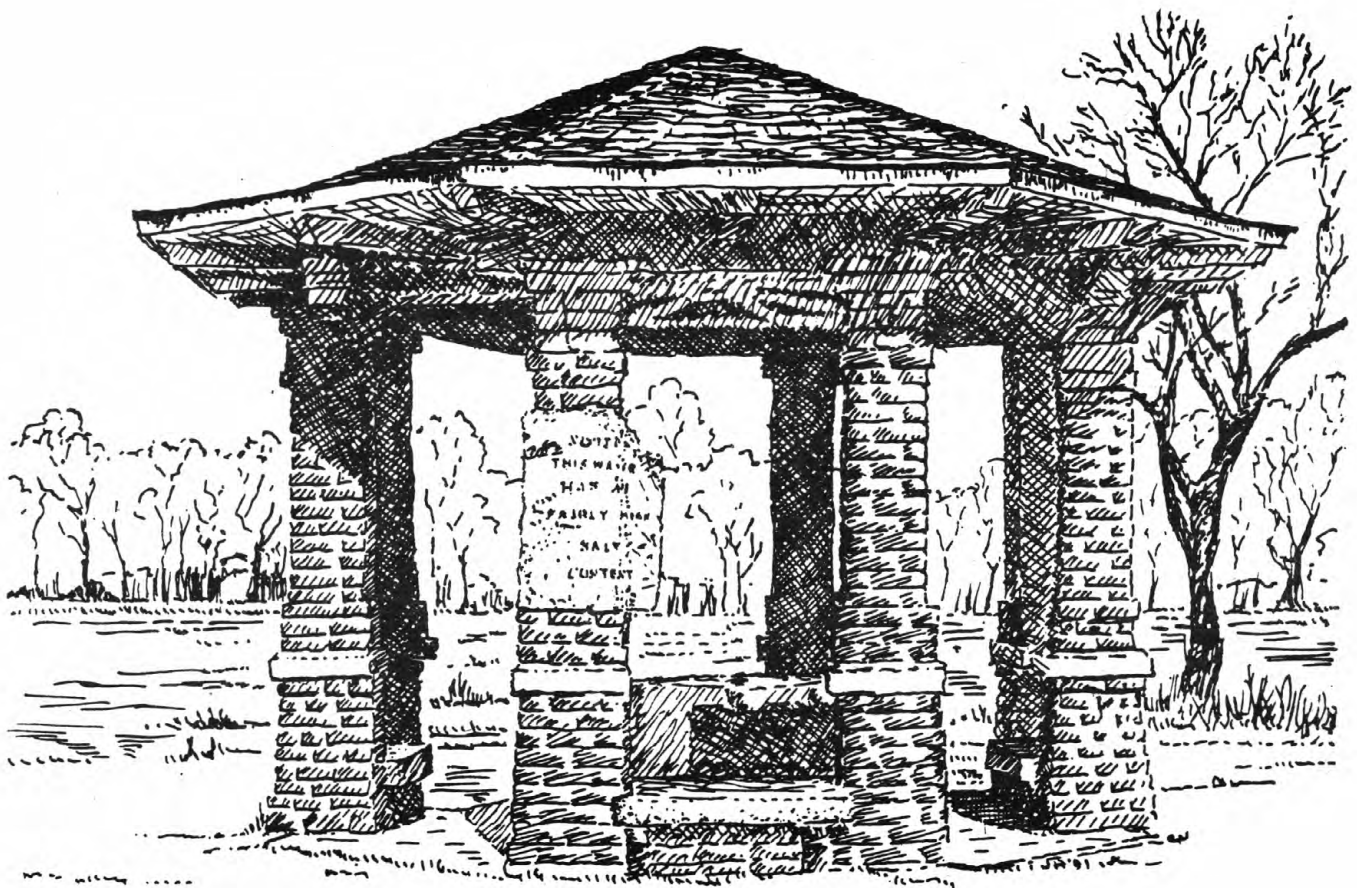
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,160 ft³/s, Aug. 13, 1981, gage height, 10.96 ft. on the basis of step-backwater measurement at gage site; no flow most days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 2,100 ft³/s, Sept. 2, gage height 9.59 ft; no flow most days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	284
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	492
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	776.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	25.9
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	492
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1540

CAL YR 1993 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1994 TOTAL 776.00 MEAN 2.13 MAX 492 MIN .00 AC-FT 1540



Pavilion at Mineral Wells Park, Guthrie, Oklahoma

ARKANSAS RIVER BASIN
07232900 COLDWATER CREEK NEAR GUYMON, OK

LOCATION.--Lat 36°34'19", long 101°22'52", NW 1/4 NW 1/4 sec.7, T.1 N., R.16 E., Texas County, Hydrologic Unit 11100103, near left bank on downstream side of pier of bridge on county road, 0.3 mi downstream from Frisco Creek, 4.0 mi east and 7.5 mi south of Guymon, and at mile 18.0.

DRAINAGE AREA.--1,903 mi², of which 1,178 mi² is probably noncontributing.

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage 2,870.83 ft above sea level.

REMARKS.--No estimated daily discharges. Records fair. Natural flow affected by flood retarding structures and irrigation development.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/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 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	25	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	106	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	3.7	.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	134.70	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	.000	.000	4.35	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	106	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	267	.00	.00	.00	.00

ARKANSAS RIVER BASIN

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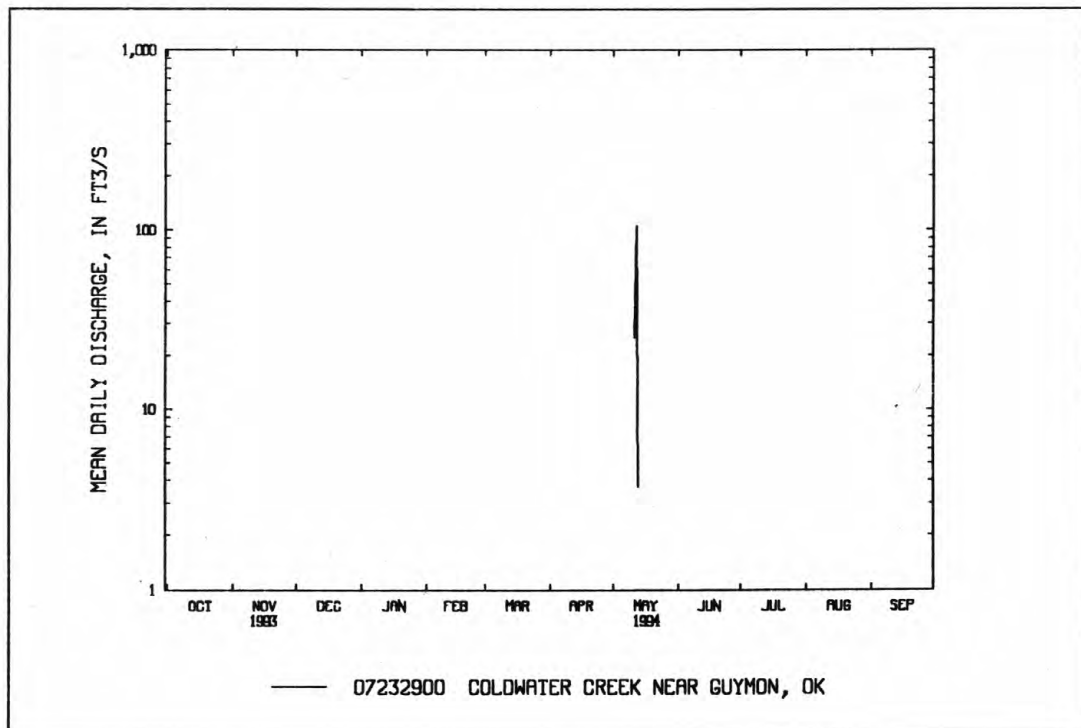
07232900 COLDWATER CREEK NEAR GUYMON, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.50	.000	.000	.000	.000	.000	3.76	11.3	6.30	.023	.94	2.14
MAX	21.0	.000	.000	.000	.000	.000	52.7	86.0	42.3	.31	6.90	27.5
(WY)	1986	1981	1981	1981	1981	1981	1990	1989	1991	1981	1992	1985
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1981	1981	1981	1981	1981	1981	1981	1981	1981	1982	1983	1981

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1981-94

ANNUAL TOTAL	267.30	134.70	
ANNUAL MEAN	.73	.37	2.17
HIGHEST ANNUAL MEAN			8.37 1982
LOWEST ANNUAL MEAN			.000 1983
HIGHEST DAILY MEAN	133 Aug 12	106 May 12	1500 May 18 1989
LOWEST DAILY MEAN	.00 most days	.00 most days	.00 each year
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 1 1980
INSTANTANEOUS PEAK FLOW		220 May 11	5800 Jun 20 1982
INSTANTANEOUS PEAK STAGE		10.68 May 11	14.34 Jun 20 1982
ANNUAL RUNOFF (AC-FT)	530	267	1570
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00



ARKANSAS RIVER BASIN

07233650 PALO DURO CREEK AT RANGE, OK

LOCATION.--Lat 36°32'38", long 101°04'50", SE 1/4 SE 1/4 sec.14, T.1 N., R.18 E., Texas County, Hydrologic Unit 11100104, on downstream side of pier of county road bridge, 3.4 mi upstream from Hackberry Creek, 11.0 mi southeast of Hardesty, and at mile 14.9.

DRAINAGE AREA.--1,513 mi², of which 687 mi² is probably noncontributing.

PERIOD OF RECORD.--October 1991 to current year.

GAGE.--Water-stage recorder. Datum of gage 2,679.77 ft above sea level.

REMARKS.--Records poor. Flow regulated since April 1991 by Palo Duro Reservoir, 18 mi upstream. Natural flow also affected by local irrigation withdrawals.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	1.2	1.4	1.2	e1.4	e1.8	e2.2	e1.3	1.5	.00	.00	.62
2	.07	1.2	1.5	1.2	e1.3	e1.7	e2.1	1.2	1.7	.00	.00	.75
3	.12	1.2	1.4	1.2	e1.3	e1.6	2.1	1.2	1.9	.00	.09	.68
4	.18	1.1	1.4	1.2	e1.4	e1.6	e2.1	1.1	1.8	.00	1.7	.59
5	.25	1.1	1.2	1.3	e1.4	e1.6	e2.0	1.1	1.8	.00	1.6	.60
6	.22	1.1	1.1	1.3	e1.4	e1.5	e2.1	1.1	1.8	.00	1.1	.58
7	.24	1.1	1.1	1.4	e1.4	e1.5	e2.0	1.2	1.7	.00	.28	.46
8	.25	1.2	1.2	1.5	e1.3	e1.5	e1.9	1.2	1.6	.00	.01	1.3
9	.26	1.2	1.2	1.5	e1.3	e1.6	e2.0	1.4	1.6	.00	.00	1.2
10	.38	1.2	1.2	1.5	e1.3	e1.7	e1.9	1.3	2.0	.00	.00	.78
11	.45	1.2	1.2	1.5	e1.3	e1.7	e2.1	1.2	1.8	.00	.00	.61
12	.48	1.3	1.3	1.6	e1.3	e1.7	e2.0	1.2	1.3	.00	.00	.62
13	.52	1.4	1.4	1.5	e1.3	e1.7	e1.9	1.3	1.2	.00	.00	.62
14	.53	1.5	1.3	1.6	e1.3	e1.8	e1.8	1.6	1.2	.00	.00	.64
15	.57	1.4	1.1	1.6	e1.3	e1.9	e1.7	1.6	1.6	.00	.00	.68
16	.62	1.3	1.1	1.6	e1.4	e2.0	e1.6	1.6	1.7	.00	.00	.56
17	.75	1.3	1.1	1.6	e1.4	2.0	e1.7	1.6	1.3	.00	.00	.41
18	.79	1.3	1.1	1.5	e1.5	e2.0	e1.6	1.5	.59	.00	.00	.41
19	.83	1.4	1.1	1.5	e1.5	e1.9	e1.5	1.7	.12	.00	.00	.28
20	.85	1.4	1.1	1.5	e1.6	e1.9	e1.4	1.7	.03	.00	.00	.25
21	.83	1.4	1.2	1.5	e1.6	e1.9	e1.5	1.7	.02	.00	.00	.33
22	.84	1.4	1.1	1.5	e1.6	e1.9	e1.5	1.6	.02	.00	.00	.26
23	.86	1.5	1.1	1.5	e1.6	e2.0	e1.4	1.5	.00	.00	.00	.28
24	.89	1.6	1.1	1.5	e1.7	2.1	e1.5	1.5	.00	.00	1.7	.40
25	.87	1.6	1.1	1.5	e1.8	2.1	e1.5	e1.9	.00	.00	1.3	.59
26	.97	1.6	1.1	1.6	e1.9	2.1	e1.4	e1.8	.00	.00	.58	.55
27	1.1	1.6	1.1	1.6	e1.9	2.1	e1.3	e1.7	.00	.00	e.35	.45
28	1.2	1.6	1.1	1.5	e1.9	2.1	e1.4	e1.6	.00	.00	.10	.30
29	1.2	1.5	1.1	e1.5	---	2.2	e1.5	e1.5	.00	.00	.07	.09
30	1.2	1.5	1.1	e1.5	---	2.3	e1.4	e1.5	.00	.00	.03	.02
31	1.2	---	1.1	e1.4	---	e2.2	---	1.5	---	.00	.17	---
TOTAL	19.57	40.4	36.7	45.4	41.4	57.7	52.1	44.9	28.28	0.00	9.08	15.91
MEAN	.63	1.35	1.18	1.46	1.48	1.86	1.74	1.45	.94	.000	.29	.53
MAX	1.2	1.6	1.5	1.6	1.9	2.3	2.2	1.9	2.0	.00	1.7	1.3
MIN	.05	1.1	1.1	1.2	1.3	1.5	1.3	1.1	.00	.00	.00	.02
AC-FT	39	80	73	90	82	114	103	89	56	.00	18	32

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.47	1.06	1.14	1.45	1.54	1.62	1.60	1.34	1.00	.33	.33	.25
MAX	.63	1.35	1.18	1.50	1.67	1.86	1.74	1.45	1.43	.84	.35	.53
(WY)	1994	1994	1994	1992	1993	1994	1994	1994	1992	1992	1992	1994
MIN	.34	.84	1.11	1.39	1.48	1.35	1.35	1.20	.63	.000	.29	.064
(WY)	1992	1992	1992	1993	1994	1992	1992	1993	1993	1994	1994	1993

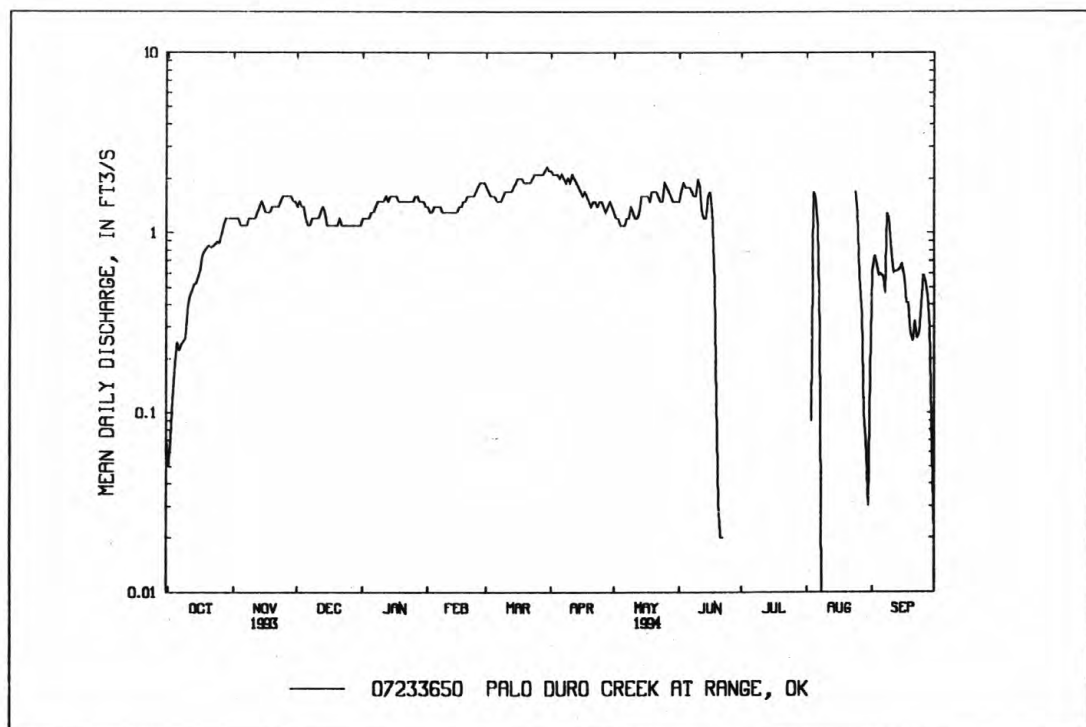
e Estimated

ARKANSAS RIVER BASIN
07233650 PALO DURO CREEK AT RANGE, OK--Continued

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SUMMARY STATISTICS	1993 CALENDAR YEAR		1994 WATER YEAR		WATER YEARS 1992-94	
ANNUAL TOTAL	362.54		391.44			
ANNUAL MEAN	.99		1.07		1.01	
HIGHEST ANNUAL MEAN					1.07	1994
LOWEST ANNUAL MEAN					.94	1993
HIGHEST DAILY MEAN	6.4	Aug 12	2.3	Mar 30	6.4	Aug 12 1993
LOWEST DAILY MEAN	.01	Jul 27	.00	at times	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.01	Jul 27	.00	Jun 23	.00	Jun 23 1994
INSTANTANEOUS PEAK FLOW			3.6	Aug 24	.71	Aug 12 1993
INSTANTANEOUS PEAK STAGE			^a 9.03	Nov 26,27	10.00	Aug 12 1993
ANNUAL RUNOFF (AC-FT)	719		776		730	
10 PERCENT EXCEEDS	1.7		1.8		1.7	
50 PERCENT EXCEEDS	1.1		1.3		1.2	
90 PERCENT EXCEEDS	.05		.00		.06	

^aGage height affected by backwater from beaver dam.



ARKANSAS RIVER BASIN
07234000 BEAVER RIVER AT BEAVER, OK

(Headwater of the North Canadian River)

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

DRAINAGE AREA.--7,955 mi², of which 4,270 mi² is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1904 to December 1905 (gage heights only), October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as Beaver Creek at Beaver 1904-5, and October 1937 to September 1970 as North Canadian River at Beaver.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,368.16 ft, sea level (levels by U.S. Army Corps of Engineers). Mar. 29, 1904 to Dec. 31, 1905, nonrecording gage at same vicinity at different datum. Mar. 1, 1938 to Sept. 30, 1946, water-stage recorder at present site at datum 3.0 ft higher.

REMARKS.--Records 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 tele-meter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.19	.14	.19	e.22	2.4	4.9	2.7	.26	.21	.05	5.2
2	.13	.19	.15	.19	e.21	2.2	4.9	2.7	.29	.16	.06	53
3	.13	.20	.16	.18	e.21	2.1	5.0	2.8	.35	.25	.06	17
4	.13	.21	.16	.18	.21	2.1	5.0	3.0	.31	.24	.06	4.4
5	.13	.19	.19	.18	.22	2.7	5.6	3.1	.25	.17	.05	.86
6	.13	.20	.20	.17	.23	3.2	5.6	3.2	4.3	.19	.04	.16
7	.13	.20	.20	.16	.22	3.4	6.0	2.7	3.7	.20	.04	.09
8	.15	.20	.21	.17	.21	3.8	6.3	2.5	.62	.17	.03	.07
9	.15	.19	.22	.17	e.19	7.9	6.7	2.4	.35	.14	.03	.05
10	.15	.18	.22	.18	e.22	5.8	6.7	2.2	3.7	.13	.03	.04
11	.16	.21	.23	.18	e.26	6.2	8.3	2.7	19	.11	.03	.04
12	.16	.20	.22	.19	.26	5.4	7.6	2.9	128	.11	.03	.03
13	.16	.22	.30	.18	.22	5.5	7.5	3.6	95	.09	.02	.03
14	.16	.25	.19	.18	e.33	5.4	7.6	4.4	45	.09	.05	.03
15	.16	.22	.18	.18	.41	5.0	6.3	5.1	29	.07	.06	.02
16	.16	.32	.18	.18	e.47	5.1	6.0	4.8	21	.09	.04	.02
17	.19	.24	.18	.16	e.64	4.6	6.1	4.0	15	.43	.03	.02
18	.19	.26	e.17	.16	e.91	4.1	6.4	4.0	12	.11	.03	.02
19	.18	.22	.15	.18	e1.3	4.4	5.5	3.8	9.4	.07	.02	.02
20	.18	.22	.15	.18	e1.2	5.3	5.3	3.1	7.5	.08	.02	.01
21	.12	.23	.16	.20	e1.1	5.5	5.4	2.9	6.3	.13	.02	.01
22	.13	.20	.16	.21	e1.4	5.6	4.9	1.4	5.6	.08	.02	.01
23	.17	.19	.16	.22	1.3	5.4	4.9	.58	5.0	.07	.02	.01
24	.16	.18	.16	.21	e1.5	4.0	4.7	.52	4.0	.08	.02	.01
25	.17	.14	.17	.20	e1.4	4.2	4.2	2.1	3.0	.10	.01	.01
26	.15	.14	.18	.29	e1.4	5.4	3.0	3.4	2.3	.11	.01	.01
27	.13	.14	.17	.21	e1.9	5.4	3.1	1.1	1.6	.10	.00	.01
28	.13	.14	.18	.21	2.7	4.8	4.7	.52	.85	.08	.00	.01
29	.15	.13	.19	.21	---	4.5	3.9	1.9	.38	.07	.00	.01
30	.15	.13	.20	.22	---	4.2	2.9	.63	.22	.06	.00	.01
31	.18	---	.20	.23	---	4.7	---	.33	---	.06	.02	---
MEAN	.15	.20	.18	.19	.74	4.53	5.50	2.62	14.1	.13	.029	2.71
MAX	.19	.32	.30	.29	2.7	7.9	8.3	5.1	128	.43	.06	53
MIN	.12	.13	.14	.16	.19	2.1	2.9	.33	.22	.06	.00	.01
AC-FT	9.3	12	11	12	41	278	327	161	842	8.0	1.8	161
CFSM	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

e Estimated

ARKANSAS RIVER BASIN
07234000 BEAVER RIVER AT BEAVER, OK--Continued

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1994, BY WATER YEAR (WY)

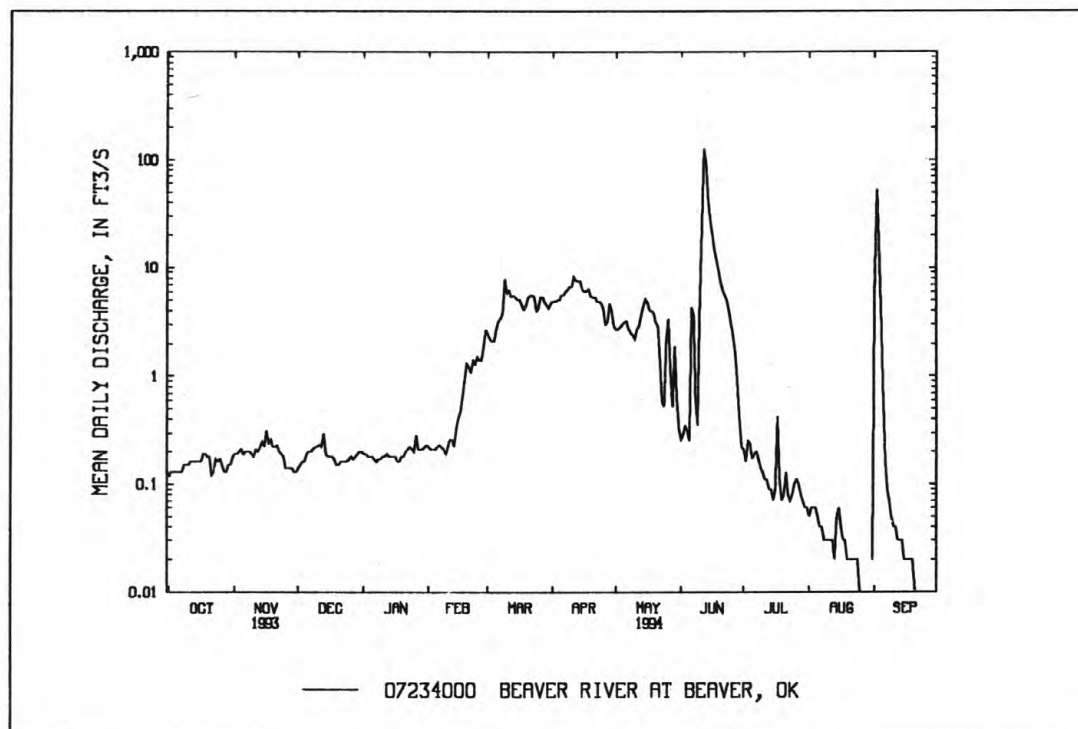
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.61	2.03	2.46	3.71	6.12	10.5	16.7	58.9	74.2	18.1	4.42	13.1
MAX	130	11.6	13.7	17.2	21.4	27.6	83.8	295	362	79.4	25.9	78.5
(WY)	1986	1988	1988	1988	1993	1993	1990	1989	1989	1979	1982	1981
MIN	.000	.000	.000	.040	.11	.11	.029	.093	.000	.000	.000	.000
(WY)	1980	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981	1980

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1979-94
ANNUAL TOTAL	3718.25	939.96	
ANNUAL MEAN	10.2	2.58	^a 18.3
HIGHEST ANNUAL MEAN	64.0	1989	
LOWEST ANNUAL MEAN			2.25 1984
HIGHEST DAILY MEAN	347 May 1	128 Jun 12	3880 May 31 1980
LOWEST DAILY MEAN	.12 Sep 29	.00 Aug 27-30	.00 at times
ANNUAL SEVEN-DAY MINIMUM	.13 Sep 29	.01 Aug 24	.00 Oct 1 1978
INSTANTANEOUS PEAK FLOW		310 Jun 12	^b 5510 Jun 10 1983
INSTANTANEOUS PEAK STAGE		5.12 Jun 12	^c 10.50 Jun 10 1983
ANNUAL RUNOFF (AC-FT)	7380	1860	13270
ANNUAL RUNOFF (CFSM)	.003	.001	.005
10 PERCENT EXCEEDS	27	5.4	28
50 PERCENT EXCEEDS	3.9	.21	.58
90 PERCENT EXCEEDS	.16	.03	.00

^aPrior to regulation, water years 1938-78, 103 ft³/s.

^bMaximum discharge for period of record, 70,000 ft³/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 ft³/s.

^cMaximum gage height for period of record, 14.55 ft, Oct. 8, 1946.



ARKANSAS RIVER BASIN
07234000 BEAVER RIVER AT BEAVER, OK--Continued

(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952, 1958-59, 1962-63, 1968-94 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1967 to January 1982.

WATER TEMPERATURE: October 1967 to January 1982.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

		AGENCY		DIS-	PH				BARO-		OXYGEN,
		COL-	ANA-	CHARGE,	SPE-	WATER			METRIC		DIS-
		LECTING	LYZING	INST.	CIFIC	WHOLE			PRES-		SOLVED
		SAMPLE	SAMPLE	CUBIC	CON-	FIELD	TEMPER-	TEMPER-	TUR-	SURE	OXYGEN,
DATE	TIME	(CODE	(CODE	FEET	DUCT-	(STAND-	ATURE	ATURE	BID-	(MM	DIS-
		NUMBER)	NUMBER)	PER	ANCE	ARD	AIR	WATER	ITY	OF	SOLVED
		(00027)	(00028)	SECOND	(US/CM	UNITS)	(DEG C)	(DEG C)	(NTU)	HG)	(MG/L)
				(00061)	(00095)	(00400)	(00020)	(00010)	(00076)	(00025)	(00300)
											(00301)
NOV											
02...	1000	1028	80020	0.16	6020	8.1	7.0	8.0	4.9	721	9.4
FEB											
15...	1100	1028	80020	0.36	6180	8.0	6.5	2.0	1.0	722	10.6
MAY											
10...	1030	1028	80020	2.2	6870	7.8	18.0	16.5	1.2	709	6.2
JUL											
06...	1200	1028	80020	0.36	6060	8.0	31.0	24.5	3.9	701	7.8
104											
COLI- STREP- HARD- MAGNE- SODIUM POTAS- BICAR- CAR-											
FORM, TOCOCCI HARD- NESS SIUM, SODIUM, AD- SIUM, BONATE CAR-											
FECAL, FECAL, NESS NONCARB CALCIUM SIUM, SODIUM, SORP- SIUM, WATER BONATE											
0.7 KF AGAR TOTAL DISSOLV DIS- DIS- DIS- TION SOLVED FIELD FIELD											
UM-MF (COLS. (MG/L FLD. AS SOLVED SOLVED SOLVED TION SOLVED FIELD FIELD											
DATE	(COLS./	PER	AS	CACO3	(MG/L	(MG/L	(MG/L	SODIUM	RATIO	(MG/L	AS (MG/L AS
	100 ML)	100 ML)	CACO3)	(MG/L)	AS CA)	AS MG)	AS NA)	PERCENT		AS K)	HCO3) CO3)
	(31625)	(31673)	(00900)	(00904)	(00915)	(00925)	(00930)	(00932)	(00931)	(00935)	(00453) (00452)
NOV											
02...	1100	430	1500	1200	340	160	890	56	10	8.3	323
FEB											
15...	200	920	1200	960	270	130	920	62	12	8.6	315
MAY											
10...	270	290	1000	860	220	120	1100	--	15	--	234
JUL											
06...	640	190	1400	1200	330	150	--	--	--	--	344
0											

ARKANSAS RIVER BASIN
07234000 BEAVER RIVER AT BEAVER, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	ALKA- LINITY WAT DISSULFATE TOT IT DIS- FIELD SOLVED (MG/L AS (MG/L CACO3) AS SO4) (39086) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, 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)
------	---	--	---	--	---	--	--	--	---	--	--

NOV												
02...	265	950	1400	1.0	26	4050	3940	5.51	1.75	<0.010	<0.050	0.040
FEB												
15...	258	680	1600	1.3	23	3950	3790	5.37	3.84	<0.010	--	<0.010
MAY												
10...	192	700	1800	1.4	13	4220	--	--	--	<0.010	<0.050	0.010
JUL												
06...	282	930	1400	1.0	29	3730	--	--	--	<0.010	<0.050	0.030

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
------	--	---	---	--	---	--	--	--	---	---	---

NOV											
02...	0.05	0.36	0.40	0.40	0.020	<0.010	<0.010	<10	100	<1	60
FEB											
15...	--	0.50	0.50	0.50	0.010	0.010	<0.010	<10	<100	<1	30
MAY											
10...	0.01	0.39	0.40	0.40	<0.010	<0.010	<0.010	10	<100	<1	90
JUL											
06...	0.04	1.2	1.2	1.2	0.200	<0.010	<0.010	20	--	<1	50

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	SEDI- MENT, DIS- SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
------	---	---	--	---	--	---	---	---	--	--	--

NOV											
02...	130	70	3	<1	<1	<1.0	4800	22	--	--	--
FEB											
15...	150	110	4	<1	<1	<1.0	4400	39	8	0.01	50
MAY											
10...	160	90	4	<1	<1	<1.0	4600	34	9	0.05	48
JUL											
06...	120	160	5	<1	<4	<1.0	--	28	--	--	--

ARKANSAS RIVER BASIN

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK

LOCATION.--Lat 36°26'12", long 99°16'41", SW 1/4 SW 1/4 sec.30, T.23 N., R.19 W., Woodward County, Hydrologic Unit 11100301, on downstream side of pier of bridge on State Highway 412 (formerly State Highway 15), 275 ft downstream from The Atchison, Topcka 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 mi², of which 4,812 mi² is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1903 to September 1905 (gage heights only), October 1905 to June 1906, October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as Canadian River (North Fork) near Woodward 1903-06. Gage-height records collected in this vicinity since 1919 are contained in reports of National Weather Service.

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

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

REMARKS.--Records fair. 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 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	8.7	11	34	e23	54	61	81	42	10	4.7	6.4
2	7.7	9.8	11	37	24	55	61	78	47	9.4	4.8	4.3
3	7.4	9.3	12	39	27	55	60	70	58	8.6	4.9	3.5
4	7.8	9.8	12	40	28	54	59	66	56	8.2	5.0	3.0
5	7.6	9.1	12	41	30	53	55	67	52	7.0	4.6	2.8
6	7.1	9.9	12	42	30	53	56	63	52	6.6	4.3	2.4
7	6.5	9.9	12	41	29	53	56	61	49	6.5	3.9	2.2
8	6.3	11	12	46	27	54	54	59	47	6.6	3.6	11
9	5.7	11	12	50	e25	60	55	57	46	6.5	3.3	3.6
10	6.2	11	12	49	e20	58	54	60	47	6.3	3.1	e3.1
11	6.6	11	13	50	e20	59	69	88	49	5.6	3.0	e2.6
12	6.7	13	14	50	e25	74	62	92	48	22	2.8	2.2
13	6.6	12	13	51	e45	79	59	95	44	9.5	2.5	2.0
14	6.4	17	13	51	e70	80	58	97	41	7.5	3.0	1.8
15	6.9	13	14	51	86	82	56	96	39	7.0	3.4	2.0
16	6.4	13	14	50	75	83	53	95	39	14	2.8	1.8
17	6.5	13	15	e49	59	85	54	95	37	10	2.4	1.5
18	7.7	13	15	e45	56	80	51	79	36	7.4	2.4	1.4
19	7.1	13	16	e38	55	67	51	73	30	5.8	2.2	1.4
20	7.0	13	15	e30	50	64	51	57	26	5.1	2.6	1.4
21	7.2	14	15	35	50	60	58	52	23	13	2.7	1.6
22	8.0	13	15	44	57	60	83	47	20	9.3	2.4	1.9
23	7.4	13	14	36	56	61	71	42	18	7.9	2.2	1.9
24	7.3	13	13	32	57	74	63	87	16	7.3	2.2	2.1
25	7.0	e12	15	31	55	70	58	49	15	6.7	2.2	2.1
26	6.4	e10	16	35	54	61	63	48	13	7.1	1.9	1.8
27	6.8	e11	15	31	54	60	157	42	12	6.3	1.8	1.7
28	7.5	10	15	30	54	59	188	40	11	6.0	1.5	1.7
29	7.3	11	12	29	---	58	175	55	11	5.9	1.5	1.5
30	7.6	11	14	29	---	57	104	47	11	5.5	e1.4	1.2
31	7.6	---	24	27	---	58	---	43	---	4.8	12	---
TOTAL	218.4	348.5	428	1243	1241	1980	2155	2081	1035	249.4	101.1	77.9
MEAN	7.05	11.6	13.8	40.1	44.3	63.9	71.8	67.1	34.5	8.05	3.26	2.60
MAX	8.1	17	24	51	86	85	188	97	58	22	12	11
MIN	5.7	8.7	11	27	20	53	51	40	11	4.8	1.4	1.2
AC-FT	433	691	849	2470	2460	3930	4270	4130	2050	495	201	155

c Estimated

ARKANSAS RIVER BASIN

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07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1994, BY WATER YEAR (WY)

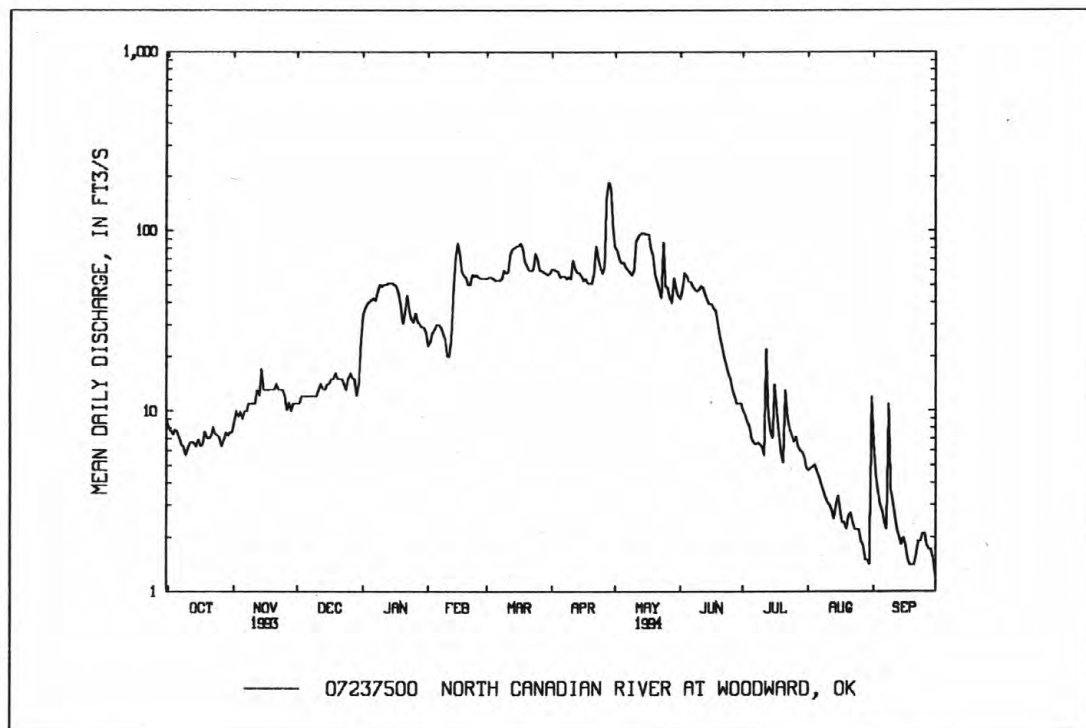
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	52.7	47.2	47.8	67.9	81.4	130	140	244	210	88.2	36.7	27.8
MAX	377	173	125	200	174	404	382	900	814	328	207	158
(WY)	1986	1986	1986	1988	1987	1987	1988	1979	1989	1989	1989	1989
MIN	2.33	5.75	8.78	11.0	12.6	47.8	34.7	32.0	16.1	4.24	1.73	.95
(WY)	1992	1985	1984	1981	1981	1992	1981	1992	1981	1981	1991	1984

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1979-94
ANNUAL TOTAL	32576.8	11158.3	
ANNUAL MEAN	89.3	30.6	^a 97.8
HIGHEST ANNUAL MEAN			228
LOWEST ANNUAL MEAN			16.9
HIGHEST DAILY MEAN	465	May 5	188
LOWEST DAILY MEAN	5.7	Oct 9	1.2
ANNUAL SEVEN-DAY MINIMUM	6.4	Oct 8	1.6
INSTANTANEOUS PEAK FLOW		209	Apr 28
INSTANTANEOUS PEAK STAGE		4.30	Apr 28
ANNUAL RUNOFF (AC-FT)	64620	22130	70830
10 PERCENT EXCEEDS	191	63	215
50 PERCENT EXCEEDS	70	15	54
90 PERCENT EXCEEDS	9.0	2.7	5.6

^aPrior to regulation 1939-78, 194 ft³/s.

^bMaximum discharge for period of record 42,000 ft³/s, Oct. 10, 1946.

^cMaximum gage height for period of record 9.80 ft, Oct. 10, 1946, site and datum then in use.



ARKANSAS RIVER BASIN
07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955, 1958-59, 1961-63, 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to January 1982.

WATER TEMPERATURE: October 1974 to January 1982.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAMPLE	TEMPER- ATURE WATER (DEG C) (00010)	AGENCY	AGENCY	DIS-	GAGE HEIGHT (FEET) (00065)	SPE-	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH	
		LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)		COL- LECTING SAMPLE (CODE NUMBER) (00027)	ANA- LYZING SAMPLE (CODE NUMBER) (00028)	CHARGE, INST. CUBIC FEET SECOND (00061)		CIFIC CON- DUCT- ANCE (US/CM) (00095)		WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	
FEB											
16...	1404	2.00	7.5	1028	1028	73	3.22	1350	11.5	8.3	
16...	1407	6.00	7.5	1028	1028	73	3.22	1350	11.5	8.3	
16...	1410	10.0	7.5	1028	1028	73	3.21	1350	11.5	8.3	
16...	1413	14.0	7.5	1028	1028	73	3.21	1350	11.5	8.3	
16...	1416	18.0	7.5	1028	1028	73	3.21	1350	11.5	8.3	
16...	1419	22.0	7.5	1028	1028	73	3.21	1350	11.5	8.3	
16...	1422	26.0	7.5	1028	1028	73	3.21	1350	11.5	8.3	
16...	1425	30.0	7.5	1028	1028	73	3.21	1350	11.5	8.3	
16...	1428	34.0	7.5	1028	1028	73	3.21	1350	11.5	8.3	
16...	1430	38.0	7.5	1028	1028	73	3.21	1350	11.5	8.3	
16...	1432	42.0	7.5	1028	1028	73	3.21	1350	11.5	8.3	
DATE	TIME	AGENCY	AGENCY	DIS-	PH	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	
		COL- LECTING SAMPLE (CODE NUMBER) (00027)	ANA- LYZING SAMPLE (CODE NUMBER) (00028)	CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)						WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
NOV											
03...	1000	1028	80020	9.2	2650	8.2	10.5	3.5	1.0	730	13.6
JAN											
04...	1200	1028	80020	44	1570	8.3	3.0	2.0	22	734	13.1
FEB											
16...	1400	1028	80020	73	1350	8.3	18.0	7.5	26	722	11.5
JUL											
06...	1500	1028	80020	5.9	2620	9.1	39.0	34.5	1.0	714	18.5

ARKANSAS RIVER BASIN
07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

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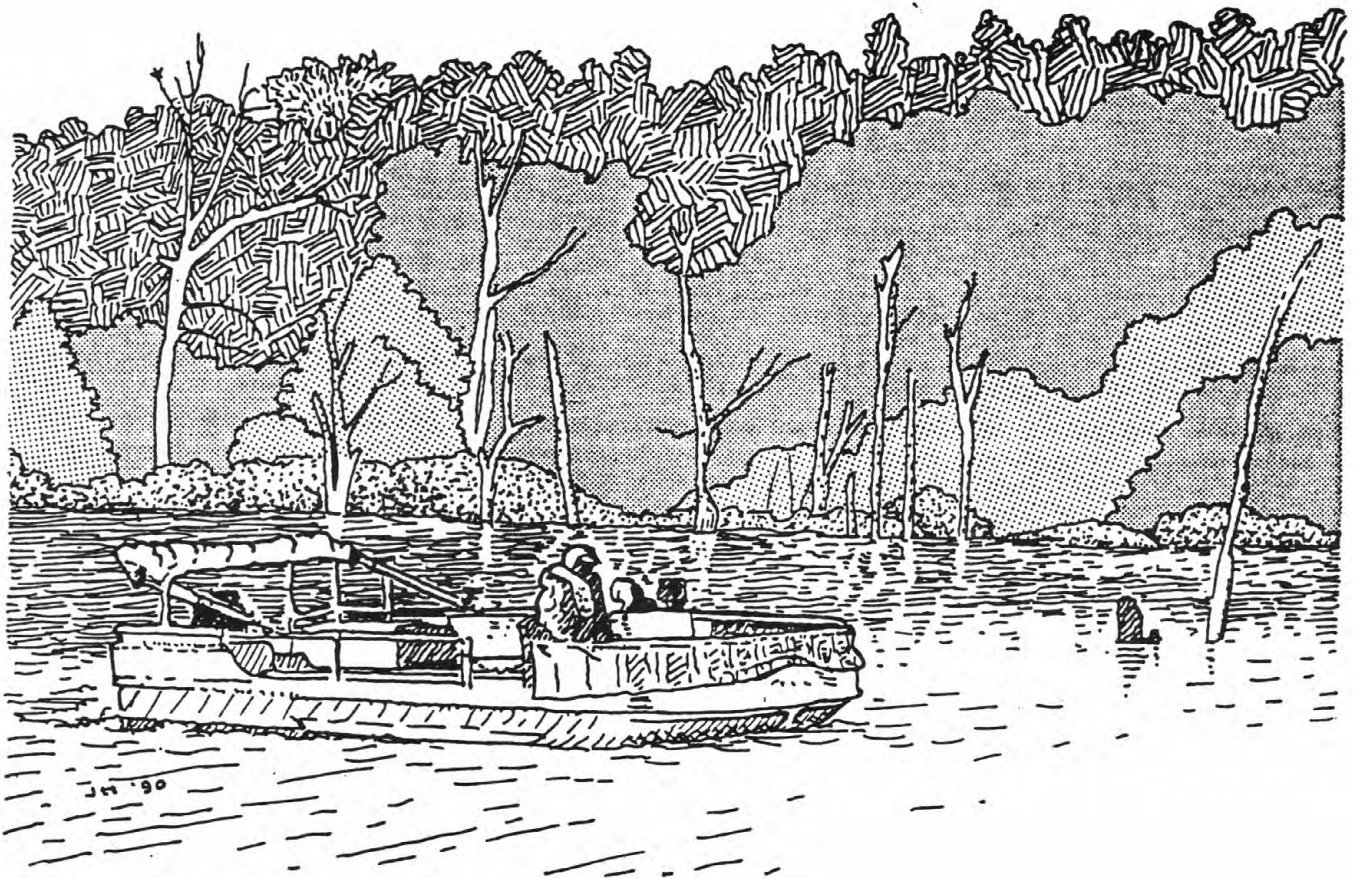
WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI 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)
NOV 03...	108	120	100	940	700	270	63	290	40	4	5.3
JAN 04...	99	130	310	380	170	100	32	160	47	4	4.7
FEB 16...	102	17	140	350	140	92	28	140	46	3	4.5
JUL 06...	285	110	10000	620	480	160	52	320	53	6	8.0
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)	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)
NOV 03...	293	0	240	630	390	0.80	29	1770	1830	2.41	43.9
JAN 04...	259	0	212	240	230	0.80	28	994	923	1.35	118
FEB 16...	251	0	206	190	210	0.80	23	870	813	1.18	172
JUL 06...	104	29	133	560	450	0.80	16	1520	1650	2.07	24.1
DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	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)
NOV 03...	--	--	--	0.050	0.16	--	--	0.450	0.58	0.55	1.0
JAN 04...	--	--	--	<0.010	--	--	--	0.280	0.36	0.92	1.2
FEB 16...	--	--	--	<0.010	--	--	--	0.190	0.24	0.71	0.90
JUL 06...	0.280	0.280	1.2	0.100	0.33	0.380	0.380	0.050	0.06	0.35	0.40

ARKANSAS RIVER BASIN
07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, DIS- SOLVED (MG/L AS PO4) (00660)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
NOV 03...	1.0	0.220	0.170	0.150	0.46	<10	100	<1	60	60
JAN 04...	1.2	0.180	0.110	0.070	0.21	--	--	--	--	--
FEB 16...	0.90	0.120	0.050	0.040	0.12	<10	150	<3	5	37
JUL 06...	0.78	--	0.110	0.090	0.28	<40	200	<1	30	50
DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	SEDI- MENT, DIS- SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 03...	70	30	1	<1	<1.0	1800	9	4	0.10	69
JAN 04...	--	--	--	--	--	--	--	52	6.2	93
FEB 16...	9	<10	1	<1	<1.0	980	7	120	24	96
JUL 06...	70	70	<1	<1	<1.0	1500	17	85	1.3	96



Sampling on Eufaula Lake

ARKANSAS RIVER BASIN

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 mi², of which 4,847 mi is probably noncontributing.

PERIOD OF RECORD.--July 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,675.53 ft above sea level. July 1, 1946 to Aug. 17, 1964, at site 60 ft downstream and prior to Oct. 1, 1954, at datum 5.00 ft higher.

REMARKS.--Records good. Some regulation since May 1942 by Fort Supply Lake. Minor regulation since October 1978 by Optima Lake. Some regulation since May 1991 by Palo Duro Reservoir. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	26	41	49	e45	82	79	209	90	18	5.4	3.8
2	13	28	41	57	e47	83	79	156	78	16	7.3	2.4
3	12	29	44	60	63	82	80	132	74	15	6.2	3.6
4	12	30	44	61	66	81	81	120	81	13	5.2	2.9
5	13	30	43	63	64	80	81	111	81	12	4.2	2.8
6	13	30	42	65	65	79	79	105	73	10	3.5	2.5
7	12	31	41	63	64	79	77	98	69	9.8	2.8	1.9
8	13	32	41	63	61	86	78	94	64	9.2	2.3	4.5
9	13	34	42	65	42	96	77	93	61	9.1	2.1	3.5
10	13	35	42	71	e45	98	77	90	61	9.2	1.7	3.1
11	15	36	41	72	e50	107	90	89	66	8.2	1.5	3.8
12	15	36	42	74	e90	116	107	99	67	9.4	1.2	2.7
13	16	35	44	74	104	130	104	111	63	8.9	.95	2.2
14	16	36	44	75	110	124	94	115	56	14	.96	1.7
15	16	38	43	75	106	117	87	118	52	11	1.1	1.6
16	17	40	44	75	103	112	84	115	51	22	1.0	1.4
17	17	40	44	73	98	110	80	111	48	17	.75	1.1
18	19	39	44	71	82	107	78	110	46	15	.72	.88
19	20	39	44	e65	80	104	76	99	45	11	.71	.76
20	21	38	44	69	76	89	73	91	43	7.3	2.0	.69
21	21	37	44	81	74	84	72	81	40	9.4	21	.66
22	22	37	44	92	82	81	74	73	37	10	5.6	.71
23	22	37	43	81	89	79	101	69	34	11	2.2	.69
24	22	36	44	74	90	76	119	124	31	9.6	1.4	.72
25	22	31	45	69	88	86	93	200	29	9.3	1.1	.83
26	22	28	46	68	83	88	83	635	26	27	.74	.80
27	23	e30	48	68	82	83	81	155	24	15	.57	.75
28	23	38	47	68	82	79	146	114	22	11	.43	.71
29	24	40	45	64	---	79	203	157	20	8.1	.37	.61
30	24	40	46	64	---	78	245	166	20	6.8	.65	.30
31	25	---	46	57	---	79	---	118	---	5.9	2.1	---
TOTAL	550	1036	1353	2126	2131	2854	2878	4158	1552	368.2	87.75	54.61
MEAN	17.7	34.5	43.6	68.6	76.1	92.1	95.9	134	51.7	11.9	2.83	1.82
MAX	25	40	48	92	110	130	245	635	90	27	21	4.5
MIN	12	26	41	49	42	76	72	69	20	5.9	.37	.30
AC-FT	1090	2050	2680	4220	4230	5660	5710	8250	3080	730	174	108

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	78.4	85.7	80.7	102	125	189	192	371	285	124	50.1	41.8
MAX	430	324	179	263	300	567	511	984	982	380	271	244
(WY)	1986	1987	1986	1988	1987	1987	1988	1979	1989	1989	1989	1989
MIN	2.73	10.6	24.5	30.5	36.7	78.5	57.3	44.8	18.8	8.13	1.23	.074
(WY)	1992	1985	1979	1981	1981	1981	1981	1981	1981	1991	1984	1984

e Estimated

ARKANSAS RIVER BASIN

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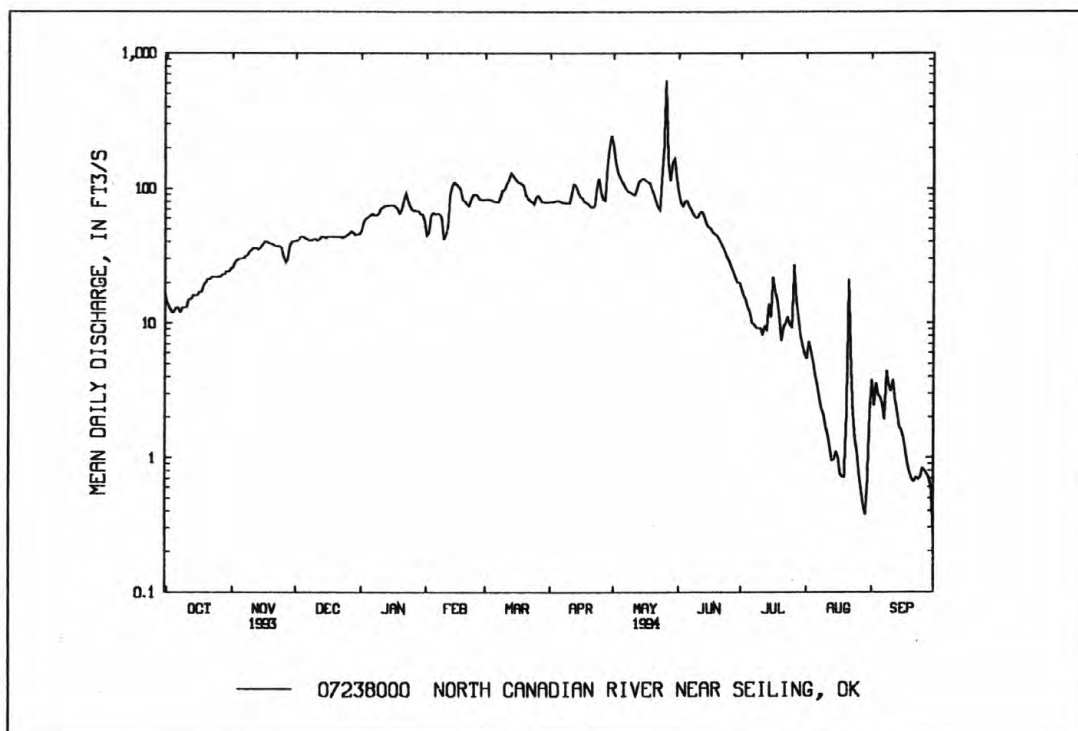
07238000 NORTH CANADIAN RIVER NEAR SEILING, OK--Continued

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1979-94
ANNUAL TOTAL	58616	19148.56	
ANNUAL MEAN	161	52.5	^a 144
HIGHEST ANNUAL MEAN			299 1987
LOWEST ANNUAL MEAN			29.4 1981
HIGHEST DAILY MEAN	2550 May 9	635 May 26	2680 May 17 1982
LOWEST DAILY MEAN	11 Sep 23	.30 Sep 30	.00 at times
ANNUAL SEVEN-DAY MINIMUM	13 Oct 2	.67 Sep 24	.00 Sep 16 1980
INSTANTANEOUS PEAK FLOW		1090 May 26	^b 6360 May 27 1980
INSTANTANEOUS PEAK STAGE		8.99 May 26	^c 12.98 May 27 1980
ANNUAL RUNOFF (AC-FT)	116300	37980	104200
10 PERCENT EXCEEDS	266	104	312
50 PERCENT EXCEEDS	111	44	80
90 PERCENT EXCEEDS	19	2.1	8.9

^aPrior to regulation, water years 1947-78, 215 ft³/s.

^bMaximum discharge for period of record, 33,000 ft³/s, May 19, 1951.

^cMaximum gage height for period record, 16.00 ft, Oct. 11, 1946, present datum.



ARKANSAS RIVER BASIN

07239300 NORTH CANADIAN RIVER BELOW WEAVERS CREEK NEAR WATONGA, OK

LOCATION.--Lat 35°48'43", long 98°25'14", NE 1/4, NE 1/4, sec.1, T.15 N., R.12 W., Blaine County, Hydrologic Unit 11100301, near right abutment on downstream side of U.S. Highway 281, 2.0 mi south of intersection of U.S. Highway 281 and State Highway 33 and at mile 361.2.

DRAINAGE AREA.--12,736 mi², of which 4,899 mi² is probably noncontributing.

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,453.60 ft above sea level (Oklahoma State Highway Department benchmark).

REMARKS.--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 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	30	29	32	207	86	48	121	71	44	37	47
2	25	28	28	31	673	84	48	156	65	43	42	47
3	25	28	29	30	873	78	48	152	63	42	43	47
4	27	27	32	29	933	73	45	110	61	41	41	45
5	27	28	31	30	947	64	45	95	57	40	41	45
6	26	28	29	30	917	61	46	85	58	39	37	46
7	26	29	29	25	892	59	47	79	57	40	39	45
8	27	30	29	28	882	85	47	76	55	41	40	45
9	25	30	29	34	886	99	84	74	53	41	39	45
10	26	30	29	34	933	90	67	73	59	42	39	45
11	28	30	29	31	927	93	185	70	59	42	39	44
12	28	32	29	30	886	98	125	69	58	43	38	44
13	29	33	33	30	859	80	78	67	55	42	37	44
14	27	33	33	30	897	71	68	67	52	39	37	43
15	27	32	31	29	899	65	61	66	52	48	38	43
16	28	32	31	30	818	62	58	63	53	62	39	73
17	27	33	31	27	365	61	57	61	53	63	37	476
18	28	32	31	e25	151	60	53	61	49	49	37	847
19	28	31	32	e31	126	57	50	60	51	45	38	860
20	28	31	33	28	109	55	51	57	54	43	40	880
21	28	31	32	33	97	53	49	55	52	42	42	887
22	28	31	33	42	102	51	49	54	47	41	40	879
23	27	31	31	35	93	51	49	55	45	42	39	873
24	27	31	32	32	84	50	47	126	46	41	38	885
25	26	28	33	32	88	50	48	96	46	41	39	906
26	25	27	33	32	83	52	51	246	46	44	38	901
27	26	31	33	34	81	54	59	136	45	44	37	903
28	26	35	31	30	81	53	96	89	41	42	35	906
29	28	32	30	30	---	52	142	170	42	42	36	645
30	29	30	32	31	---	50	247	163	46	41	36	236
31	30	---	34	26	---	49	---	85	---	40	47	---
TOTAL	837	914	961	951	14889	2046	2148	2937	1591	1349	1205	11832
MEAN	27.0	30.5	31.0	30.7	532	66.0	71.6	94.7	53.0	43.5	38.9	394
MAX	30	35	34	42	947	99	247	246	71	63	47	906
MIN	25	27	28	25	81	49	45	54	41	39	35	43
AC-FT	1660	1810	1910	1890	29530	4060	4260	5830	3160	2680	2390	23470

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	96.0	94.1	95.4	117	187	192	256	243	307	203	167	152
MAX	604	437	278	382	532	597	746	764	944	895	610	666
(WY)	1987	1987	1987	1988	1994	1988	1987	1993	1987	1989	1984	1986
MIN	10.2	9.97	13.4	11.4	14.0	24.2	24.2	10.4	18.8	10.1	25.5	9.48
(WY)	1985	1985	1985	1985	1985	1985	1985	1985	1985	1985	1992	1985

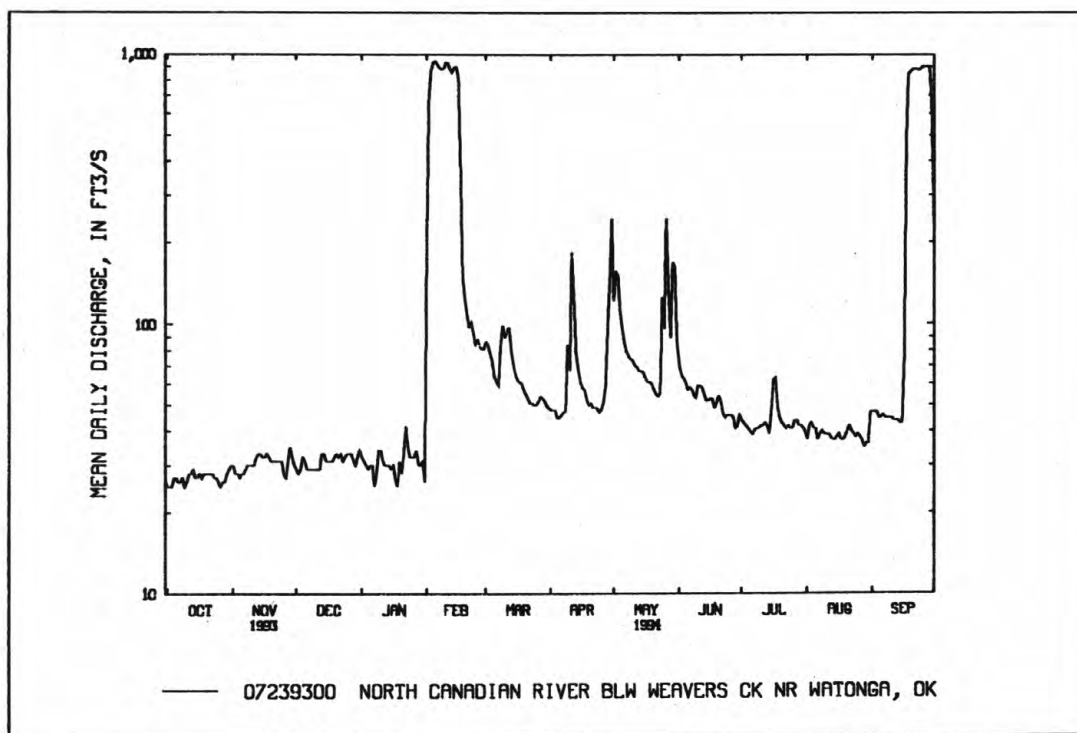
c Estimated

ARKANSAS RIVER BASIN

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07239300 NORTH CANADIAN RIVER BELOW WEAVERS CREEK NEAR WATONGA, OK--Continued

SUMMARY STATISTICS	1993 CALENDAR YEAR		1994 WATER YEAR		WATER YEARS 1984-94	
ANNUAL TOTAL	66646		41660			
ANNUAL MEAN	183		114		176	
HIGHEST ANNUAL MEAN					443	1987
LOWEST ANNUAL MEAN					32.1	1985
HIGHEST DAILY MEAN	2360	May 9	947	Feb 5	7540	Oct 3 1986
LOWEST DAILY MEAN	25	Sep 22	25	several days	5.0	Sep 26,27 1985
ANNUAL SEVEN-DAY MINIMUM	26	Sep 30	26	Oct 1	5.5	Sep 14 1985
INSTANTANEOUS PEAK FLOW			970	Feb 10,11	9740	Oct 3 1986
INSTANTANEOUS PEAK STAGE			11.66	Sep 25	19.24	Oct 3 1986
ANNUAL RUNOFF (AC-FT)	132200		82630		127200	
10 PERCENT EXCEEDS	681		159		589	
50 PERCENT EXCEEDS	55		44		45	
90 PERCENT EXCEEDS	28		28		15	



ARKANSAS RIVER BASIN

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK

LOCATION.--Lat 35°37'01", long 98°03'54", in NW 1/4 SW 1/4 of sec.9, T.13 N., R.8 W., Canadian County, Hydrologic Unit 11100301, near left bank on downstream side of county road bridge, 1 mi north and 3 mi east of Calumet, and at mile 320.7.

DRAINAGE AREA.--12,962 mi², of which 4,899 is noncontributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,326.89 ft above sea level.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e28	e33	38	e40	e48	129	88	955	199	46	e36	51
2	e28	e30	e35	e38	180	128	86	670	153	46	e38	53
3	e28	29	e37	e37	602	126	83	1130	126	45	e41	51
4	29	e29	e40	e37	816	126	81	699	175	44	e40	51
5	e29	e30	e44	e37	880	118	81	446	141	43	e38	50
6	e28	e31	47	e36	918	110	79	354	104	40	e35	49
7	e28	e32	49	e35	946	103	79	300	96	38	e35	49
8	e30	e32	e45	e36	956	114	79	264	90	36	35	49
9	e30	e33	e42	e37	962	158	79	235	84	36	e34	49
10	e30	e34	e42	e38	979	199	86	220	81	e34	e33	49
11	e33	e34	e42	e37	1120	286	552	208	81	e34	31	49
12	e34	e35	e45	e37	1120	402	730	200	81	35	e31	48
13	37	e36	e48	e36	1050	334	367	187	81	e33	e31	e48
14	e35	e38	e49	e36	1040	233	221	177	80	35	e32	e46
15	e33	e40	e49	e35	1040	180	167	171	78	45	e33	e44
16	e33	e42	e48	e34	1050	150	139	166	76	52	e34	e42
17	e32	e43	e48	e33	855	131	122	155	75	72	e35	e41
18	e32	e43	e48	e34	437	120	114	146	73	77	e35	190
19	e32	43	e49	e34	271	114	107	140	71	63	e35	587
20	e32	e43	e49	e44	229	109	102	135	68	54	e36	696
21	e32	e43	e49	e74	200	104	99	131	67	50	e38	731
22	e32	e42	e49	e60	188	100	97	126	67	50	e38	762
23	e31	e42	e49	e56	183	96	96	122	65	47	37	776
24	e31	e39	e49	50	170	95	94	119	62	43	36	781
25	e31	e34	e49	e50	150	91	90	223	58	43	e35	796
26	e30	e40	e49	50	143	91	122	1410	56	43	e34	827
27	e30	e43	e47	e49	139	91	135	831	56	44	e33	836
28	e31	e40	e46	e49	132	91	605	354	52	e42	e32	837
29	e33	e39	e44	e49	---	91	571	299	51	e41	31	839
30	e33	e38	e42	e48	---	91	1750	549	47	e39	29	679
31	e33	---	e41	e48	---	91	---	390	---	e38	48	---
TOTAL	968	1110	1408	1314	16804	4402	7101	11512	2594	1388	1089	10156
MEAN	31.2	37.0	45.4	42.4	600	142	237	371	86.5	44.8	35.1	339
MAX	37	43	49	74	1120	402	1750	1410	199	77	48	839
MIN	28	29	35	33	48	91	79	119	47	33	29	41
AC-FT	1920	2200	2790	2610	33330	8730	14080	22830	5150	2750	2160	20140

e Estimated

ARKANSAS RIVER BASIN

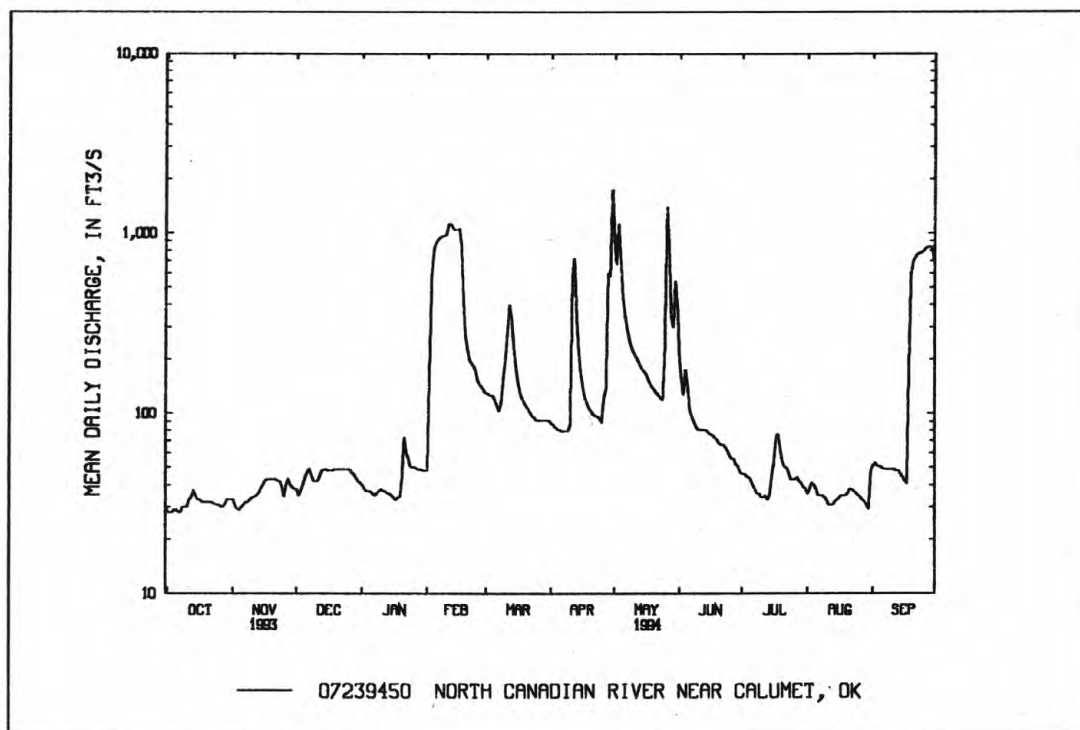
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07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	59.8	73.2	107	113	217	198	253	564	471	224	156	189
MAX	155	136	213	275	600	716	703	1878	957	860	518	535
(WY)	1990	1990	1993	1990	1994	1990	1990	1993	1989	1989	1989	1989
MIN	18.4	27.9	28.5	35.0	28.8	28.8	32.6	38.5	86.5	38.8	35.1	26.3
(WY)	1993	1991	1991	1989	1991	1991	1991	1992	1994	1991	1994	1992

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1989-94
ANNUAL TOTAL	123648	59846	
ANNUAL MEAN	339	164	219
HIGHEST ANNUAL MEAN			359
LOWEST ANNUAL MEAN			85.3
HIGHEST DAILY MEAN	8430	May 10	1750
LOWEST DAILY MEAN	28	Oct 1	28
ANNUAL SEVEN-DAY MINIMUM	28	Oct 1	28
INSTANTANEOUS PEAK FLOW		2040	Apr 30
INSTANTANEOUS PEAK STAGE		11.18	Apr 30
INSTANTANEOUS LOW FLOW		28	Oct 1
ANNUAL RUNOFF (AC-FT)	245300	118700	158400
10 PERCENT EXCEEDS	999	577	676
50 PERCENT EXCEEDS	90	49	73
90 PERCENT EXCEEDS	33	33	28



ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1988 to current year.

pH: October 1988 to current year.

WATER TEMPERATURE: October 1988 to current year.

DISSOLVED OXYGEN: October 1988 to current year.

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

REMARKS.--Interruptions in record were due to malfunction of the recording instruments. Samples were collected monthly and specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,930 microsiemens, Oct. 21, 1991; minimum, 153 microsiemens, Mar. 11, 1990.

pH: Maximum, 9.4 units, Sept. 25, 1989; minimum, 7.1 units, Nov. 6, 1988.

WATER TEMPERATURE: Maximum, 39.0°C, July 2, 1990; minimum, 0.0°C, several days during winter period.

DISSOLVED OXYGEN: Maximum, 15.0 mg/L, March 23, 1989; minimum, 3.1 mg/L, July 15, 1989.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,910 microsiemens, Aug. 9; minimum, 278 microsiemens, Apr. 30.

pH: Maximum, 8.8 units, March 6, June 5, July 18, Sept. 2; minimum, 7.7 units, Apr. 25, May 1, 26, 27.

WATER TEMPERATURE: Maximum 36.5°C, Aug. 9; minimum, 0.0°C, several days in winter months.

DISSOLVED OXYGEN: Maximum, 14.1 mg/L, Feb. 10; minimum, 3.6 mg/L, May 26, 27.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAMPLE LOC - ATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPER - ATURE (DEG C) (00010)	BARO - METRIC PRES - SURE (MM OF (00025)	AGENCY COL - LECTING (CODE NUMBER) (00027)	AGENCY ANA - LYZING (CODE NUMBER) (00028)	DIS - CHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPE - CIFIC CON - DUCT - ANCE (US/CM) (00095)	OXYGEN, DIS - SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND - ARD UNITS) (00400)
MAY											
31...	1138	10.0	27.0	725	1028	1028	370	7.22	753	5.9	7.9
31...	1141	20.0	27.0	725	1028	1028	370	7.22	755	6.1	7.9
31...	1144	30.0	27.0	725	1028	1028	370	7.22	757	6.1	7.9
31...	1147	40.0	27.0	725	1028	1028	370	7.22	752	6.1	8.0
31...	1150	50.0	27.0	725	1028	1028	370	7.22	753	6.0	8.0
31...	1154	60.0	27.0	725	1028	1028	370	7.22	751	6.1	8.0
31...	1158	70.0	27.0	725	1028	1028	370	7.22	751	6.1	8.0
31...	1201	80.0	27.0	725	1028	1028	370	7.22	750	6.1	8.0

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
OCT										
13...	1100	1028	80020	36	1630	8.2	17.0	16.0	1.4	734
NOV										
03...	0945	1028	80020	29	1660	8.2	9.5	6.0	0.90	731
DEC										
07...	1030	1028	80020	49	1450	8.3	10.0	5.0	0.80	735
JAN										
18...	1040	1028	80020	50	1630	8.1	-5.5	0.5	1.1	745
FEB										
15...	1000	1028	80020	1050	1770	8.1	5.0	3.0	73	738
MAR										
29...	0920	1028	80020	92	1620	8.4	9.5	9.0	3.0	730
APR										
20...	0945	1028	80020	102	1600	8.4	23.0	21.5	1.0	736
MAY										
11...	0945	1028	80020	208	1340	8.2	21.5	19.5	17	728
JUN										
14...	0845	1028	80020	81	1640	8.2	25.0	23.5	7.3	720
JUL										
26...	0950	1028	80020	44	1650	8.4	26.0	26.0	1.0	730
AUG										
23...	1000	1028	80020	37	1720	8.3	30.0	23.5	1.7	732
SEP										
07...	0930	1028	80020	45	1710	8.3	20.5	22.0	6.0	737

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	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)
OCT 13...	9.2	97	--	0.7	110	190	--	--	--	--
NOV 03...	11.1	94	--	1.3	37	220	490	240	110	51
DEC 07...	13.0	106	--	4.6	130	75	--	--	--	--
JAN 18...	14.2	102	0.61	0.5	34	33	--	--	--	--
FEB 15...	13.6	106	0.49	0.8	84	430	510	270	120	50
MAR 29...	11.3	103	--	1.7	44	30	--	--	--	--
APR 20...	8.9	105	--	2.0	140	980	--	--	--	--
MAY 11...	9.2	105	0.53	2.8	240	--	420	120	100	40
JUN 14...	7.8	98	--	3.6	--	39	--	--	--	--
JUL 26...	8.2	107	--	3.1	1400	330	--	--	--	--
AUG 23...	8.5	105	--	3.2	120	140	440	300	93	51
SEP 07...	8.3	99	--	3.5	260	470	--	--	--	--

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued
WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA- LILITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT 13...	--	--	--	--	308	0	252	--	--	--
NOV 03...	160	41	3	5.6	305	0	250	340	190	0.70
DEC 07...	--	--	--	--	316	0	259	--	--	--
JAN 18...	--	--	--	--	359	0	294	--	--	--
FEB 15...	180	43	3	6.5	289	0	237	380	250	0.70
MAR 29...	--	--	--	--	302	3	252	--	--	--
APR 20...	--	--	--	--	279	9	243	--	--	--
MAY 11...	110	36	2	5.6	344	6	292	250	110	0.60
JUN 14...	--	--	--	--	273	0	224	--	--	--
JUL 26...	--	--	--	--	174	0	143	--	--	--
AUG 23...	180	46	4	7.0	170	0	139	380	240	0.70
SEP 07...	--	--	--	--	156	0	128	--	--	--

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
OCT 13...	--	--	--	--	--	3	--	--	--	<0.010
NOV 03...	8.9	1060	1020	1.44	83.0	13	--	--	--	<0.010
DEC 07...	--	--	--	--	--	4	--	--	--	<0.010
JAN 18...	--	--	--	--	--	3	0.210	--	--	<0.010
FEB 15...	4.8	1160	1140	1.58	3290	258	0.044	0.044	0.19	0.050
MAR 29...	--	--	--	--	--	35	--	--	--	<0.010
APR 20...	--	--	--	--	--	60	--	--	--	<0.010
MAY 11...	11	848	805	1.15	476	40	0.110	0.110	0.49	0.020
JUN 14...	--	--	--	--	--	26	--	--	--	<0.010
JUL 26...	--	--	--	--	--	25	--	--	--	<0.010
AUG 23...	0.78	1130	1040	1.54	113	20	--	--	--	<0.010
SEP 07...	--	--	--	--	--	45	--	--	--	<0.010

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA 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)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)
OCT 13...	--	--	<0.050	<0.010	--	--	0.40	0.050	0.010	0.03
NOV 03...	--	--	<0.050	0.030	0.04	0.37	0.40	0.030	0.020	0.06
DEC 07...	--	--	<0.050	0.010	0.01	0.29	0.30	0.050	0.020	0.06
JAN 18...	--	0.210	0.210	0.050	0.06	0.35	0.40	0.040	0.020	0.06
FEB 15...	0.16	0.094	0.094	0.040	0.05	0.36	0.40	0.030	<0.010	--
MAR 29...	--	--	<0.050	<0.010	--	--	0.30	<0.010	<0.010	--
APR 20...	--	--	<0.050	0.020	0.03	0.38	0.40	0.020	<0.010	--
MAY 11...	0.07	0.130	0.130	0.020	0.03	0.38	0.40	0.140	0.150	0.46
JUN 14...	--	--	<0.050	0.020	0.03	0.38	0.40	0.030	0.020	0.06
JUL 26...	--	--	<0.050	0.030	0.04	0.37	0.40	0.020	<0.010	--
AUG 23...	--	--	<0.050	0.020	0.03	0.48	0.50	0.020	<0.010	--
SEP 07...	--	--	<0.050	0.020	0.03	0.28	0.30	<0.010	<0.010	--

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	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)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)
------	---	---	---	---	--	---	---	---	---	---	---	--

NOV

03... 3 110 <0.5 <1.0 <5 <3 <10 <3 <10 45 21 <10

FEB

15... 2 160 <0.5 <1.0 <5 <3 <10 <3 <10 43 <1 <10

MAY

11... 4 130 <0.5 <1.0 <5 <3 <10 5 10 31 42 <10

AUG

23... -- 140 <0.5 <1.0 <5 <3 <10 <3 10 47 2 <10

DATE	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)	BROM- ACIL ATER HLREC (UG/L (30234)	BUTA- CHLOR ATER HLREC (UG/L (30235)	BUTYL- ATE ATER HLREC (UG/L (30236)	CARBO- IN HOLE RECOV- ERABLE (UG/L (30245)	CYCLO- ATE HOLE RECOV- ERABLE (UG/L (30254)	DIPHEN- AMID WATER WHOLE RECOV- ERABLE (UG/L (30255)
------	---	--	---	---	---	---	--	---	--	--	---	---

NOV

03... <10 <1 <1.0 1200 <6 <3 <0.20 <0.10 <0.10 <0.20 <0.10 <0.10

FEB

15... <10 <1 <1.0 1200 <6 10 <0.20 <0.10 <0.10 <0.20 <0.10 <0.10

MAY

11... <10 <1 <1.0 960 7 4 <0.20 <0.10 <0.10 <0.20 <0.10 <0.10

AUG

23... <10 <1 <1.0 1300 <6 4 <0.20 <0.10 <0.10 <0.20 <0.10 <0.10

DATE	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39516)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39251)	HEXAZI- NONE WATER WHOLE RECOV- ERABLE (UG/L) (30264)	METOLA- CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	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)
------	--	--	---	--	--	---	--	--	--	---

NOV

03... <0.1 <1 <0.10 <1.0 <0.30 <0.20 <0.10 <0.01 <0.10 <0.20 <0.10

FEB

15... <0.1 1 <0.10 <1.0 <0.20 <0.20 <0.10 <0.01 <0.10 <0.20 <0.10

MAY

11... <0.1 <1 <0.10 <1.0 <0.20 <0.20 <0.10 <0.01 <0.10 <0.20 <0.10

AUG

23... <0.1 <1 <0.10 <1.0 <0.20 <0.20 <0.10 <0.01 <0.10 <0.20 <0.10

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DATE	ALA-CHLOR		ALDRIN, TOTAL		DEETHYL		DE-ISO		CHLOR-DANE,		CYAN-AZINE
	TOTAL	ALDRIN, TOTAL	IN BOT-TOM MA-TERIAL	AME-TRYNE	ATRA-ZINE	ATRA-ZINE,	PROPYL	ATRAZIN	CHLOR-DANE,	CHLOR-PYRIFOS	
	RECOVER (UG/L)	RECOVER (UG/L)	RECOVER (UG/KG)	RECOVER (UG/L)	RECOVER (UG/L)	RECOVER (UG/L)	RECOVER (UG/L)	RECOVER (UG/L)	RECOVER (UG/L)	RECOVER (UG/L)	
	(77825)	(39330)	(39333)	(82184)	(39630)	(75981)	(75980)	(39350)	(39351)	(38932)	(81757)
NOV 03...	<0.10	<0.001	<0.1	<0.10	<0.1	<0.20	<0.20	<0.1	<1.0	<0.01	<0.20
FEB 15...	<0.10	0.001	<0.1	<0.10	<0.1	<0.20	<0.20	<0.1	<1.0	<0.01	<0.20
MAY 11...	<0.10	<0.001	<0.1	--	<0.1	<0.20	<0.20	<0.1	<1.0	<0.01	<0.20
AUG 23...	<0.10	<0.001	<0.1	<0.10	<0.1	<0.20	<0.20	<0.1	<1.0	<0.01	<0.20
DATE	2,4-D,		DDD,		DDE,		DDT,		DI-ELDRIN,		DI-ELDRIN
	TOTAL	DDD,	IN BOT-TOM MA-TERIAL	DDE,	TOM MA-TERIAL	DDT,	TOM MA-TERIAL	DEF	AZINON,	ELDRIN	
	RECOVER (UG/L)	RECOVER (UG/L)	RECOVER (UG/KG)	RECOVER (UG/L)	RECOVER (UG/KG)	RECOVER (UG/L)	RECOVER (UG/KG)	RECOVER (UG/L)	RECOVER (UG/L)	RECOVER (UG/L)	
	(39730)	(39360)	(39363)	(39365)	(39368)	(39370)	(39373)	(39040)	(39570)	(39380)	(39383)
NOV 03...	<0.01	<0.001	<0.1	<0.001	<0.1	<0.001	<0.1	<0.01	<0.01	<0.001	<0.2
FEB 15...	<0.01	<0.001	<0.1	<0.001	<0.1	<0.001	<0.1	<0.01	<0.01	<0.001	<0.2
MAY 11...	0.06	<0.001	<0.1	<0.001	<0.1	<0.001	<0.1	<0.01	<0.01	<0.001	<0.2
AUG 23...	0.04	<0.001	<0.1	<0.001	<0.1	<0.001	<0.1	<0.01	0.01	<0.001	<0.2
DATE	DI-SYSTON		ENDO-SULFAN,		ENDRIN,		ETHION,		HEPTA-CHLOR		LINDANE
	TOTAL	2, 4-DP	IN BOT-TOM MA-TERIAL	ENDRIN	TOM MA-TERIAL	ETHION,	CHLOR,	CHLOR,	EPOXIDE		
	RECOVER (UG/L)	RECOVER (UG/L)	RECOVER (UG/L)	RECOVER (UG/L)	RECOVER (UG/L)	RECOVER (UG/L)	RECOVER (UG/L)	RECOVER (UG/L)	RECOVER (UG/L)		
	(39011)	(82183)	(39388)	(39389)	(39390)	(39393)	(39398)	(39410)	(39420)	(39423)	(39340)
NOV 03...	<0.01	<0.01	<0.001	<0.1	<0.001	<0.1	<0.01	<0.001	<0.001	<0.1	<0.001
FEB 15...	<0.01	<0.01	<0.001	<0.1	<0.001	<0.1	<0.01	<0.001	<0.001	<0.1	<0.001
MAY 11...	<0.01	<0.01	<0.001	<0.1	<0.001	<0.1	<0.01	<0.001	<0.001	<0.1	<0.001
AUG 23...	<0.01	<0.01	<0.001	<0.1	<0.001	<0.1	<0.01	<0.001	<0.001	<0.1	<0.001

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	LINDANE	METH-		METH-	METHYL		MIREX,	MIREX,		PER-	PHORATE
	TOTAL	OXY-		CHLOR,	THION,		TOTAL	THION,		THANE	
	IN BOT-	MALA-	METH-	TOT. IN	PARA-	MIREX,	IN BOT-	PARA-	PER-	IN BOT-	
	TOM MA- TERIAL (UG/KG) (39343)	THION, TOTAL (UG/L) (39530)	CHLOR, TOTAL (UG/L) (39480)	BOTTOM MATL. (UG/KG) (39481)	THION, TOTAL (UG/L) (39600)	TOTAL (UG/L) (39755)	TOM MA- TERIAL (UG/KG) (39758)	THION, TOTAL (UG/L) (39540)	THANE TOTAL (UG/L) (39034)	TOM MA- TERIAL (UG/KG) (81886)	
NOV 03...	<0.1	<0.01	<0.01	<0.6	<0.01	<0.01	<0.1	<0.01	<0.1	<1.00	<0.01
FEB 15...	<0.1	<0.01	<0.01	<0.2	<0.01	<0.01	<0.1	<0.01	<0.1	<1.00	<0.01
MAY 11...	<0.1	<0.01	<0.01	<0.2	<0.01	<0.01	<0.1	<0.01	<0.1	<1.00	<0.01
AUG 23...	<0.1	<0.01	<0.01	<0.2	<0.01	<0.01	<0.1	<0.01	<0.1	<1.00	<0.01
DATE	PROME-	PROME-	PRO-	SIMA-		SIME-	TOX-		TOXA-	TRI-	TOTAL TRI-THION
	TONE	TRYNE	PAZINE	SILVEX,		TRYNE	2,4,5-T		PHENE,	FLURA-	
	TOTAL	TOTAL	TOTAL	TOTAL		TOTAL	TOTAL		IN BOT-	LIN	
	(UG/L) (39056)	(UG/L) (39057)	(UG/L) (39024)	(UG/L) (39760)		(UG/L) (39055)	(UG/L) (39054)		TOM MA- TERIAL (UG/KG) (39403)	TOTAL RECOVER (UG/L) (39030)	
NOV 03...	<0.20	<0.10	<0.10	<0.01	<0.10	<0.10	<0.01	<1	<10	<0.10	<0.01
FEB 15...	<0.20	<0.10	<0.10	<0.01	<0.10	<0.10	<0.01	<1	<10	<0.10	<0.01
MAY 11...	<0.20	<0.10	<0.10	<0.01	<0.10	<0.10	<0.01	<1	<10	<0.10	<0.01
AUG 23...	<0.20	<0.10	<0.10	<0.01	<0.10	<0.10	<0.01	<1	<10	<0.10	<0.01

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

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SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1600	1510	1550	1640	1610	1630	1640	1550	1600	1600	1560	1580
2	1640	1570	1620	1640	1620	1630	1550	1490	1520	1600	1550	1580
3	1660	1630	1650	1670	1630	1640	1560	1510	1530	1590	1550	1570
4	1670	1640	1650	1660	1630	1650	1520	1490	1510	1580	1550	1560
5	1660	1600	1640	1680	1660	1670	1520	1470	1490	1570	1540	1560
6	1640	1570	1620	1680	1650	1670	1480	1440	1460	1580	1550	1560
7	1640	1580	1620	1690	1660	1670	1450	1420	1440	1630	1570	1590
8	1590	1440	1500	1690	1650	1670	1470	1440	1450	1680	1550	1620
9	1500	1330	1440	1660	1640	1650	1480	1440	1460	1640	1550	1600
10	1460	1390	1430	1660	1620	1640	1500	1470	1490	1590	1510	1550
11	1530	1460	1500	1650	1620	1630	1530	1500	1510	1580	1520	1560
12	1570	1530	1550	1620	1540	1580	1530	1470	1510	1520	1480	1510
13	1590	1540	1560	1600	1500	1550	1490	1450	1470	1500	1460	1480
14	1590	1550	1570	1500	1350	1390	1500	1470	1490	1500	1470	1480
15	1590	1560	1580	1490	1380	1450	1510	1500	1500	1500	1480	1490
16	1590	1550	1580	1480	1440	1460	1500	1490	1500	1500	1480	1490
17	1600	1560	1580	1500	1460	1480	1510	1490	1500	1560	1490	1510
18	1590	1570	1580	1520	1490	1500	1520	1500	1510	1620	1540	1580
19	1600	1590	1600	1540	1510	1530	1540	1510	1520	1720	1600	1660
20	1610	1580	1600	1540	1510	1530	1560	1540	1550	1650	1540	1610
21	1600	1570	1590	1560	1530	1540	1570	1550	1560	1630	1540	1580
22	1610	1580	1600	1580	1560	1570	1580	1550	1560	1560	1500	1540
23	1610	1570	1590	1590	1550	1570	1580	1550	1560	1530	1460	1500
24	1600	1570	1590	1620	1590	1600	1580	1560	1570	1500	1450	1470
25	1600	1570	1580	1650	1610	1630	1580	1550	1560	1460	1400	1420
26	1600	1570	1580	1730	1620	1670	1590	1540	1570	1410	1380	1390
27	1600	1580	1590	1680	1620	1650	1580	1560	1570	1420	1380	1400
28	1610	1590	1600	1660	1570	1630	1600	1570	1580	1440	1380	1420
29	1620	1600	1610	1650	1610	1630	1610	1560	1580	1450	1440	1450
30	1640	1600	1620	1640	1600	1620	1610	1570	1590	1450	1420	1440
31	1640	1610	1620	---	---	---	1590	1560	1580	1540	1430	1460
MONTH	1670	1330	1580	1730	1350	1590	1640	1420	1530	1720	1380	1520

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1530	1430	1490	---	---	---	1670	1660	1660	463	295	379
2	1650	1470	1530	---	---	---	1670	1660	1660	637	456	559
3	---	---	---	---	---	---	1670	1650	1660	---	---	---
4	---	---	---	1590	1570	1570	1660	1650	1660	---	---	---
5	1800	1710	1770	1610	1590	1600	1660	1650	1650	---	---	---
6	1770	1720	1750	1620	1600	1610	1680	1650	1660	1310	1070	1190
7	1790	1730	1760	1630	1610	1620	1680	1660	1670	1420	1310	1370
8	1800	1750	1790	1610	1360	1480	1680	1650	1660	1470	1420	1440
9	1750	1620	1670	1370	1290	1330	1660	1640	1650	1520	1470	1500
10	1840	1230	1670	1300	1200	1270	1640	1500	1600	1570	1520	1550
11	1860	903	1480	1210	984	1070	1500	466	933	1590	1560	1580
12	1830	1800	1820	984	779	832	924	496	723	1610	1580	1590
13	1830	1750	1800	928	809	872	924	644	705	1610	1580	1590
14	1790	1750	1770	1100	928	1040	1030	698	885	1610	1580	1600
15	1770	1730	1760	1200	1100	1160	1310	1030	1170	1650	1580	1610
16	1760	1720	1740	1420	1200	1270	1480	1310	1420	1660	1630	1650
17	1740	1690	1720	1580	1420	1500	1550	1480	1520	1660	1600	1620
18	---	---	---	1610	1550	1590	1580	1540	1570	1650	1600	1620
19	---	---	---	1620	1550	1600	1600	1560	1580	1670	1640	1650
20	---	---	---	1620	1550	1600	1600	1560	1580	1680	1650	1660
21	---	---	---	1630	1560	1600	1590	1550	1570	1690	1660	1670
22	---	---	---	1630	1560	1620	1550	1450	1500	1690	1670	1680
23	---	---	---	1640	1600	1630	1560	1400	1510	1730	1670	1700
24	---	---	---	1660	1580	1630	1560	1540	1550	1710	1640	1660
25	---	---	---	1650	1620	1640	1560	1480	1530	1670	847	1420
26	---	---	---	1650	1580	1620	1520	1040	1340	847	353	459
27	---	---	---	1630	1580	1610	1400	959	1180	1000	381	565
28	---	---	---	1620	1600	1610	1030	527	778	881	468	573
29	---	---	---	1620	1600	1610	617	505	558	769	642	686
30	---	---	---	1630	1610	1620	617	278	353	822	655	720
31	---	---	---	1660	1630	1650	---	---	---	872	626	728
MONTH	---	---	---	---	---	---	1680	278	1350	---	---	---

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[illegible]

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

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PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	FEBRUARY			MARCH			APRIL			MAY		
1	8.6	8.4	8.5	8.5	8.4	8.4	8.5	8.4	8.5	7.9	7.7	7.9
2	8.6	8.3	8.4	8.5	8.4	8.5	8.5	8.4	8.4	8.0	7.9	8.0
3	8.5	8.3	8.4	8.6	8.4	8.5	8.4	8.3	8.4	---	---	---
4	8.5	8.5	8.5	8.6	8.5	8.6	8.5	8.3	8.4	---	---	---
5	8.5	8.5	8.5	8.7	8.5	8.6	8.5	8.3	8.4	---	---	---
6	8.6	8.5	8.5	8.8	8.6	8.6	8.5	8.4	8.4	8.2	8.0	8.1
7	8.5	8.4	8.5	8.7	8.5	8.6	8.5	8.4	8.4	8.1	8.0	8.1
8	8.5	8.5	8.5	8.7	8.5	8.6	8.5	8.3	8.4	8.1	8.0	8.0
9	8.5	8.5	8.5	8.6	8.5	8.5	8.5	8.3	8.4	---	---	---
10	8.5	8.3	8.5	8.5	8.4	8.5	8.4	8.3	8.3	---	---	---
11	8.5	8.4	8.5	8.4	8.3	8.3	8.4	7.8	8.2	8.5	8.2	8.3
12	8.5	8.4	8.5	8.3	8.1	8.2	8.0	7.8	7.9	8.6	8.2	8.3
13	8.4	8.4	8.4	8.4	8.1	8.3	8.0	7.9	8.0	8.4	8.0	8.2
14	8.4	8.4	8.4	8.6	8.4	8.5	8.4	8.0	8.1	---	---	---
15	8.4	8.3	8.4	8.7	8.5	8.6	8.6	8.3	8.4	---	---	---
16	8.4	8.4	8.4	8.7	8.6	8.7	8.5	8.1	8.4	---	---	---
17	8.4	8.4	8.4	8.7	8.6	8.6	---	---	---	---	---	---
18	8.4	8.4	8.4	8.6	8.4	8.6	---	---	---	8.4	8.0	8.2
19	8.5	8.4	8.4	8.5	8.3	8.4	8.5	8.2	8.4	8.4	8.0	8.2
20	8.5	8.4	8.5	8.6	8.2	8.4	8.5	8.2	8.3	8.5	8.1	8.3
21	8.5	8.5	8.5	8.4	8.3	8.4	8.5	8.2	8.4	8.5	8.2	8.3
22	8.5	8.4	8.5	8.5	8.3	8.4	8.6	8.2	8.4	8.4	8.1	8.3
23	8.5	8.4	8.5	8.4	8.2	8.3	8.4	8.2	8.3	8.4	8.2	8.3
24	8.5	8.4	8.4	8.4	8.2	8.3	8.3	8.0	8.2	8.4	8.1	8.3
25	8.5	8.4	8.5	8.4	8.3	8.4	8.0	7.7	7.9	8.3	7.8	8.1
26	8.5	8.5	8.5	8.5	8.3	8.4	---	---	---	7.9	7.7	7.7
27	8.5	8.4	8.5	8.6	8.3	8.5	---	---	---	7.9	7.7	7.8
28	8.5	8.4	8.5	8.5	8.4	8.5	---	---	---	7.9	7.8	7.8
29	---	---	---	8.6	8.4	8.5	8.0	7.9	7.9	8.0	7.8	7.9
30	---	---	---	8.5	8.4	8.5	8.0	7.8	8.0	7.9	7.8	7.8
31	---	---	---	8.5	8.4	8.5	---	---	---	8.1	7.8	8.0
MAX	8.6	8.5	8.5	8.8	8.6	8.7	---	---	---	---	---	---
MIN	8.4	8.3	8.4	8.3	8.1	8.2	---	---	---	---	---	---

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

PII, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

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WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	25.0	16.5	20.0	8.5	3.0	6.0	12.0	7.0	9.5	8.5	3.5	5.5
2	21.5	16.0	18.5	12.0	7.0	9.0	11.5	8.0	10.0	8.0	4.0	5.5
3	23.0	14.0	18.0	13.0	5.5	9.0	11.0	9.0	10.5	6.0	2.0	4.0
4	25.5	15.0	20.0	15.0	7.5	11.0	11.0	7.0	9.0	6.0	2.5	4.0
5	26.0	17.5	21.5	10.0	5.5	8.0	10.0	5.5	7.5	7.0	1.5	4.0
6	26.0	17.5	21.5	9.0	3.0	5.5	8.5	4.5	6.5	6.0	2.0	4.5
7	23.5	18.5	21.0	9.5	2.5	6.0	9.0	4.0	6.0	2.0	.0	.5
8	25.5	18.0	21.0	10.5	3.5	7.0	10.0	4.0	7.0	2.5	.0	1.0
9	18.0	12.5	14.0	10.5	7.5	9.0	13.0	9.5	11.0	5.0	.0	2.0
10	16.5	10.0	13.0	12.5	5.5	8.5	11.5	7.5	9.5	9.0	4.0	6.0
11	20.0	11.0	15.0	12.5	8.5	10.5	9.5	6.0	7.5	8.0	3.5	5.5
12	19.5	13.0	16.0	16.5	12.5	14.0	10.5	6.0	8.0	8.5	4.5	6.0
13	22.5	15.0	18.0	13.0	9.0	10.5	9.5	6.0	8.0	8.5	3.0	5.5
14	22.0	15.0	18.0	13.5	8.5	10.5	6.0	4.5	5.0	7.5	2.5	4.5
15	19.5	16.0	17.5	10.0	7.0	8.5	6.5	4.0	5.0	4.5	.5	2.5
16	24.5	18.5	20.5	8.0	6.5	7.0	7.0	5.0	5.5	3.0	1.0	2.0
17	19.5	16.0	17.5	11.0	6.0	8.5	8.5	5.0	6.5	2.5	.0	.5
18	19.0	15.5	17.0	12.0	7.5	9.5	7.0	3.0	5.0	.5	.0	.0
19	17.0	15.0	15.5	11.0	6.5	8.5	8.0	3.0	5.0	.5	.0	.0
20	17.0	13.0	15.0	9.5	4.0	6.5	6.5	3.0	4.5	1.0	.0	.5
21	17.0	9.5	13.0	10.0	4.0	7.0	6.5	1.5	3.5	4.0	.0	1.5
22	17.0	10.0	13.0	9.0	5.0	7.0	5.5	2.0	3.5	5.5	3.0	4.5
23	16.5	10.0	13.0	12.0	7.0	9.0	5.0	.0	2.5	9.5	5.0	7.0
24	17.5	10.0	13.5	8.0	2.0	5.0	5.0	.5	3.0	10.5	8.0	9.0
25	18.5	10.0	14.0	2.5	.0	1.0	7.0	2.0	4.0	9.5	7.5	8.5
26	15.5	11.0	13.0	2.0	.0	.5	8.0	3.0	5.0	11.0	7.5	9.0
27	14.5	8.0	11.0	5.0	.0	2.0	7.0	4.0	5.5	7.5	4.0	5.5
28	15.5	7.5	11.0	7.5	1.0	4.0	4.0	1.0	2.0	6.0	1.5	3.5
29	12.5	4.5	7.5	8.5	3.0	5.5	4.5	.0	2.0	6.5	1.0	3.5
30	8.0	1.5	4.5	9.5	3.5	6.5	4.5	.0	2.0	3.5	1.0	2.5
31	9.0	1.0	5.0	---	---	---	7.0	1.0	4.0	3.0	.0	1.0
MONTH	26.0	1.0	15.4	16.5	.0	7.3	13.0	.0	5.9	11.0	.0	3.9

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	3.0	.0	.5	5.5	4.0	5.0	19.5	11.5	15.5	---	---	---
2	1.5	.0	1.0	9.5	3.0	6.0	21.0	13.5	16.5	---	---	---
3	3.0	.5	1.5	12.0	6.5	9.0	19.0	11.0	14.5	---	---	---
4	3.0	2.5	2.5	15.0	9.0	12.0	17.0	11.5	14.5	---	---	---
5	4.0	2.5	3.0	17.0	10.5	13.5	15.5	6.5	11.0	---	---	---
6	4.5	2.5	3.5	16.0	13.0	14.5	14.0	5.0	9.0	23.5	19.0	21.5
7	4.0	2.5	3.0	14.5	11.0	13.0	15.5	8.0	11.5	23.0	18.0	20.0
8	2.5	.5	1.5	11.0	1.0	5.0	18.5	10.0	14.0	20.5	16.5	18.5
9	.5	.0	.0	6.0	.5	3.0	21.0	15.0	17.5	19.5	18.5	19.0
10	.5	.0	.0	8.5	3.0	6.0	18.5	13.5	15.5	21.5	17.0	19.0
11	1.5	.0	.5	9.5	6.0	8.0	13.5	11.5	12.0	22.5	19.0	21.0
12	3.0	1.5	2.0	10.5	8.0	9.5	13.5	10.5	12.0	24.0	21.0	22.0
13	3.5	2.0	2.5	13.5	9.5	11.0	17.5	11.5	14.0	25.5	20.5	23.0
14	3.5	2.0	2.5	15.5	10.0	13.0	22.0	15.0	18.0	24.5	20.5	22.5
15	4.5	3.0	3.5	16.5	12.0	14.0	20.0	16.0	18.0	26.0	19.5	22.5
16	6.0	3.5	4.5	16.5	11.0	13.5	21.5	14.0	17.5	27.0	20.0	23.5
17	8.5	5.0	7.0	18.0	12.0	15.0	23.0	16.0	19.5	26.5	22.0	24.0
18	11.0	8.0	9.0	19.5	13.0	16.0	23.0	15.5	19.0	27.5	21.0	24.0
19	12.5	11.0	11.5	19.5	14.0	16.5	24.5	17.0	20.5	27.0	21.5	24.0
20	11.5	9.0	10.0	20.5	15.5	17.5	26.0	19.0	22.5	27.0	21.0	24.0
21	9.0	6.0	7.0	18.5	12.0	15.0	26.5	20.0	23.0	26.5	20.5	23.5
22	6.5	4.5	6.0	18.0	12.5	15.0	25.0	20.0	22.0	27.0	20.5	23.5
23	6.0	2.5	4.5	21.5	13.5	17.0	25.5	19.0	22.0	27.5	21.0	24.0
24	8.0	2.5	5.0	17.5	10.0	13.5	25.0	19.5	21.5	28.0	21.5	24.5
25	7.5	3.5	5.5	13.0	8.0	10.5	21.5	19.0	20.0	28.0	23.5	25.5
26	6.0	1.5	3.5	12.0	9.5	11.0	24.0	17.0	20.5	25.0	20.0	22.5
27	6.5	2.5	4.5	13.0	8.5	10.5	---	---	---	24.5	22.5	23.5
28	5.5	4.0	5.0	14.0	7.0	10.5	---	---	---	25.0	21.5	23.5
29	---	---	---	15.5	8.5	11.5	---	---	---	25.5	22.0	24.0
30	---	---	---	15.5	8.5	12.0	---	---	---	28.0	24.0	26.0
31	---	---	---	17.0	9.0	13.0	---	---	---	30.0	25.5	28.0
MONTH	12.5	.0	3.9	21.5	.5	11.6	---	---	---	---	---	---

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[illegible]

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	9.8	6.7	7.9	12.6	10.4	11.5	11.7	9.2	10.4	12.6	10.3	11.1
2	10.3	6.7	8.4	12.4	9.9	10.9	12.8	8.9	10.3	12.7	10.1	11.0
3	11.3	7.9	9.3	11.5	9.0	10.4	11.0	8.9	9.7	12.9	10.3	11.4
4	11.5	6.0	9.1	11.5	8.6	9.8	12.9	9.4	10.7	13.0	10.8	11.6
5	11.0	6.0	7.8	11.8	8.7	10.3	12.8	9.8	10.8	12.4	10.1	11.4
6	10.8	5.9	7.7	12.2	10.0	11.0	13.1	10.1	11.2	12.4	10.0	11.1
7	10.2	5.9	7.5	12.0	9.9	10.9	13.3	10.3	11.3	13.1	11.2	12.2
8	10.6	6.1	7.6	11.9	9.4	10.6	13.0	9.6	11.1	12.7	11.6	12.0
9	11.2	6.5	8.9	11.4	9.4	10.1	12.9	8.9	10.3	12.7	10.8	11.8
10	11.4	8.2	9.5	12.1	9.3	10.6	12.9	9.2	10.5	11.9	10.2	10.9
11	11.8	7.5	9.4	10.5	8.3	9.5	13.1	9.6	10.9	12.5	10.3	11.2
12	11.5	7.2	8.9	10.4	7.9	8.7	12.1	9.2	10.5	12.3	10.4	11.1
13	13.0	7.0	9.1	10.1	7.9	9.1	11.4	9.1	10.0	12.4	10.4	11.1
14	11.8	6.9	8.7	11.4	8.8	10.0	12.7	10.0	11.1	12.4	10.5	11.3
15	10.7	7.0	8.4	11.8	8.8	10.3	12.8	10.6	11.3	12.9	11.0	11.9
16	11.5	6.6	8.2	11.9	10.3	10.8	12.5	10.5	11.1	12.1	11.5	11.8
17	11.1	6.6	8.3	12.7	10.1	11.1	12.9	10.3	11.1	12.9	11.5	12.2
18	11.3	7.4	8.7	12.4	9.7	10.8	13.2	10.4	11.5	13.1	11.8	12.4
19	9.6	7.4	8.5	11.9	9.7	10.8	13.0	10.4	11.4	12.9	11.9	12.4
20	11.8	8.0	9.3	12.3	9.9	10.9	13.0	10.4	11.4	12.7	11.9	12.3
21	12.7	8.5	10.1	12.2	10.0	10.9	13.2	10.8	11.7	12.7	11.4	12.2
22	11.6	8.7	9.8	12.2	9.9	10.8	13.1	10.8	11.7	12.2	10.9	11.6
23	11.8	8.7	9.9	12.4	9.6	10.6	13.2	11.1	12.0	11.9	10.1	10.9
24	11.6	8.6	9.8	12.9	9.6	11.3	13.1	11.1	11.9	10.8	9.4	10.0
25	11.7	8.4	9.8	13.3	11.3	12.4	13.0	10.8	11.7	11.5	9.2	10.1
26	11.7	8.4	9.9	13.0	12.1	12.4	12.8	10.2	11.3	11.4	9.2	10.1
27	12.0	9.2	10.3	13.0	11.4	12.3	12.6	10.1	11.0	12.2	9.7	10.9
28	11.8	8.9	10.3	13.0	11.0	11.9	13.2	10.7	11.9	12.6	10.8	11.6
29	11.9	8.9	10.5	13.0	10.6	11.6	13.2	11.6	12.3	12.5	11.0	11.7
30	13.1	11.2	12.0	13.2	10.3	11.5	13.0	11.4	12.1	12.6	11.0	11.7
31	12.9	10.9	12.0	---	---	---	12.7	10.3	11.6	12.7	12.0	12.3
MONTH	13.1	5.9	9.2	13.3	7.9	10.8	13.3	8.9	11.2	13.1	9.2	11.5

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

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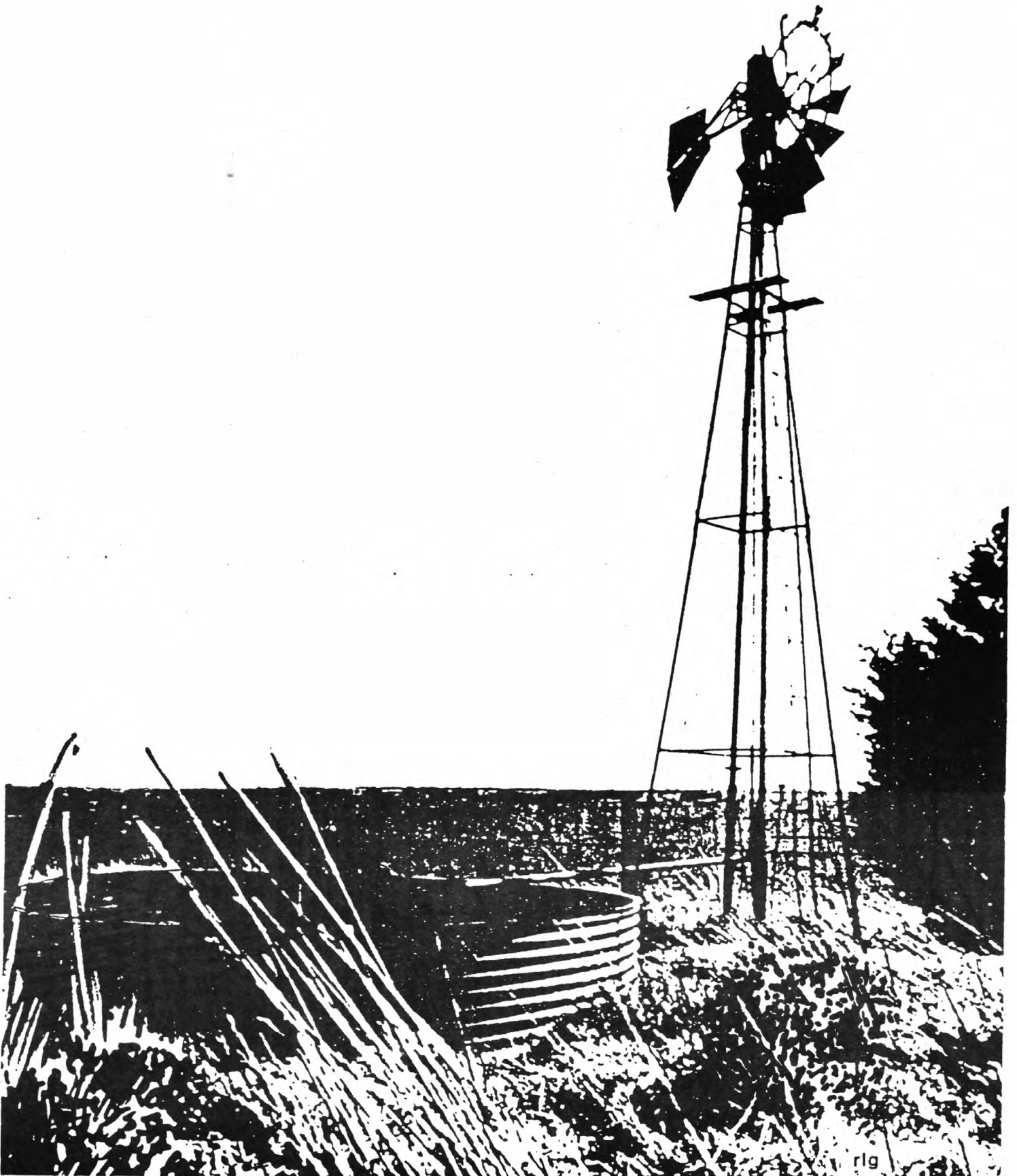
OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	12.4	11.8	12.1	12.1	11.6	11.8	11.2	8.6	9.9	9.1	8.3	8.7
2	---	---	---	12.5	11.0	11.9	10.9	8.5	9.5	8.7	8.3	8.5
3	---	---	---	11.7	10.3	11.1	11.0	8.7	9.8	8.4	8.2	8.2
4	---	---	---	11.3	9.7	10.5	11.1	8.7	9.8	8.4	7.9	8.2
5	12.3	12.1	12.2	11.6	9.4	10.4	11.4	8.4	10.0	---	---	---
6	12.4	12.3	12.3	12.7	9.1	10.5	11.9	10.0	11.1	---	---	---
7	12.8	12.3	12.5	12.2	9.1	10.5	11.5	9.4	10.5	---	---	---
8	13.4	12.8	13.1	12.7	10.1	11.4	11.6	8.8	10.3	---	---	---
9	14.0	13.4	13.7	13.2	11.9	12.7	11.1	8.3	9.4	---	---	---
10	14.1	13.7	13.9	12.3	10.9	11.8	10.2	7.8	8.9	---	---	---
11	14.0	13.7	13.8	11.1	10.2	10.9	9.2	7.3	8.2	12.3	7.7	9.7
12	13.7	13.5	13.6	10.3	9.8	10.1	8.3	7.7	8.0	13.7	7.2	9.8
13	13.8	13.5	13.6	10.4	9.6	9.9	8.7	7.7	8.3	12.7	6.9	9.3
14	13.8	13.6	13.7	11.3	9.3	10.2	9.8	7.7	8.5	11.5	6.6	8.6
15	13.6	13.3	13.5	12.1	9.0	10.3	13.1	7.4	9.9	10.4	6.6	8.3
16	13.3	13.0	13.2	12.5	9.2	10.6	13.3	8.2	10.3	10.1	6.3	8.0
17	13.0	11.9	12.5	12.2	8.8	10.3	11.8	7.8	9.6	9.2	5.8	7.4
18	11.9	10.9	11.6	12.1	8.6	10.1	10.9	7.7	9.1	9.5	5.8	7.5
19	10.9	10.5	10.7	11.5	8.5	9.8	10.8	7.4	8.9	9.3	5.7	7.4
20	11.5	10.5	11.0	11.1	8.2	9.4	10.6	7.1	8.6	9.2	5.8	7.3
21	12.1	11.1	11.6	11.1	8.6	9.8	10.3	6.9	8.3	9.2	6.0	7.5
22	12.2	11.8	12.0	11.0	8.8	9.8	10.6	6.7	8.4	9.4	6.0	7.6
23	12.9	12.0	12.5	11.1	8.3	9.6	10.4	6.9	8.6	9.0	6.1	7.5
24	12.9	11.6	12.4	11.6	8.2	9.9	10.1	7.0	8.2	9.8	6.1	7.5
25	12.4	11.5	12.0	11.7	9.7	10.7	9.5	7.1	8.1	10.0	5.4	7.1
26	13.3	12.3	12.7	11.4	9.3	10.1	9.8	7.2	7.9	5.4	3.6	4.2
27	12.8	12.0	12.4	12.0	10.0	11.0	9.8	7.0	8.4	9.0	3.6	4.7
28	12.2	11.7	12.0	12.1	10.2	11.1	9.5	7.4	8.4	6.0	5.3	5.8
29	---	---	---	11.7	9.9	10.8	8.9	7.5	8.2	6.6	5.3	6.1
30	---	---	---	11.8	9.8	10.7	9.1	8.8	8.9	5.4	5.1	5.2
31	---	---	---	11.5	9.3	10.4	---	---	---	6.0	5.2	5.6
MONTH	---	---	---	13.2	8.2	10.6	13.3	6.7	9.1	---	---	---

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]



ARKANSAS RIVER BASIN

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK

LOCATION.--Lat 35°33'47", long 97°57'26", SW 1/4 NW 1/4 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 mi² of which 4,899 mi² is probably noncontributing.

PERIOD OF RECORD.--October 1902 to April 1908, October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected at site 1.1 mi upstream February 1914 to March 1934 and at site 0.1 mi upstream thereafter are contained in reports of National Weather Service. Published as Canadian River (North Fork) near El Reno 1902-4.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,295.00 ft above sea level. October 1902 to April 1908, nonrecording gage at site about 450 ft upstream at different datum. October 1937 to September 1988, gage at site 500 ft upstream and datum 4.02 ft higher.

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e40	41	48	43	e480	e162	88	e1300	282	81	e45	95
2	e40	43	48	45	e650	e157	e87	e950	214	80	e48	84
3	e40	45	48	47	e740	148	e84	1500	180	76	e45	74
4	e43	47	50	46	784	e145	82	e869	e200	75	e43	e69
5	e43	47	52	47	e880	e140	e83	e546	e160	71	e41	e63
6	e42	46	52	46	e920	e130	84	e413	e130	68	e39	e59
7	e42	44	52	e44	e940	e140	83	e342	e125	67	e38	e58
8	e43	45	49	e44	e960	e180	84	e300	e120	64	37	53
9	e43	47	48	e43	e980	e250	82	e278	117	63	e37	e53
10	e43	47	48	42	e985	e330	88	262	113	63	37	e51
11	e44	49	48	44	990	551	2750	e252	112	64	e37	e50
12	e45	65	49	45	e1150	e715	e3000	e241	113	61	e37	48
13	45	59	52	45	e1150	e480	602	e231	111	61	e37	47
14	44	95	52	44	e1060	e335	e310	e219	103	64	e37	e45
15	43	87	53	42	e1060	e260	222	e208	93	66	e37	43
16	43	68	53	42	e1050	e190	e180	e195	90	79	e38	e41
17	42	61	53	42	e1030	e170	e160	182	89	92	e39	e40
18	42	55	50	e42	e660	e147	e142	169	86	104	e39	115
19	42	53	50	e52	e400	e130	e132	159	82	90	e39	600
20	43	50	50	e68	e300	e125	e125	151	200	74	e39	741
21	42	47	50	e92	e270	111	e118	143	89	e66	e40	763
22	42	46	50	e70	e240	e107	116	134	78	e62	e39	806
23	41	46	50	56	e227	103	e104	128	94	e59	e38	817
24	40	44	50	60	e219	e90	e95	125	107	e58	37	819
25	40	43	50	63	e200	88	e93	209	103	e56	e36	831
26	40	44	49	60	e182	e100	e145	1600	102	e56	e34	853
27	39	42	50	59	e178	e102	e200	849	97	e55	e31	851
28	39	43	49	57	e170	103	e2020	474	91	e54	e28	848
29	40	43	47	54	---	e96	e1130	439	87	e52	e25	853
30	40	46	44	51	---	e94	e2500	621	84	e51	22	740
31	40	---	43	e220	---	e93	---	482	---	e48	e25	---
TOTAL	1295	1538	1537	1755	18855	5972	14989	13971	3652	2080	1144	10610
MEAN	41.8	51.3	49.6	56.6	673	193	500	451	122	67.1	36.9	354
MAX	45	95	53	220	1150	715	3000	1600	282	104	48	853
MIN	39	41	43	42	170	88	82	125	78	48	22	40
AC-FT	2570	3050	3050	3480	37400	11850	29730	27710	7240	4130	2270	21040

e Estimated

ARKANSAS RIVER BASIN

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

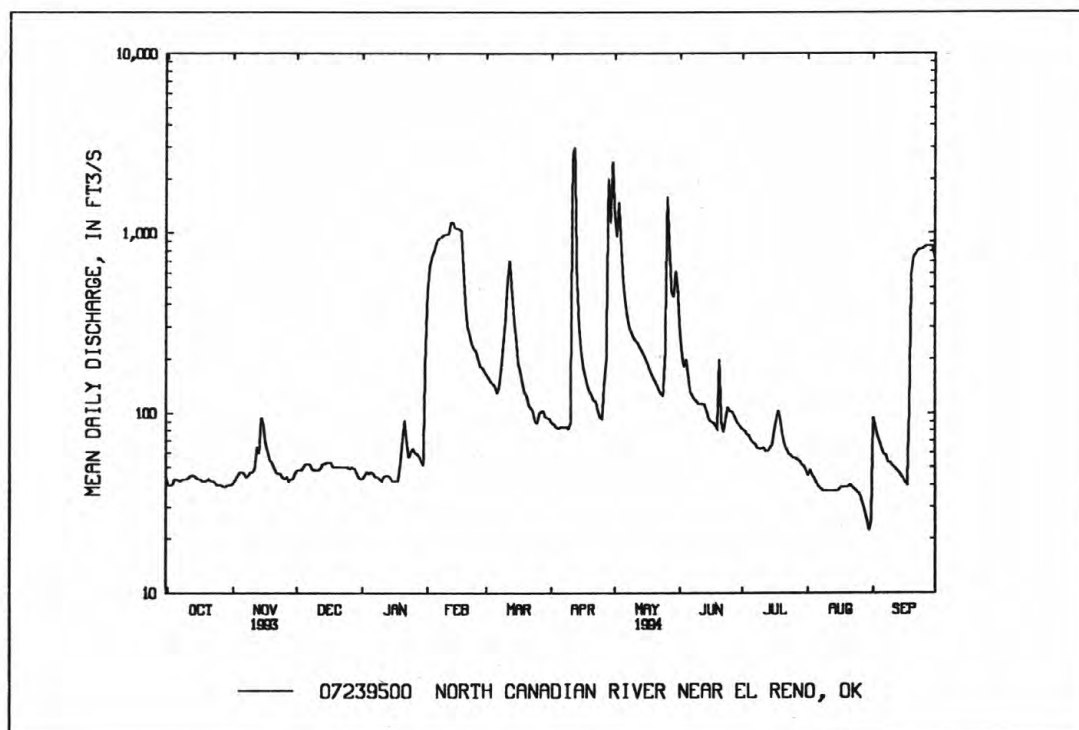
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	176	111	83.5	85.5	125	185	229	401	487	279	166	209
MAX	1904	883	489	558	673	892	1027	2354	3121	2597	2460	2786
(WY)	1987	1975	1978	1988	1994	1990	1988	1993	1949	1951	1950	1950
MIN	.000	.000	.000	.000	.000	.000	.000	8.00	.17	.73	.000	.000
(WY)	1953	1955	1955	1955	1955	1955	1955	1953	1953	1952	1954	1952

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1949-94
ANNUAL TOTAL	151671	77398	
ANNUAL MEAN	416	212	^a 212
HIGHEST ANNUAL MEAN			807
LOWEST ANNUAL MEAN			31.8
HIGHEST DAILY MEAN	13300	May 10	13300
LOWEST DAILY MEAN	35	Sep 12	.00
ANNUAL SEVEN-DAY MINIMUM	40	Oct 24	.00
INSTANTANEOUS PEAK FLOW		4090	15000
INSTANTANEOUS PEAK STAGE		14.66	^b 22.22
ANNUAL RUNOFF (AC-FT)	300800	153500	153300
10 PERCENT EXCEEDS	1030	740	603
50 PERCENT EXCEEDS	141	68	46
90 PERCENT EXCEEDS	43	40	1.6

^aPrior to regulation, 1903-07, 1938-48, 264 ft³/s.

^bPresent datum.



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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1944-45, 1950-51, 1953, 1955-57, 1974-79, October 1991 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1954 to September 1957, May 1974 to September 1975, October 1991 to current year.

WATER TEMPERATURE: October 1954 to September 1957, May 1974 to September 1975, October 1991 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1991.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments, and extended periods of minimum discharge, which inhibited probe operation.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,200 microsiemens, July 25, 1974, Oct. 11, 1978; minimum, 173 microsiemens, Nov. 12, 1992.

WATER TEMPERATURE: Maximum, 35.0°C, July 1, 23, 1994; minimum, 0.0°C, during winter months.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1510	1460	1480	---	---	---	---	---	---	1560	1540	1550
2	1530	1460	1500	---	---	---	1580	1500	1540	1580	1550	1560
3	1490	1440	1460	---	---	---	1530	1470	1500	1580	1530	1560
4	1480	1440	1460	---	---	---	1540	1510	1530	1560	1530	1550
5	1490	1460	1470	---	---	---	1540	1520	1530	1550	1530	1540
6	1500	1470	1480	1640	1620	1630	1530	1500	1520	1550	1530	1540
7	1500	1480	1490	1620	1600	1610	1500	1480	1490	1580	1540	1560
8	1510	1390	1420	1630	1610	1620	1490	1480	1490	1590	1540	1570
9	1460	1400	1430	1630	1600	1620	1500	1470	1490	1580	1540	1560
10	1460	1390	1430	1620	1570	1600	1520	1490	1500	1570	1520	1550
11	1450	1390	1420	1620	1610	1620	1540	1520	1520	1570	1510	1540
12	1510	1450	1480	1620	1190	1470	1550	1520	1540	1560	1520	1540
13	1580	1510	1540	1560	1480	1540	1550	1470	1510	1560	1500	1530
14	1610	1580	1600	1590	1330	1430	1520	1510	1510	1530	1500	1520
15	1610	1580	1600	1390	1340	1350	1530	1520	1530	1540	1500	1520
16	1590	1570	1580	1420	1370	1400	1540	1520	1530	1530	1510	1520
17	1600	1570	1590	1430	1410	1420	1520	1510	1510	1540	1510	1520
18	1570	1560	1570	1490	1430	1450	1530	1510	1520	1590	1540	1570
19	1560	1560	1560	1510	1460	1480	1530	1520	1520	1630	1590	1610
20	1570	1550	1560	1490	1340	1420	1550	1530	1540	1620	1580	1600
21	1560	1530	1550	---	---	---	1560	1540	1550	1610	1550	1580
22	1560	1550	1560	---	---	---	1570	1550	1560	1570	1520	1560
23	1570	1530	1560	---	---	---	1570	1550	1560	1520	1480	1500
24	1530	1420	1460	---	---	---	1560	1550	1560	1480	1410	1450
25	---	---	---	---	---	---	1570	1550	1560	1410	1390	1400
26	---	---	---	---	---	---	1560	1540	1560	1390	1120	1250
27	---	---	---	---	---	---	1570	1540	1560	1400	1180	1290
28	---	---	---	---	---	---	1580	1560	1570	1400	1350	1370
29	---	---	---	---	---	---	1590	1560	1570	1410	1370	1390
30	---	---	---	---	---	---	1570	1540	1560	1420	1400	1410
31	---	---	---	---	---	---	1570	1540	1560	1450	1380	1410
MONTH	---	---	---	---	---	---	---	---	---	1630	1120	1500

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[illegible]

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

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	1720	1640	1680	1750	1680	1720	1490	914	1250
2	---	---	---	1720	1670	1700	1760	1700	1730	1390	1080	1180
3	---	---	---	1700	1670	1680	1750	1700	1720	1490	1300	1420
4	---	---	---	1760	1700	1740	1790	1730	1760	1520	1450	1480
5	---	---	---	1790	1750	1770	1750	1640	1700	1620	1430	1510
6	---	---	---	1790	1770	1780	1750	1680	1710	1690	1600	1650
7	---	---	---	1790	1760	1780	1780	1730	1750	1710	1640	1690
8	---	---	---	1790	1760	1780	1820	1760	1790	1760	1630	1710
9	---	---	---	1790	1760	1770	1830	1770	1790	1750	1710	1730
10	---	---	---	1770	1750	1760	1810	1790	1800	1760	1720	1740
11	---	---	---	1780	1750	1770	1820	1800	1810	1800	1740	1770
12	---	---	---	1760	1730	1750	1840	1800	1820	---	---	---
13	---	---	---	1750	1730	1740	1850	1810	1830	---	---	---
14	---	---	---	1750	1620	1720	1830	1810	1820	1800	1780	1790
15	---	---	---	1690	1620	1670	1830	1810	1820	1810	1780	1790
16	---	---	---	1640	1430	1550	1830	1810	1810	1790	1760	1770
17	---	---	---	1580	1240	1460	1840	1710	1810	1800	1760	1780
18	---	---	---	1560	1150	1340	1710	1610	1660	1880	1740	1810
19	---	---	---	1510	1130	1330	1750	1660	1700	---	---	---
20	---	---	---	1520	1210	1350	1760	1660	1710	1900	1770	1880
21	---	---	---	1520	1340	1470	1770	1680	1740	1910	1870	1890
22	1640	1600	1620	1710	1490	1630	1770	1700	1740	1900	1870	1880
23	1630	1580	1610	1760	1710	1730	1720	1660	1700	1890	1870	1880
24	1630	1560	1590	1760	1730	1750	1760	1700	1740	1900	1890	1890
25	1650	1590	1610	1750	1730	1740	1780	1730	1760	1910	1870	1890
26	1670	1630	1650	1730	1610	1670	1810	1780	1790	1910	1850	1890
27	1690	1640	1660	1690	1600	1630	1890	1810	1840	1870	1790	1850
28	1710	1670	1690	1720	1650	1690	1900	1850	1870	1870	1840	1870
29	1720	1680	1740	1720	1650	1690	1890	1840	1870	1870	1850	1860
30	1720	1670	1700	1700	1650	1670	1910	1810	1850	---	---	---
31	---	---	---	1730	1660	1710	1860	1390	1580	---	---	---
MONTH	---	---	---	1790	1130	1660	1910	1390	1770	---	---	---

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

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WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	23.0	18.5	20.5	7.5	4.0	6.0	10.5	8.0	9.5	7.0	4.0	5.5
2	21.0	18.0	19.5	9.5	7.0	8.0	10.5	8.5	9.5	8.0	5.0	6.0
3	20.5	15.5	18.0	---	---	---	11.5	9.5	10.5	6.0	3.0	4.5
4	22.5	16.5	19.0	---	---	---	10.0	7.5	8.5	5.5	3.0	4.0
5	23.5	18.5	21.0	---	---	---	9.0	6.0	7.5	6.0	2.5	4.0
6	23.5	18.5	21.0	7.0	4.0	5.5	7.5	5.0	6.5	6.0	3.0	5.0
7	22.0	19.5	21.0	8.0	3.5	5.5	8.0	4.5	6.0	3.0	.5	1.5
8	23.5	19.0	21.0	8.5	4.5	6.5	9.0	5.0	6.5	2.0	.5	1.0
9	20.0	13.5	15.5	10.0	8.0	9.0	12.5	9.0	10.5	3.5	.5	2.0
10	14.5	11.5	13.0	10.0	6.0	8.0	10.5	8.0	9.5	7.5	3.5	5.5
11	16.5	12.0	14.0	11.5	8.5	10.0	8.5	6.5	7.5	6.5	4.5	5.5
12	17.0	14.0	15.5	15.5	11.5	13.5	9.5	6.5	8.0	8.0	5.5	6.5
13	20.0	15.5	17.5	13.5	9.5	11.5	9.5	6.5	8.0	7.0	4.5	6.0
14	19.5	16.0	17.5	12.0	9.0	10.0	6.5	5.0	5.5	6.5	4.0	5.5
15	18.0	16.0	17.0	10.0	7.0	8.5	6.0	4.5	5.5	5.0	2.0	3.5
16	21.5	17.5	19.0	7.0	6.5	7.0	7.0	5.0	6.0	3.5	2.5	2.5
17	20.0	16.5	17.5	8.5	6.0	7.5	8.0	5.5	6.5	3.0	1.0	1.5
18	17.0	15.5	16.0	10.0	7.5	8.5	6.0	3.5	5.0	1.0	1.0	1.0
19	16.5	14.5	15.5	10.0	8.0	9.0	6.5	3.5	5.0	1.5	.5	1.0
20	16.0	14.0	14.5	8.0	5.5	7.0	6.0	3.5	4.5	2.0	.5	1.0
21	14.5	11.0	12.5	8.0	5.5	7.0	5.5	2.0	3.5	3.5	.5	1.5
22	15.5	11.0	13.0	8.0	6.0	7.0	5.0	3.0	4.0	6.0	3.5	4.5
23	14.5	11.0	13.0	10.0	7.5	8.5	4.5	1.0	3.0	8.0	6.0	7.0
24	15.5	11.0	13.0	9.5	4.5	7.0	4.5	2.0	3.0	10.0	8.0	9.0
25	16.0	11.5	13.5	4.5	1.5	2.5	6.0	2.5	4.0	10.0	8.0	9.0
26	14.5	12.5	13.5	2.5	1.0	1.5	7.0	3.5	5.0	10.5	8.0	9.0
27	13.0	9.5	11.5	3.5	1.0	2.0	7.0	5.0	6.0	6.5	4.5	5.5
28	13.5	8.5	11.0	5.0	2.5	3.5	5.0	1.5	2.5	5.0	2.0	3.5
29	12.0	6.0	9.0	6.5	4.5	5.5	3.5	.5	2.0	5.5	2.0	3.5
30	6.0	3.0	5.0	8.0	5.0	6.5	3.5	.5	2.0	7.0	1.5	3.5
31	7.0	2.5	4.5	---	---	---	5.5	2.0	4.0	2.5	.0	.5
MONTH	23.5	2.5	15.3	---	---	---	12.5	.5	6.0	10.5	.0	4.2

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	2.5	.0	.5	5.5	4.5	5.0	19.0	13.0	16.0	---	---	---
2	3.5	.0	1.5	8.0	3.5	5.5	19.5	14.0	16.5	---	---	---
3	3.0	.0	1.5	11.5	6.5	9.0	18.0	11.5	15.0	---	---	---
4	3.5	2.0	3.0	14.5	9.0	11.5	16.5	12.0	14.5	---	---	---
5	4.5	3.0	3.5	16.5	10.5	13.5	16.0	8.0	12.0	---	---	---
6	4.5	3.0	4.0	16.0	13.0	14.5	12.5	6.0	9.0	20.5	17.0	19.0
7	4.0	3.5	3.5	14.5	11.5	13.0	15.0	8.5	11.5	20.0	16.5	18.0
8	3.5	1.0	2.0	11.5	1.0	5.5	16.5	10.5	13.5	---	---	---
9	1.0	.0	.0	5.5	1.0	3.0	19.5	15.0	16.5	---	---	---
10	.5	.0	.0	8.0	2.5	5.0	19.0	13.0	16.0	---	---	---
11	1.0	.0	.5	9.0	5.5	7.5	13.0	10.0	11.0	21.5	18.0	20.0
12	3.0	1.0	1.5	10.5	8.0	9.0	13.5	10.0	12.0	23.0	19.5	21.0
13	3.5	2.0	2.5	13.0	9.5	11.0	17.0	12.5	14.5	24.0	20.0	22.0
14	3.5	2.0	2.5	14.0	10.5	12.0	---	---	---	23.0	20.0	21.5
15	4.5	2.5	3.5	15.0	12.0	13.5	---	---	---	25.0	19.0	22.0
16	5.5	3.5	4.5	15.0	12.0	13.5	---	---	---	26.0	19.5	22.5
17	9.5	5.0	6.5	17.0	12.5	14.5	---	---	---	26.0	21.5	23.5
18	10.0	8.0	9.0	18.0	14.0	16.0	---	---	---	27.0	21.0	24.0
19	12.0	10.0	11.0	18.5	14.5	16.5	---	---	---	26.0	21.0	23.5
20	11.0	9.0	10.0	19.0	16.5	17.5	---	---	---	26.5	20.5	23.5
21	9.5	6.5	7.5	17.5	13.5	15.5	25.0	20.5	23.0	26.0	20.0	23.0
22	6.5	5.5	6.5	16.5	13.0	15.0	24.0	20.5	22.0	26.5	20.5	23.5
23	5.5	3.5	4.5	20.5	14.5	17.0	24.5	19.5	22.0	27.0	21.0	24.0
24	7.0	3.0	5.0	18.5	11.5	14.5	24.0	19.5	22.0	27.5	21.5	24.5
25	7.0	4.5	5.5	13.0	8.5	11.0	22.0	19.5	20.5	28.5	22.0	25.5
26	5.0	2.0	4.0	12.5	10.5	11.5	23.0	17.5	20.5	---	---	---
27	5.5	3.0	4.5	13.5	9.0	11.0	---	---	---	---	---	---
28	5.5	4.5	5.0	13.5	8.0	11.0	---	---	---	---	---	---
29	---	---	---	15.0	9.0	12.0	---	---	---	---	---	---
30	---	---	---	15.0	9.5	12.5	---	---	---	---	---	---
31	---	---	---	16.0	10.5	13.0	---	---	---	---	---	---
MONTH	15.0	.0	4.1	20.5	1.0	11.6	---	---	---	---	---	---

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

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WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	35.0	27.0	30.5	31.5	23.5	27.0	23.5	19.5	21.0
2	---	---	---	34.5	25.5	30.0	30.0	24.5	27.0	26.0	19.5	22.0
3	---	---	---	34.0	26.5	30.0	31.5	23.5	27.5	28.0	22.5	24.5
4	---	---	---	33.5	25.5	29.0	32.0	24.5	28.0	30.5	23.0	26.0
5	---	---	---	33.5	25.0	29.0	31.5	24.5	28.0	25.5	22.5	24.0
6	---	---	---	33.5	25.5	29.0	31.5	23.0	27.0	30.0	22.5	25.5
7	---	---	---	33.5	25.5	29.0	32.0	24.0	27.5	29.0	21.5	25.0
8	---	---	---	31.5	24.0	28.0	33.5	23.0	28.0	28.0	22.5	24.5
9	---	---	---	29.5	24.0	26.5	32.0	25.0	28.0	27.0	20.0	23.5
10	---	---	---	31.0	23.0	27.0	30.5	23.5	26.5	28.0	21.5	24.5
11	---	---	---	32.0	24.5	27.5	32.0	23.5	27.5	26.5	21.0	23.5
12	---	---	---	30.0	25.0	27.5	32.5	24.0	28.0	---	---	---
13	---	---	---	31.5	25.0	28.0	33.0	24.0	28.0	---	---	---
14	---	---	---	31.5	25.5	28.0	29.0	24.5	26.5	29.0	22.5	25.5
15	---	---	---	31.5	23.0	27.0	27.0	20.0	23.5	25.0	23.0	24.0
16	---	---	---	33.0	24.0	28.0	29.0	18.5	24.0	24.0	20.5	22.0
17	---	---	---	33.0	25.5	29.0	29.5	21.5	25.0	25.5	16.5	20.5
18	---	---	---	34.5	26.5	30.0	31.0	22.5	26.0	23.5	17.0	20.5
19	---	---	---	33.5	26.0	29.5	30.5	25.0	27.5	23.5	20.5	22.0
20	---	---	---	33.0	25.0	29.0	27.5	24.0	25.5	24.0	22.0	23.0
21	---	---	---	30.0	26.0	28.0	29.5	20.5	25.0	23.0	22.0	22.5
22	32.5	25.0	28.5	33.5	24.5	28.5	30.0	21.5	25.5	22.5	19.5	20.5
23	31.5	25.0	28.0	35.0	25.5	30.0	30.5	22.0	26.5	19.5	17.5	18.0
24	32.0	23.5	28.0	34.0	27.0	30.5	32.0	24.5	28.0	17.5	16.0	16.5
25	32.5	25.0	28.5	33.5	28.0	30.5	33.0	24.5	28.5	18.5	16.0	17.0
26	33.5	25.5	29.0	30.0	25.5	28.0	31.0	24.5	27.0	19.5	17.0	18.5
27	34.5	25.5	30.0	30.5	21.5	26.0	32.5	24.0	28.0	20.5	18.5	19.5
28	34.0	27.5	30.5	30.5	21.5	26.0	32.5	23.5	27.5	21.5	19.0	20.0
29	36.0	28.0	31.5	30.5	23.0	26.5	31.5	23.5	27.5	22.0	20.0	21.0
30	35.0	26.0	30.5	29.5	22.5	26.0	31.0	23.5	27.5	---	---	---
31	---	---	---	31.5	22.0	26.5	27.0	22.5	24.0	---	---	---
MONTH	---	---	---	35.0	21.5	28.3	33.5	18.5	26.8	---	---	---

ARKANSAS RIVER BASIN

07240000 LAKE HEFNER CANAL NEAR OKLAHOMA CITY, OK

LOCATION.--Lat 35°33'11", long 97°37'11", in SW 1/4 SW 1/4 sec.34, T.13 N., R.4 W., Oklahoma County, Hydrologic Unit 11050002, attached to left wing wall just downstream from outlet of inverted siphon, 2,600 ft upstream from Lake Hefner, 3.0 mi northeast of Bethany, and 7.6 mi northwest of the State Capitol in Oklahoma City.

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

REVISED RECORDS.--WDR OK-80-1: 1968-80 (Datum).

GAGE.--Water stage recorder and concrete control. Datum of gage is 1,196.06 ft above sea level. Prior to Apr. 8, 1947, nonrecording gage at site 2.7 mi upstream at different datum. Apr. 8, 1947, to Apr. 30, 1950, water-stage recorder at site 3.0 mi upstream at different datum. May 1, 1950 to May 19, 1954, Apr. 26, 1957 to Feb. 19, 1968, at present site and datum 4.90 ft higher. May 20, 1954, to Apr. 25, 1957, water-stage recorder and concrete control at site 2,500 ft downstream at datum 2.10 ft higher than present datum.

REMARKS.--Records fair. 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 ft³/s, May 28, 1955; no flow at times in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

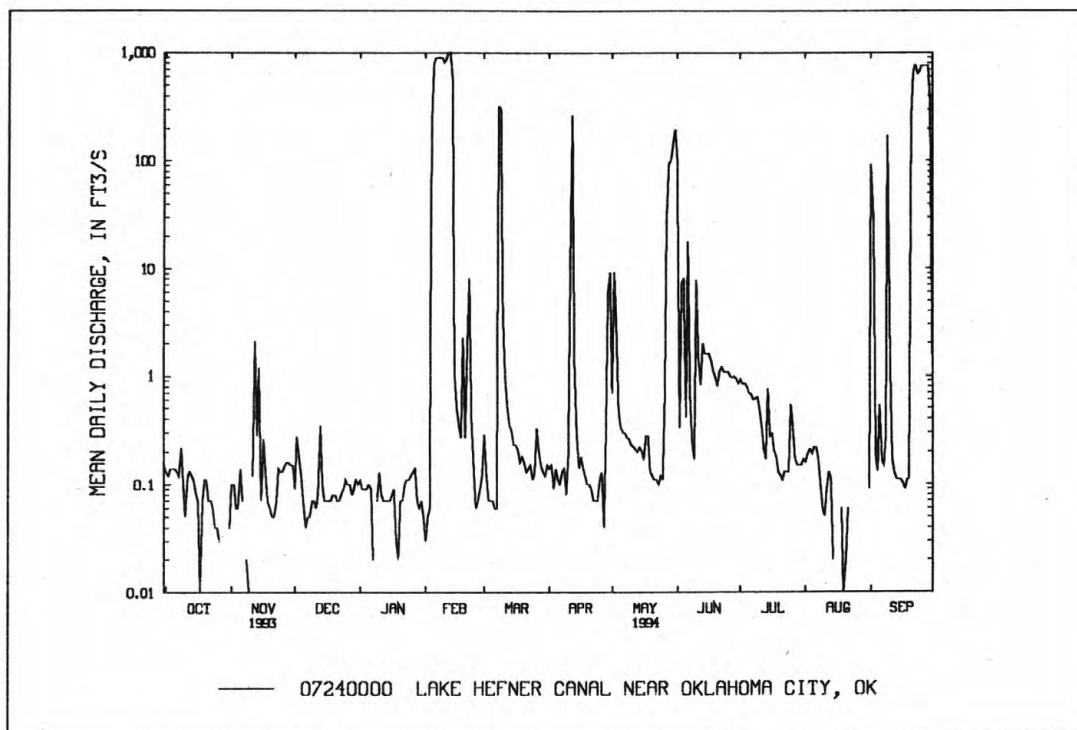
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.13	.10	.09	.11	.03	.29	.14	.69	101	.92	.16	93
2	.12	.10	.28	.09	.05	.13	.15	9.3	.33	.84	.19	29
3	.14	.06	.17	.09	.06	.07	.09	2.9	7.4	.86	.21	.18
4	.14	.06	.12	.09	237	.07	.14	.49	8.0	.80	.19	.13
5	.14	.14	.07	.10	787	.07	.11	.33	.41	.70	.22	.54
6	.13	.07	.04	.09	888	.06	.10	.30	18	.68	.22	.16
7	.12	.00	.05	.02	890	.06	.13	.30	.61	.60	.17	.15
8	.22	.02	.05	.00	900	327	.14	.27	.24	.62	.10	.28
9	.10	.01	.07	.07	894	297	.08	.26	.17	.64	.06	171
10	.05	.00	.07	.13	822	3.9	.19	.23	7.9	.50	.05	1.2
11	.12	.12	.06	.08	873	1.0	7.7	.22	1.4	.35	.09	.17
12	.13	2.1	.08	.07	975	.52	265	.21	.82	.21	.13	.13
13	.12	.28	.35	.07	996	.35	1.2	.20	2.0	.17	.11	.11
14	.11	1.2	.10	.07	576	.31	.29	.22	1.6	.77	.02	.11
15	.08	.07	.07	.07	1.0	.23	.14	.20	1.6	.27	.00	.11
16	.07	.26	.07	.08	.50	.23	.18	.17	1.6	.30	.00	.10
17	.01	.13	.07	.09	.34	.21	.14	.28	1.4	.20	.00	.09
18	.07	.07	.07	.03	.27	.16	.12	.28	1.1	.18	.06	.11
19	.11	.06	.08	.02	2.3	.18	.10	.13	.97	.13	.01	.11
20	.11	.05	.08	.07	.27	.16	.10	.12	.80	.12	.02	251
21	.07	.05	.07	.07	1.7	.13	.09	.11	1.1	.11	.06	663
22	.07	.07	.07	.10	8.2	.14	.07	.11	1.2	.13	.00	783
23	.06	.14	.08	.11	.38	.15	.07	.10	1.1	.13	.00	633
24	.04	.13	.09	.11	.15	.11	.07	.12	1.1	.13	.00	680
25	.04	.13	.11	.12	.06	.13	.11	.11	1.1	.55	.00	759
26	.03	.15	.10	.13	.07	.33	.13	.66	.99	.32	.00	755
27	.00	.16	.10	.14	.09	.20	.04	31	.96	.17	.00	754
28	.00	.16	.08	.07	.12	.15	.30	93	.99	.15	.00	761
29	.02	.15	.09	.06	---	.13	6.0	100	.94	.15	.00	364
30	.00	.15	.11	.07	---	.12	9.2	142	.86	.15	.00	.72
31	.04	---	.10	.05	---	.15	---	197	---	.17	.09	---
TOTAL	2.59	6.19	3.04	2.47	8853.59	633.74	292.32	581.31	167.69	12.02	2.16	6700.40
MEAN	.084	.21	.098	.080	316	20.4	9.74	18.8	5.59	.39	.070	223
MAX	.22	2.1	.35	.14	996	327	265	197	101	.92	.22	783
MIN	.00	.00	.04	.00	.03	.06	.04	.10	.17	.11	.00	.09
AC-FT	5.1	12	6.0	4.9	17560	1260	580	1150	333	24	4.3	13290

CAL YR 1993 TOTAL 4045.87 MEAN 11.1 MAX 864 MIN .00 AC-FT 8020
WTR YR 1994 TOTAL 17257.52 MEAN 47.3 MAX 996 MIN .00 AC-FT 34230

ARKANSAS RIVER BASIN

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07240000 LAKE HEFNER CANAL NEAR OKLAHOMA CITY, OK—Continued



ARKANSAS RIVER BASIN

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK

LOCATION.--Lat 35°28'43", long 97°39'47", in NE 1/4 of NW 1/4 of sec.31, T. 12N., R. 4W, Oklahoma County, Hydrologic Unit 11100301, on left downstream side of bridge on NW 10th Street, 0.5 mi downstream from Lake Overholser, 2.4 mi upstream from Mustang Creek, 9.1 mi southwest of State Capitol of Oklahoma, and at river mile 281.0.

DRAINAGE AREA.--13,222 mi², of which 4,899 mi² is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1952 to September 1968, October 1969 to September 1972, October 1973 to September 1987, October 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,194.66 ft above sea level. Prior to Oct. 1, 1961, at datum 10.00 ft higher. Prior to March 24, 1971, gage located at current site. March 25, 1971, to Sept. 30, 1987, gage located 200 ft upstream.

REMARKS.--Records fair. Flow regulated by Canton Lake (station 07238500) and Lake Overholser (station 07240500). Diversions upstream from station into Lake Overholser and Lake Hefner Canal (station 07240000). U.S. Geological Survey's satellite tele-meter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	54	71	63	77	237	105	2410	336	67	e36	100
2	61	54	68	64	77	191	145	1220	198	61	e36	e48
3	61	54	57	64	390	188	108	2030	113	61	e36	e35
4	61	54	28	63	160	186	105	1400	871	61	e35	e42
5	61	55	28	63	e16	183	158	802	215	61	e35	e50
6	59	54	26	70	e15	180	106	375	578	61	e35	55
7	58	54	25	78	e14	133	102	293	169	61	e35	75
8	59	54	51	78	e13	473	102	383	211	50	e35	69
9	71	54	66	79	12	953	102	358	169	43	35	50
10	60	54	67	79	e10	868	101	245	131	42	e35	e28
11	60	54	66	78	e7.6	912	537	148	129	41	34	e30
12	59	59	67	78	e5.6	734	2920	143	128	41	e34	e32
13	59	55	90	78	e4.0	473	1140	163	129	41	e34	e33
14	59	56	94	78	e2.7	425	646	230	129	82	e33	e36
15	58	51	106	77	2.1	336	478	228	129	35	e33	e39
16	58	39	102	77	5.0	161	500	181	129	e35	e33	41
17	57	e14	96	77	e5.2	172	544	147	126	e34	e33	e32
18	57	e14	93	77	635	230	464	146	123	e34	e32	e27
19	55	e14	93	77	385	171	451	146	122	33	40	e24
20	56	e16	91	74	262	181	456	144	65	e33	46	e22
21	55	e17	70	67	237	152	411	144	45	45	50	e19
22	55	30	54	67	581	141	403	143	82	55	45	e17
23	54	44	54	67	454	141	380	140	91	55	23	16
24	54	51	54	67	176	153	235	131	91	48	e23	e15
25	54	46	54	67	349	139	157	132	91	42	e22	e14
26	54	42	54	73	188	156	154	135	40	50	e21	14
27	54	42	54	78	113	186	152	945	e30	55	e20	e13
28	54	42	59	77	135	169	146	355	45	53	e19	e12
29	58	42	62	77	---	130	360	485	77	40	e18	e12
30	58	57	63	77	---	105	2840	355	77	e36	e18	e11
31	55	---	65	77	---	105	---	347	---	e36	95	---
TOTAL	1797	1326	2028	2266	4331.2	8964	14508	14504	4869	1492	1059	1011
MEAN	58.0	44.2	65.4	73.1	155	289	484	468	162	48.1	34.2	33.7
MAX	71	59	106	79	635	953	2920	2410	871	82	95	100
MIN	54	14	25	63	2.1	105	101	131	30	33	18	11
AC-FT	3560	2630	4020	4490	8590	17780	28780	28770	9660	2960	2100	2010

e Estimated

ARKANSAS RIVER BASIN

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07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1994, BY WATER YEAR (WY)

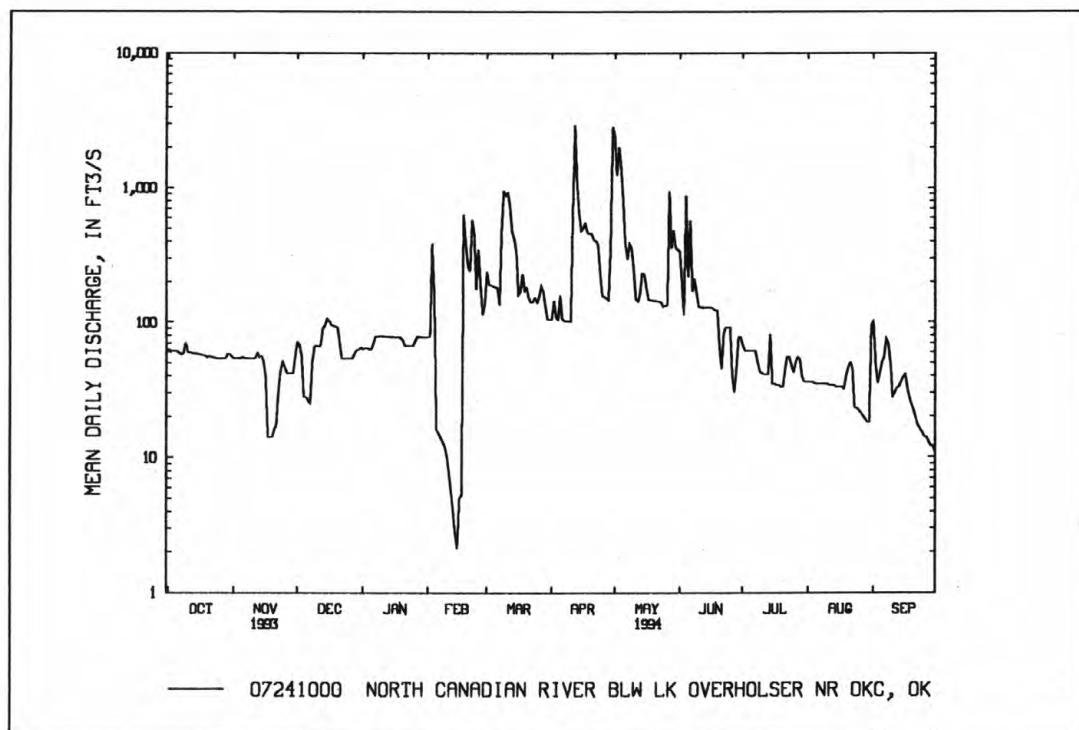
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	172	109	78.5	68.9	104	143	113	315	371	154	80.6	96.7
MAX	2426	1489	563	515	668	1487	538	2922	2180	1749	884	826
(WY)	1987	1975	1993	1987	1987	1990	1987	1993	1957	1957	1957	1989
MIN	.000	.000	.016	.045	.061	.000	.027	.45	.013	.039	.000	.000
(WY)	1953	1955	1957	1955	1955	1954	1954	1956	1953	1954	1953	1954

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1953-94

ANNUAL TOTAL	191792.9	58155.2	
ANNUAL MEAN	525	159	
HIGHEST ANNUAL MEAN			151
LOWEST ANNUAL MEAN			749
HIGHEST DAILY MEAN	13300	May 10	2920
LOWEST DAILY MEAN	6.9	Jan 25	2.1
ANNUAL SEVEN-DAY MINIMUM	21	Nov 16	4.6
INSTANTANEOUS PEAK FLOW			4460
INSTANTANEOUS PEAK STAGE			16.06
INSTANTANEOUS LOW FLOW			2.1
ANNUAL RUNOFF (AC-FT)	380400	115400	109200
10 PERCENT EXCEEDS	1280	377	403
50 PERCENT EXCEEDS	192	64	9.0
90 PERCENT EXCEEDS	53	23	.48

^aNo flow at times in 1952-57.

^bFrom high-water mark.



ARKANSAS RIVER BASIN

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1988 to current year.

pH: October 1988 to June 1991.

WATER TEMPERATURE: October 1988 to current year.

DISSOLVED OXYGEN: October 1988 to current year.

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

REMARKS.--Interruptions in record were due to malfunction of the recording instrument and insufficient flow for probes to function properly.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 2,050 microsiemens, Nov. 19, 1991; minimum, 108 microsiemens, Sept. 13, 1989.

pH: Maximum, 8.9 units, Oct. 27, 1989, Nov. 27, 1989, Sept. 15, 17, 1990; minimum, 6.2 units, Aug. 8, 1989.

WATER TEMPERATURE: Maximum, 33.5°C, July 27, 1992; minimum, 0.0°C, several days during December 1990.

DISSOLVED OXYGEN: Maximum, 17.5 mg/l, Oct. 12, 1992; minimum, 2.3 mg/l, Apr. 20, 1990.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
JUN											
03...	0936	10.0	27.0	732	1028	1028	111	6.57	817	6.8	8.1
03...	0942	20.0	27.0	732	1028	1028	111	6.57	821	7.0	8.1
03...	0946	30.0	27.0	732	1028	1028	111	6.57	822	6.9	8.1
03...	0950	40.0	27.0	732	1028	1028	111	6.57	821	7.0	8.1
03...	0956	50.0	27.0	732	1028	1028	111	6.57	823	7.0	8.1
03...	1000	60.0	27.0	732	1028	1028	111	6.57	824	6.8	8.1
03...	1003	70.0	27.0	732	1028	1028	111	6.57	827	6.6	8.1

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ARKANSAS RIVER BASIN

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- (MM HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT												
13...	1340	1028	80020	59	1440	8.4	20.0	19.5	7.4	735	11.2	127
NOV												
03...	1145	1028	80020	54	1470	8.3	16.5	9.5	3.2	735	12.6	115
DEC												
07...	1215	1028	80020	25	1390	8.5	13.0	10.0	4.2	735	16.0	147
JAN												
18...	1245	1028	80020	78	*1460	8.3	-5.0	3.0	3.1	747	14.3	109
FEB												
15...	1200	1028	80020	2.1	*1390	8.3	16.5	8.0	1.6	740	17.4	153
MAR												
22...	0915	1028	80020	141	1460	8.3	16.0	16.0	26	728	9.4	101
APR												
20...	1210	1028	80020	1040	1180	8.3	28.0	21.0	2.0	736	9.7	114
MAY												
11...	1145	1028	80020	147	1300	8.4	22.0	19.5	8.8	728	10.1	115
JUN												
14...	1115	1028	80020	129	1460	8.4	28.0	26.5	30	723	7.1	94
JUL												
26...	1145	1028	80020	57	1430	8.3	29.5	28.5	5.1	730	8.0	108
AUG												
23...	1215	1028	80020	23	1350	8.2	31.0	28.0	8.6	730	9.4	126
SEP												
07...	1145	1028	80020	84	1370	8.3	29.5	26.0	3.8	739	9.0	115

*SPECIFIC CONDUCTANCE, LAB (µs/cm)

ARKANSAS RIVER BASIN

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 KF AGAR UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL AS CACO3) (MG/L) (00900)	HARD- NESS NONCARB 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 13...	0.68	0.2	350	130	--	--	--	--	--	--	--	--
NOV 03...	0.70	5.2	43	22	470	170	110	46	140	39	3	4.4
DEC 07...	0.58	3.6	70	44	--	--	--	--	--	--	--	--
JAN 18...	0.96	1.0	35	K15	--	--	--	--	--	--	--	--
FEB 15...	1.0	2.1	--	--	400	--	97	39	130	41	3	4.3
MAR 22...	--	6.7	250	120	--	--	--	--	--	--	--	--
APR 20...	0.45	0.3	2000	450	--	--	--	--	--	--	--	--
MAY 11...	0.57	4.2	680	--	470	190	110	48	150	41	3	5.3
JUN 14...	--	3.5	--	160	--	--	--	--	--	--	--	--
JUL 26...	0.71	3.5	230	350	--	--	--	--	--	--	--	--
AUG 23...	1.3	4.6	600	80	360	170	79	39	140	45	3	7.4
SEP 07...	0.85	4.6	2300	420	--	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN 321
07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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)	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 13...	334	5	282	--	--	--	--	--	--	--	--
NOV 03...	356	0	292	280	150	0.70	10	932	919	1.27	136
DEC 07...	329	10	287	--	--	--	--	--	--	--	--
JAN 18...	371	0	304	--	--	--	--	--	--	--	--
FEB 15...	--	--	--	240	160	0.70	9.0	877	829	1.19	4.97
MAR 22...	322	0	264	--	--	--	--	--	--	--	--
APR 20...	245	0	201	--	--	--	--	--	--	--	--
MAY 11...	332	7	284	310	170	0.70	10	1010	977	1.37	401
JUN 14...	320	11	280	--	--	--	--	--	--	--	--
JUL 26...	238	0	195	--	--	--	--	--	--	--	--
AUG 23...	227	0	186	260	160	0.40	6.5	844	809	1.15	52.4
SEP 07...	206	0	169	--	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS- (MG/L) (00530)	NITRO- GEN, NITRATE (MG/L) (00620)	NITRO- GEN, NITRATE (MG/L) (00618)	NITRO- GEN, NITRATE (MG/L) (71851)	NITRO- GEN, NITRITE (MG/L) (00613)	NITRO- GEN, NITRITE (MG/L) (71856)	NITRO- GEN, NO2+NO3 (MG/L) (00630)	NITRO- GEN, NO2+NO3 (MG/L) (00631)	NITRO- GEN, AMMONIA (MG/L) (00608)	NITRO- GEN, AMMONIA (MG/L) (71846)	NITRO- GEN, ORGANIC (MG/L) (00607)
	AT 105 DEG. C, SUS- (MG/L) (00530)	NITRO- GEN, NITRATE (MG/L) (00620)	NITRO- GEN, NITRATE (MG/L) (00618)	NITRO- GEN, NITRATE (MG/L) (71851)	NITRO- GEN, NITRITE (MG/L) (00613)	NITRO- GEN, NITRITE (MG/L) (71856)	NITRO- GEN, NO2+NO3 (MG/L) (00630)	NITRO- GEN, NO2+NO3 (MG/L) (00631)	NITRO- GEN, AMMONIA (MG/L) (00608)	NITRO- GEN, AMMONIA (MG/L) (71846)	NITRO- GEN, ORGANIC (MG/L) (00607)
OCT											
13...	13	0.240	0.240	1.1	0.040	0.13	0.280	0.280	0.100	0.13	0.30
NOV											
03...	17	0.280	0.280	1.2	0.020	0.07	0.300	0.300	0.050	0.06	0.35
DEC											
07...	9	0.270	0.270	1.2	0.010	0.03	0.280	0.280	0.020	0.03	0.28
JAN											
18...	9	0.540	0.540	2.4	0.020	0.07	0.560	0.560	0.090	0.12	0.31
FEB											
15...	14	0.380	0.380	1.7	0.040	0.13	0.420	0.420	0.140	0.18	0.46
MAR											
22...	44	--	--	--	<0.010	--	--	<0.050	0.020	0.03	0.88
APR											
20...	78	0.054	--	--	<0.010	--	0.054	0.054	0.020	0.03	0.38
MAY											
11...	39	0.160	0.160	0.71	0.010	0.03	0.170	0.170	0.020	0.03	0.38
JUN											
14...	58	--	--	--	<0.010	--	--	<0.050	0.020	0.03	0.28
JUL											
26...	25	0.090	0.090	0.40	0.020	0.07	0.110	0.110	0.200	0.26	0.40
AUG											
23...	28	0.310	0.310	1.4	0.110	0.36	0.420	0.420	0.400	0.52	0.50
SEP											
07...	44	0.210	0.210	0.93	0.040	0.13	0.250	0.250	0.200	0.26	0.40

ARKANSAS RIVER BASIN 323
07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS ORTHOPHOS- PHATE, ORTHOPHOS- PHATE, ORTHOPHOS- PHATE, (MG/L AS P) (00666)	PHOS- PHORUS ORTHOPHOS- PHATE, ORTHOPHOS- PHATE, ORTHOPHOS- PHATE, (MG/L AS P) (00671)	PHOS- PHATE, ORTHOPHOS- PHATE, ORTHOPHOS- PHATE, ORTHOPHOS- PHATE, (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)
OCT 13...	0.40	0.140	0.150	0.46	--	--	--	--	--	--	--
NOV 03...	0.40	0.110	0.110	0.34	4	110	<0.5	<1.0	<5	<3	<10
DEC 07...	0.30	0.140	0.130	0.40	--	--	--	--	--	--	--
JAN 18...	0.40	0.120	0.130	0.40	--	--	--	--	--	--	--
FEB 15...	0.60	0.090	0.070	0.21	3	150	<0.5	<1.0	<5	<3	<10
MAR 22...	0.90	0.080	0.020	0.06	--	--	--	--	--	--	--
APR 20...	0.40	0.070	0.050	0.15	--	--	--	--	--	--	--
MAY 11...	0.40	0.080	0.080	0.25	4	130	<0.5	<1.0	<5	<3	<10
JUN 14...	0.30	0.090	0.090	0.28	--	--	--	--	--	--	--
JUL 26...	0.60	0.150	0.150	0.46	--	--	--	--	--	--	--
AUG 23...	0.90	0.430	0.400	1.2	5	120	<0.5	<1.0	<5	<3	<10
SEP 07...	0.60	0.140	0.130	0.40	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

ARKANSAS RIVER BASIN

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07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1310	1280	1300	1510	1440	1490	1450	1440	1450	1430	1390	1410
2	1330	1300	1310	1510	1470	1490	1470	1430	1450	1430	1390	1420
3	1350	1310	1330	1510	1460	1490	---	---	---	1440	1400	1420
4	1360	1340	1350	1500	1460	1480	---	---	---	1440	1370	1420
5	1400	1360	1370	1520	1460	1490	---	---	---	1450	1400	1420
6	1410	1350	1390	1530	1500	1520	---	---	---	1450	1410	1430
7	1420	1350	1400	1540	1490	1520	---	---	---	1460	1430	1450
8	1440	1300	1400	1540	1490	1520	---	---	---	1460	1420	1440
9	1480	1250	1370	1540	1500	1520	1390	1360	1380	1450	1420	1440
10	1510	1450	1480	1550	1500	1530	1390	1350	1380	1430	1410	1420
11	1530	1450	1480	1540	1520	1530	1390	1360	1380	1450	1410	1430
12	1490	1430	1460	1530	1240	1470	1380	1260	1360	1450	1410	1430
13	1480	1430	1450	1500	914	1410	1360	1090	1280	1450	1400	1430
14	1480	1400	1450	1350	1190	1290	1340	1280	1310	1460	1420	1440
15	1460	1400	1430	1400	1340	1380	1340	1330	1340	1470	1430	1450
16	1440	1400	1420	---	---	---	1340	1290	1310	1460	1440	1450
17	1460	1420	1440	---	---	---	1340	1290	1310	1470	1430	1450
18	1450	1390	1420	---	---	---	1370	1340	1350	1470	1430	1450
19	1460	1420	1450	---	---	---	1370	1340	1360	1470	1430	1450
20	1500	1400	1450	---	---	---	1380	1340	1360	1440	1410	1430
21	1500	1430	1460	---	---	---	1380	1330	1360	1450	1420	1440
22	1560	1430	1500	---	---	---	1380	1350	1370	1440	1430	1440
23	1570	1530	1550	1300	1250	1280	1380	1340	1370	1440	1420	1430
24	1570	1530	1550	1300	1160	1240	1390	1350	1370	1440	1410	1430
25	1570	1530	1550	1360	1230	1310	1380	1350	1370	1440	1420	1430
26	1570	1540	1560	1370	1330	1350	1380	1350	1370	1440	1400	1420
27	1580	1540	1570	1400	1340	1370	1410	1370	1380	1430	1410	1420
28	1590	1540	1570	1410	1340	1380	1420	1410	1410	1430	1410	1420
29	1600	1490	1560	1430	1370	1400	1430	1390	1410	1440	1400	1420
30	1600	1450	1490	1450	1420	1440	1440	1400	1420	1420	1410	1420
31	1520	1460	1490	---	---	---	1430	1390	1410	1420	1380	1400
MONTH	1600	1250	1450	---	---	---	---	---	---	1470	1370	1430

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

SPECIFIC CONDUCTANCE, US/CM (@ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994)

[illegible]

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

ARKANSAS RIVER BASIN
07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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

ARKANSAS RIVER BASIN

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07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	4.5	2.0	3.0	5.0	5.0	5.0	15.0	12.5	13.5	10.5	8.0	9.0
2	4.0	1.5	2.5	6.5	5.0	5.5	16.5	14.0	15.0	11.5	10.5	11.0
3	3.0	2.5	2.5	7.0	6.0	6.5	17.5	14.0	15.5	13.0	11.5	12.0
4	---	---	---	10.5	7.0	9.0	17.0	14.5	15.5	14.5	13.0	13.5
5	---	---	---	12.5	10.5	11.0	16.5	12.0	14.0	18.5	14.5	16.0
6	---	---	---	15.5	12.5	14.0	14.0	11.5	12.5	24.0	18.5	19.5
7	---	---	---	15.5	14.0	15.0	13.5	12.0	12.5	20.5	19.0	20.0
8	---	---	---	14.0	5.0	10.0	13.5	11.5	12.0	20.0	18.5	19.0
9	---	---	---	5.0	3.5	4.0	15.0	12.5	13.5	19.5	18.5	19.0
10	---	---	---	8.5	4.5	6.5	15.5	15.0	15.0	20.0	18.5	19.0
11	---	---	---	8.5	7.5	8.0	16.5	12.0	14.5	20.0	18.5	19.0
12	---	---	---	9.5	8.5	9.0	13.0	11.5	12.0	22.0	19.5	21.0
13	---	---	---	11.5	8.5	10.0	15.5	12.0	13.5	22.5	20.5	21.5
14	---	---	---	13.5	11.5	13.0	18.0	15.5	16.5	23.5	22.5	23.0
15	---	---	---	16.0	13.0	14.0	18.5	15.5	17.0	24.5	21.5	23.0
16	---	---	---	---	---	---	17.5	16.0	17.0	23.0	21.5	22.0
17	---	---	---	16.5	14.5	15.0	18.0	16.5	17.0	24.5	22.5	23.5
18	---	---	---	18.5	16.0	17.0	18.0	17.0	17.5	25.0	23.5	24.0
19	12.0	8.0	10.0	17.0	15.5	16.5	18.5	17.5	18.0	25.5	23.5	24.5
20	12.0	10.0	11.0	17.5	16.0	16.5	20.0	17.5	18.0	25.0	23.5	24.0
21	10.5	9.5	9.5	18.5	13.0	16.5	20.5	18.0	19.5	24.5	23.5	24.0
22	9.5	6.5	8.0	16.5	15.5	16.0	22.5	20.0	21.5	24.5	23.5	23.5
23	6.5	4.5	5.5	17.0	15.5	16.0	22.0	21.5	21.5	24.5	23.5	24.0
24	5.5	4.0	4.5	16.0	12.0	15.5	23.0	21.5	22.0	25.5	24.0	24.5
25	5.5	4.5	5.0	---	---	---	22.5	22.0	22.0	27.5	24.0	26.0
26	6.0	4.0	5.0	---	---	---	22.5	21.0	21.5	27.0	24.5	25.5
27	5.5	4.5	5.0	---	---	---	21.0	18.5	20.0	25.5	22.0	23.5
28	5.0	4.5	4.5	---	---	---	21.5	17.0	18.5	22.5	22.0	22.5
29	---	---	---	---	---	---	17.0	9.0	13.0	23.5	22.5	23.0
30	---	---	---	---	---	---	9.5	8.0	8.5	25.0	23.5	24.0
31	---	---	---	---	---	---	---	---	---	27.0	25.0	26.0
MONTH	---	---	---	---	---	---	23.0	8.0	16.3	27.5	8.0	21.0

ARKANSAS RIVER BASIN

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	28.0	27.0	27.5	29.0	26.5	27.5	28.0	24.0	25.5	27.0	22.0	25.0
2	28.5	26.5	27.5	28.5	26.0	27.0	28.0	24.5	25.5	31.5	21.0	24.0
3	29.5	25.5	27.5	28.5	26.0	27.0	28.5	24.5	26.0	28.5	22.0	24.0
4	27.0	25.5	26.0	28.0	26.0	26.5	28.5	25.0	26.5	32.0	22.5	25.5
5	27.0	25.5	26.5	28.0	25.5	26.5	29.0	25.5	27.0	26.0	22.0	23.0
6	26.5	24.0	25.5	29.5	25.5	27.5	29.5	26.5	27.5	31.5	22.0	25.0
7	28.5	26.0	27.0	---	---	---	29.5	26.0	27.0	26.5	24.5	25.0
8	29.0	27.0	28.0	---	---	---	30.0	26.0	27.5	---	---	---
9	30.0	28.5	29.0	---	---	---	29.5	26.0	27.5	---	---	---
10	29.0	27.0	28.0	---	---	---	27.5	26.0	26.5	---	---	---
11	27.0	25.0	26.0	---	---	---	29.5	26.5	27.5	---	---	---
12	26.0	24.5	25.5	---	---	---	29.5	26.0	27.0	---	---	---
13	26.5	25.5	26.0	28.5	25.0	26.5	29.5	26.0	27.0	---	---	---
14	27.0	25.5	26.5	---	---	---	29.0	26.0	27.0	---	---	---
15	26.0	25.0	25.5	---	---	---	28.0	25.0	26.0	---	---	---
16	26.5	25.0	25.5	---	---	---	28.5	24.5	26.0	---	---	---
17	26.5	25.0	25.5	---	---	---	28.5	24.0	25.0	---	---	---
18	28.5	26.0	27.0	---	---	---	28.5	24.5	25.5	---	---	---
19	30.0	27.0	28.5	---	---	---	27.0	25.0	25.5	---	---	---
20	---	---	---	31.0	27.0	28.5	26.5	25.0	25.5	---	---	---
21	---	---	---	29.0	27.0	28.0	27.5	24.5	25.5	---	---	---
22	29.0	26.5	27.5	30.0	27.5	28.5	27.0	24.0	25.5	---	---	---
23	29.5	27.0	28.0	29.5	27.0	28.0	28.5	23.0	25.0	---	---	---
24	28.5	26.0	27.0	30.5	27.0	28.0	29.0	23.5	25.5	---	---	---
25	27.0	25.5	26.0	30.0	26.5	27.5	29.5	23.5	25.5	---	---	---
26	30.0	25.5	27.0	28.5	26.0	27.5	29.0	23.5	25.5	---	---	---
27	30.0	24.0	26.5	28.0	25.0	26.5	30.5	24.0	26.0	24.5	17.0	20.0
28	29.0	25.0	27.0	28.5	25.5	27.0	30.5	24.0	26.5	25.0	17.5	20.5
29	29.0	27.0	27.5	28.5	25.0	26.5	30.5	24.0	26.5	25.0	18.0	20.5
30	29.0	26.5	27.5	27.5	24.0	25.0	30.0	24.0	26.0	---	---	---
31	---	---	---	28.0	24.0	25.5	27.0	24.5	25.5	---	---	---
MONTH	---	---	---	---	---	---	30.5	23.0	26.2	---	---	---

ARKANSAS RIVER BASIN

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

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OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	12.2	10.6	11.1	12.9	11.4	12.1	14.7	11.3	12.3
2	---	---	---	12.3	10.4	11.1	14.1	11.2	12.1	14.8	11.3	12.1
3	---	---	---	12.3	10.2	11.0	---	---	---	14.7	11.4	12.4
4	---	---	---	12.2	9.8	10.7	---	---	---	14.7	11.4	12.4
5	---	---	---	12.3	10.0	10.9	---	---	---	14.3	10.9	12.1
6	11.9	8.9	9.8	12.7	10.5	11.2	---	---	---	13.7	10.9	11.8
7	11.2	8.5	9.4	12.6	10.5	11.2	---	---	---	14.4	11.4	12.5
8	11.1	8.5	9.3	12.7	10.3	11.2	---	---	---	14.6	11.9	12.7
9	11.1	8.7	9.7	12.6	10.1	10.9	13.7	10.5	11.4	14.4	11.4	12.5
10	11.8	9.3	10.3	12.8	10.1	11.0	13.9	10.6	11.5	13.8	11.3	11.9
11	11.4	9.2	9.9	11.1	9.6	10.2	13.8	10.6	11.6	14.5	11.3	12.2
12	11.0	9.1	9.8	10.7	9.0	9.6	13.3	10.4	11.3	14.5	11.2	12.1
13	11.5	8.8	9.8	10.2	8.8	9.2	12.6	10.3	10.8	14.3	10.8	12.0
14	11.2	8.8	9.6	10.5	8.5	9.2	11.8	10.8	11.2	14.1	10.7	11.6
15	10.4	8.6	9.3	10.9	8.6	9.3	12.4	11.2	11.7	14.0	10.7	11.7
16	10.9	8.1	9.1	---	---	---	12.5	11.3	11.6	11.7	10.9	11.1
17	10.6	8.2	8.8	---	---	---	13.0	11.4	11.8	14.0	11.1	12.1
18	10.1	8.2	8.9	---	---	---	13.5	11.6	12.2	14.5	11.6	12.6
19	9.9	8.8	9.4	---	---	---	13.2	11.5	12.1	14.1	11.8	12.5
20	10.6	9.2	9.9	---	---	---	13.4	11.5	12.1	14.4	12.0	12.6
21	11.3	10.2	10.7	---	---	---	13.9	11.4	12.2	14.2	11.7	12.6
22	11.5	9.7	10.5	---	---	---	14.1	11.4	12.2	13.5	11.5	12.1
23	11.6	9.7	10.3	11.7	9.3	10.2	14.3	11.6	12.4	13.5	11.2	12.0
24	11.9	9.7	10.4	11.8	9.5	10.5	13.3	11.6	12.4	13.3	10.9	12.1
25	12.1	9.8	10.5	12.5	10.4	11.2	14.6	11.5	12.4	13.2	10.5	11.5
26	12.5	9.8	10.7	13.2	10.9	11.6	14.5	11.4	12.3	13.4	10.0	11.1
27	12.9	10.0	10.9	13.4	10.9	11.7	14.2	11.3	12.2	13.0	10.0	10.9
28	12.6	9.9	10.8	13.8	11.0	11.8	14.1	11.5	12.4	12.9	10.1	11.0
29	11.3	9.9	10.6	14.1	11.0	11.9	14.9	12.0	12.8	13.1	10.0	11.1
30	12.1	10.2	10.9	13.5	11.1	12.1	14.8	11.6	12.7	12.7	10.0	10.9
31	12.3	10.5	11.1	---	---	---	14.5	11.4	12.3	13.5	10.6	11.6
MONTH	---	---	---	---	---	---	---	---	---	14.8	10.0	11.9

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

ARKANSAS RIVER BASIN

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK

LOCATION.--Lat 35°33'56", long 97°22'01", in SW 1/4 SW 1/4 sec.25, T.13 N., R.2 W., Oklahoma County, Hydrologic Unit 11100302, on right downstream abutment of county road bridge, 3.8 mi downstream from Crutcho Creek, 4.0 mi west of Jones, and at mile 252.7.

DRAINAGE AREA.--13,413 mi², of which 4,899 mi² 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 good. 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 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	91	84	97	e90	501	166	2650	464	110	74	283
2	96	88	135	96	e95	476	160	1850	458	100	68	124
3	96	89	168	100	100	244	189	1940	256	89	66	63
4	97	88	135	101	e95	217	159	1760	268	87	66	56
5	96	87	84	98	e90	206	158	1040	835	87	65	75
6	94	88	71	96	e85	197	200	693	1070	86	66	96
7	93	88	67	e90	e80	192	156	452	531	88	64	66
8	111	86	65	e95	e75	1920	150	440	261	152	63	123
9	111	88	76	e100	e70	1490	148	481	280	90	64	206
10	105	93	85	107	e65	1460	151	486	217	79	63	74
11	98	92	85	106	60	998	524	306	205	73	62	61
12	97	131	86	106	59	908	1990	264	189	70	60	59
13	96	193	488	105	53	557	1540	255	183	74	59	58
14	95	241	214	105	52	521	856	300	179	83	58	57
15	94	124	145	104	50	398	563	369	175	301	58	57
16	98	121	142	105	49	369	523	318	179	270	59	89
17	94	155	134	105	47	193	541	275	178	124	63	66
18	97	75	126	e104	47	256	524	252	171	86	292	57
19	95	64	124	e105	865	273	479	250	184	76	83	56
20	103	63	121	e105	677	213	482	247	276	73	104	55
21	98	59	119	104	342	235	461	243	116	75	110	51
22	93	56	109	103	1780	201	443	239	95	87	88	512
23	92	63	98	100	776	194	442	236	124	91	67	117
24	91	76	96	100	322	191	414	233	129	90	62	61
25	91	80	95	99	287	204	314	226	127	233	56	51
26	89	79	92	102	326	392	297	301	125	133	54	47
27	89	81	91	106	201	386	244	326	86	109	53	43
28	90	79	92	105	172	254	272	811	67	92	52	42
29	87	77	95	103	---	217	572	1010	82	88	50	42
30	94	77	99	103	---	184	2420	660	110	77	51	39
31	94	---	99	e95	---	168	---	485	---	77	203	---
TOTAL	2972	2872	3720	3150	7010	14215	15538	19398	7620	3350	2403	2786
MEAN	95.9	95.7	120	102	250	459	518	626	254	108	77.5	92.9
MAX	111	241	488	107	1780	1920	2420	2650	1070	301	292	512
MIN	87	56	65	90	47	168	148	226	67	70	50	39
AC-FT	5890	5700	7380	6250	13900	28200	30820	38480	15110	6640	4770	5530

e Estimated

ARKANSAS RIVER BASIN

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07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	173	235	383	260	339	585	409	1207	1108	351	311	494
MAX	410	487	968	519	605	1993	786	4095	3631	1044	966	1350
(WY)	1990	1993	1992	1993	1993	1990	1990	1993	1989	1989	1989	1989
MIN	92.3	95.7	109	102	95.5	116	121	227	198	95.8	77.5	92.9
(WY)	1993	1994	1989	1994	1991	1991	1991	1992	1991	1991	1994	1994

SUMMARY STATISTICS 1993 CALENDAR YEAR

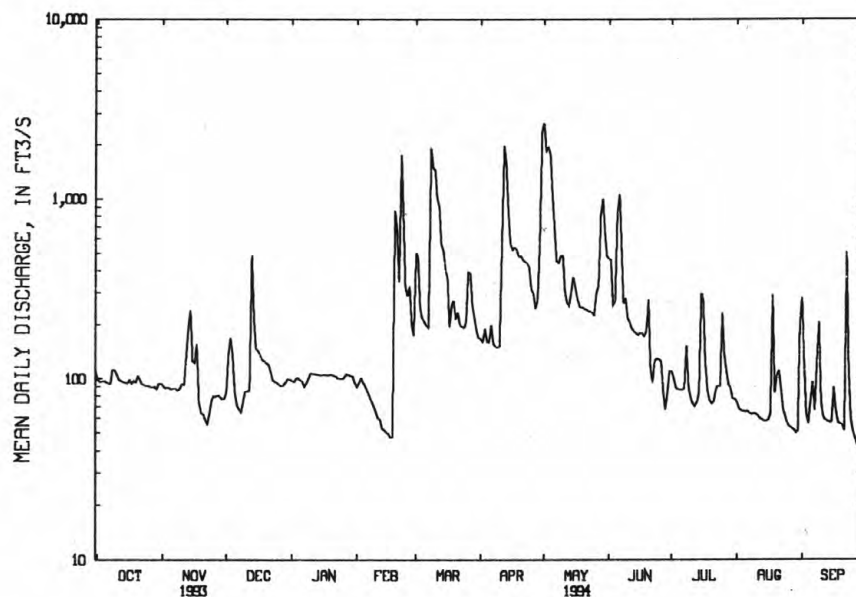
ANNUAL TOTAL	272552
ANNUAL MEAN	747
HIGHEST ANNUAL MEAN	
LOWEST ANNUAL MEAN	
HIGHEST DAILY MEAN	22700
LOWEST DAILY MEAN	56
ANNUAL SEVEN-DAY MINIMUM	65
INSTANTANEOUS PEAK FLOW	
INSTANTANEOUS PEAK STAGE	
INSTANTANEOUS LOW FLOW	
ANNUAL RUNOFF (AC-FT)	540600
10 PERCENT EXCEEDS	1650
50 PERCENT EXCEEDS	320
90 PERCENT EXCEEDS	91

1994 WATER YEAR

ANNUAL TOTAL	85034
ANNUAL MEAN	233
HIGHEST ANNUAL MEAN	
LOWEST ANNUAL MEAN	
HIGHEST DAILY MEAN	2650
LOWEST DAILY MEAN	39
ANNUAL SEVEN-DAY MINIMUM	46
INSTANTANEOUS PEAK FLOW	3510
INSTANTANEOUS PEAK STAGE	14.85
INSTANTANEOUS LOW FLOW	39
ANNUAL RUNOFF (AC-FT)	168700
10 PERCENT EXCEEDS	487
50 PERCENT EXCEEDS	103
90 PERCENT EXCEEDS	61

WATER YEARS 1989-94

ANNUAL TOTAL	488
ANNUAL MEAN	835
HIGHEST ANNUAL MEAN	167
LOWEST ANNUAL MEAN	1991
HIGHEST DAILY MEAN	22700
LOWEST DAILY MEAN	28
ANNUAL SEVEN-DAY MINIMUM	32
INSTANTANEOUS PEAK FLOW	38100
INSTANTANEOUS PEAK STAGE	24.80
INSTANTANEOUS LOW FLOW	28
ANNUAL RUNOFF (AC-FT)	353800
10 PERCENT EXCEEDS	1010
50 PERCENT EXCEEDS	202
90 PERCENT EXCEEDS	72



— 07241520 NORTH CANADIAN RIVER AT BRITTON RD AT OKC, OK

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1988 to current year

pH: October 1988 to June 1991 (discontinued).

WATER TEMPERATURE: October 1988 to current year.

DISSOLVED OXYGEN: October 1988 to current year.

INSTRUMENTATION.--Water quality monitor since October 1988.

REMARKS.--Interruptions in record were due to malfunction of the recording instrument, and the sensors being impeded by shallow depths and excessive sand movement. Samples were collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum 2,630 microsiemens, July 18, 1990; minimum 117 microsiemens, Sept. 6, 1992.

pH: Maximum 9.1 units, June 27, 1991; minimum 6.3 units, Aug. 8, 1989.

WATER TEMPERATURE: Maximum 34.5°C, June 29, 1994; minimum recorded, 0.0°C, several days during winter period.

DISSOLVED OXYGEN: Maximum 19.8 mg/L, Aug. 23, 1994; minimum 0.7 mg/L, July 8, 1994.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAMPLE LOC - ATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
JUN											
02...	0925	20.0	26.0	731	1028	1028	443	10.59	782	7.0	8.2
02...	0931	40.0	26.0	731	1028	1028	443	10.59	788	7.0	8.1
02...	0937	60.0	26.0	731	1028	1028	443	10.59	788	7.1	8.2
02...	0943	80.0	26.0	731	1028	1028	443	10.59	791	7.2	8.2
02...	0949	100	26.5	731	1028	1028	443	10.59	788	7.2	8.2
02...	0955	120	26.5	731	1028	1028	443	10.59	788	7.3	8.2
02...	1005	140	26.0	731	1028	1028	443	10.59	791	7.4	8.2
02...	1018	160	27.0	731	1028	1028	443	10.59	785	7.5	8.2
02...	1022	180	26.5	731	1028	1028	443	10.59	792	7.5	8.2
02...	1028	200	26.5	731	1028	1028	443	10.59	792	7.6	8.2

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT												
13...	0945	1028	80020	99	1400	8.2	17.0	17.0	3.0	733	8.3	90
NOV												
02...	0915	1028	80020	93	1500	8.1	11.5	8.5	1.4	738	10.0	89
DEC												
07...	0900	1028	80020	68	1360	8.1	7.0	5.5	2.6	733	9.9	82
JAN												
18...	1000	1028	80020	E104	1500	8.0	-8.5	0.0	2.0	--	--	--
FEB												
15...	1015	1028	80020	53	1600	8.2	10.0	5.5	1.5	740	13.9	114
MAR												
23...	0900	1028	80020	198	1400	8.4	21.5	15.0	20	729	9.2	96
APR												
20...	0900	1028	80020	482	1140	8.3	20.0	19.5	30	737	7.9	90
MAY												
10...	1100	1028	80020	468	1140	8.5	24.0	18.5	35	736	11.1	123
JUN												
15...	0815	1028	80020	174	1390	8.1	24.5	23.5	26	723	7.1	89
JUL												
26...	0830	1028	80020	108	736	7.9	24.0	26.5	9.4	728	4.6	60
AUG												
23...	0830	1028	80020	67	1300	8.3	21.0	23.0	4.4	731	5.6	68
SEP												
07...	0845	1028	80020	57	1050	8.0	20.0	21.5	0.50	736	6.1	72

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 KF AGAR UM-MF (COLS./ 100 ML) (31625)	STREP- FECAL, (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL AS CACO3) (00900)	HARD- NESS NONCARB 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 AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
OCT 13...	2.5	0.4	570	91	--	--	--	--	--	--	--
NOV 02...	1.8	2.0	K1700	170	450	150	110	43	150	42	3
DEC 07...	2.1	5.3	270	69	--	--	--	--	--	--	--
JAN 18...	2.7	0.6	38	58	--	--	--	--	--	--	--
FEB 15...	3.5	1.6	3500	970	390	80	98	36	160	46	4
MAR 23...	1.1	7.0	500	580	--	--	--	--	--	--	--
APR 20...	0.75	1.7	180	270	--	--	--	--	--	--	--
MAY 10...	0.62	6.1	480	220	360	130	88	33	95	36	2
JUN 15...	0.62	5.4	--	310	--	--	--	--	--	--	--
JUL 26...	1.5	4.8	6500	800	--	--	--	--	--	--	--
AUG 23...	1.1	9.7	710	230	330	140	67	38	140	48	3
SEP 07...	2.1	1.5	610	220	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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)	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											
13...	364	0	298	--	--	--	--	--	--	--	--
NOV											
02...	366	0	300	200	180	0.60	12	910	890	1.24	229
DEC											
07...	369	0	302	--	--	--	--	--	--	--	--
JAN											
18...	385	0	316	--	--	--	--	--	--	--	--
FEB											
15...	383	0	314	110	270	0.70	10	932	896	1.27	133
MAR											
23...	330	9	285	--	--	--	--	--	--	--	--
APR											
20...	256	0	210	--	--	--	--	--	--	--	--
MAY											
10...	269	5	229	200	100	0.50	9.2	720	671	0.98	910
JUN											
15...	314	0	257	--	--	--	--	--	--	--	--
JUL											
26...	171	0	140	--	--	--	--	--	--	--	--
AUG											
23...	228	0	187	210	180	0.50	6.7	798	767	1.09	144
SEP											
07...	246	0	202	--	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDEDED (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L) AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L) AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L) AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS NO2) (71856)	NITRO- GEN, NO2+NO3 TOTAL (MG/L) AS N) (00630)	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)
OCT											
13...	8	0.770	0.770	3.4	0.020	0.07	0.790	0.790	0.060	0.08	1.6
NOV											
02...	11	1.16	1.16	5.1	0.040	0.13	1.20	1.20	0.190	0.24	0.41
DEC											
07...	7	1.36	1.36	6.0	0.040	0.13	1.40	1.40	0.340	0.44	0.36
JAN											
18...	17	1.76	1.76	7.8	0.040	0.13	1.80	1.80	0.310	0.40	0.59
FEB											
15...	2	2.31	2.31	10	0.090	0.30	2.40	2.40	0.570	0.73	0.53
MAR											
23...	57	0.600	0.600	2.7	0.030	0.10	0.630	0.630	0.020	0.03	0.48
APR											
20...	133	0.340	0.340	1.5	0.010	0.03	0.350	0.350	0.050	0.06	0.35
MAY											
10...	109	0.210	0.210	0.93	0.010	0.03	0.220	0.220	0.020	0.03	0.38
JUN											
15...	60	0.200	0.200	0.89	0.020	0.07	0.220	0.220	0.020	0.03	0.38
JUL											
26...	72	0.950	0.950	4.2	0.050	0.16	1.00	1.00	0.110	0.14	0.39
AUG											
23...	37	0.550	0.550	2.4	0.030	0.10	0.580	0.580	0.020	0.03	0.48
SEP											
07...	19	1.57	1.57	6.9	0.030	0.10	1.60	1.60	0.050	0.06	0.45

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
OCT 13...	1.7	0.350	0.370	1.1	--	--	--	--	--	--	--
NOV 02...	0.60	0.420	0.440	1.3	3	190	<0.5	<1.0	<5	<3	<10
DEC 07...	0.70	0.520	0.520	1.6	--	--	--	--	--	--	--
JAN 18...	0.90	0.420	0.420	1.3	--	--	--	--	--	--	--
FEB 15...	1.1	1.20	1.20	3.7	2	260	<0.5	<1.0	<5	<3	<10
MAR 23...	0.50	0.230	0.180	0.55	--	--	--	--	--	--	--
APR 20...	0.40	0.120	0.110	0.34	--	--	--	--	--	--	--
MAY 10...	0.40	0.170	0.170	0.52	4	150	<0.5	<1.0	<5	<3	<10
JUN 15...	0.40	0.180	0.170	0.52	--	--	--	--	--	--	--
JUL 26...	0.50	0.350	0.360	1.1	--	--	--	--	--	--	--
AUG 23...	0.50	0.490	0.430	1.3	5	150	<0.5	<1.0	<5	<3	<10
SEP 07...	0.50	0.630	0.610	1.9	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	CYAN- AZINE TOTAL (UG/L) (81757)	2,4-D, TOTAL (UG/L) (39730)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DEF TOTAL (UG/L) (39040)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	DI- SYSTON TOTAL (UG/L) (39011)	2, 4-DP TOTAL (UG/L) (82183)	ENDO- SULFAN, TOTAL (UG/L) (39388)
OCT 13...	--	--	--	--	--	--	--	--	--	--	--
NOV 02...	<0.20	<0.01	<0.001	<0.001	<0.001	<0.01	0.02	0.001	<0.01	<0.01	<0.001
DEC 07...	--	--	--	--	--	--	--	--	--	--	--
JAN 18...	--	--	--	--	--	--	--	--	--	--	--
FEB 15...	<0.20	<0.01	<0.001	<0.001	<0.001	<0.01	0.04	0.001	<0.01	<0.01	<0.001
MAR 23...	--	--	--	--	--	--	--	--	--	--	--
APR 20...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	<0.20	0.16	<0.001	<0.001	<0.001	<0.01	0.03	<0.001	<0.01	<0.01	<0.001
JUN 15...	--	--	--	--	--	<0.01	0.02	--	<0.01	--	--
JUL 26...	--	--	--	--	--	<0.01	0.18	--	<0.01	--	--
AUG 23...	<0.20	0.08	<0.001	<0.001	<0.001	<0.01	0.05	0.001	<0.01	<0.01	<0.001
SEP 07...	--	--	--	--	--	<0.01	0.05	--	<0.01	--	--

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METHYL PARA- THION, TOTAL (UG/L) (39600)	MIREX, TOTAL (UG/L) (39755)	PARA- THION, TOTAL (UG/L) (39540)	PER- THANE TOTAL (UG/L) (39034)
OCT 13...	--	--	--	--	--	--	--	--	--	--	--
NOV 02...	<0.001	<0.01	<0.001	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1
DEC 07...	--	--	--	--	--	--	--	--	--	--	--
JAN 18...	--	--	--	--	--	--	--	--	--	--	--
FEB 15...	<0.001	<0.01	<0.001	0.001	0.010	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1
MAR 23...	--	--	--	--	--	--	--	--	--	--	--
APR 20...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	<0.001	<0.01	<0.001	<0.001	0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1
JUN 15...	--	<0.01	--	--	--	<0.01	--	<0.01	--	<0.01	--
JUL 26...	--	<0.01	--	--	--	0.03	--	<0.01	--	<0.01	--
AUG 23...	<0.001	<0.01	<0.001	<0.001	0.008	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1
SEP 07...	--	<0.01	--	--	--	<0.01	--	<0.01	--	<0.01	--

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1370	1330	1350	1500	1440	1460	1420	1350	1390	---	---	---
2	1380	1340	1360	1530	1490	1510	1390	1060	1230	---	---	---
3	1390	1360	1380	1550	1460	1500	1270	854	1140	---	---	---
4	1400	1360	1380	1530	1490	1520	1120	830	992	---	---	---
5	1410	1370	1390	1540	1490	1520	1240	1100	1140	---	---	---
6	1400	1370	1390	1540	1470	1510	1360	1230	1300	---	---	---
7	1410	1380	1400	1520	1470	1510	1410	1340	1380	---	---	---
8	1420	1260	1370	1530	1500	1510	1430	1390	1420	---	---	---
9	1360	1250	1300	1530	1500	1520	1500	1360	1420	---	---	---
10	1370	1290	1330	1560	1420	1510	1390	1360	1380	---	---	---
11	1410	1300	1370	1600	1520	1540	1390	1360	1380	---	---	---
12	1410	1370	1390	1530	1010	1450	1400	1310	1370	---	---	---
13	1470	1390	1420	1190	920	1060	1310	400	666	---	---	---
14	1450	1400	1420	1150	591	753	971	451	757	---	---	---
15	1450	1420	1440	1030	725	865	1230	959	1100	---	---	---
16	1460	1420	1440	1220	928	1130	1330	1230	1290	---	---	---
17	1450	1410	1430	928	670	777	1400	1260	1360	---	---	---
18	1450	1410	1430	1220	920	1080	1490	1400	1450	---	---	---
19	1470	1420	1450	1410	1220	1320	---	---	---	---	---	---
20	1480	1400	1450	1510	1320	1420	---	---	---	---	---	---
21	1470	1420	1450	1490	1290	1400	---	---	---	---	---	---
22	1480	1440	1460	1520	1420	1460	---	---	---	---	---	---
23	1490	1460	1470	1640	1420	1530	---	---	---	---	---	---
24	1490	1450	1470	1420	1310	1340	---	---	---	---	---	---
25	1510	1430	1470	1360	1280	1320	---	---	---	---	---	---
26	1530	1460	1480	1340	1300	1320	---	---	---	---	---	---
27	1530	1450	1480	1370	1310	1350	---	---	---	---	---	---
28	1520	1440	1480	1390	1360	1370	---	---	---	---	---	---
29	1540	1460	1490	1410	1370	1390	---	---	---	---	---	---
30	1510	1460	1490	1410	1370	1390	---	---	---	---	---	---
31	1540	1430	1480	---	---	---	---	---	---	---	---	---
MONTH	1540	1250	1420	1640	591	1340	---	---	---	---	---	---

[illegible]

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	784	662	716	1550	1470	1500	1490	1420	1460	1310	319	754
2	871	781	816	1560	1470	1520	1470	1420	1450	1360	1190	1300
3	993	871	937	1580	1510	1540	---	---	---	1330	1110	1220
4	1030	759	957	1580	1520	1540	---	---	---	1480	1260	1380
5	852	729	773	1580	1500	1530	---	---	---	1450	1010	1370
6	810	319	508	1590	1500	1550	1600	1520	1560	1010	568	792
7	773	566	706	1580	1520	1560	1640	1540	1580	1380	932	1150
8	893	773	832	1550	847	1240	1600	1490	1550	1340	371	1180
9	1050	891	963	1470	1230	1380	1600	1510	1550	827	407	715
10	1160	1050	1100	1510	1270	1400	1600	1520	1560	1140	817	1010
11	1200	1140	1160	1550	1410	1490	1610	1500	1560	1280	1140	1240
12	---	---	---	1540	1460	1510	1630	1510	1570	1340	1240	1300
13	---	---	---	1560	1430	1500	1630	1510	1580	1410	1260	1340
14	---	---	---	1520	1380	1450	1640	1540	1590	1420	1330	1380
15	---	---	---	1180	578	879	1650	1550	1600	1400	1320	1360
16	1380	1310	1350	957	375	706	1610	1490	1560	1440	887	1190
17	1380	1310	1350	1060	490	763	1620	1530	1580	1280	981	1150
18	1470	1370	1420	1330	1060	1240	1180	366	890	1400	1270	1320
19	1480	1420	1450	1440	1300	1380	1330	651	1020	1440	1320	1380
20	1420	781	992	1490	1400	1440	1450	1040	1330	1490	1390	1430
21	1380	1210	1300	1480	1410	1450	1270	883	1050	1470	1390	1440
22	1550	1370	1430	1510	1390	1450	1420	1270	1370	1410	244	601
23	1500	1380	1450	1460	1400	1430	1420	1300	1350	669	330	479
24	1420	1320	1340	1450	1390	1420	1420	1330	1360	1050	669	879
25	1380	1320	1350	1410	424	914	1480	1330	1420	1320	1050	1220
26	1440	1360	1400	1180	646	868	1470	1350	1420	1440	1280	1370
27	1500	1370	1440	1220	827	985	1470	1350	1430	1470	1390	1420
28	1550	1500	1520	1330	1220	1280	1480	1340	1420	1510	1380	1440
29	1600	1450	1510	1390	1320	1350	1500	1350	1420	1490	1340	1420
30	1500	1420	1460	1420	1320	1380	1480	1350	1430	1610	1450	1490
31	---	---	---	1460	1370	1430	1350	371	943	---	---	---
MONTH	---	---	---	1590	375	1320	---	---	---	1610	244	1190

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

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WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	22.5	17.0	20.0	9.5	6.0	8.0	12.5	8.5	10.5	8.5	5.0	6.5
2	21.5	17.5	19.5	11.5	8.5	10.0	12.0	10.0	11.5	8.0	5.5	6.5
3	21.0	15.0	18.0	12.5	7.5	10.0	12.0	11.0	11.5	6.5	3.0	4.5
4	23.0	17.0	20.0	14.0	9.0	11.5	11.0	8.5	10.0	5.5	3.5	4.5
5	24.0	19.0	21.5	12.0	6.5	8.5	10.0	6.5	8.5	7.0	2.5	4.5
6	24.0	18.5	21.5	8.0	4.0	6.0	9.0	5.5	7.5	7.0	3.5	6.0
7	23.0	19.5	21.5	8.5	4.0	6.5	10.0	5.5	7.5	3.5	.5	1.5
8	24.0	19.5	21.5	9.5	5.5	8.0	10.5	6.0	8.0	3.5	.5	1.5
9	20.5	13.0	15.0	12.0	9.0	10.5	15.0	10.5	12.5	6.0	1.5	3.5
10	16.0	11.0	13.5	13.0	8.0	10.5	12.5	9.5	11.0	8.5	5.5	7.0
11	18.5	13.0	16.0	12.5	10.5	11.5	10.0	7.5	9.0	8.5	5.5	7.5
12	19.0	15.0	17.5	15.5	12.5	14.0	10.0	7.0	9.0	9.5	7.0	8.0
13	22.0	17.0	19.5	14.5	10.0	12.0	10.0	7.5	9.0	8.5	5.0	7.0
14	21.5	17.0	19.5	12.5	9.5	11.0	7.5	5.5	6.5	7.5	4.5	6.0
15	19.5	17.0	18.0	11.0	8.0	9.0	6.0	5.0	5.5	5.5	2.0	3.5
16	23.5	18.5	20.5	8.5	7.5	8.0	7.0	5.5	6.0	3.0	2.0	2.5
17	21.0	17.0	18.0	10.0	7.5	8.5	8.5	6.0	7.0	2.5	.5	1.5
18	18.0	16.0	17.0	12.5	9.0	10.5	7.0	4.5	6.0	1.0	.5	.5
19	17.5	15.5	16.5	11.5	8.0	10.0	8.0	4.5	6.5	1.0	.5	.5
20	18.0	15.0	16.0	10.0	5.5	8.0	7.5	5.0	6.0	4.0	.5	2.0
21	16.0	12.5	14.5	10.5	6.0	8.0	6.5	3.0	5.0	5.5	.5	3.0
22	16.5	11.5	14.0	9.5	6.5	8.0	6.0	4.0	5.0	6.5	5.0	5.5
23	16.0	11.5	14.0	13.0	8.0	10.0	6.0	2.0	4.0	8.5	6.5	7.5
24	16.5	11.5	14.5	10.5	4.0	7.0	5.5	3.0	4.5	11.0	8.5	9.5
25	17.0	12.0	14.5	4.0	1.5	2.5	7.0	3.5	5.0	12.0	10.0	11.0
26	16.0	13.0	14.5	4.5	.5	2.0	8.5	4.5	6.5	12.0	9.5	11.0
27	14.0	10.0	12.5	5.5	1.0	3.5	8.5	6.5	7.5	9.5	5.0	6.5
28	14.5	9.5	12.0	8.5	3.5	6.0	6.5	2.0	3.5	5.0	2.5	4.0
29	14.0	5.5	9.5	10.0	5.5	7.5	5.0	1.5	3.0	6.0	2.5	4.0
30	7.5	3.5	5.5	10.5	6.5	8.5	5.0	2.0	3.5	5.5	3.5	4.5
31	8.5	3.5	6.5	---	---	---	7.5	3.0	5.5	4.0	.5	2.0
MONTH	24.0	3.5	16.2	15.5	.5	8.5	15.0	1.5	7.2	12.0	.5	5.0

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	4.5	.5	2.0	6.5	4.0	5.5	18.5	11.5	15.0	11.0	8.5	9.5
2	5.5	.5	3.0	8.5	3.0	6.0	19.5	13.5	16.5	11.5	10.5	11.0
3	7.5	2.0	5.0	12.5	6.5	9.5	17.0	11.5	14.5	14.0	11.0	12.5
4	6.5	3.5	5.0	15.0	9.5	12.0	16.0	12.0	14.5	15.5	12.5	14.0
5	9.0	4.5	6.5	16.5	11.0	14.0	15.5	6.0	11.5	19.5	14.0	16.5
6	10.5	5.0	8.0	17.5	13.5	15.5	13.0	4.0	8.5	22.5	17.0	19.5
7	8.0	5.5	7.0	16.5	12.0	14.0	15.5	9.0	12.0	22.0	17.0	19.5
8	5.5	1.5	3.5	12.0	3.5	7.0	17.0	10.5	14.0	20.5	15.0	17.5
9	1.5	.5	.5	6.0	3.0	4.5	19.5	15.0	17.0	20.5	18.5	19.0
10	4.0	.5	1.5	8.0	4.0	5.5	18.5	15.5	17.0	22.0	17.0	19.5
11	7.0	.5	3.0	10.5	6.5	8.5	15.5	13.0	13.5	23.5	19.5	21.5
12	8.5	4.0	6.0	10.0	8.0	9.0	13.0	11.0	12.0	25.0	21.0	23.0
13	9.0	2.5	5.5	13.5	9.0	11.0	15.5	11.5	13.5	26.0	21.5	23.5
14	8.5	4.0	6.0	14.5	10.0	12.5	20.0	14.0	16.5	25.0	20.5	22.0
15	11.5	5.0	8.0	15.0	13.0	14.0	20.0	16.0	17.5	25.5	20.0	22.5
16	13.0	6.0	9.5	15.5	11.0	13.5	19.5	12.5	16.5	---	---	---
17	15.0	8.0	11.0	18.0	12.0	15.0	20.0	16.5	18.5	---	---	---
18	14.0	10.0	12.0	18.5	14.0	16.5	19.5	15.5	18.0	---	---	---
19	13.0	10.5	11.5	19.5	14.5	17.0	22.0	17.0	19.5	27.0	21.0	24.0
20	12.0	9.5	11.0	20.0	16.5	18.0	23.0	19.0	21.0	26.5	20.5	23.5
21	9.5	7.5	8.0	---	---	---	23.0	19.5	21.5	26.5	20.0	23.0
22	7.5	6.5	7.0	---	---	---	22.0	19.5	21.0	27.0	20.5	24.0
23	6.5	5.0	5.5	---	---	---	23.5	19.0	21.5	27.0	21.5	24.5
24	8.0	3.5	6.0	19.0	11.5	14.5	23.0	20.0	21.5	---	---	---
25	8.0	4.5	6.5	14.0	9.0	11.5	21.5	19.5	20.5	29.5	23.0	26.0
26	---	---	---	14.0	11.5	12.5	25.0	18.5	21.5	26.5	22.5	24.5
27	---	---	---	13.0	11.0	12.0	23.5	12.5	17.0	24.5	21.0	23.0
28	---	---	---	---	---	---	17.0	11.5	13.5	25.0	21.0	23.0
29	---	---	---	---	---	---	16.5	8.5	12.0	24.5	21.0	22.5
30	---	---	---	---	---	---	9.5	8.5	9.0	28.5	22.5	25.5
31	---	---	---	---	---	---	---	---	---	29.5	25.5	27.5
MONTH	---	---	---	---	---	---	25.0	4.0	16.2	---	---	---

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

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WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	30.0	25.5	28.0	33.0	26.5	30.0	30.0	23.5	27.0	23.0	21.5	22.0
2	30.5	25.5	28.0	32.5	25.0	29.0	31.0	24.5	27.0	26.5	21.0	23.5
3	30.5	26.0	28.0	---	---	---	---	---	---	26.0	22.5	24.0
4	30.0	25.0	27.5	---	---	---	---	---	---	29.0	22.5	25.5
5	30.0	25.5	27.5	---	---	---	---	---	---	25.5	22.5	24.0
6	28.5	21.5	24.5	---	---	---	31.0	23.0	27.0	28.5	22.5	25.0
7	31.0	25.0	27.5	---	---	---	30.0	24.0	26.5	28.5	21.0	24.5
8	32.5	26.0	29.0	---	---	---	32.0	23.5	27.5	26.5	22.0	24.5
9	31.0	26.5	28.0	---	---	---	31.5	25.0	28.0	26.5	21.0	23.5
10	27.5	24.0	26.0	---	---	---	31.5	24.5	27.5	28.0	22.0	24.5
11	27.0	24.0	25.5	31.5	25.5	28.0	32.0	24.5	28.0	28.5	21.5	24.5
12	30.0	23.5	26.5	29.5	25.0	27.5	32.5	24.5	28.0	28.5	22.5	25.5
13	30.5	25.0	28.0	32.0	25.0	28.5	---	---	---	29.0	22.5	25.5
14	29.0	24.5	26.5	---	---	---	---	---	---	29.0	22.5	25.5
15	26.5	23.5	24.5	31.5	25.5	28.0	---	---	---	26.0	23.0	24.5
16	27.5	23.5	25.0	29.5	24.5	27.0	29.5	20.0	24.5	25.5	21.5	23.5
17	31.0	24.5	27.5	34.0	24.0	28.5	29.5	22.0	25.5	25.5	18.5	22.0
18	32.5	25.5	29.0	34.0	27.0	30.5	30.0	23.5	26.0	26.0	18.0	22.0
19	30.0	26.0	28.5	31.5	22.0	26.5	29.0	25.0	27.0	27.0	18.5	22.5
20	32.0	26.0	28.5	---	---	---	26.5	23.5	25.0	26.5	20.5	23.5
21	33.5	27.0	30.0	30.0	24.5	27.0	---	---	---	24.5	20.0	22.5
22	32.0	26.5	29.0	33.0	24.5	28.0	29.5	20.5	25.0	21.5	17.0	19.0
23	31.0	25.5	28.0	33.5	21.5	27.5	---	---	---	17.5	15.0	16.0
24	32.5	24.0	28.0	33.5	27.0	30.0	31.0	24.5	27.5	19.5	13.0	16.5
25	32.5	25.5	29.0	30.0	24.5	28.0	31.5	24.5	27.5	22.0	16.0	18.5
26	33.0	25.5	29.0	29.5	26.5	28.0	30.0	24.0	26.5	24.5	17.0	20.5
27	33.5	25.0	29.5	29.5	22.5	26.0	31.0	23.5	27.0	25.5	18.5	22.0
28	33.5	27.0	30.0	30.5	22.0	26.0	31.0	23.0	26.5	26.5	19.5	23.0
29	34.5	26.5	30.5	29.5	23.0	26.5	30.5	23.0	26.5	26.5	20.0	23.0
30	34.0	26.5	30.0	28.0	23.5	26.0	30.0	23.0	26.5	24.5	19.5	22.0
31	---	---	---	30.5	22.5	26.5	25.5	23.0	23.5	---	---	---
MONTH	34.5	21.5	27.9	---	---	---	---	---	---	29.0	13.0	22.8

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	13.9	7.6	10.0	12.9	10.4	11.4	10.7	8.1	9.1	12.2	8.7	10.1
2	14.2	7.1	10.0	13.0	9.8	11.0	8.4	7.5	8.0	11.5	8.6	9.8
3	14.6	7.9	10.5	12.7	9.2	10.6	8.9	6.7	7.6	12.9	9.0	10.8
4	17.0	7.5	11.1	12.4	8.6	10.1	9.7	6.9	8.4	12.9	9.8	11.1
5	15.1	6.8	11.0	12.5	8.4	10.3	10.3	8.5	9.3	12.0	9.3	10.8
6	14.2	6.7	9.6	12.7	9.7	10.9	11.3	8.9	10.0	11.8	8.5	10.0
7	13.5	6.6	9.3	12.2	9.2	10.6	11.6	9.4	10.4	12.4	10.0	11.2
8	13.7	6.9	9.4	12.2	8.7	10.2	11.7	9.2	10.2	12.1	10.5	11.3
9	12.0	7.2	9.4	11.8	8.2	9.5	12.1	8.1	9.8	12.0	9.8	11.0
10	12.0	9.1	10.4	11.0	8.0	9.1	12.8	8.4	10.2	11.0	9.1	9.9
11	12.3	8.7	10.1	8.7	7.5	8.1	13.3	9.1	10.7	11.7	8.7	9.9
12	12.7	8.2	10.0	8.4	3.3	7.0	12.2	9.2	10.5	12.1	8.7	10.0
13	13.6	7.9	10.1	6.6	3.3	5.0	9.2	6.3	7.9	12.0	8.8	10.4
14	13.4	7.6	9.9	6.4	5.1	5.8	10.4	8.8	9.8	11.8	8.1	9.7
15	12.8	7.6	9.7	9.1	5.9	7.4	11.1	10.0	10.5	12.2	8.9	10.3
16	14.9	7.1	10.0	9.2	7.8	8.8	11.0	10.1	10.4	11.1	9.7	10.3
17	13.2	6.6	9.1	8.3	7.5	7.9	11.0	9.9	10.3	11.9	9.7	10.8
18	12.4	7.5	9.4	8.4	7.3	7.8	11.4	9.9	10.5	11.5	10.3	10.9
19	10.1	7.4	8.5	9.0	7.1	8.1	11.4	9.8	10.5	11.4	10.4	10.9
20	10.9	7.6	8.9	9.5	8.1	8.7	11.6	9.7	10.6	12.0	10.6	11.2
21	10.8	7.7	9.0	9.5	8.0	8.7	11.9	10.2	11.0	12.3	10.0	11.2
22	11.1	7.9	9.1	9.8	8.2	8.9	11.6	10.1	10.7	11.8	9.4	10.4
23	11.4	8.0	9.3	9.9	7.9	8.9	12.0	10.1	10.9	12.1	9.0	10.2
24	11.5	7.9	9.3	10.8	7.8	9.4	12.1	10.0	10.9	11.2	8.4	9.5
25	12.0	7.9	9.4	11.5	9.7	10.6	12.0	9.9	10.7	12.2	7.8	10.0
26	12.0	7.8	9.5	11.2	10.3	10.7	11.6	9.0	10.3	11.7	7.3	9.2
27	12.4	8.5	10.1	11.2	9.5	10.5	11.6	8.6	9.8	12.3	7.8	9.7
28	12.5	8.8	10.2	11.0	8.9	9.9	12.3	9.2	10.8	12.5	9.2	10.6
29	11.8	8.3	10.1	11.2	8.6	9.6	12.9	10.5	11.4	12.5	9.5	10.7
30	13.3	11.1	12.0	11.1	8.4	9.5	12.5	10.0	11.0	12.6	9.0	10.5
31	13.3	10.6	11.8	---	---	---	12.1	9.4	10.6	12.5	9.9	11.1
MONTH	17.0	6.6	9.9	13.0	3.3	9.2	13.3	6.3	10.1	12.9	7.3	10.4

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

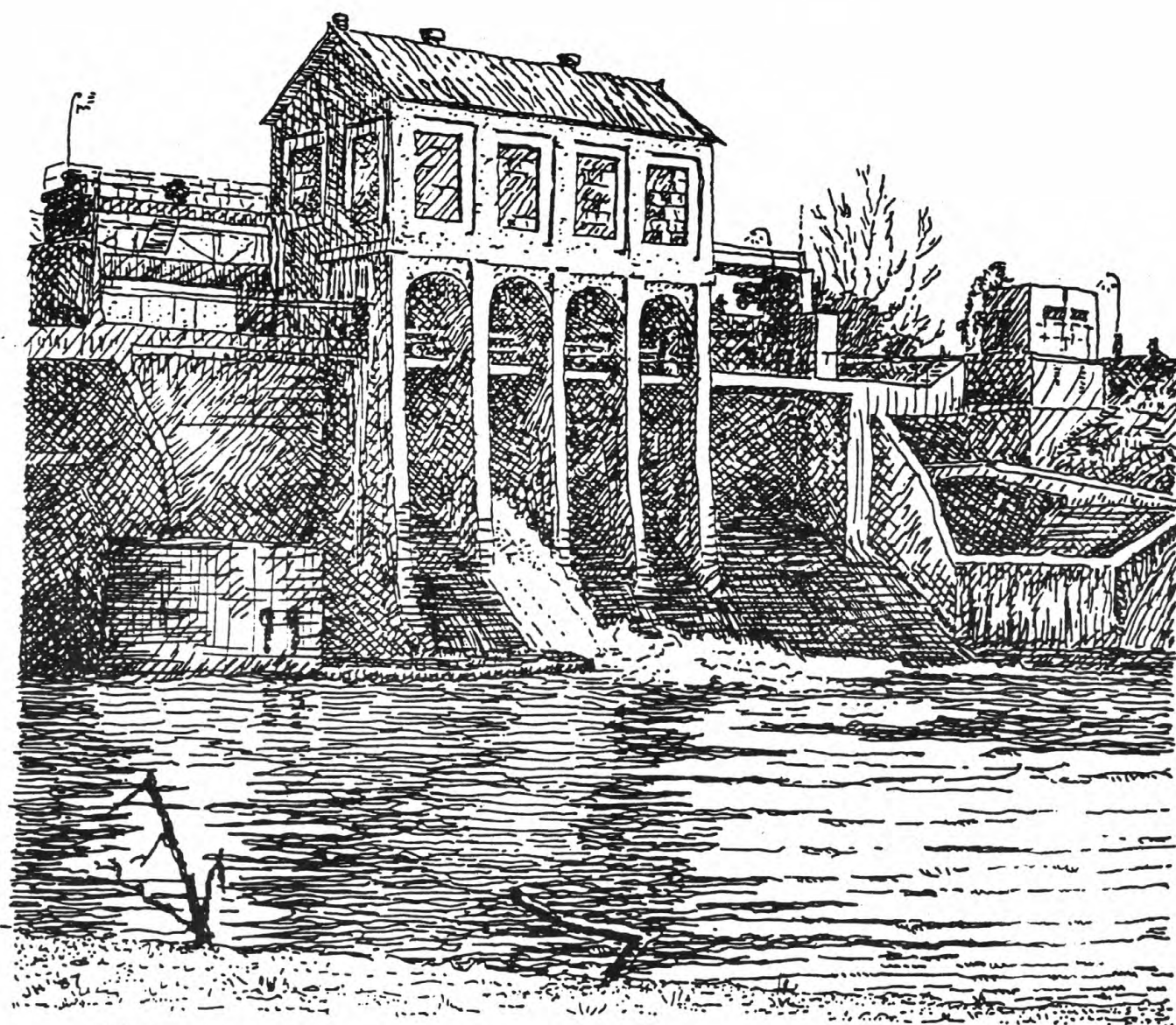
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OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	12.2	10.3	11.2	11.2	10.2	10.7	11.1	7.8	9.4	9.3	8.9	9.1
2	12.3	9.7	11.0	11.8	10.3	11.3	11.0	7.6	9.0	9.4	8.8	9.0
3	12.2	9.2	10.5	10.7	9.5	10.2	12.8	7.7	9.7	9.2	8.8	9.0
4	---	---	---	9.8	8.6	9.3	10.1	7.7	8.8	9.0	8.4	8.7
5	---	---	---	9.9	8.3	9.1	10.3	7.5	8.9	8.8	7.8	8.5
6	---	---	---	10.3	8.1	9.0	11.0	8.9	10.3	8.4	7.0	7.9
7	---	---	---	---	---	---	10.5	8.5	9.4	9.2	7.0	7.8
8	---	---	---	---	---	---	11.5	8.3	9.7	9.8	8.4	9.1
9	---	---	---	---	---	---	13.1	7.1	9.5	10.9	7.9	9.4
10	---	---	---	---	---	---	10.8	6.4	8.4	15.1	8.7	11.4
11	---	---	---	---	---	---	8.1	5.4	6.9	17.5	7.8	11.8
12	---	---	---	---	---	---	7.4	6.5	7.1	17.5	7.1	11.4
13	---	---	---	---	---	---	7.8	7.2	7.5	15.4	6.4	10.2
14	---	---	---	---	---	---	7.7	6.8	7.4	---	---	---
15	---	---	---	---	---	---	8.6	6.8	7.7	---	---	---
16	---	---	---	10.2	8.4	9.1	8.9	7.6	8.2	---	---	---
17	---	---	---	9.3	7.5	8.6	9.9	7.4	8.4	14.9	5.8	9.6
18	---	---	---	12.9	7.4	9.7	10.7	7.6	9.0	---	---	---
19	9.9	6.5	8.2	13.8	7.7	10.2	10.4	7.4	8.7	---	---	---
20	9.1	6.7	8.3	13.2	7.2	9.5	10.3	7.2	8.6	---	---	---
21	11.3	9.1	10.6	13.5	8.2	10.3	9.8	6.9	8.2	14.5	6.5	9.9
22	11.0	10.0	10.2	11.1	8.4	9.6	10.0	7.1	8.3	14.5	6.1	9.6
23	11.7	10.5	11.3	11.5	8.0	9.6	10.4	7.1	8.5	12.1	5.2	6.0
24	11.9	10.2	11.4	11.8	7.8	9.8	10.1	7.0	8.3	---	---	---
25	11.8	10.1	11.0	11.7	9.2	10.5	10.2	5.1	7.5	---	---	---
26	12.9	11.4	12.2	9.9	7.2	8.6	13.1	4.8	8.3	11.3	5.6	7.4
27	11.7	11.1	11.4	10.0	7.6	9.0	10.9	6.2	8.5	12.6	5.7	8.8
28	11.4	11.0	11.2	12.1	9.5	10.6	12.2	8.6	9.9	7.5	6.0	6.7
29	---	---	---	11.9	9.5	10.6	10.2	7.6	8.7	7.0	4.9	6.0
30	---	---	---	12.1	9.4	10.7	9.2	8.4	8.9	6.9	5.4	6.2
31	---	---	---	11.0	8.3	9.8	---	---	---	7.2	5.8	6.5
MONTH	---	---	---	---	---	---	13.1	4.8	8.6	---	---	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]



Spillway at Lake Overholser near Oklahoma City

ARKANSAS RIVER BASIN

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK

LOCATION.--Lat 35°30'01", long 97°11'37", in SW 1/4 NW 1/4 sec.22, T.12 N., R.1 E., Oklahoma County, Hydrologic Unit 11100302, on left bank downstream side county road bridge, 2.2 mi northwest of Harrah, 3.8 mi downstream from Choctaw Creek, and at mile 230.0.

DRAINAGE AREA.--13,501 mi², of which 4,899 mi² 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 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	235	194	161	e178	e177	428	285	e3120	e672	210	143	515
2	233	194	182	e170	e177	915	290	e2400	e595	e208	147	422
3	221	194	254	e171	e195	534	274	e2800	537	e192	143	205
4	210	208	303	e177	e180	420	311	2550	e500	e190	139	147
5	209	212	236	e176	e172	e430	281	e1500	e1000	e190	141	139
6	211	212	190	e170	e170	e450	300	e1300	e1200	e190	137	200
7	205	212	167	e161	e163	e470	298	e840	e820	186	139	167
8	213	212	163	e170	e155	1730	266	e655	e575	196	134	156
9	226	207	154	e180	e150	2200	271	e700	e480	256	135	347
10	215	207	172	e184	e147	e1800	258	718	e440	183	130	262
11	210	192	175	e181	e142	1580	346	e500	e410	163	132	160
12	204	208	176	e178	e139	1290	1540	e440	e380	159	128	143
13	206	337	412	e177	e137	e960	2300	e420	e357	153	123	143
14	202	e380	599	177	e132	e815	e1500	e410	e340	176	124	136
15	209	340	294	e177	130	e700	e880	e480	328	414	124	138
16	209	233	e240	e177	e125	652	e830	e430	e331	339	128	145
17	200	298	e230	e177	e120	e541	e800	e400	e332	470	121	180
18	197	238	e218	177	113	e480	786	e375	e330	209	329	144
19	202	196	e210	e177	415	e520	e742	354	e360	171	297	130
20	209	166	e200	e177	1310	e460	690	e342	e470	162	175	127
21	208	159	e190	e177	545	e433	e638	e339	e260	159	216	130
22	202	139	e187	e177	1690	e455	e590	e335	197	153	180	308
23	203	138	e181	e177	1300	e421	e550	e330	e220	179	168	672
24	203	138	e176	e177	855	e410	e512	e320	233	176	154	210
25	198	150	e171	177	504	e408	e490	e310	e220	190	133	154
26	197	157	e170	e176	563	e530	454	e347	e190	407	129	133
27	193	160	e170	e176	477	871	e365	e440	e180	238	120	134
28	194	166	e173	e176	339	509	e350	980	e165	198	115	129
29	192	173	e175	e177	---	429	e500	1170	e179	176	113	123
30	194	161	e179	e177	---	353	e2250	1470	e190	166	113	117
31	194	---	e179	177	---	303	---	825	---	154	154	---
TOTAL	6404	6181	6687	5456	10722	22497	19947	27600	12491	6613	4664	6116
MEAN	207	206	216	176	383	726	665	890	416	213	150	204
MAX	235	380	599	184	1690	2200	2300	3120	1200	470	329	672
MIN	192	138	154	161	113	303	258	310	165	153	113	117
AC-FT	12700	12260	13260	10820	21270	44620	39560	54740	24780	13120	9250	12130

e Estimated

ARKANSAS RIVER BASIN

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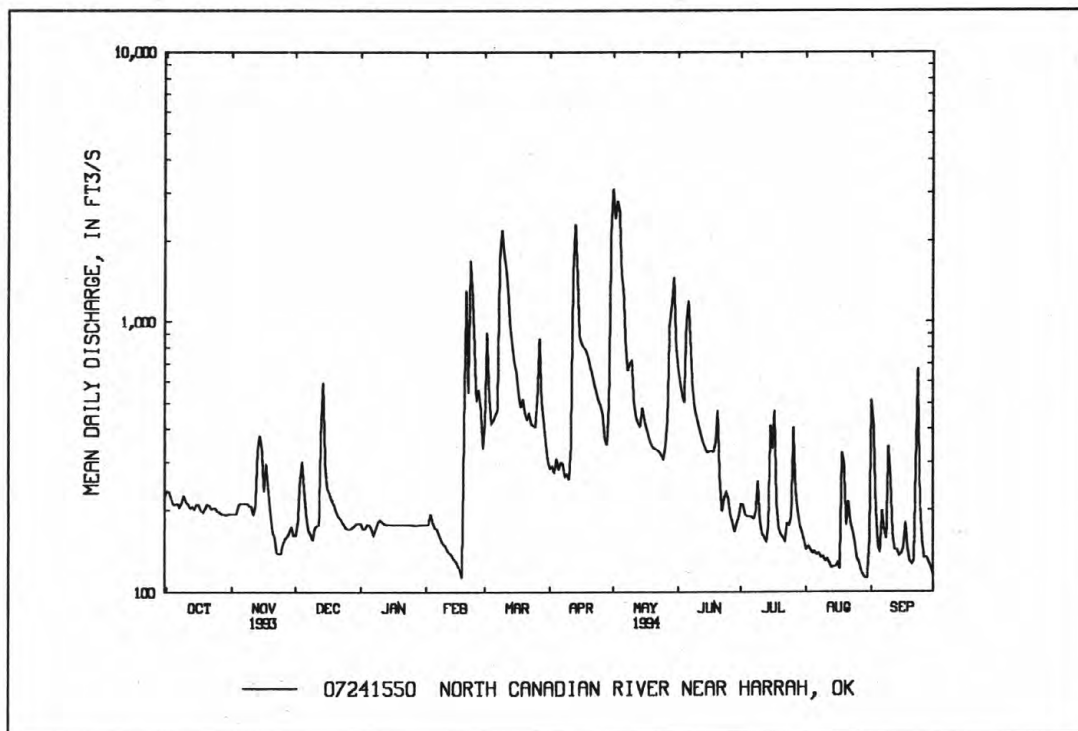
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	418	355	291	274	338	534	488	957	829	336	219	307
MAX	3634	1627	1209	907	1293	2596	2312	4265	4041	1154	1228	1699
(WY)	1987	1975	1992	1988	1987	1990	1988	1993	1989	1989	1989	1989
MIN	71.3	56.7	68.1	58.3	61.1	76.1	76.6	79.5	75.5	87.7	54.5	64.0
(WY)	1970	1970	1977	1970	1970	1971	1971	1971	1972	1970	1972	1972

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1969-94

ANNUAL TOTAL	319376	135378	
ANNUAL MEAN	875	371	446
HIGHEST ANNUAL MEAN			1322
LOWEST ANNUAL MEAN			93.0
HIGHEST DAILY MEAN	18000	May 10	3120
LOWEST DAILY MEAN	120	Aug 30	113
ANNUAL SEVEN-DAY MINIMUM	149	Nov 21	125
INSTANTANEOUS PEAK FLOW			3770
INSTANTANEOUS PEAK STAGE			11.00
ANNUAL RUNOFF (AC-FT)	633500	268500	323000
10 PERCENT EXCEEDS	1740	728	993
50 PERCENT EXCEEDS	437	207	193
90 PERCENT EXCEEDS	187	139	68



ARKANSAS RIVER BASIN
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, dissolved oxygen, and alkalinity were determined in the field. Biological samples analyzed were by The University of Iowa Hygienic Laboratory.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily (observed), 4,700 microsiemens, Sept. 25, 1980; minimum recorded, 125 microsiemens, Apr. 21, 1990.

pH: Maximum, 9.4 units, May 3, 4, 5, 6, 7, 8, 15, July 7, 1992, June 27, 1994, July 1, 1994, Aug. 24, 1994; minimum, 6.9 units, Apr. 27, 1990.

WATER TEMPERATURE: Maximum daily (observed), 36.0°C, July 11, 1982; minimum, 0.0°C on several days during winter periods.

DISSOLVED OXYGEN: Maximum, 20.1 mg/L, July 12, 1991; minimum, 1.0 mg/L, July 3, 1991.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum 1,980 microsiemens, Mar. 25 minimum 261 microsiemens, Apr. 30.

pH: Maximum 9.4 units, June 27 and 30, July 1, Aug. 24; minimum 7.4 units, June 7, Sept. 10.

WATER TEMPERATURE: Maximum 35.0°C, June 29; minimum 0.0°C, Jan. 18.

DISSOLVED OXYGEN: Maximum recorded (greater than 20 percent missing record), 19.9 mg/L, June 18 (may have exceeded 20.0 mg/L in June, July, August); minimum recorded, 1.9 mg/L, July 5.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
JUN											
03...	1506	10.0	30.0	734	1028	1028	537	5.92	850	10.2	8.5
03...	1509	20.0	30.0	734	1028	1028	537	5.92	849	10.3	8.5
03...	1513	125	29.5	734	1028	1028	537	5.92	849	10.2	8.5
03...	1517	135	29.5	734	1028	1028	537	5.92	849	10.4	8.5
03...	1521	145	29.5	734	1028	1028	537	5.92	849	10.5	8.5
03...	1525	155	29.5	734	1028	1028	537	5.92	847	10.4	8.5
03...	1529	165	29.5	734	1028	1028	537	5.92	848	10.4	8.5
03...	1534	175	29.5	734	1028	1028	537	5.92	849	10.4	8.5
03...	1538	185	31.5	734	1028	1028	537	5.92	853	10.2	8.5

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- (MM HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT												
13...	1200	1028	80020	206	1130	8.2	22.0	19.0	3.3	736	10.1	114
NOV												
02...	1130	1028	80020	194	1220	8.3	13.0	10.5	3.2	740	10.8	100
DEC												
07...	1130	1028	80020	161	1070	8.2	12.0	8.0	4.5	737	11.1	97
JAN												
18...	1130	1028	80020	177	1240	8.2	-5.5	1.0	4.3	--	--	--
FEB												
15...	1130	1028	80020	130	1110	8.2	15.5	9.5	1.9	742	13.2	119
MAR												
29...	0945	1028	80020	436	1180	8.2	12.0	11.0	5.0	743	10.8	101
APR												
20...	1030	1028	80020	690	1060	8.3	24.0	20.5	10	737	8.5	98
MAY												
10...	0915	1028	80020	718	1020	8.2	19.5	18.0	65	736	8.9	98
JUN												
15...	1115	1028	80020	328	1200	8.5	27.5	24.5	28	731	11.4	143
JUL												
26...	1000	1028	80020	524	633	7.8	25.5	27.0	50	728	4.5	60
AUG												
23...	1015	1028	80020	183	1120	8.6	28.0	24.5	6.4	731	10.7	134
SEP												
07...	0945	1028	80020	183	868	8.0	22.5	23.0	22	736	7.9	96

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 KF AGAR (COLS./ 100 ML) (31625)	STREP- TOCOC CI FECAL, (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB 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 AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
OCT 13...	5.0	<0.9	770	44	--	--	--	--	--	--	--
NOV 02...	5.6	1.7	1200	110	330	98	82	31	120	43	7.4
DEC 07...	5.3	6.0	940	120	300	72	77	27	110	--	--
JAN 18...	5.8	2.0	330	77	--	--	--	--	--	--	--
FEB 15...	4.2	2.0	980	300	270	43	70	24	120	48	8.3
MAR 29...	2.6	3.0	370	140	340	130	83	33	110	--	--
APR 20...	1.1	0.8	480	380	--	--	--	--	--	--	--
MAY 10...	1.7	4.7	420	360	280	82	70	25	80	38	6.0
JUN 15...	0.99	8.1	--	67	320	100	73	33	120	--	--
JUL 26...	2.5	8.1	2100	500	--	--	--	--	--	--	--
AUG 23...	4.1	11	160	330	260	98	62	26	120	49	9.5
SEP 07...	4.7	2.8	230	170	200	68	48	19	94	--	--

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	BICAR- WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR- WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA- WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)
OCT 13...	271	0	222	--	--	--	--	704	--	--	--	29
NOV 02...	287	0	235	140	150	0.80	12	740	710	1.01	388	21
DEC 07...	283	0	232	--	--	--	11	662	--	--	--	20
JAN 18...	318	0	261	--	--	--	--	766	--	--	--	10
FEB 15...	282	0	231	94	160	0.90	9.5	654	643	0.89	230	22
MAR 29...	262	0	215	--	--	--	5.6	735	--	--	--	86
APR 20...	242	0	198	--	--	--	--	666	--	--	--	169
MAY 10...	240	0	197	150	85	0.50	8.2	569	550	0.77	1100	210
JUN 15...	254	4	214	--	--	--	7.8	740	--	--	--	72
JUL 26...	129	0	106	--	--	--	--	343	--	--	--	229
AUG 23...	166	17	164	160	150	0.50	6.0	684	650	0.93	338	63
SEP 07...	159	0	130	--	--	--	7.7	513	--	--	--	54

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRATE	NITRO- GEN, NITRATE	NITRO- GEN, NITRATE	NITRO- GEN, NITRATE	NITRO- GEN, NITRATE	NITRO- GEN, NITRATE	NITRO- GEN, NITRATE	NITRO- GEN, NITRATE	NITRO- GEN, NITRATE	NITRO- GEN, NITRATE	NITRO- GEN, NITRATE	NITRO- GEN, NITRATE
	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-
	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED
	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L
	AS N)	AS N)	AS NO3)	AS N)	AS NO2)	AS N)	AS N)	AS N)	AS NH4)	AS N)	AS N)	AS P)
	(00620)	(00618)	(71851)	(00613)	(71856)	(00630)	(00631)	(00608)	(71846)	(00607)	(00623)	(00666)
OCT												
13...	4.38	4.38	19	0.020	0.07	4.40	4.40	0.020	0.03	0.58	0.60	0.680
NOV												
02...	4.76	4.76	21	0.040	0.13	4.80	4.80	0.120	0.15	0.68	0.80	0.950
DEC												
07...	4.51	4.51	20	0.090	0.30	4.60	4.60	0.160	0.21	0.54	0.70	1.10
JAN												
18...	4.97	4.97	22	0.030	0.10	5.00	5.00	0.100	0.13	0.70	0.80	0.860
FEB												
15...	2.39	2.39	11	0.110	0.36	2.50	2.50	1.00	1.3	0.70	1.7	1.50
MAR												
29...	2.08	2.08	9.2	0.020	0.07	2.10	2.10	0.030	0.04	0.47	0.50	0.510
APR												
20...	0.710	0.710	3.1	0.020	0.07	0.730	0.730	0.020	0.03	0.38	0.40	0.310
MAY												
10...	1.30	--	--	<0.010	--	1.30	1.30	0.020	0.03	0.38	0.40	0.340
JUN												
15...	0.560	0.560	2.5	0.030	0.10	0.590	0.590	0.030	0.04	0.37	0.40	0.720
JUL												
26...	1.82	1.82	8.1	0.080	0.26	1.90	1.90	0.220	0.28	0.38	0.60	0.350
AUG												
23...	3.37	3.37	15	0.030	0.10	3.40	3.40	0.020	0.03	0.68	0.70	0.650
SEP												
07...	3.97	3.97	18	0.030	0.10	4.00	4.00	0.010	0.01	0.69	0.70	0.730

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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											
13...	0.690	2.1	--	--	--	--	--	--	--	--	--
NOV											
02...	0.970	3.0	3	130	<0.5	<1.0	<5	<3	<10	9	<10
DEC											
07...	1.00	3.1	3	130	<0.5	<1.0	<5	<3	<10	12	<10
JAN											
18...	0.870	2.7	--	--	--	--	--	--	--	--	--
FEB											
15...	1.40	4.3	2	120	<0.5	<1.0	<5	<3	<10	21	<10
MAR											
29...	0.480	1.5	3	160	<0.5	<1.0	<5	<3	<10	12	<10
APR											
20...	0.320	0.98	--	--	--	--	--	--	--	--	--
MAY											
10...	0.330	1.0	3	140	<0.5	<1.0	<5	<3	<10	9	<10
JUN											
15...	0.680	2.1	5	140	<0.5	<1.0	<5	<3	<10	11	10
JUL											
26...	0.350	1.1	--	--	--	--	--	--	--	--	--
AUG											
23...	0.600	1.8	5	120	<0.5	<1.0	<5	<3	<10	7	10
SEP											
07...	0.730	2.2	4	100	<0.5	<1.0	<5	<3	<10	6	<10

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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)	PHENOLS TOTAL (UG/L) (32730)
OCT 13...	--	--	--	--	--	--	--	--	--	--	--
NOV 02...	30	12	--	<10	<10	<1	<1.0	910	<6	8	--
DEC 07...	24	19	0.3	<10	<10	<1	<1.0	830	<6	6	6
JAN 18...	--	--	--	--	--	--	--	--	--	--	--
FEB 15...	18	54	--	<10	<10	<1	<1.0	790	<6	16	--
MAR 29...	24	6	0.1	10	<10	<1	<1.0	910	<6	9	<1
APR 20...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	17	1	--	<10	10	<1	<1.0	690	9	4	--
JUN 15...	28	2	<0.1	10	<10	<1	<1.0	870	9	7	2
JUL 26...	--	--	--	--	--	--	--	--	--	--	--
AUG 23...	26	1	--	<10	<10	<1	<1.0	760	9	6	--
SEP 07...	17	<1	<0.1	<10	<10	<1	<1.0	580	8	7	<1

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

[illegible]

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	CYAN- AZINE TOTAL (UG/L) (81757)	2, 4-D, TOTAL (UG/L) (39730)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DEF TOTAL (UG/L) (39040)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	DI- SYSTON TOTAL (UG/L) (39011)	2, 4-DP TOTAL (UG/L) (82183)	ENDO- SULFAN, TOTAL (UG/L) (39388)
OCT											
13...	--	--	--	--	--	--	--	--	--	--	--
NOV											
02...	<0.20	<0.01	<0.001	<0.001	<0.001	<0.01	0.06	0.002	<0.01	<0.01	<0.001
DEC											
07...	--	--	--	--	--	--	--	--	--	--	--
JAN											
18...	--	--	--	--	--	--	--	--	--	--	--
FEB											
15...	<0.20	--	<0.001	<0.001	<0.001	<0.01	0.18	0.002	<0.01	--	<0.001
MAR											
29...	--	--	--	--	--	--	--	--	--	--	--
APR											
20...	--	--	--	--	--	--	--	--	--	--	--
MAY											
10...	<0.20	0.15	<0.001	<0.001	<0.001	<0.01	0.06	0.001	<0.01	<0.01	<0.001
JUN											
15...	--	--	--	--	--	<0.01	0.14	--	<0.01	--	--
JUL											
26...	--	--	--	--	--	<0.01	0.30	--	<0.01	--	--
AUG											
23...	<0.20	0.08	<0.001	<0.001	<0.001	<0.01	0.11	0.002	<0.01	<0.01	<0.001
SEP											
07...	--	--	--	--	--	<0.01	0.13	--	<0.01	--	--

DATE	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METHYL PARA- THION, TOTAL (UG/L) (39600)	MIREX, TOTAL (UG/L) (39755)	PARA- THION, TOTAL (UG/L) (39540)	PER- THANE TOTAL (UG/L) (39034)
OCT											
13...	--	--	--	--	--	--	--	--	--	--	--
NOV											
02...	<0.001	<0.01	<0.001	0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1
DEC											
07...	--	--	--	--	--	--	--	--	--	--	--
JAN											
18...	--	--	--	--	--	--	--	--	--	--	--
FEB											
15...	<0.001	<0.01	<0.001	0.001	0.030	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1
MAR											
29...	--	--	--	--	--	--	--	--	--	--	--
APR											
20...	--	--	--	--	--	--	--	--	--	--	--
MAY											
10...	<0.001	<0.01	<0.001	0.001	0.010	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1
JUN											
15...	--	<0.01	--	--	--	<0.01	--	<0.01	--	<0.01	--
JUL											
26...	--	<0.01	--	--	--	0.03	--	<0.01	--	<0.01	--
AUG											
23...	<0.001	<0.01	<0.001	<0.001	0.030	<0.01	<0.01	<0.01	<0.01	0.01	<0.1
SEP											
07...	--	<0.01	--	--	--	<0.01	--	<0.01	--	<0.01	--

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued
WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

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SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1180	1140	1160	1320	1240	1280	1150	1130	1140	1180	1150	1160
2	1200	1150	1150	1310	1220	1260	1160	1090	1130	1190	1140	1160
3	1200	1170	1190	1240	1190	1210	1220	972	1070	1180	1130	1150
4	1200	1160	1190	1250	1110	1200	1140	860	991	1160	1110	1140
5	1200	1160	1190	1250	1090	1200	988	847	932	1190	1160	1170
6	1210	1160	1180	1240	1170	1200	1030	986	1000	1180	1160	1170
7	1230	1170	1200	1220	1130	1190	1130	1030	1080	1210	1170	1190
8	1230	1160	1190	1210	1120	1150	1140	1110	1120	1220	1180	1190
9	1190	1120	1160	1150	1110	1130	1150	1110	1130	1270	1200	1230
10	1150	1080	1110	1230	1060	1140	1220	1140	1170	1200	1180	1190
11	1160	1070	1130	1280	1120	1200	1190	1150	1170	1200	1180	1190
12	1170	1080	1120	1250	998	1180	1190	1080	1160	1200	1160	1180
13	1170	1060	1120	1250	925	1110	1080	611	959	1210	1160	1190
14	1150	1040	1100	1050	738	950	611	468	526	1240	1200	1220
15	1140	1090	1110	813	738	775	895	600	775	1250	1210	1220
16	1130	1060	1100	925	783	847	1050	890	980	1220	1210	1220
17	1160	1120	1140	1110	815	985	1110	1050	1080	1230	1200	1210
18	1180	1130	1150	907	783	837	1130	1090	1110	1250	1200	1220
19	1190	1130	1160	1050	907	982	1140	1100	1130	1220	1140	1180
20	1210	1160	1180	1160	1030	1090	1170	1130	1150	1360	1150	1260
21	1230	1180	1200	1220	1130	1170	1170	1130	1160	1300	1190	1240
22	1250	1180	1200	1160	1070	1110	1180	1160	1170	1210	1180	1190
23	1260	1190	1230	1180	1120	1150	1170	1120	1150	1190	1150	1170
24	1230	1170	1210	1330	1170	1220	1190	1140	1160	1150	1130	1140
25	1260	1210	1230	1330	1180	1220	1170	1140	1160	1160	1130	1140
26	1270	1190	1230	1250	1170	1200	1220	1170	1190	1170	1110	1140
27	1280	1210	1250	1220	1160	1190	1190	1140	1170	1180	1130	1150
28	1290	1210	1260	1230	1130	1180	1190	1160	1170	1220	1160	1190
29	1280	1230	1250	1200	1130	1160	1180	1150	1170	1300	1160	1190
30	1330	1230	1280	1180	1130	1150	1180	1150	1170	1170	1150	1160
31	1380	1290	1330	---	---	---	1180	1150	1160	1190	1140	1160
MONTH	1380	1040	1180	1330	738	1120	1220	468	1080	1360	1110	1180

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1220	1140	1160	1140	1050	1100	1380	1290	1340	---	---	---
2	1190	1160	1170	1050	575	703	1360	1300	1330	---	---	---
3	1230	1170	1200	1010	731	909	1320	1290	1310	---	---	---
4	1340	1150	1240	1170	1110	1090	1300	1140	1220	---	---	---
5	1370	1280	1320	1230	1150	1190	1240	1140	1190	544	471	508
6	1380	1170	1270	1400	1210	1240	1310	1230	1260	625	522	571
7	1180	1120	1140	1320	1210	1260	1310	1200	1250	749	625	701
8	1200	1160	1180	1290	306	745	1310	1220	1260	881	712	784
9	1210	1150	1180	602	343	439	1300	1250	1260	949	852	900
10	1190	1050	1130	602	487	544	1270	1220	1250	1050	949	1010
11	1280	1110	1160	825	490	576	1240	1160	1200	1120	1050	1090
12	1300	1120	1200	983	825	933	1190	559	714	1120	1050	1080
13	1180	1080	1120	1000	954	970	646	537	571	1130	1090	1090
14	1140	1070	1090	1080	827	1030	629	537	583	1120	1090	1100
15	1140	1080	1110	861	769	815	727	639	683	1250	1120	1180
16	1220	1140	1170	1180	861	951	847	717	781	1250	1150	1200
17	1200	1140	1170	1020	955	991	893	837	865	1230	1180	1210
18	1220	1160	1180	1090	986	1040	976	852	920	1210	1160	1190
19	1610	1080	1340	1140	1090	1160	1010	961	985	1220	1160	1190
20	1560	531	979	1220	1140	1180	1050	1010	1040	1280	1200	1240
21	841	610	642	1240	1200	1220	1110	1050	1080	1250	1210	1230
22	1030	316	652	1290	1220	1250	1150	1070	1100	1250	1200	1230
23	1070	395	616	1450	1220	1260	1140	1080	1160	1270	1200	1240
24	1090	1000	1040	1390	1300	1330	1190	1090	1130	1240	1210	1220
25	1000	970	984	1980	1350	1520	1130	1100	1120	1260	1210	1230
26	1190	996	1100	1510	1130	1320	1210	1000	1150	1280	1180	1230
27	1220	1160	1180	1520	867	1080	1200	1060	1130	1330	1050	1190
28	1210	1130	1170	1080	877	978	1230	1190	1210	1300	722	1010
29	---	---	---	1220	1080	1170	1250	834	1130	815	541	678
30	---	---	---	1300	1220	1260	893	261	500	595	368	479
31	---	---	---	1340	1270	1310	---	---	---	646	595	627
MONTH	1610	316	1100	1980	306	1050	1380	261	1060	---	---	---

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

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SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	769	632	700	1240	1220	1230	1230	1090	1180	983	451	713
2	798	710	763	1250	1200	1220	1240	1070	1180	1130	494	874
3	942	776	827	1260	1150	1220	1220	1150	1180	1130	1020	1090
4	979	864	921	1190	1110	1160	1200	1130	1160	1040	1000	1020
5	971	703	837	1190	1130	1160	1220	1120	1160	1070	994	1030
6	786	346	631	1400	1190	1250	1180	1110	1140	1200	934	1090
7	690	336	505	1450	1260	1350	1190	1120	1150	976	796	899
8	771	690	725	1260	1120	1180	1160	1130	1140	1050	970	1000
9	876	761	823	1130	847	959	1170	1100	1130	1140	537	906
10	1030	876	961	1020	904	945	1200	1140	1170	844	656	787
11	1110	1020	1070	1020	936	978	1230	1150	1180	1010	827	929
12	---	---	---	1070	991	1020	1280	1200	1240	1090	1010	1060
13	---	---	---	1090	910	1050	1260	1160	1210	1100	1040	1070
14	---	---	---	1110	1010	1070	1240	1130	1180	1110	1060	1090
15	---	---	---	1180	680	976	1200	1150	1180	1130	1050	1080
16	1240	1200	1220	814	680	760	1240	1110	1200	1060	1010	1040
17	1220	1120	1190	830	507	668	1280	1130	1210	1100	856	988
18	1240	1140	1180	956	644	800	1260	605	932	971	864	923
19	1250	1180	1210	1100	933	1020	817	589	698	1050	957	999
20	1350	924	1200	1140	1090	1120	1040	807	909	1070	1000	1040
21	1150	841	975	1190	1110	1150	1250	993	1120	1070	895	1010
22	1090	1040	1070	1200	1120	1160	1080	963	1020	895	415	810
23	1180	1070	1110	1220	1160	1190	1170	1080	1120	451	295	359
24	1220	1130	1160	1200	1150	1170	1180	1090	1120	638	451	552
25	1160	1050	1080	1180	1080	1130	1130	1090	1110	804	638	710
26	1100	1050	1080	1220	555	764	1120	1050	1080	948	804	888
27	1120	1060	1090	1060	778	899	1140	1080	1110	1030	948	995
28	1110	965	1060	1050	898	959	1130	1060	1100	1140	1030	1090
29	1150	1100	1130	1160	919	1010	1090	1030	1060	1140	1100	1110
30	1220	1110	1150	1200	1100	1170	1080	1020	1040	1160	1070	1120
31	---	---	---	1220	1070	1160	1070	896	974	---	---	---
MONTH	---	---	---	1450	507	1060	1280	589	1110	1200	295	942

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.5	8.1	8.3	---	---	---	8.6	8.4	8.5	8.3	8.2	8.2
2	8.8	8.2	8.4	---	---	---	8.5	8.2	8.4	8.3	8.2	8.2
3	8.9	8.5	8.7	---	---	---	8.3	8.0	8.1	8.3	8.1	8.2
4	8.8	8.4	8.6	---	---	---	8.3	8.0	8.1	8.3	8.2	8.2
5	8.9	8.4	8.7	---	---	---	8.4	8.1	8.2	8.4	8.1	8.3
6	8.7	8.2	8.5	---	---	---	8.2	8.1	8.2	8.4	8.2	8.3
7	8.5	8.0	8.2	---	---	---	8.3	8.2	8.3	8.3	8.2	8.3
8	---	---	---	---	---	---	8.3	8.1	8.2	8.3	8.2	8.3
9	---	---	---	---	---	---	8.4	8.0	8.2	8.4	8.2	8.3
10	---	---	---	---	---	---	8.4	8.1	8.2	8.4	8.2	8.3
11	---	---	---	---	---	---	8.5	8.1	8.3	8.4	8.1	8.2
12	---	---	---	---	---	---	8.5	8.2	8.3	8.4	8.1	8.2
13	---	---	---	---	---	---	8.2	7.7	8.1	8.4	8.1	8.3
14	---	---	---	---	---	---	7.9	7.7	7.8	8.3	8.1	8.2
15	---	---	---	---	---	---	8.1	7.8	8.0	8.3	8.0	8.2
16	---	---	---	8.4	8.2	8.4	8.2	8.0	8.1	8.2	8.1	8.2
17	---	---	---	8.4	8.0	8.2	8.3	8.0	8.1	8.3	8.1	8.2
18	---	---	---	8.2	8.0	8.2	8.3	8.2	8.3	8.3	8.2	8.3
19	---	---	---	8.3	8.1	8.3	8.4	8.2	8.3	8.3	8.1	8.2
20	---	---	---	8.3	8.1	8.2	8.4	8.3	8.3	8.4	8.2	8.3
21	---	---	---	8.3	8.2	8.3	8.4	8.3	8.4	8.4	8.2	8.3
22	---	---	---	8.4	8.3	8.3	8.4	8.3	8.3	8.5	8.3	8.3
23	---	---	---	8.3	8.2	8.3	8.3	8.2	8.3	8.5	8.2	8.3
24	---	---	---	8.4	8.2	8.3	8.3	8.2	8.3	8.5	8.1	8.2
25	---	---	---	8.4	8.2	8.4	8.3	8.3	8.3	8.6	8.2	8.4
26	---	---	---	8.3	8.2	8.2	8.4	8.3	8.4	8.6	8.1	8.4
27	---	---	---	8.3	8.2	8.2	8.3	8.3	8.3	8.6	8.2	8.4
28	---	---	---	8.2	8.1	8.2	8.3	8.2	8.3	8.5	8.3	8.4
29	---	---	---	8.1	8.0	8.1	8.3	8.2	8.2	8.5	8.3	8.4
30	---	---	---	8.6	8.0	8.3	8.3	8.2	8.2	8.5	8.2	8.4
31	---	---	---	---	---	---	8.3	8.2	8.2	8.5	8.2	8.4
MAX	---	---	---	---	---	---	8.6	8.4	8.5	8.6	8.3	8.4
MIN	---	---	---	---	---	---	7.9	7.7	7.8	8.2	8.0	8.2

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

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PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	FEBRUARY			MARCH			APRIL			MAY		
1	8.4	8.2	8.3	8.0	7.9	8.0	8.6	8.4	8.5	7.9	7.7	7.8
2	8.4	8.2	8.3	8.0	7.5	7.8	8.6	8.3	8.4	7.8	7.5	7.7
3	8.5	8.1	8.3	8.0	7.6	8.0	8.7	8.3	8.5	7.8	7.5	7.7
4	8.4	8.1	8.3	8.2	7.8	8.1	8.6	8.3	8.4	7.9	7.5	7.7
5	8.4	8.2	8.3	8.3	8.2	8.2	8.4	8.1	8.2	7.9	7.7	7.8
6	8.4	8.3	8.3	8.3	8.1	8.2	8.3	8.1	8.2	8.0	7.8	7.9
7	8.3	8.1	8.2	8.4	8.2	8.3	8.3	8.1	8.2	8.0	7.8	7.9
8	8.3	8.2	8.2	8.4	7.9	8.1	8.5	8.2	8.4	8.1	7.9	8.0
9	8.2	8.1	8.2	8.0	7.8	7.9	8.6	8.2	8.3	8.3	8.0	8.0
10	8.2	8.0	8.2	8.0	7.8	7.9	8.7	8.3	8.4	8.7	8.1	8.4
11	8.2	8.1	8.2	8.2	7.8	8.0	8.5	8.1	8.3	8.9	8.4	8.6
12	8.3	8.1	8.2	8.3	8.2	8.3	8.2	7.8	7.8	9.0	8.4	8.7
13	8.2	8.1	8.2	8.4	8.2	8.3	7.8	7.7	7.8	9.1	8.4	8.8
14	8.3	8.1	8.2	8.4	8.3	8.4	7.9	7.7	7.8	9.0	8.4	8.8
15	8.4	8.1	8.2	8.3	8.2	8.3	8.1	7.8	8.0	9.0	8.5	8.7
16	8.2	7.9	8.1	8.4	8.3	8.4	8.2	8.1	8.2	9.0	8.4	8.8
17	8.3	7.9	8.1	8.5	8.4	8.4	8.2	8.1	8.2	8.9	8.5	8.8
18	8.4	8.0	8.2	8.5	8.3	8.4	8.5	8.2	8.4	9.2	8.4	8.7
19	8.1	7.7	8.0	8.7	8.4	8.7	8.5	8.4	8.5	9.0	8.4	8.8
20	7.8	7.6	7.8	8.9	8.5	8.7	8.5	8.3	8.4	8.7	8.2	8.6
21	7.9	7.6	7.7	8.9	8.6	8.7	8.5	8.3	8.4	8.8	8.2	8.6
22	7.9	7.7	7.9	8.9	8.5	8.7	8.6	8.3	8.5	8.9	8.1	8.5
23	8.0	7.8	7.9	8.7	8.4	8.6	8.7	8.3	8.6	8.9	8.2	8.7
24	8.1	7.9	8.1	8.8	8.5	8.6	8.7	8.4	8.6	8.9	7.9	8.6
25	8.1	8.0	8.1	8.7	8.5	8.6	8.7	8.4	8.6	8.9	8.1	8.6
26	8.1	8.0	8.0	8.5	8.1	8.3	8.6	8.2	8.4	8.9	7.8	8.5
27	8.1	8.0	8.1	8.3	7.8	8.0	8.5	8.1	8.2	8.8	8.1	8.3
28	8.1	8.0	8.1	8.3	7.9	8.2	8.5	8.1	8.3	8.4	7.8	8.0
29	---	---	---	8.4	8.2	8.3	8.3	8.0	8.3	7.9	7.6	7.8
30	---	---	---	8.5	8.3	8.4	8.1	7.7	7.9	7.7	7.4	7.6
31	---	---	---	8.6	8.4	8.4	---	---	---	7.9	7.6	7.8
MAX	8.5	8.3	8.3	8.9	8.6	8.7	8.7	8.4	8.6	9.2	8.5	8.8
MIN	7.8	7.6	7.7	8.0	7.5	7.8	7.8	7.7	7.8	7.7	7.4	7.6

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.3	7.7	8.0	9.4	8.7	9.0	8.9	8.3	8.7	7.8	7.5	7.6
2	8.6	7.9	8.2	9.2	8.4	8.7	8.8	8.3	8.6	8.2	7.5	7.6
3	8.7	8.1	8.4	9.1	8.4	8.7	8.4	8.2	8.3	8.5	7.9	8.1
4	9.0	8.1	8.5	8.9	8.3	8.6	8.4	8.2	8.2	8.7	7.8	8.3
5	8.8	7.8	8.2	9.0	8.4	8.8	8.4	8.2	8.3	8.6	8.0	8.3
6	8.0	7.6	7.8	8.8	8.3	8.5	8.5	8.2	8.3	8.8	7.8	8.3
7	7.9	7.4	7.6	8.8	8.2	8.4	8.5	8.3	8.4	8.6	7.8	8.3
8	8.6	7.8	8.1	8.9	8.3	8.6	8.8	8.3	8.5	8.7	8.2	8.4
9	8.7	8.3	8.5	8.6	7.7	8.1	8.9	8.5	8.7	8.4	7.7	8.1
10	8.6	8.2	8.5	8.9	8.0	8.3	8.9	8.5	8.6	8.2	7.4	7.9
11	8.8	8.2	8.5	8.9	8.2	8.6	9.2	8.6	8.8	9.0	7.7	8.2
12	9.1	8.3	8.6	9.1	8.3	8.7	9.1	8.5	8.8	9.1	8.2	8.4
13	9.3	8.3	8.9	9.2	8.3	8.7	9.1	8.6	8.9	9.2	8.4	8.7
14	9.3	8.4	9.0	9.2	8.0	8.7	9.0	8.6	8.8	9.2	8.4	8.8
15	9.2	8.4	9.1	8.5	7.7	7.9	8.8	8.6	8.7	9.3	8.3	8.6
16	9.1	8.6	8.8	8.3	7.5	7.8	8.7	8.5	8.6	9.0	8.0	8.3
17	9.0	8.4	8.8	8.0	7.7	7.8	8.6	8.3	8.5	9.0	8.0	8.6
18	9.1	8.4	8.9	8.9	7.8	8.2	8.5	7.8	8.2	8.9	7.9	8.5
19	9.0	8.4	8.7	9.3	8.6	8.7	8.3	7.8	7.9	9.0	8.0	8.5
20	8.7	8.1	8.4	9.3	8.5	8.8	8.6	7.8	8.2	9.2	8.2	8.7
21	8.8	8.0	8.1	9.1	8.4	8.8	8.8	7.9	8.5	9.3	8.6	8.9
22	9.3	8.5	8.8	9.2	8.2	9.0	9.0	8.3	8.6	8.8	7.9	8.5
23	9.2	8.3	8.9	9.3	8.6	9.2	9.3	8.6	8.9	8.2	8.0	8.2
24	9.2	8.3	8.8	9.2	8.7	8.9	9.4	8.7	9.0	8.3	7.9	8.1
25	9.3	8.5	9.0	9.0	8.2	8.7	9.2	8.7	8.9	8.2	7.9	8.1
26	9.3	8.6	8.9	8.5	7.8	8.2	9.0	8.7	8.8	8.2	7.9	8.1
27	9.4	8.7	9.1	8.9	8.0	8.4	9.1	8.5	8.8	8.3	8.0	8.1
28	9.3	8.5	9.0	8.9	8.2	8.6	8.8	8.6	8.7	8.4	7.7	8.1
29	9.3	8.5	9.0	8.8	8.5	8.6	8.6	8.4	8.5	8.7	7.8	8.4
30	9.4	8.6	9.0	8.7	8.4	8.6	8.5	8.3	8.4	9.0	8.3	8.5
31	---	---	---	8.6	8.3	8.4	8.5	7.7	7.8	---	---	---
MAX	9.4	8.7	9.1	9.4	8.7	9.2	9.4	8.7	9.0	9.3	8.6	8.9
MIN	7.9	7.4	7.6	8.0	7.5	7.8	8.3	7.7	7.8	7.8	7.4	7.6

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

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WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	10.5	7.0	8.5	13.5	9.0	11.5	9.5	6.0	8.0
2	---	---	---	12.0	9.0	10.5	13.5	11.5	13.0	8.5	6.5	7.5
3	---	---	---	13.5	8.5	11.0	13.5	12.5	13.0	7.5	4.5	6.0
4	---	---	---	15.5	10.0	12.5	12.5	10.5	11.5	6.5	5.0	5.5
5	---	---	---	13.0	8.0	10.0	11.5	8.5	10.0	7.5	3.5	5.5
6	---	---	---	10.0	6.0	8.0	11.0	8.0	9.5	8.0	5.5	7.0
7	23.5	20.5	22.5	10.0	5.5	8.0	11.5	7.5	9.5	5.5	1.5	3.0
8	25.0	20.5	22.5	11.0	6.5	9.0	12.0	7.5	9.5	5.5	1.0	3.5
9	21.0	14.5	16.5	13.0	10.0	11.5	16.0	12.0	14.0	6.5	2.5	4.5
10	17.5	13.0	15.5	13.5	9.5	11.5	14.0	11.0	12.5	8.5	6.0	7.5
11	19.5	14.0	17.0	13.5	11.5	12.5	12.0	9.5	10.5	10.0	7.0	8.5
12	20.5	16.0	18.5	16.5	13.5	15.0	11.5	8.5	10.0	10.5	8.0	9.0
13	22.5	18.5	20.0	15.0	12.5	14.0	11.0	9.0	10.0	10.0	6.0	8.0
14	22.0	18.0	20.0	14.5	11.5	13.0	9.0	7.0	8.0	8.5	6.0	7.0
15	19.5	18.0	18.5	12.0	10.0	11.0	8.0	6.5	7.0	6.5	3.5	5.0
16	24.0	19.0	21.0	10.0	8.0	8.5	8.0	7.0	7.5	4.5	3.5	4.0
17	21.5	17.5	19.0	9.5	7.5	8.5	9.5	7.5	8.0	4.0	1.5	3.0
18	18.5	17.0	17.5	11.5	8.0	9.5	8.5	6.0	7.5	3.5	.0	2.0
19	18.0	16.5	17.0	11.5	9.0	10.0	9.5	6.0	8.0	3.5	.5	2.0
20	18.5	16.0	17.0	11.5	6.0	9.0	9.0	6.5	7.5	6.0	3.0	4.5
21	17.5	13.0	15.5	11.0	6.5	9.0	8.0	4.5	6.5	6.5	2.0	4.5
22	17.5	12.5	15.0	10.0	7.5	9.0	8.0	5.5	7.0	7.5	6.0	7.0
23	17.0	12.5	15.0	12.5	8.5	10.5	7.5	3.5	6.0	9.0	7.5	8.5
24	17.5	12.5	15.0	11.5	5.0	8.0	7.0	4.5	6.0	11.5	9.0	10.5
25	18.0	12.5	15.5	5.0	2.5	3.5	9.0	5.0	6.5	14.0	11.0	12.0
26	16.5	13.5	15.0	5.0	1.5	3.5	9.0	5.0	7.0	12.5	10.5	11.5
27	15.5	11.5	13.5	6.5	2.0	4.5	10.0	7.5	8.5	10.5	6.0	8.0
28	15.5	10.5	13.0	8.5	4.0	6.0	7.5	4.0	5.5	7.0	3.5	5.0
29	14.5	7.5	10.5	9.5	5.5	8.0	7.0	3.5	5.0	6.5	3.0	5.0
30	9.5	5.5	7.5	10.5	6.0	8.5	6.5	3.0	5.0	5.5	4.0	5.0
31	10.0	5.0	8.0	---	---	---	8.5	4.5	6.5	5.0	1.0	3.0
MONTH	---	---	---	16.5	1.5	9.4	16.0	3.0	8.6	14.0	.0	6.2

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	5.5	1.0	3.5	7.0	5.0	6.5	19.0	12.0	15.5	11.0	9.5	10.0
2	6.5	1.5	4.0	7.0	4.5	5.5	20.0	14.5	17.0	11.0	10.5	11.0
3	8.0	2.5	5.5	12.0	5.5	8.5	19.0	13.0	16.0	14.0	10.5	12.0
4	8.5	5.0	6.5	16.5	10.5	13.5	17.0	13.5	15.5	14.5	13.5	14.0
5	8.5	4.5	6.5	18.0	13.0	15.5	16.0	9.5	13.5	18.5	14.5	16.0
6	10.5	5.0	8.0	18.5	14.5	16.5	13.5	7.5	10.5	21.5	17.5	19.5
7	9.0	6.5	7.5	17.5	14.0	16.0	15.5	9.5	12.5	20.5	19.0	20.0
8	6.5	2.5	5.0	14.0	4.5	8.5	18.0	11.5	15.0	20.0	16.5	18.5
9	---	---	---	5.5	3.5	4.5	19.0	16.0	17.5	20.0	18.5	19.0
10	---	---	---	6.5	4.5	5.5	19.0	17.5	18.5	22.0	17.5	20.0
11	---	---	---	10.0	6.5	8.0	17.5	15.5	16.5	23.5	20.5	22.0
12	---	---	---	11.0	9.0	10.0	15.5	12.0	13.5	25.0	21.5	23.0
13	---	---	---	13.0	9.5	11.0	15.0	12.0	13.5	26.0	22.0	24.0
14	---	---	---	15.0	11.0	13.0	19.5	15.0	17.0	24.5	22.0	23.0
15	---	---	---	16.5	12.5	14.5	20.0	17.5	19.0	25.5	20.5	23.0
16	---	---	---	16.0	12.5	14.5	20.0	15.5	18.0	26.5	21.0	24.0
17	---	---	---	18.0	13.0	15.5	21.5	17.0	19.5	27.0	22.5	24.5
18	---	---	---	19.5	15.0	17.0	21.0	17.5	19.5	27.5	22.5	25.0
19	13.5	11.0	12.5	20.0	15.0	18.0	23.0	17.5	20.5	26.0	22.0	24.0
20	12.5	10.0	11.0	20.5	17.5	19.0	24.0	20.0	22.0	26.0	20.5	23.5
21	11.0	8.5	9.5	18.5	14.0	16.5	25.0	21.0	23.0	26.0	21.0	23.5
22	8.5	6.5	7.5	17.5	13.0	15.5	24.0	21.0	22.5	26.5	22.0	24.5
23	6.5	5.0	6.0	21.0	14.5	17.5	23.5	20.0	22.0	27.0	22.0	24.5
24	7.5	3.5	5.5	19.0	13.0	16.0	24.0	20.5	22.5	28.0	23.0	25.5
25	8.5	6.0	7.0	14.5	11.0	13.0	22.5	20.0	21.0	29.5	24.0	26.5
26	6.5	3.5	5.0	14.5	12.0	13.0	23.5	18.5	21.0	27.0	23.0	25.5
27	5.5	3.5	5.0	13.5	11.5	12.5	22.5	15.0	18.0	25.5	22.5	24.0
28	7.0	5.0	6.0	14.0	9.5	12.0	17.5	13.0	15.0	24.0	21.5	23.0
29	---	---	---	15.5	10.0	12.5	16.0	10.5	13.0	25.0	21.5	23.0
30	---	---	---	15.5	10.5	13.0	11.0	8.5	9.5	27.5	22.0	24.5
31	---	---	---	16.5	10.5	13.5	---	---	---	30.0	25.0	27.5
MONTH	---	---	---	21.0	3.5	12.8	25.0	7.5	17.3	30.0	9.5	21.5

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

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WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	30.0	26.0	28.0	33.5	28.0	30.5	31.0	24.5	27.5	22.5	21.5	22.0
2	30.0	25.5	28.0	32.5	26.0	29.5	30.5	25.0	27.5	25.0	21.0	22.5
3	30.0	26.5	28.0	33.0	27.0	30.0	31.5	25.0	28.0	25.5	22.5	24.0
4	30.0	24.5	27.5	32.5	26.5	29.0	30.0	25.5	27.5	29.5	22.0	25.5
5	28.0	25.0	27.0	32.0	26.0	29.0	31.0	25.0	28.0	26.0	22.5	24.0
6	27.0	23.5	25.0	32.0	26.5	29.0	30.5	24.0	27.0	28.5	22.5	25.0
7	29.0	23.0	26.0	32.5	26.5	29.5	28.5	24.0	26.5	28.5	22.0	25.0
8	31.0	25.5	28.0	32.0	26.5	29.5	31.0	23.5	27.0	26.5	22.5	24.0
9	29.5	26.5	27.5	29.0	25.0	27.0	31.5	25.0	28.0	25.0	21.0	23.0
10	26.5	24.0	25.5	31.5	24.0	27.5	31.0	25.0	27.5	27.5	22.0	24.5
11	25.5	23.0	24.5	31.5	26.0	28.5	32.0	25.0	28.5	30.0	21.5	25.5
12	28.5	22.5	25.5	29.5	25.5	27.5	31.5	25.5	28.5	29.5	24.0	27.0
13	29.5	24.0	26.5	32.5	25.5	29.0	32.5	25.5	28.5	30.5	24.5	27.5
14	28.5	23.5	26.0	33.0	26.5	29.0	29.5	25.5	27.5	30.5	24.5	27.5
15	26.0	22.5	24.5	29.5	23.5	27.0	27.5	22.0	25.0	29.0	25.0	27.0
16	28.0	23.5	25.5	32.0	25.0	28.5	29.0	21.0	25.0	28.0	23.5	25.5
17	30.0	24.0	27.0	32.5	27.0	29.5	29.5	23.0	26.0	27.5	20.5	24.0
18	32.0	25.5	28.5	34.0	28.0	31.0	29.0	24.0	26.5	28.0	20.0	24.0
19	30.0	27.0	28.5	32.5	27.0	29.5	29.5	26.0	27.5	28.5	20.5	24.5
20	31.5	26.0	28.5	33.0	26.0	29.0	27.5	24.5	26.0	28.5	21.5	25.0
21	32.5	27.0	29.5	29.5	26.0	28.0	29.0	22.5	25.5	26.5	22.5	24.5
22	32.5	27.0	29.5	33.0	25.0	29.5	30.0	23.5	26.5	23.5	18.5	21.0
23	31.5	26.5	29.0	33.5	26.5	29.5	---	---	---	20.5	17.5	18.5
24	32.5	25.5	29.0	33.0	28.0	30.5	---	---	---	21.5	15.0	18.0
25	33.0	26.5	30.0	32.0	26.5	29.5	---	---	---	23.0	17.0	19.5
26	33.5	27.5	30.0	30.0	27.0	28.5	30.0	24.5	27.0	26.0	18.0	21.5
27	33.5	27.5	30.5	29.0	23.0	26.0	31.5	24.5	27.5	26.5	20.0	23.0
28	34.0	28.5	31.0	30.0	23.0	26.5	31.0	24.0	27.5	28.0	21.0	24.5
29	35.0	29.0	31.5	29.5	23.5	26.5	31.0	24.0	27.0	28.5	21.5	25.0
30	34.0	27.5	30.5	28.5	24.5	26.5	30.5	24.0	27.0	27.0	21.5	24.0
31	---	---	---	30.5	23.0	26.5	27.0	22.5	24.0	---	---	---
MONTH	35.0	22.5	27.9	34.0	23.0	28.6	---	---	---	30.5	15.0	23.9

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	12.5	6.8	9.0	12.3	9.9	10.9	11.5	9.4	10.2	12.6	10.1	11.0
2	12.3	6.2	8.7	11.5	9.3	10.4	11.5	8.5	9.8	11.9	9.9	10.7
3	13.8	7.1	9.7	11.3	9.0	9.9	9.9	8.6	9.0	12.8	10.1	11.2
4	14.1	7.1	9.8	11.0	8.4	9.6	10.6	8.6	9.5	12.8	10.5	11.3
5	17.5	6.8	10.8	11.5	8.1	9.7	11.7	9.3	10.3	12.5	10.5	11.3
6	15.9	6.8	10.4	11.9	9.6	10.5	12.1	9.7	10.6	11.7	9.9	10.7
7	15.2	6.4	9.9	11.9	9.6	10.7	12.2	10.0	10.9	12.7	10.2	11.4
8	15.7	6.7	10.1	11.8	9.1	10.5	11.9	9.9	10.7	13.0	10.9	11.8
9	13.8	7.5	10.1	11.8	9.0	10.1	11.7	9.3	10.2	12.7	10.6	11.4
10	12.2	8.8	10.5	12.1	8.7	10.0	12.0	9.1	10.2	11.8	10.1	10.8
11	11.7	8.6	9.8	10.7	8.6	9.5	12.8	9.5	10.8	12.3	9.4	10.5
12	11.5	8.4	10.0	10.3	8.1	9.2	12.5	10.1	10.9	12.2	9.3	10.4
13	12.2	8.2	10.2	8.4	6.4	7.7	10.3	7.5	9.3	12.4	9.1	10.4
14	11.5	8.1	9.5	8.9	6.5	7.7	10.0	7.7	9.3	12.2	9.2	10.4
15	10.8	8.3	9.2	9.0	7.0	8.1	11.0	10.0	10.5	12.5	9.6	10.8
16	13.4	7.9	10.6	9.4	8.1	8.7	11.1	10.1	10.6	11.6	10.4	10.9
17	---	---	---	9.8	8.4	8.9	11.2	10.0	10.5	12.9	10.5	11.5
18	---	---	---	9.3	7.6	8.5	11.6	10.0	10.7	13.1	11.2	12.0
19	---	---	---	9.3	7.6	8.6	11.8	10.2	10.9	12.7	10.9	11.7
20	---	---	---	10.3	8.6	9.4	11.9	10.1	10.8	13.0	10.8	11.7
21	---	---	---	10.4	8.9	9.5	12.2	10.5	11.2	12.9	10.7	11.6
22	9.9	7.8	8.6	10.6	9.2	9.8	12.1	10.4	11.1	12.1	10.1	10.9
23	10.0	7.8	8.7	10.4	8.8	9.8	12.3	10.5	11.3	11.6	9.6	10.4
24	10.1	7.9	8.8	10.5	8.6	9.6	12.2	10.4	11.2	11.5	9.3	10.1
25	10.4	7.9	8.9	11.7	10.2	10.8	12.3	10.6	11.3	12.9	9.0	10.5
26	10.6	7.9	9.0	12.2	10.6	11.3	12.3	10.4	11.2	12.8	9.2	10.6
27	10.8	8.3	9.3	12.1	10.6	11.3	12.0	10.2	10.8	13.1	9.0	10.7
28	11.3	8.6	9.5	12.0	10.2	11.0	12.1	10.2	11.1	13.6	10.5	11.8
29	10.7	8.3	9.3	11.9	9.8	10.7	12.7	10.9	11.6	14.0	10.8	12.0
30	12.0	9.8	10.8	11.7	9.7	10.7	12.9	10.8	11.6	13.6	10.6	11.9
31	12.0	10.0	11.0	---	---	---	12.5	10.6	11.3	14.3	11.1	12.5
MONTH	---	---	---	12.3	6.4	9.8	12.9	7.5	10.6	14.3	9.0	11.1

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[illegible]

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	9.0	5.6	7.0	---	---	---	17.0	3.3	10.2	4.4	2.0	3.1
2	11.5	6.1	8.2	18.0	4.4	9.9	15.3	3.4	9.4	7.1	3.6	5.2
3	11.7	6.2	8.3	17.7	3.9	9.6	14.9	4.2	8.2	9.4	5.1	6.8
4	16.4	6.1	10.3	14.7	3.2	7.9	13.8	4.7	8.3	11.0	5.6	7.2
5	8.6	5.3	6.3	11.4	1.9	6.2	17.3	5.2	11.2	9.2	5.5	6.8
6	6.5	3.3	5.2	---	---	---	---	---	---	12.7	5.3	8.1
7	7.1	4.0	5.7	---	---	---	---	---	---	10.0	5.2	7.1
8	11.2	5.6	7.9	---	---	---	---	---	---	10.5	5.5	7.2
9	11.7	5.4	8.1	---	---	---	---	---	---	8.8	5.6	7.2
10	11.3	5.8	8.2	---	---	---	---	---	---	12.0	5.9	8.2
11	13.7	6.2	10.0	---	---	---	---	---	---	13.1	6.7	9.0
12	---	---	---	---	---	---	---	---	---	12.4	6.9	9.3
13	---	---	---	---	---	---	---	---	---	12.9	6.7	8.9
14	---	---	---	---	---	---	---	---	---	12.4	6.2	8.5
15	---	---	---	---	---	---	---	---	---	13.6	5.8	8.6
16	18.3	6.1	11.4	---	---	---	---	---	---	11.5	5.5	7.7
17	19.0	6.0	12.5	---	---	---	---	---	---	13.1	6.1	9.0
18	19.9	5.1	12.5	---	---	---	---	---	---	11.3	6.6	8.4
19	15.6	4.3	9.9	---	---	---	---	---	---	11.3	6.6	8.4
20	11.7	4.7	7.7	---	---	---	---	---	---	11.5	6.2	8.2
21	---	---	---	---	---	---	---	---	---	11.5	6.1	8.1
22	---	---	---	---	---	---	---	---	---	9.2	2.9	6.9
23	---	---	---	---	---	---	---	---	---	7.1	3.0	5.5
24	---	---	---	---	---	---	---	---	---	8.8	7.1	8.0
25	19.8	4.5	12.2	---	---	---	---	---	---	8.8	7.7	8.2
26	19.7	4.7	11.0	---	---	---	13.1	5.6	8.9	9.0	7.6	8.2
27	---	---	---	17.5	5.9	1.0	14.4	5.6	9.1	9.7	7.6	8.5
28	---	---	---	15.3	6.2	10.8	14.1	5.6	8.9	9.6	7.2	8.3
29	---	---	---	16.9	4.8	10.8	13.6	5.5	8.7	11.7	7.2	9.1
30	---	---	---	17.9	3.6	10.8	11.8	5.1	7.8	13.2	7.4	9.7
31	---	---	---	15.5	4.5	8.7	6.5	4.4	5.1	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	13.6	2.0	7.8

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

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PHYTOPLANKTON ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	OCT 13, 93		NOV 02, 93		DEC 07, 93		JAN 18, 94		FEB 15, 94	
TIME	1200		1130		1130		1130		1130	
TOTAL CELLS/ML	22000		12000		13000		12000		9400	
	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...OOCYSTACEAE										
....ANKISTRODESMUS	8100	37	3500	29	1500	12	2700	23	1200	13
...SCENEDESMACEAE										
....SCENEDESMUS	6500	30	1200	10	1200	9	770	6	--	
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--		--	770	6		--		--	
..ZYGNEATALES										
...DESMIDIACEAE										
....STAUSTRUM	--		--		--		390	3	--	
CHRYSTOPHYTA (YELLOW-GREEN ALGAE)										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	1500	7	--		--		--		--	
..PENNALES										
...FRAGILARIACEAE										
....FRAGILARIA	--		--		--		--		770	8
...NAVICULACEAE										
....NAVICULA	3900	18	1900	16	3500	27	4200	35	3100	33
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	1900	9	4600	38	5000	38	3100	26	3500	37
..OSCILLATORIALES										
...OSCILLATORIACEAE										
....OSCILLATORIA	--		--		390	3	--		390	4
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	390	2	390	3	390	3	770	6	390	4

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PHYTOPLANKTON ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE TIME	MAR 29, 94 0945		APR 20, 94 1030		MAY 10, 94 0915		JUN 15, 94 1115		JUL 26, 94 1000	
TOTAL CELLS/ML	31000		31000		25000		71000		33000	
	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...HYDRODICTYACEAE										
....PEDIASTRUM	--		--		--		390	<1	390	1
...OOCYSTACEAE										
....ANKISTRODESMUS	3900	13	5400	17	3100	12	9200	13	5000	15
....CHLORELLA	--		6500	21	--		7700	11	--	
...SCENEDESMACEAE										
....SCENEDESMUS	1200	4	5400	17	6200	25	14000	20	6500	20
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--		--		1900	8	770	1	2300	7
..ZYGNEATALES										
...DESMIDIACEAE										
....CLOSTERIUM	8500	27	4200	14	--		28000	39	--	
....STAUSTRUM	--		770	2	--		770	1	--	
CHRYSOPHYTA (YELLOW-GREEN ALGAE)										
.BACILLARIOPHYCEAE										
..PENNALES										
...FRAGILARIACEAE										
....SYNEDRA	390	1	--		--		--		--	
...NAVICULACEAE										
....NAVICULA	2300	7	1200	4	5000	20	5000	7	7700	23
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	11000	35	5800	19	7300	29	3500	5	8100	25
..OSCILLATORIALES										
...NOSTOCACEAE										
....ANABAENA	--		--		--		--		390	1
...OSCILLATORIAEAE										
....OSCILLATORIA	--		--		770	3	1500	2	2700	8
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	3500	11	1500	5	390	2	--		--	

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

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PHYTOPLANKTON ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	AUG 23, 94	SEP 07, 94		
TIME	1015	0945		
TOTAL CELLS/ML	43000	20000		
	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)				
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...HYDRODICTYACEAE				
....PEDIASTRUM	390	<1	--	
...OOCYSTACEAE				
....ANKISTRODESMUS	7700	18	3900	20
....CHLORELLA	7300	17	770	4
...SCENEDESMACEAE				
....SCENEDESMUS	16000	37	4200	21
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	1200	3	770	4
..ZYGNEATALES				
...DESMIDIACEAE				
....CLOSTERIUM	--		390	2
....STAUSTRUM	5000	12	770	4
CHRYSTOPHYTA (YELLOW-GREEN ALGAE)				
.BACILLARIOPHYCEAE				
..PENNALES				
...NAVICULACEAE				
....NAVICULA	3100	7	5000	25
CYANOPHYTA (BLUE-GREEN ALGAE)				
.CYANOPHYCEAE				
..CHROOCOCCALES				
...CHROOCOCCACEAE				
....ANACYSTIS	1200	3	3100	16
..OSCILLATORIALES				
...OSCILLATORIACEAE				
....OSCILLATORIA	770	2	770	4
EUGLENOPHYTA (EUGLENOIDS)				
.EUGLENOPHYCEAE				
..EUGLENALES				
...EUGLENACEAE				
....EUGLENA	390	<1	--	

ARKANSAS RIVER BASIN

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK

LOCATION.--Lat 35°15'56", long 96°12'21", in NE 1/4 SW 1/4 sec.12, T.9 N., R.10 E., Hughes County, Hydrologic Unit 11100302, on left downstream side of bridge on U.S. Highway 75, 2.3 mi upstream from Wewoka Creek, 2.5 mi northeast of Wetumka, and at mile 84.4.

DRAINAGE AREA.--14,290 mi² of which 4,899 mi² is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 977: 1942. WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 678.28 ft above sea level. Prior to Jan. 19, 1939, nonrecording gage at site 500 ft upstream and at datum 5.00 ft higher. Jan. 20, 1939, to Feb. 23, 1985, recording gage 500 ft upstream at datum 5.00 ft higher. Prior to Aug. 8, 1991, at same site and at datum 5.00 ft higher.

REMARKS.--Records 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 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	495	245	255	318	303	909	608	2080	1520	324	225	e212
2	764	244	386	320	304	1630	554	3030	1470	e316	192	e320
3	556	243	822	325	308	1590	524	8920	1070	e308	169	e338
4	350	244	1040	330	308	1080	485	5530	1160	e299	158	e420
5	329	245	836	325	311	1070	468	4230	1250	e299	200	e369
6	321	239	e630	322	311	917	451	3490	1650	e316	333	e473
7	320	237	e500	315	316	749	436	3810	1340	e274	663	e369
8	317	243	e400	314	378	3430	442	2810	1160	e241	1250	e286
9	309	237	e340	312	441	6460	419	1890	1480	e229	e765	e228
10	e290	234	e310	316	349	6030	435	1490	1480	e229	e425	e233
11	e269	233	e305	311	313	4440	511	1220	1070	e241	e338	e308
12	e252	247	e300	306	301	3310	1080	1160	871	e249	e291	298
13	e245	270	e430	317	294	2450	878	1210	814	278	e254	269
14	e233	326	e620	316	286	1940	746	1150	829	357	e245	295
15	e231	387	876	314	278	1700	1860	953	752	2200	e216	230
16	e233	381	736	309	275	1360	1730	846	e670	1140	e210	234
17	e226	498	724	310	268	1130	1320	774	e600	647	e205	374
18	e217	473	606	301	264	1010	1070	736	e560	441	e174	305
19	e218	429	481	289	266	897	901	824	e590	423	e182	249
20	230	337	445	300	378	835	858	789	e640	444	e209	228
21	e239	330	422	312	486	687	845	733	e590	437	e266	219
22	e235	306	408	298	1340	663	829	693	435	331	e282	240
23	e231	274	393	291	2670	665	778	660	e405	274	e312	228
24	e233	258	381	304	1920	621	761	635	e390	245	e237	242
25	e229	247	375	316	1950	579	738	634	e405	233	210	265
26	e228	236	363	319	1330	648	715	630	426	224	e205	313
27	e229	236	359	321	985	872	727	617	385	251	e203	497
28	e228	241	347	315	776	681	723	604	370	229	e201	334
29	e231	250	335	304	---	633	756	826	365	208	e193	262
30	e233	255	323	301	---	804	2960	1150	342	322	e164	225
31	e236	---	321	303	---	759	---	1160	---	275	e182	---
TOTAL	8957	8625	15069	9654	17709	50549	25608	55284	25089	12284	9159	8863
MEAN	289	287	486	311	632	1631	854	1783	836	396	295	295
MAX	764	498	1040	330	2670	6460	2960	8920	1650	2200	1250	497
MIN	217	233	255	289	264	579	419	604	342	208	158	212
AC-FT	17770	17110	29890	19150	35130	100300	50790	109700	49760	24370	18170	17580

e Estimated

ARKANSAS RIVER BASIN

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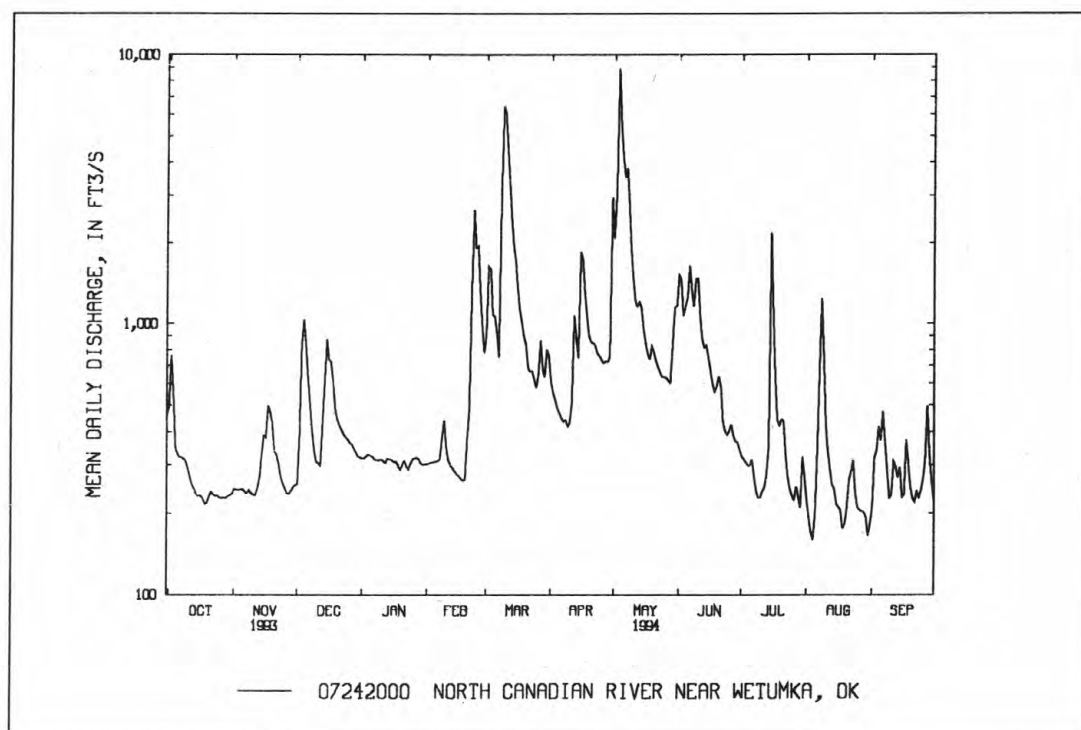
07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	697	635	468	407	566	815	1093	1723	1536	657	355	470
MAX	4914	4580	3225	2075	3037	5684	6643	6989	6081	3230	2667	3894
(WY)	1987	1942	1993	1985	1985	1990	1945	1993	1957	1951	1950	1950
MIN	4.25	16.7	43.8	44.3	56.6	43.5	72.8	85.3	73.4	42.5	8.71	.000
(WY)	1957	1955	1955	1940	1957	1940	1955	1940	1953	1954	1956	1954

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1938-94
ANNUAL TOTAL	597974	246850	
ANNUAL MEAN	1638	676	785
HIGHEST ANNUAL MEAN			2229
LOWEST ANNUAL MEAN			156
HIGHEST DAILY MEAN	27300	May 14	8920
LOWEST DAILY MEAN	217	Oct 18	158
ANNUAL SEVEN-DAY MINIMUM	227	Oct 14	194
INSTANTANEOUS PEAK FLOW			9560
INSTANTANEOUS PEAK STAGE			13.34
ANNUAL RUNOFF (AC-FT)	1186000	489600	568800
10 PERCENT EXCEEDS	2750	1320	1810
50 PERCENT EXCEEDS	927	347	279
90 PERCENT EXCEEDS	249	230	67

^aNo flow Aug. 27 to Oct. 11, 1954. Aug. 25 to Oct. 22, 1956.



ARKANSAS RIVER BASIN
07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1944 to December 1944; December 1951 to March 1953; October 1953 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1953 to May 1989.

WATER TEMPERATURE: October 1953 to May 1989.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
JUN											
15...	1300	12.0	27.5	751	1028	1028	723	5.93	897	8.2	8.7
15...	1305	24.0	27.5	751	1028	1028	723	5.93	899	8.3	8.7
15...	1310	36.0	27.5	751	1028	1028	723	5.93	896	8.2	8.7
15...	1315	48.0	27.5	751	1028	1028	723	5.93	897	8.1	8.8
15...	1320	60.0	27.5	751	1028	1028	723	5.93	895	7.9	8.8
15...	1325	12.0	27.5	751	1028	1028	723	5.93	901	8.2	8.8
15...	1330	24.0	27.5	751	1028	1028	723	5.93	901	8.3	8.9
15...	1335	36.0	27.5	751	1028	1028	723	5.93	901	8.5	8.9
15...	1340	48.0	27.5	751	1028	1028	723	5.93	889	8.6	8.9
15...	1345	60.0	27.5	751	1028	1028	723	5.93	890	8.7	8.9
15...	1350	72.0	27.5	751	1028	1028	723	5.93	890	8.5	8.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT											
20...	1100	1028	80020	230	911	8.2	16.5	17.0	7.5	750	12.3
DEC											
21...	1330	1028	80020	577	*615	8.1	8.5	8.0	55	750	11.9
APR											
11...	1530	1028	80020	649	936	8.3	20.5	19.5	22	743	9.4
JUN											
15...	1230	1028	80020	723	893	8.7	27.0	27.5	63	751	7.9
AUG											
08...	1400	1028	80020	1020	421	8.1	33.5	26.5	300	750	7.2

*SPECIFIC CONDUCTANCE, LAB (µs/cm)

ARKANSAS RIVER BASIN
07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, (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 AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
------	---	--	---	--	--	---	---	---	--	--

OCT										
20...	129	100	--	250	51	55	27	89	43	2
DEC										
21...	102	130	97	180	20	48	14	47	36	2
APR										
11...	105	1800	870	240	66	51	27	91	45	3
JUN										
15...	102	48	28	260	61	71	21	70	36	2
AUG										
08...	91	>6000	K3300	100	32	27	8.4	38	43	2

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)	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)
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OCT										
20...	242	0	198	88	110	0.60	3.5	509	500	0.69
DEC										
21...	193	0	158	49	65	0.40	11	355	340	0.48
APR										
11...	210	0	172	110	120	0.50	0.10	546	508	0.74
JUN										
15...	220	14	204	100	86	0.50	7.4	519	486	0.71
AUG										
08...	86	0	71	43	52	0.30	5.2	237	222	0.32

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	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)
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OCT										
20...	0.260	0.260	1.2	0.020	0.07	0.280	0.280	0.020	0.03	2.6
DEC										
21...	1.29	1.29	5.7	0.010	0.03	1.30	1.30	0.080	0.10	0.42
APR										
11...	--	--	--	<0.010	--	--	<0.050	0.040	0.05	2.1
JUN										
15...	--	--	--	<0.010	--	--	<0.050	0.020	0.03	1.2
AUG										
08...	0.190	0.190	0.84	0.010	0.03	0.200	0.200	0.030	0.04	2.8

ARKANSAS RIVER BASIN
07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued
WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
OCT 20...	2.9	0.380	<0.010	<0.010	--	10	160	<3	<3	19
DEC 21...	1.8	0.170	0.160	0.170	0.52	10	130	<1	6	9
APR 11...	2.1	0.460	0.020	0.020	0.06	--	--	--	--	--
JUN 15...	1.2	0.480	0.200	0.200	0.61	20	190	<3	3	15
AUG 08...	3.0	0.680	0.060	0.050	0.15	60	96	<3	97	7
DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	SEDI- MENT, DIS- SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 20...	7	<10	3	<1	<1.0	760	<6	193	120	88
DEC 21...	14	1	6	<1	<1.0	440	4	298	464	72
APR 11...	--	--	--	--	--	--	--	345	605	92
JUN 15...	1	<10	3	<1	<1.0	630	14	216	422	98
AUG 08...	1	<10	2	<1	<1.0	240	<6	1150	3170	77



ARKANSAS RIVER BASIN
07242380 DEEP FORK NEAR WARWICK, OK

LOCATION.--Lat 35°40'51", long 97°00'29", NW 1/4 NE 1/4 sec. 20, T.14 N., R.3 E., Lincoln County, Hydrologic Unit 11100303, on left downstream abutment on U.S. Highway 66, 0.5 mi southwest of Warwick, and at mile 190.9.

DRAINAGE AREA.--532 mi².

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is 823.05 ft above sea level.

REMARKS.--Records good. Considerable regulation by Arcadia Lake (station 07242340), 22.9 miles upstream, since November 1986. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	51	63	64	119	531	196	465	129	34	22	124
2	42	51	76	65	64	457	181	1830	304	29	21	51
3	41	53	88	68	57	339	188	1950	323	28	21	37
4	41	54	106	67	88	300	179	996	410	26	22	33
5	41	52	91	65	74	258	173	980	347	25	24	87
6	40	52	80	64	58	246	106	868	501	25	22	75
7	64	53	74	60	58	218	91	686	481	25	24	39
8	72	54	110	59	58	2630	92	633	325	25	24	41
9	70	55	125	64	45	1650	95	547	283	25	24	42
10	72	56	124	65	e54	1200	98	176	278	28	20	35
11	74	56	115	59	e58	1030	473	145	186	26	22	30
12	74	67	119	58	67	562	477	135	166	44	18	26
13	72	91	379	59	60	389	303	126	157	642	17	73
14	69	105	288	59	59	288	224	119	147	181	17	83
15	69	83	178	58	88	245	315	114	137	190	17	168
16	57	78	157	59	95	419	284	101	74	122	16	149
17	53	146	173	56	64	456	268	137	64	86	16	58
18	56	142	163	48	58	684	237	118	57	54	19	33
19	54	132	161	e52	250	815	92	84	55	43	17	30
20	54	129	156	e54	524	764	83	76	54	36	48	84
21	52	131	113	e56	232	665	80	72	50	61	35	43
22	47	129	104	e58	1850	483	75	67	47	46	20	59
23	46	126	102	e60	840	304	75	63	44	35	18	45
24	46	73	89	e61	579	122	75	63	42	30	16	86
25	47	61	86	63	480	102	78	63	40	34	16	101
26	46	60	86	63	386	226	88	220	37	36	17	100
27	46	62	86	61	409	259	76	93	36	30	16	100
28	48	62	72	57	410	152	84	74	35	26	14	97
29	47	62	64	116	---	125	284	1410	34	23	14	43
30	50	65	62	123	---	108	1250	507	34	23	15	25
31	49	---	65	120	---	104	---	212	---	22	157	---
TOTAL	1684	2391	3755	2041	7184	16131	6320	13130	4877	2060	769	1997
MEAN	54.3	79.7	121	65.8	257	520	211	424	163	66.5	24.8	66.6
MAX	74	146	379	123	1850	2630	1250	1950	501	642	157	168
MIN	40	51	62	48	45	102	75	63	34	22	14	25
AC-FT	3340	4740	7450	4050	14250	32000	12540	26040	9670	4090	1530	3960

c Estimated

07242380 DEEP FORK NEAR WARWICK, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	102	166	246	150	222	453	532	795	520	138	139	360
MAX	169	347	683	288	516	1219	1435	2494	1370	328	630	1527
(WY)	1990	1993	1993	1993	1993	1990	1990	1993	1989	1992	1989	1989
MIN	46.7	68.3	60.7	65.8	47.0	59.3	101	115	70.5	31.2	24.6	66.6
(WY)	1993	1991	1989	1994	1988	1991	1989	1988	1988	1990	1991	1994

SUMMARY STATISTICS 1993 CALENDAR YEAR

1994 WATER YEAR

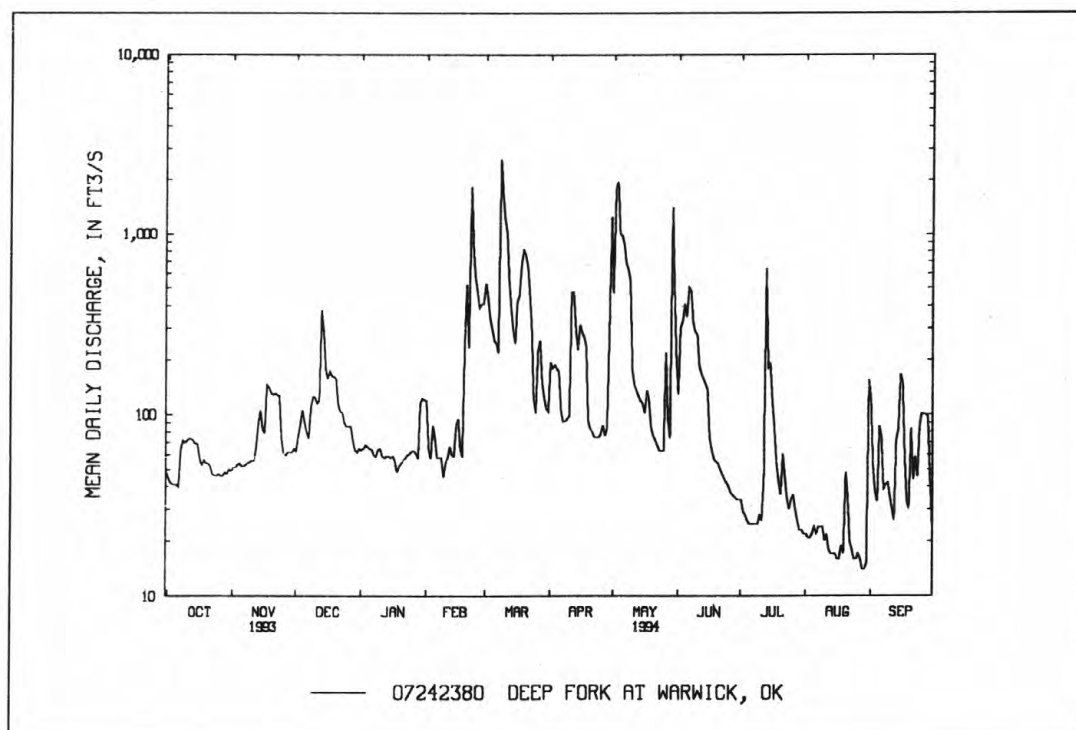
WATER YEARS 1988-94

ANNUAL TOTAL	181651	62339	
ANNUAL MEAN	498	171	319
HIGHEST ANNUAL MEAN			567
LOWEST ANNUAL MEAN			119
HIGHEST DAILY MEAN	19000	May 9	2630
LOWEST DAILY MEAN	23	Aug 22	14
ANNUAL SEVEN-DAY MINIMUM	25	Aug 17	15
INSTANTANEOUS PEAK FLOW		4720	May 2
INSTANTANEOUS PEAK STAGE		11.00	May 2
ANNUAL RUNOFF (AC-FT)	360300	123600	230700
10 PERCENT EXCEEDS	1300	414	729
50 PERCENT EXCEEDS	210	72	101
90 PERCENT EXCEEDS	44	25	30

^aMinimum daily discharge for period of record, .05 ft³/s Aug. 23, 1987.

^bMaximum discharge for period of record, 28,700 ft³/s, Oct. 21, 1983.

^cMaximum gage height for period of record, 22.05 ft, Oct. 21, 1983.



ARKANSAS RIVER BASIN

07243000 DRY CREEK NEAR KENDRICK, OK

LOCATION.--Lat 35°46'55", long 96°51'14", in NW 1/4 NW 1/4 sec.14, T.15 N., R.4 E., Lincoln County, Hydrologic Unit 11100303, near left bank on downstream side of county road bridge, 1.0 mi downstream from Beaver Creek and 4.5 mi west of Kendrick.

DRAINAGE AREA.--69.0 mi².

PERIOD OF RECORD.--October 1955 to September 1994 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 820 ft above sea level, from topographic map. Prior to Oct. 1, 1981, gage at same site and datum 5.00 ft higher.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
May 2	1900	2,200	14.48	No other peaks greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	2.8	4.4	6.9	7.6	26	12	31	8.2	e3.3	e1.5	e1.5
2	4.1	2.8	4.9	7.0	7.4	23	12	671	7.6	e6.0	e1.4	e1.2
3	4.1	2.8	6.1	7.0	6.7	17	13	225	7.4	e5.0	e1.3	e1.0
4	4.3	2.9	6.8	6.9	6.5	15	13	50	8.0	e4.0	e1.8	e.90
5	4.3	2.7	6.1	6.8	6.2	14	12	29	7.4	e3.5	e1.5	e1.5
6	4.1	2.6	5.2	6.9	5.9	13	11	22	27	e2.9	e1.4	e1.1
7	3.9	2.6	4.9	6.3	5.8	13	11	30	15	e4.5	e2.0	e.96
8	4.0	2.6	4.8	8.1	5.5	712	12	22	9.0	e3.5	e1.6	e.82
9	3.5	2.6	4.9	6.7	5.7	294	12	19	8.0	e3.0	e1.4	e1.0
10	3.4	2.6	4.5	7.0	6.2	319	12	17	7.8	e2.6	e1.2	e.92
11	3.5	2.8	4.3	6.7	5.9	166	61	16	7.8	e2.3	e1.1	e.82
12	3.6	3.9	4.7	6.5	6.4	60	27	14	7.9	e3.0	e1.0	e.73
13	3.5	5.6	132	6.4	5.9	34	17	13	7.6	e2.5	e.88	e.67
14	3.3	8.0	38	6.3	5.8	26	15	13	7.4	e3.1	e.78	e.61
15	3.1	4.5	14	6.1	5.8	23	13	12	7.1	e2.8	e.70	e.80
16	3.5	5.8	11	6.2	5.6	20	12	11	e6.7	e4.5	e.62	e.72
17	3.0	7.0	9.4	7.6	5.7	19	12	10	e6.0	e4.0	e.52	e.64
18	3.1	4.7	8.4	7.4	5.9	17	12	10	e5.8	e3.3	e.60	e.60
19	3.2	4.2	8.2	7.8	63	17	12	9.2	e5.6	e2.8	e.88	e.55
20	3.3	4.0	7.9	7.0	68	16	11	8.6	e5.2	e2.6	e10	e.53
21	3.1	4.0	7.5	6.8	19	15	11	8.2	e5.0	e5.0	e5.3	e6.0
22	3.1	3.8	7.2	6.5	375	14	11	8.4	e4.8	e4.0	e3.0	e5.7
23	3.0	3.9	7.0	6.5	59	15	11	7.9	e4.5	e3.0	e2.4	e3.4
24	3.0	3.8	6.7	6.5	26	14	10	7.9	e4.3	e2.1	e1.5	e2.4
25	3.0	3.8	6.5	6.4	19	13	11	7.8	e3.8	e2.5	e1.2	e2.0
26	2.9	4.1	6.5	6.5	14	31	11	14	e3.7	e2.8	e.97	e1.6
27	2.9	4.2	6.6	6.2	13	25	10	8.9	e3.6	e2.5	e.86	e1.5
28	2.9	4.3	6.4	6.0	13	16	10	8.1	e3.3	2.2	e.74	e1.4
29	3.1	4.2	6.7	5.9	---	14	45	35	e4.0	e2.0	e.66	1.3
30	2.9	4.2	6.7	6.0	---	13	202	14	e3.6	e1.8	e1.2	e1.2
31	2.8	---	6.9	5.7	---	13	---	9.4	---	e1.7	e2.0	---
TOTAL	105.6	117.8	365.2	206.6	779.5	2027	644	1362.4	213.1	98.8	52.01	44.07
MEAN	3.41	3.93	11.8	6.66	27.8	65.4	21.5	43.9	7.10	3.19	1.68	1.47
MAX	4.3	8.0	132	8.1	375	712	202	671	27	6.0	10	6.0
MIN	2.8	2.6	4.3	5.7	5.5	13	10	7.8	3.3	1.7	.52	.53
AC-FT	209	234	724	410	1550	4020	1280	2700	423	196	103	87

c Estimated

ARKANSAS RIVER BASIN

395

07243000 DRY CREEK NEAR KENDRICK, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	15.3	20.7	19.1	12.1	24.0	36.0	44.0	66.4	47.1	10.8	3.77	16.4
MAX	132	247	153	60.7	235	215	297	309	225	80.9	30.3	104
(WY)	1960	1975	1992	1987	1985	1990	1990	1993	1974	1959	1992	1974
MIN	.000	.000	.000	.000	.000	.000	.83	.57	.54	.000	.000	.000
(WY)	1957	1956	1956	1956	1956	1956	1981	1981	1964	1956	1956	1956

SUMMARY STATISTICS 1993 CALENDAR YEAR

1994 WATER YEAR

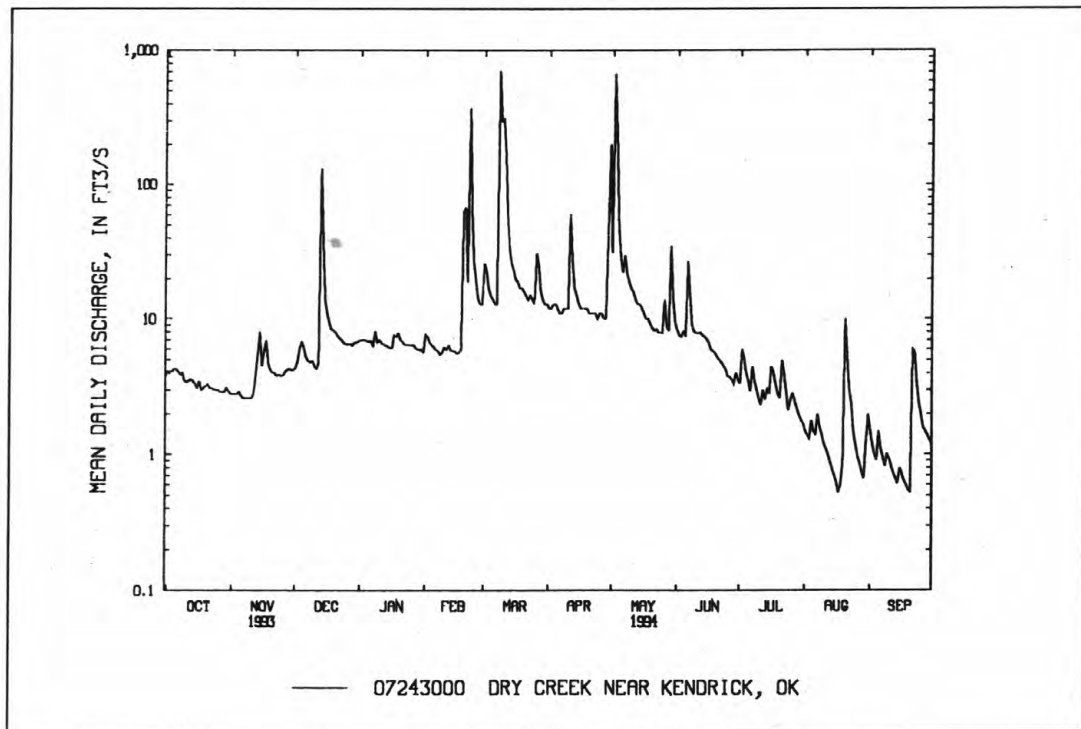
WATER YEARS 1956-94

ANNUAL TOTAL	23915.5	6016.08	
ANNUAL MEAN	65.5	16.5	26.2
HIGHEST ANNUAL MEAN			88.0 1975
LOWEST ANNUAL MEAN			2.02 1981
HIGHEST DAILY MEAN	3670	May 9 712	Mar 8 5590 May 12 1982
LOWEST DAILY MEAN	1.7	Aug 28 .52	Aug 17 ^a .00 Oct 1 1955
ANNUAL SEVEN-DAY MINIMUM	1.9	Aug 22 .64	Sep 14 .00 Oct 7 1955
INSTANTANEOUS PEAK FLOW		2200	May 2 ^b 18000 Nov 2 1974
INSTANTANEOUS PEAK STAGE		14.48	May 2 ^c 24.20 Nov 2 1974
ANNUAL RUNOFF (AC-FT)	47440	11930	19020
10 PERCENT EXCEEDS	111	19	27
50 PERCENT EXCEEDS	14	5.9	2.8
90 PERCENT EXCEEDS	2.9	1.3	.00

^aNo flow at times most years.

^bFrom slope-area measurement.

^cAt present datum.



ARKANSAS RIVER BASIN
07243500 DEEP FORK NEAR BEGGS, OK

LOCATION.--Lat 35°40'26", long 96°04'06", NW 1/4 SW 1/4 sec.20, T.14 N., R.12 E., Okmulgee County, Hydrologic Unit 11100303, near right downstream abutment of county road bridge, 3.0 mi upstream from Adams Creek, 4.0 mi south of Beggs, 8.0 mi downstream from Flat Rock (Checkerboard) Creek, and at mile 85.0.

DRAINAGE AREA.--2,018 mi².

PERIOD OF RECORD.--September 1938 to current year.

REVISED RECORDS.--WSP 957: 1941. WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 632.55 ft above sea level. Prior to Aug. 29, 1939, nonrecording gage at site 450 ft downstream at same datum. Aug. 29, 1939, to June 22, 1953, nonrecording gage at present site and datum. June 23, 1953, to July 15, 1981, recording gage at present site and datum. July 16, 1981, to May 3, 1989, recording gage at site 1,000 ft downstream and at same datum.

REMARKS.--No estimated daily discharges. Records fair. Some regulation by Arcadia Lake (station 07242340) since November 1986. U.S. Army Corps of Engineers' satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Mar. 14	0600	7,760	20.60	May 9	1700	6,110	18.44
Apr. 13	1200	2,730	14.26				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	203	65	105	165	125	1330	664	3120	1160	45	45	307
2	346	64	105	154	129	2400	540	2880	914	45	36	326
3	453	63	254	151	156	2290	542	4270	528	53	31	363
4	258	66	508	151	168	1680	711	4610	487	57	27	282
5	173	68	517	151	169	1240	627	5110	596	65	27	187
6	137	68	404	152	158	927	574	5140	731	60	39	179
7	118	70	323	151	136	732	529	5050	1310	55	88	323
8	107	73	271	148	128	2740	476	5370	992	45	705	431
9	107	73	230	138	128	4690	424	6000	871	39	634	381
10	99	73	200	134	125	5410	370	5710	690	38	517	363
11	93	72	175	134	110	6310	936	4560	499	31	281	258
12	101	77	175	134	110	6600	3560	2560	397	30	153	218
13	109	83	337	137	106	7340	3670	1530	342	32	98	153
14	111	112	1620	146	107	7720	3370	1130	292	35	70	115
15	111	361	1500	144	110	7100	2800	830	243	64	53	92
16	221	332	1280	138	98	5550	1690	677	212	465	41	151
17	455	285	989	131	117	4300	939	556	191	565	34	276
18	224	365	651	123	112	1870	723	469	180	441	28	435
19	174	300	467	117	116	1180	625	411	202	267	24	396
20	145	241	375	116	143	984	555	375	196	178	41	247
21	127	234	325	115	85	970	495	334	149	140	170	152
22	112	223	297	111	1130	993	410	293	125	169	221	112
23	104	203	275	116	2830	968	339	258	101	153	142	175
24	96	190	260	140	2440	889	302	236	85	120	125	199
25	90	182	235	152	2190	751	283	216	78	84	97	180
26	83	176	216	156	2190	831	277	203	74	81	72	163
27	77	169	205	158	1830	2240	277	196	64	151	55	127
28	71	152	197	158	1060	2030	274	190	59	166	41	105
29	67	127	190	156	---	1700	397	244	53	96	32	103
30	65	112	177	144	---	1300	2350	526	49	72	26	103
31	65	---	173	136	---	872	---	729	---	58	82	---
TOTAL	4702	4679	13036	4357	16306	85937	29729	63783	11870	3900	4035	6902
MEAN	152	156	421	141	582	2772	991	2058	396	126	130	230
MAX	455	365	1620	165	2830	7720	3670	6000	1310	565	705	435
MIN	65	63	105	111	85	732	274	190	49	30	24	92
AC-FT	9330	9280	25860	8640	32340	170500	58970	126500	23540	7740	8000	13690

ARKANSAS RIVER BASIN

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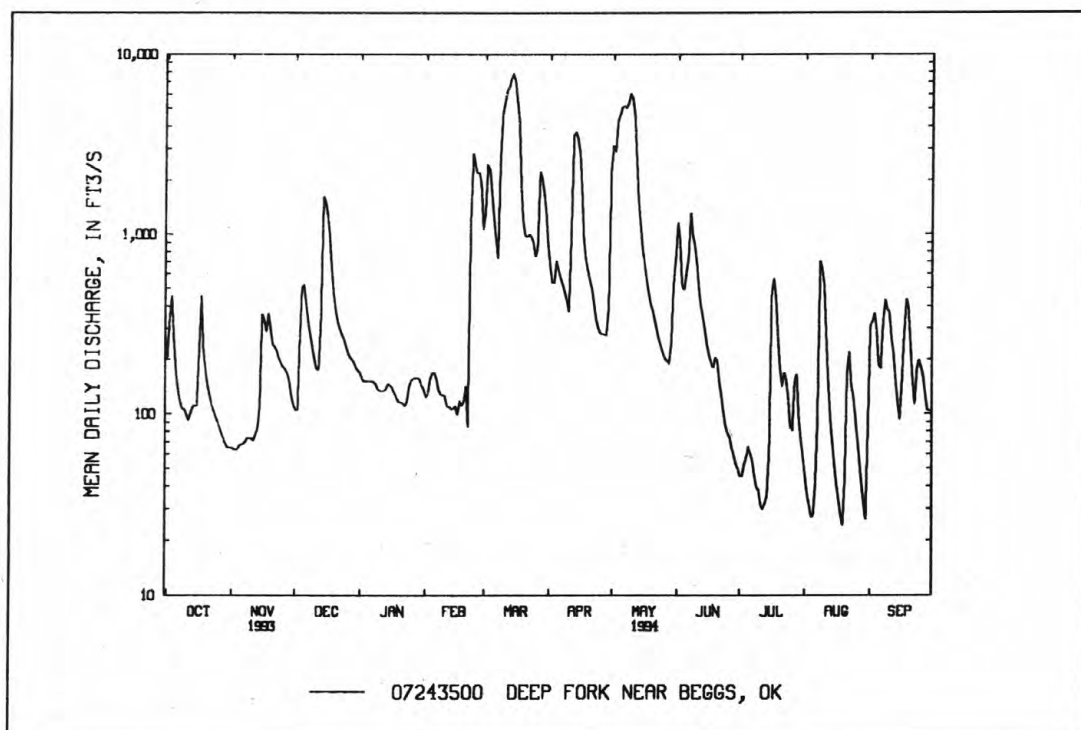
07243500 DEEP FORK NEAR BEGGS, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	716	717	546	400	647	1151	1554	2310	1910	582	248	386
MAX	5464	8391	4797	3749	4388	8895	9519	12470	8994	3950	2416	1947
(WY)	1942	1975	1993	1985	1985	1990	1945	1943	1974	1950	1992	1989
MIN	.000	.000	.51	7.74	20.3	9.65	37.0	133	59.0	5.67	3.31	.000
(WY)	1955	1955	1955	1940	1957	1940	1955	1971	1953	1954	1954	1956

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1939-94
ANNUAL TOTAL	742432	249236	
ANNUAL MEAN	2034	683	930
HIGHEST ANNUAL MEAN			2645
LOWEST ANNUAL MEAN			114
HIGHEST DAILY MEAN	30100	May 14	7720
LOWEST DAILY MEAN	17	Aug 23	24
ANNUAL SEVEN-DAY MINIMUM	22	Aug 20	36
INSTANTANEOUS PEAK FLOW			7760
INSTANTANEOUS PEAK STAGE			20.60
ANNUAL RUNOFF (AC-FT)	1473000	494400	674100
10 PERCENT EXCEEDS	5260	1850	2610
50 PERCENT EXCEEDS	710	190	161
90 PERCENT EXCEEDS	73	64	19

^aIn 1939, 1954, 1956.



ARKANSAS RIVER BASIN

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK

LOCATION.--Lat 35°15'50", long 95°14'21", in SE 1/4 SE 1/4 sec.12, T.9 N., R.19 E., Haskell County, Hydrologic Unit 11090204, on right downstream bank at end of bridge on State Highway 2, 0.8 mi north of Whitefield, 5.5 mi upstream from Taloka (Snake) Creek, 8.2 mi downstream from Eufaula Dam, and at mile 18.8.

DRAINAGE AREA.--47,576 mi², of which 9,700 mi² 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 fair. Prior to February 1964, occasional slight regulation by Conchas Lake in New Mexico and, except for 54 mi² 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 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10800	700	e1000	499	4080	16000	5710	12800	4450	1460	1030	921
2	5400	e500	e800	141	2630	15700	2220	13600	4100	642	2090	432
3	6230	236	e650	2620	2690	16600	1160	3520	5090	222	1550	180
4	5950	154	e500	4340	2390	22100	4900	911	4080	206	1070	165
5	1650	147	e280	4480	805	21600	5150	5660	5470	2660	847	161
6	3730	124	6650	3210	625	21300	3960	19600	7070	3470	460	588
7	3290	113	e17600	2770	234	19000	3800	32800	12800	1260	185	437
8	3580	571	e20300	3670	984	14100	3450	32200	12100	666	1390	1040
9	4090	1050	18100	528	747	14900	3220	29700	4410	350	1990	1410
10	3760	3210	12500	1580	2340	17400	1310	25100	5910	190	4290	442
11	4220	e800	5540	2770	1330	24800	3020	27100	3620	183	4570	163
12	3500	e1100	4540	1130	982	31400	6030	29800	3890	585	4320	2140
13	3020	e700	6540	1200	223	33200	3310	27700	5490	679	2780	3270
14	2350	8200	7810	2180	1040	37600	1600	25000	4910	392	653	2760
15	2180	e4850	7530	1550	2640	42800	2130	24800	3030	241	3000	1770
16	2500	e4600	12300	2630	1600	38000	1160	22100	1440	260	3090	693
17	1120	e7850	9460	1060	2210	27900	701	15800	1530	239	688	348
18	1900	e12400	5860	1470	3790	20900	2720	6540	1500	1510	189	151
19	6140	e12200	5250	2340	3570	18300	2700	5920	899	3710	174	799
20	2780	e9800	5540	2360	1860	18100	5570	3480	1500	3880	236	2380
21	5490	e10600	2660	1770	6960	15700	6780	3910	2030	2670	184	2570
22	4900	e12500	2580	860	8920	13400	6050	3950	1430	1400	1110	2050
23	2260	e11300	2390	153	5710	13400	3520	4640	1380	443	2800	1990
24	471	2000	2470	126	3260	13400	2790	5360	938	2300	2860	485
25	3430	e3660	622	1610	10500	13300	2750	5820	1120	2550	3330	154
26	2600	e2200	177	3210	13600	5270	2720	5940	657	800	4230	1180
27	3250	e1500	2010	2930	13700	8960	2720	5820	1900	199	2150	1030
28	1000	e950	1120	7800	19400	7950	2790	5230	2060	179	1160	2230
29	1400	e3750	1060	4600	---	5710	3250	5570	1750	171	3350	2050
30	466	e2800	924	6610	---	6030	6870	6050	965	237	4200	3070
31	1500	---	1260	4970	---	5440	---	5860	---	258	3180	---
TOTAL	104957	120565	166023	77167	118820	580260	104061	422281	107519	34012	63156	37059
MEAN	3386	4019	5356	2489	4244	18720	3469	13620	3584	1097	2037	1235
MAX	10800	12500	20300	7800	19400	42800	6870	32800	12800	3880	4570	3270
MIN	466	113	177	126	223	5270	701	911	657	171	174	151
AC-FT	208200	239100	329300	153100	235700	1151000	206400	837600	213300	67460	125300	73510

e Estimated

ARKANSAS RIVER BASIN

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07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2923	5736	6873	6100	6117	9257	8926	13210	11240	4502	3538	2653
MAX	13100	21930	29600	20270	19480	30340	37980	64970	35550	10420	20050	13910
(WY)	1987	1975	1993	1988	1993	1985	1990	1990	1982	1982	1992	1992
MIN	241	248	247	119	127	129	81.5	148	600	259	692	558
(WY)	1979	1983	1981	1981	1981	1981	1981	1981	1988	1988	1985	1985

SUMMARY STATISTICS 1993 CALENDAR YEAR

1994 WATER YEAR

WATER YEARS 1968-94

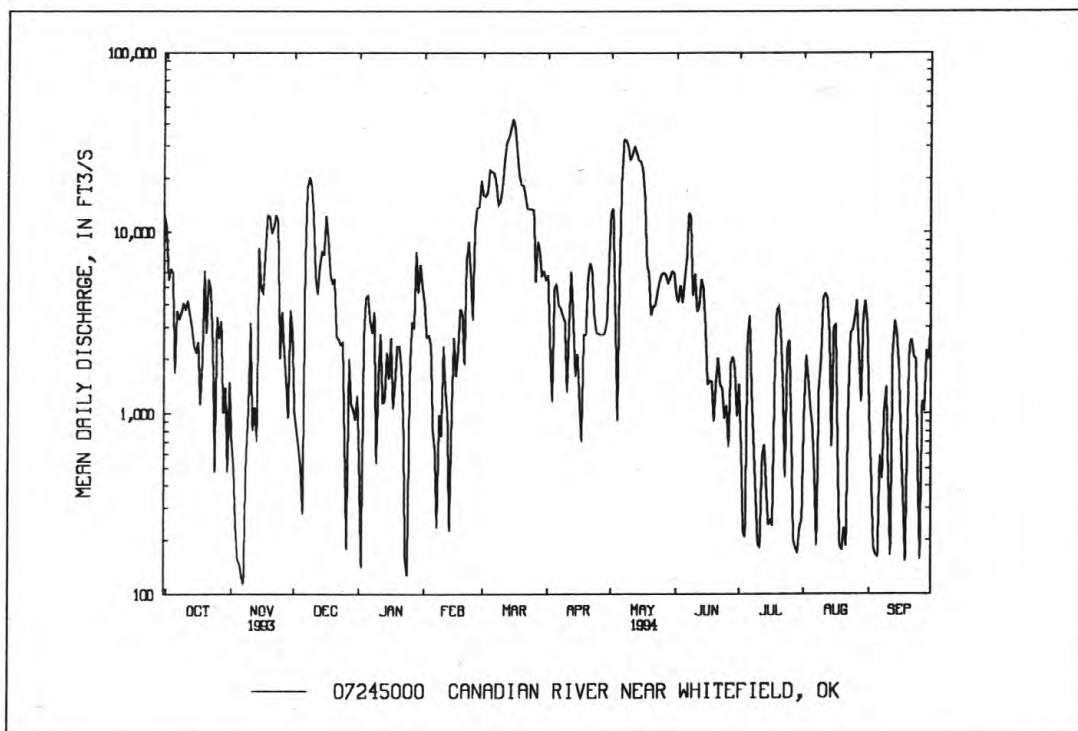
ANNUAL TOTAL	4590253	1935880	
ANNUAL MEAN	12580	5304	^a 6757
HIGHEST ANNUAL MEAN			15200
LOWEST ANNUAL MEAN			1012
HIGHEST DAILY MEAN	52400	May 22	42800
LOWEST DAILY MEAN	100	Sep 7	113
ANNUAL SEVEN-DAY MINIMUM	264	Nov 2	264
INSTANTANEOUS PEAK FLOW			44000
INSTANTANEOUS PEAK STAGE			14.01
INSTANTANEOUS LOW FLOW			113
ANNUAL RUNOFF (AC-FT)	9105000	3840000	4895000
10 PERCENT EXCEEDS	31900	14400	16200
50 PERCENT EXCEEDS	10600	2760	3640
90 PERCENT EXCEEDS	1000	349	130

^aPrior to regulation, water years 1939-63, 6,005 ft³/s.

^bMinimum daily discharge for period of record was 0.4 ft³/s, Oct. 8, 1956.

^cMaximum discharge for period of record 281,000 ft³/s, May 10, 1943.

^dMaximum gage height for period of record 25.5 ft, May 10, 1943.



ARKANSAS RIVER BASIN
07246940 POTEAU RIVER EAST OF WALDRON, AR

LOCATION.--Lat 34°53'46", long 94°03'57", in SW 1/4 SE 1/4, sec. 22, T.3 N., R.29 W., Scott County, Hydrologic Unit 11110105, at downstream side of bridge on State Highway 80 in Waldron, 1.8 mi east of Waldron High School.

DRAINAGE AREA.--15 mi².

PERIOD OF RECORD.--November 1983 to current year.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
OCT 27...	1000	1028	80020	0.26	114	7.3	9.5	11.0	760
DEC 14...	0915	1028	80020	31	83	7.5	2.5	6.0	752
DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	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 TOTAL (MG/L AS N) (00620)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
OCT 27...	10.0	91	30	0	25	0.055	0.055	0.055	0.020
DEC 14...	11.0	90	17	0	14	0.220	0.220	0.220	0.040
DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHOPHOS- PHATE, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS PO4) (00660)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 27...	0.03	0.48	0.50	0.56	0.060	0.030	0.09	8	0.01
DEC 14...	0.05	0.46	0.50	0.72	0.140	0.090	0.28	15	1.2

ARKANSAS RIVER BASIN
07246950 POTEAU RIVER NORTHWEST OF WALDRON, AR

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LOCATION.--Lat 34°54'47", long 94°06'28", in SE 1/4 SW 1/4, sec. 17, T.3 N., R.29 W., Scott County, Hydrologic Unit 11110105, at bridge on U.S. Highway 71, 0.9 mi north of Waldron city limits and Kansas City Southern Railroad crossing.

DRAINAGE AREA.--46.1 mi².

PERIOD OF RECORD.--November 1983 to current year.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
OCT 27...	1130	1028	80020	5.0	375	7.5	15.5	16.0	760
DEC 14...	1120	1028	80020	93	99	7.3	3.5	6.5	754
AUG 11...	0900	1028	80020	1.7	725	7.3	24.5	26.5	749
SEP 13...	1030	1028	80020	1.8	690	7.3	28.0	26.0	750
DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	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 TOTAL (MG/L AS N) (00620)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
OCT 27...	8.4	85	72	0	59	2.60	2.60	2.60	0.110
DEC 14...	10.5	87	20	0	16	0.370	0.370	0.370	0.150
AUG 11...	5.4	69	103	0	84	6.40	6.40	6.40	0.190
SEP 13...	5.8	73	103	0	85	5.80	5.80	5.80	1.20

ARKANSAS RIVER BASIN
07246950 POTEAU RIVER NORTHWEST OF WALDRON, AR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHODIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHODIS- SOLVED (MG/L AS PO4) (00660)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT 27...	0.14	1.2	1.3	3.9	7.50	6.30	19	36	0.49
DEC 14...	0.19	0.75	0.90	1.3	0.410	0.330	1.0	27	6.8
AUG 11...	0.24	2.0	2.2	8.6	18.0	18.0	55	4	0.02
SEP 13...	1.5	2.0	3.2	9.0	16.0	14.0	43	10	0.05

ARKANSAS RIVER BASIN
07246960 POTEAU RIVER NEAR HON, AR

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LOCATION.--Lat 34°55'34", long 94°10'03", in SW 1/4 SE 1/4, sec. 10, T.3 N., R.30 W., Scott County, Hydrologic Unit 11110105, at bridge on State Highway 80, 1.0 mi southeast of Hon, AR.

DRAINAGE AREA.--69.5 mi².

PERIOD OF RECORD.--February 1993 to July 1993, August 1994 to September 1994.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
AUG 11...	1155	1028	80020	2.0	313	7.7	31.0	25.5	750
SEP 13...	1220	1028	80020	1.7	334	7.7	30.0	25.0	748
DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	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 TOTAL (MG/L AS N) (00620)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
AUG 11...	8.2	102	50	0	41	1.40	1.40	1.40	0.010
SEP 13...	8.0	99	62	0	51	0.590	0.590	0.590	0.020
DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	SEDI- MENT, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
AUG 11...	0.01	0.79	0.80	2.2	2.80	2.70	8.3	4	0.02
SEP 13...	0.03	1.1	1.1	1.7	2.20	2.10	6.4	4	0.02

ARKANSAS RIVER BASIN

07246980 JONES CREEK NEAR HON, AR

LOCATION.--Lat 34°55'13", long 94°09'58", in SE 1/4 NE 1/4, sec. 15, T.3 N., R.30 W., Scott County, Hydrologic Unit 11110105, at low-water crossing on unimproved county road, 1.5 mi southeast of Hon, AR.

DRAINAGE AREA.--93.2 mi².

PERIOD OF RECORD.--February 1993 to June 1993; July 1994 to September 1994.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
AUG 11...	1030	1028	80020	0.13	67	7.3	28.0	26.0	750
SEP 13...	0825	1028	80020	0.93	58	7.0	23.0	22.5	750
DATE		OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	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 TOTAL (MG/L AS N) (00620)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
AUG 11...	5.0	62	26	0	22	0.084	0.084	0.084	0.050
SEP 13...	5.6	66	19	0	15	--	--	<0.050	0.030
DATE		NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
AUG 11...	0.06	0.45	0.50	0.58	0.020	0.030	0.09	5	0.00
SEP 13...	0.04	0.47	0.50	0.50	0.060	0.040	0.12	7	0.02



07247000 POTEAU RIVER AT CAUTHRON, AR

LOCATION.--Lat 34°55'08", long 94°17'55", NW 1/4 SW 1/4 sec.16, T.31 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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1939 to current year.

REVISED RECORDS.--WSP 1037: 1939(M). WRD Ark. 1970: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 569.53 ft above sea level. Prior to May 2, 1939, nonrecording gage at present site and datum. Satellite data collection platform installed Sept. 13, 1991.

REMARKS.--Records good, except for estimated daily discharge, which are fair. As of September 1974, flow from 92.2 mi² 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 1993 TO SEPTEMBER 1994

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	25	88	e38	e390	e1600	42	842	22	11	56	545
2	3.4	e20	509	e37	e330	e1500	38	e500	18	10	26	154
3	3.6	e20	6740	e37	e280	e1100	39	e3200	18	8.5	17	56
4	2.7	e18	4340	e36	e240	e700	42	e1300	26	7.2	12	28
5	2.6	e20	1580	e35	e210	e500	40	e750	28	4.7	8.3	17
6	2.6	e15	1170	e34	e180	e400	38	e500	27	3.6	5.7	13
7	2.1	15	926	e32	e160	e300	38	e700	23	4.9	4.5	11
8	1.8	12	698	e30	e140	e600	34	e800	19	4.7	3.8	8.5
9	2.1	8.7	537	e27	e150	e2300	30	e450	17	9.4	3.0	6.2
10	1.9	8.4	459	e26	e160	e1500	28	e300	17	69	2.4	4.4
11	1.9	8.4	360	e32	e150	e1200	55	243	19	41	2.2	4.4
12	1.8	9.6	283	e85	e280	e800	281	1210	17	20	2.2	4.1
13	1.6	13	787	e92	e310	e600	148	1180	13	15	2.2	3.1
14	1.5	809	755	e69	e220	e500	104	798	9.9	192	2.2	2.0
15	1.8	575	483	e58	e170	e400	87	537	8.1	115	2.1	1.7
16	2.2	1050	366	e94	e140	e320	73	347	8.0	50	2.2	1.5
17	4.0	1770	298	e2100	e120	e290	60	260	7.3	33	2.0	1.4
18	15	713	248	e980	e110	e230	51	207	7.5	26	2.0	1.3
19	568	467	205	e520	e100	e190	44	173	8.0	28	3.9	1.2
20	e2200	330	187	e390	e300	e160	39	135	8.0	35	10	1.3
21	e850	258	163	e320	e310	e140	34	105	7.9	30	17	1.2
22	e390	207	134	e270	e1500	e130	32	80	7.7	26	18	1.2
23	e180	166	113	e250	e1900	e120	25	61	8.6	22	13	1.3
24	e130	133	97	e250	e800	e110	22	50	11	18	7.5	1.6
25	e90	110	86	e260	e500	e100	19	41	17	16	5.2	2.0
26	e60	148	78	e2000	e360	e100	60	37	15	12	3.9	2.0
27	63	193	70	e5400	e280	e90	120	40	10	12	3.8	1.9
28	53	151	62	e1500	e250	e88	79	35	7.4	10	3.8	1.5
29	40	126	55	e1000	---	72	346	28	5.7	8.5	3.8	1.3
30	32	103	49	e830	---	56	2240	31	5.2	7.6	3.4	1.2
31	27	---	44	e510	---	47	---	31	---	112	7.3	---
TOTAL	4738.5	7502.1	21970	17342	10040	16243	4288	14971	416.3	962.1	256.4	880.3
MEAN	153	250	709	559	359	524	143	483	13.9	31.0	8.27	29.3
MAX	2200	1770	6740	5400	1900	2300	2240	3200	28	192	56	545
MIN	1.5	8.4	44	26	100	47	19	28	5.2	3.6	2.0	1.2
AC-FT	9400	14880	43580	34400	19910	32220	8510	29690	826	1910	509	1750

ARKANSAS RIVER BASIN

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07247000 POTEAU RIVER AT CAUTHRON, AR--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	120	212	353	266	375	432	349	516	218	61.3	20.5	17.7
MAX	1423	849	1078	907	1246	849	1092	2080	846	314	83.1	124
(WY)	1985	1975	1983	1993	1989	1975	1991	1990	1986	1981	1990	1992
MIN	.015	4.32	2.02	14.1	48.2	59.9	42.5	13.6	2.35	.41	.81	.19
(WY)	1979	1990	1990	1981	1976	1986	1976	1977	1988	1980	1976	1980

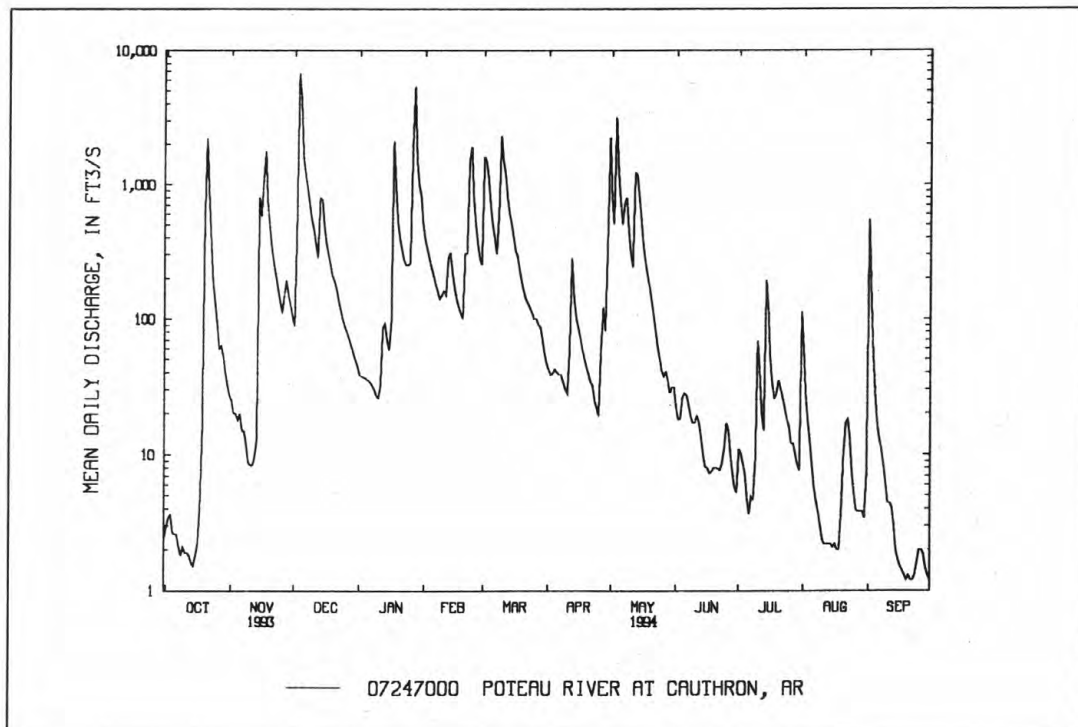
SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1975-94
ANNUAL TOTAL	116644.5	99609.7	
ANNUAL MEAN	320	273	^a 244
HIGHEST ANNUAL MEAN			432 1985
LOWEST ANNUAL MEAN			48.7 1976
HIGHEST DAILY MEAN	7000	Jan 4 6740	Dec 3 16900 May 3 1990
LOWEST DAILY MEAN	1.5	Jul 28 1.2	Sep 19 .00 Aug 30 1976
ANNUAL SEVEN-DAY MINIMUM	1.8	Oct 8 1.3	Sep 21 .00 Oct 7 1978
INSTANTANEOUS PEAK FLOW		10800	Dec 3 ^b 24000 May 3 1990
INSTANTANEOUS PEAK STAGE		17.76	Dec 3 ^c 22.17 May 3 1990
INSTANTANEOUS LOW FLOW		1.1	^d Sep 19 .00 at times
ANNUAL RUNOFF (AC-FT)	231400	197600	177100
10 PERCENT EXCEEDS	794	768	600
50 PERCENT EXCEEDS	97	44	50
90 PERCENT EXCEEDS	2.3	2.5	1.6

^aPrior to regulation, water years 1940-74, 218 ft³/s.

^bMaximum discharge for period of record, 32,200 ft³/s May 20, 1960.

^cMaximum gage height for period of record, 23.76 ft May 20, 1960.

^dAlso Sept. 20, 22.



ARKANSAS RIVER BASIN

07247000 POTEAU RIVER AT CAUTHRON, AR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1945-61, 1975-79, December 1991 to current year.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
JUL											
21...	0915	2.00	27.5	747	1028	1028	17	3.88	118	6.0	7.5
21...	0918	4.00	28.0	747	1028	1028	17	3.88	119	6.0	7.5
21...	0921	6.00	28.0	747	1028	1028	17	3.88	118	6.1	7.5
21...	0925	8.00	28.0	747	1028	1028	17	3.88	119	6.1	7.5
21...	0929	10.0	28.0	747	1028	1028	17	3.88	119	6.1	7.5
21...	0933	12.0	28.0	747	1028	1028	17	3.88	119	6.1	7.5
21...	0937	14.0	28.0	747	1028	1028	17	3.88	119	6.0	7.5
21...	0940	16.0	28.0	747	1028	1028	17	3.88	119	6.0	7.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
OCT									
27...	0830	1028	80020	59	66	7.0	9.5	12.5	760
DEC									
14...	0845	1028	80020	740	61	6.8	3.5	8.0	742
JAN									
12...	0915	1028	80020	85	93	6.6	7.5	5.5	758
FEB									
23...	1430	1028	80020	1900	54	7.3	5.0	8.5	749
APR									
13...	1045	1028	80020	150	87	6.9	18.5	16.0	747
MAY									
11...	1250	1028	80020	240	63	7.2	25.0	20.5	748
JUN									
29...	0830	1028	80020	5.0	110	7.2	28.0	30.0	743
AUG									
12...	0920	1028	80020	2.0	157	7.4	26.5	25.5	751
SEP									
14...	0835	1028	80020	3.0	68	7.0	22.5	24.5	751

ARKANSAS RIVER BASIN

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07247000 POTEAU RIVER AT CAUTHRON, AR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	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 TOTAL (MG/L AS N) (00620)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
OCT 27...	8.5	80	13	0	11	0.230	0.230	0.230	0.040
DEC 14...	9.4	82	15	0	12	0.180	0.180	0.180	0.080
JAN 12...	12.6	100	21	0	18	0.320	0.320	0.320	0.020
FEB 23...	9.9	86	10	0	8	0.110	0.110	0.110	0.040
APR 13...	7.1	73	23	0	19	0.170	0.170	0.170	0.080
MAY 11...	7.4	84	18	0	15	0.098	0.098	0.098	0.030
JUN 29...	4.8	66	26	0	21	--	--	<0.050	0.020
AUG 12...	6.1	76	43	0	35	--	--	<0.050	0.010
SEP 14...	5.2	63	24	0	19	--	--	<0.050	0.020
DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHODIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHODIS- SOLVED (MG/L AS PO4) (00660)	SEDI- MENT, DIS- SOLVED SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
OCT 27...	0.05	0.36	0.40	0.63	0.170	0.140	0.43	11	1.8
DEC 14...	0.10	0.42	0.50	0.68	0.160	0.100	0.31	22	44
JAN 12...	0.03	0.18	0.20	0.52	0.210	0.180	0.55	2	0.46
FEB 23...	0.05	0.56	0.60	0.71	0.120	0.060	0.18	37	190
APR 13...	0.10	0.72	0.80	0.97	0.230	0.170	0.52	23	9.3
MAY 11...	0.04	0.37	0.40	0.50	0.100	0.070	0.21	16	10
JUN 29...	0.03	0.48	0.50	0.50	0.110	0.050	0.15	8	0.11
AUG 12...	0.01	0.79	0.80	0.80	0.260	0.220	0.67	9	0.05
SEP 14...	0.03	0.78	0.80	0.80	0.200	0.110	0.34	15	0.12

ARKANSAS RIVER BASIN
07247015 POTEAU RIVER NEAR LOVING, OK

LOCATION.--Lat 34°52'47", long 94°29'02", in SW 1/4 NW 1/4 sec.29, T.5 N., R.27 E., LeFlore County, Hydrologic Unit 11110105, on right downstream bank of county road bridge, 0.6 mi northwest of Loving, 1.0 mi above Loving Creek, and at mile 93.6.

DRAINAGE AREA.--269 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1992, to current year.

GAGE.--Water-stage recorder. Datum of gage is 507.76 ft above sea level.

REMARKS.--Records fair. Some regulation by small flood-retarding structures. U.S. Geological Survey's satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	50	118	56	492	2120	49	1630	24	6.7	40	542
2	8.5	49	342	52	414	2400	44	999	18	6.0	35	174
3	11	47	5540	51	349	1370	55	4150	15	8.1	20	47
4	10	43	6580	49	296	886	53	1660	16	7.7	14	20
5	9.8	46	1990	49	253	648	52	946	28	5.7	10	11
6	9.3	47	1430	48	221	505	48	613	23	5.1	7.7	7.8
7	9.3	43	1090	45	187	410	47	867	20	11	6.2	6.2
8	8.9	40	817	40	161	849	46	1090	16	7.0	5.1	3.6
9	8.9	36	595	39	174	3280	39	579	17	6.4	4.2	2.6
10	8.9	32	513	38	190	2100	37	413	17	4.8	3.7	1.9
11	8.9	28	421	46	173	1680	159	314	15	26	e3.5	1.4
12	8.1	27	334	130	349	1170	745	784	15	35	2.9	1.1
13	7.7	27	682	141	391	856	304	1440	12	19	e2.7	.95
14	7.7	584	1000	106	287	673	164	947	10	14	2.3	1.1
15	7.7	943	598	87	233	536	118	588	8.2	75	2.3	.82
16	8.8	817	449	142	194	425	90	384	e8.0	53	2.1	.75
17	8.5	2490	362	2770	164	343	72	266	e7.8	34	1.7	.55
18	10	943	299	1250	143	286	61	196	e7.6	36	1.4	.50
19	442	593	245	685	130	226	53	150	e7.4	19	1.8	.45
20	3080	416	217	522	398	189	47	112	e7.2	14	3.6	.45
21	1150	312	199	438	413	165	42	84	e7.0	19	5.2	.36
22	502	247	166	362	1580	149	37	66	e6.8	19	7.6	.50
23	226	200	143	340	2050	123	35	55	e7.0	16	9.3	.90
24	155	165	122	336	1050	110	31	44	e7.4	15	9.4	.90
25	122	144	108	353	703	93	30	38	e10	14	8.0	.90
26	97	142	96	2520	516	82	94	35	e12	13	6.0	.75
27	83	226	87	6580	403	79	164	32	e10	14	4.3	.50
28	75	197	78	2100	358	78	147	32	e9.0	10	3.3	.45
29	69	166	69	1420	---	81	1010	31	8.5	8.7	3.1	1.0
30	61	140	64	1020	---	65	3610	29	e7.4	7.8	2.7	1.2
31	54	---	59	649	---	55	---	26	---	9.7	21	---
TOTAL	6272.3	9240	24813	22464	12272	22032	7483	18600	377.3	539.7	250.1	831.63
MEAN	202	308	800	725	438	711	249	600	12.6	17.4	8.07	27.7
MAX	3080	2490	6580	6580	2050	3280	3610	4150	28	75	40	542
MIN	4.3	27	59	38	130	55	30	26	6.8	4.8	1.4	.36
AC-FT	12440	18330	49220	44560	24340	43700	14840	36890	748	1070	496	1650

c Estimated

ARKANSAS RIVER BASIN

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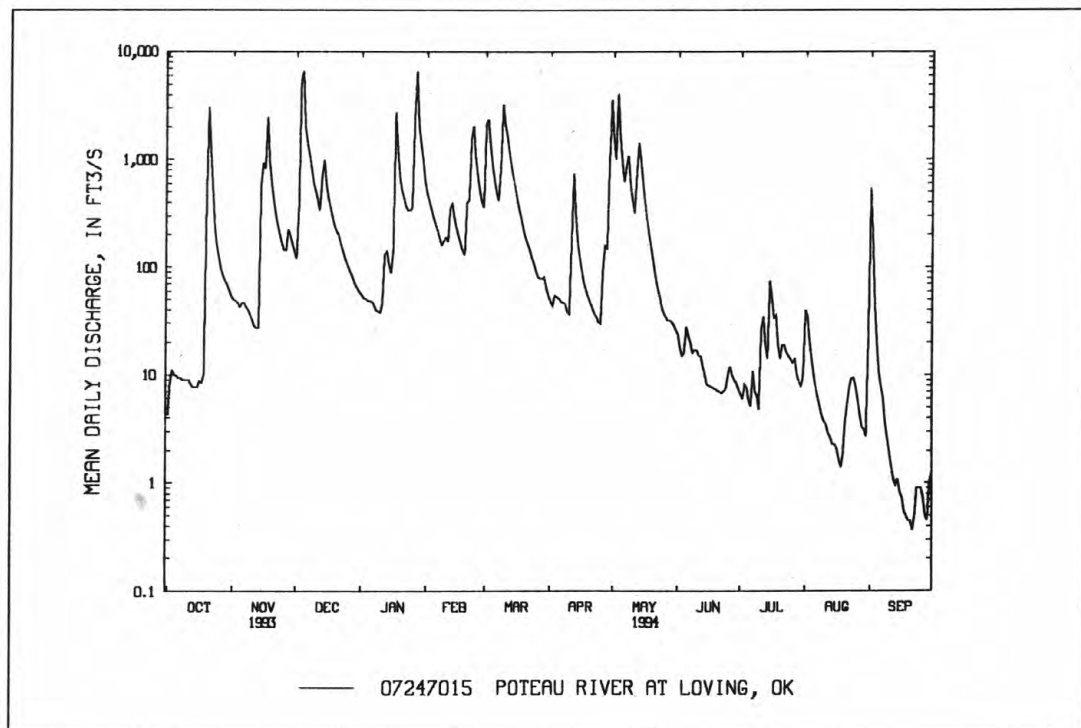
07247015 POTEAU RIVER NEAR LOVING, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	112	271	800	813	435	490	286	534	246	26.5	8.68	60.9
MAX	202	308	800	901	438	711	543	898	600	53.9	11.1	148
(WY)	1994	1994	1994	1993	1994	1994	1993	1993	1992	1992	1993	1992
MIN	21.5	235	799	725	432	270	64.4	104	12.6	8.17	6.83	7.50
(WY)	1993	1993	1993	1994	1993	1993	1992	1992	1994	1993	1992	1993

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1992-94

ANNUAL TOTAL	137390.6	125175.03	
ANNUAL MEAN	376	343	349
HIGHEST ANNUAL MEAN		355	1993
LOWEST ANNUAL MEAN		343	1994
HIGHEST DAILY MEAN	7670	May 10 6580	Dec 4 7670 May 10 1993
LOWEST DAILY MEAN	1.1	Jul 28 .36	Sep 21 .36 Sep 21 1994
ANNUAL SEVEN-DAY MINIMUM	1.8	Aug 27 .51	Sep 16 .51 Sep 16 1994
INSTANTANEOUS PEAK FLOW		8220	Dec 4 8410 Dec 16 1992
INSTANTANEOUS PEAK STAGE		26.84	Dec 4 27.18 Dec 16 1992
ANNUAL RUNOFF (AC-FT)	272500	248300	252800
10 PERCENT EXCEEDS	959	944	820
50 PERCENT EXCEEDS	117	53	62
90 PERCENT EXCEEDS	3.3	3.7	3.5



ARKANSAS RIVER BASIN

07247015 POTEAU RIVER AT LOVING, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1991 to current year.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
JUL											
21...	0755	4.00	28.0	745	1028	1028	20	9.02	135	4.8	7.3
21...	0759	9.00	28.0	745	1028	1028	20	9.02	134	4.8	7.3
21...	0804	14.0	28.0	745	1028	1028	20	9.02	134	4.8	7.3
21...	0807	19.0	28.0	745	1028	1028	20	9.02	134	4.8	7.3
21...	0810	24.0	28.0	745	1028	1028	20	9.02	134	4.8	7.3
21...	0814	54.0	28.0	745	1028	1028	20	9.02	135	4.8	7.3
21...	0818	59.0	28.0	745	1028	1028	20	9.02	134	4.8	7.3
21...	0822	64.0	28.0	745	1028	1028	20	9.02	134	4.7	7.3
21...	0827	69.0	28.0	745	1028	1028	20	9.02	134	4.7	7.3
21...	0831	74.0	28.0	745	1028	1028	20	9.02	134	4.8	7.3
21...	0835	79.0	28.0	745	1028	1028	20	9.02	135	4.7	7.3
21...	0839	84.0	28.0	745	1028	1028	20	9.02	134	4.8	7.3
21...	0843	89.0	28.0	745	1028	1028	20	9.02	134	4.8	7.3
21...	0846	94.0	28.0	745	1028	1028	20	9.02	134	4.8	7.3
21...	0850	99.0	28.0	745	1028	1028	20	9.02	134	4.7	7.3

ARKANSAS RIVER BASIN

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07247015 POTEAU RIVER AT LOVING, OK--Continued

COMPOSITE SAMPLES COLLECTED FROM AUTOMATIC SAMPLERS DURING STORM
EVENTS BY THE OKLAHOMA CONSERVATION COMMISSION
WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME START	TIME END	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)
NOV										
14-15	1034	0934	84015	80020	* 96	** 6.7	--	--	--	--
DEC										
02-03	1300	1200	84015	80020	70	6.5	--	--	--	--
JAN										
26-27	0946	0046	84015	80020	* 57	** 6.2	--	--	--	--
FEB										
22-23	1400	1100	84015	80020	80	6.5	--	--	--	--
MAR										
08-09	1000	0900	84015	80020	56	6.3	--	--	--	--
APR										
11-12	2009	1309	84015	80020	* 73	6.6	--	--	--	--
APR										
29-30	0649	0549	84015	80020	* 58	6.5	0.91	0.090	0.090	0.40

COMPOSITE SAMPLES COLLECTED FROM AUTOMATIC SAMPLERS DURING STORM
EVENTS BY THE OKLAHOMA CONSERVATION COMMISSION
WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)
NOV								
14-15	--	--	--	--	--	--	0.90	--
DEC								
02-03	--	--	--	--	--	--	0.90	--
JAN								
26-27	--	--	--	--	--	--	1.1	--
FEB								
22-23	--	--	--	--	--	--	0.70	--
MAR								
08-09	--	--	--	--	--	--	0.70	--
APR								
11-12	--	--	--	--	--	--	0.80	--
APR								
29-30	0.020	0.07	0.110	0.110	0.090	0.12	0.91	0.71

* SPECIFIC CONDUCTANCE, LAB ($\mu\text{S}/\text{cm}$)

** pH, LAB (STANDARD UNITS)

ARKANSAS RIVER BASIN

07247015 POTEAU RIVER AT LOVING, OK--Continued

COMPOSITE SAMPLES COLLECTED FROM AUTOMATIC SAMPLERS DURING STORM
EVENTS BY THE OKLAHOMA CONSERVATION COMMISSION
WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	SEDI- MENT, SUS- PENDEDED (MG/L) (80154)
NOV								
14-15	0.90	0.40	0.90	0.390	0.220	--	--	85
DEC								
02-03	0.90	0.30	0.90	0.270	0.060	--	--	204
JAN								
26-27	1.1	0.50	1.1	0.300	0.080	--	--	221
FEB								
22-23	0.70	0.60	0.70	0.230	0.080	--	--	129
MAR								
08-09	--	1.1	0.70	0.120	0.050	--	--	96
APR								
11-12	0.80	0.50	0.80	0.150	0.050	--	--	114
APR								
29-30	1.0	0.80	1.1	0.200	0.080	0.050	0.15	136

ARKANSAS RIVER BASIN

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07247015 POTEAU RIVER AT LOVING, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT										
20...	1600	84015	80020	3800	*52	**6.7	--	--	--	--
27...	1410	1028	80020	85	63	7.0	10.5	14.0	760	12.2
DEC										
14...	1100	1028	80020	1000	69	6.9	4.0	8.0	745	10.3
JAN										
11...	1530	1028	80020	48	85	7.4	8.5	4.5	760	13.2
FEB										
22...	1400	1028	80020	1400	70	6.8	12.0	11.5	744	10.0
22...	1720	1028	80020	2520	66	6.7	12.5	11.0	744	9.1
22...	2315	1028	80020	3290	63	6.8	10.0	10.0	746	9.1
23...	1100	1028	80020	1920	56	7.1	2.5	9.5	753	9.8
24...	1430	1028	80020	939	54	7.0	14.0	8.0	748	10.4
25...	0745	1028	80020	714	58	6.8	8.0	7.5	749	10.4
APR										
13...	0845	1028	80020	332	68	7.0	9.5	15.0	749	8.0
MAY										
11...	1415	1028	80020	286	57	7.3	26.0	21.5	747	7.1
JUN										
29...	0715	1028	80020	9.7	87	7.1	27.0	29.5	743	3.9
AUG										
12...	0800	1028	80020	3.3	113	7.3	23.0	25.5	749	4.6
SEP										
14...	0715	1028	80020	1.3	96	7.1	22.0	23.5	751	4.2

*SPECIFIC CONDUCTANCE, LAB ($\mu\text{S}/\text{cm}$)

**pH, LAB (STANDARD UNITS)

ARKANSAS RIVER BASIN

07247015 POTEAU RIVER AT LOVING, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	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 TOTAL (MG/L AS N) (00620)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	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)
OCT										
20...	--	--	--	--	--	--	--	--	--	0.70
27...	119	13	0	11	0.180	0.180	0.180	0.040	0.05	0.36
DEC										
14...	89	16	0	13	0.190	0.190	0.190	0.050	0.06	0.55
JAN										
11...	103	30	0	24	--	--	<0.050	0.020	0.03	0.18
FEB										
22...	94	14	0	11	0.120	0.120	0.120	0.030	0.04	0.67
22...	85	13	0	11	0.140	0.140	0.140	0.040	0.05	0.96
22...	83	14	0	12	0.130	0.130	0.130	0.050	0.06	1.0
23...	87	13	0	10	0.240	0.240	0.240	0.100	0.13	0.90
24...	89	13	0	11	0.190	0.190	0.190	0.050	0.06	0.55
25...	88	10	0	8	0.110	0.110	0.110	0.030	0.04	0.47
APR										
13...	81	17	0	14	--	--	<0.050	0.020	0.03	0.38
MAY										
11...	82	13	0	11	0.120	0.120	0.120	0.030	0.04	0.37
JUN										
29...	52	22	0	18	--	--	<0.050	0.070	0.09	0.43
AUG										
12...	57	32	0	21	--	--	<0.050	0.040	0.05	0.36
SEP										
14...	50	29	0	24	0.087	0.087	0.087	0.040	0.05	0.56

ARKANSAS RIVER BASIN

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07247015 POTEAU RIVER AT LOVING, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT										
20...	0.70	0.60	0.70	0.230	0.060	--	--	--	--	--
27...	0.40	--	0.58	0.090	--	0.080	0.25	85	20	--
DEC										
14...	0.60	--	0.79	0.170	--	0.080	0.25	43	116	--
JAN										
11...	0.20	--	0.20	0.060	--	0.020	0.06	8	1.0	--
FEB										
22...	0.70	--	0.82	0.190	--	0.030	0.09	80	302	85
22...	1.0	--	1.1	0.250	--	0.050	0.15	166	1130	84
22...	1.1	--	1.2	0.390	--	0.100	0.31	228	2030	92
23...	1.0	--	1.2	0.190	--	0.070	0.21	76	394	80
24...	0.60	--	0.79	0.090	--	0.040	0.12	22	56	--
25...	0.50	--	0.61	0.090	--	0.050	0.15	14	27	--
APR										
13...	0.40	--	0.40	0.100	--	0.040	0.12	34	30	--
MAY										
11...	0.40	--	0.52	0.090	--	0.040	0.12	20	15	--
JUN										
29...	0.50	--	0.50	0.070	--	<0.010	--	12	0.31	--
AUG										
12...	0.40	--	0.40	0.050	--	0.030	0.09	9	0.08	--
SEP										
14...	0.60	--	0.69	0.090	--	0.050	0.15	10	0.03	--

ARKANSAS RIVER BASIN

07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OK

LOCATION.--Lat 34°46'25", long 94°30'43", NE 1/4 SW 1/4 sec. 31, T.4 N., R.27 E., LcFlore 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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1992 to current year.

GAGE.--Water-stage recorder. Datum of gage is 684.00 ft above sea level, from topographic map.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	42	75	40	194	874	51	396	15	1.4	1.5	4.8
2	97	39	543	39	163	1320	48	494	12	1.0	1.6	13
3	107	47	5310	39	138	683	48	1750	10	.99	1.1	5.0
4	47	46	1590	39	121	450	43	603	19	.93	.87	3.0
5	29	40	801	36	111	323	42	340	25	.77	.80	1.9
6	20	35	483	32	95	249	45	228	22	.92	.71	1.6
7	14	32	343	29	85	203	41	726	25	1.4	2.0	1.2
8	11	31	262	28	81	569	36	631	17	5.5	1.4	.90
9	11	31	217	27	82	1050	35	358	34	4.2	1.2	.69
10	9.9	29	186	27	72	773	37	250	69	2.6	.97	.63
11	9.2	28	149	35	70	824	127	182	58	1.9	.73	.61
12	8.4	32	127	47	109	718	455	147	41	1.5	.58	.47
13	7.5	270	356	39	99	514	224	145	28	4.1	.45	.40
14	8.4	1180	332	35	81	385	159	135	18	54	.34	.31
15	12	630	252	32	74	293	125	97	14	51	.27	.24
16	15	1270	208	36	69	225	94	79	12	29	.30	.17
17	16	1150	177	819	65	185	77	65	9.7	67	.36	.11
18	93	566	149	383	62	156	66	53	9.0	111	.38	.06
19	938	373	130	256	61	131	58	45	6.8	62	.37	.02
20	3130	258	117	206	152	114	52	37	5.3	30	.66	.00
21	708	203	101	163	144	107	46	31	4.8	16	1.1	.00
22	334	162	89	139	1210	88	41	26	3.8	11	1.6	.00
23	208	132	79	129	886	78	36	22	3.1	7.5	1.2	.00
24	148	114	71	119	500	73	33	18	2.7	4.8	1.0	.00
25	110	100	65	125	344	68	31	19	3.6	3.8	1.0	.00
26	85	101	59	1370	245	62	42	21	4.1	3.5	1.1	.00
27	69	90	55	2850	200	75	42	22	2.7	5.8	1.3	.00
28	58	94	52	800	182	75	38	17	2.0	4.6	1.2	.00
29	53	92	48	469	---	63	141	18	1.8	3.1	1.0	.00
30	51	83	45	324	---	57	1110	39	1.8	2.1	.79	.00
31	46	---	42	243	---	54	---	23	---	1.6	.90	---
TOTAL	6458.8	7300	12513	8955	5695	10839	3423	7017	480.2	495.01	28.78	35.11
MEAN	208	243	404	289	203	350	114	226	16.0	16.0	.93	1.17
MAX	3130	1270	5310	2850	1210	1320	1110	1750	69	111	2.0	13
MIN	5.4	28	42	27	61	54	31	17	1.8	.77	.27	.00
AC-FT	12810	14480	24820	17760	11300	21500	6790	13920	952	982	57	70

ARKANSAS RIVER BASIN

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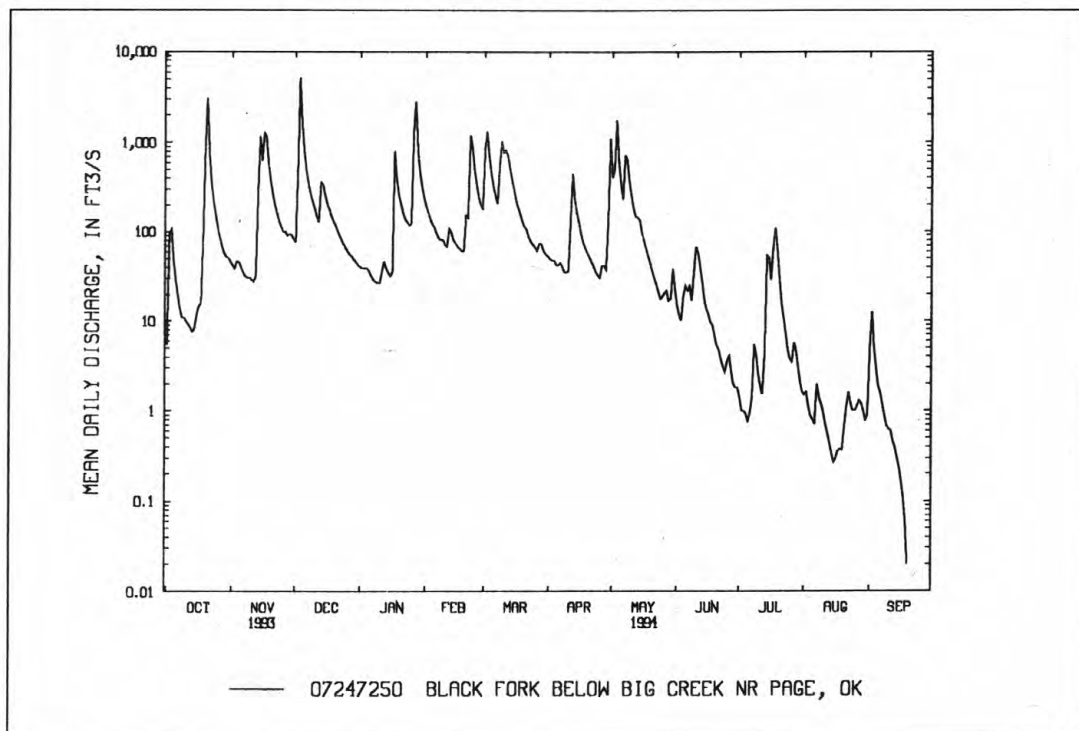
07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	113	229	446	419	210	240	203	277	74.6	11.0	9.83	131
MAX	208	243	489	549	216	350	401	553	176	16.0	14.4	378
(WY)	1994	1994	1993	1993	1993	1994	1993	1993	1992	1994	1993	1992
MIN	17.2	214	404	289	203	163	95.4	52.5	16.0	3.44	.93	1.17
(WY)	1993	1993	1994	1994	1994	1992	1992	1992	1994	1993	1994	1994

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1992-94

ANNUAL TOTAL	86792.04	63239.90	
ANNUAL MEAN	238	173	200
HIGHEST ANNUAL MEAN		226	1993
LOWEST ANNUAL MEAN		173	1994
HIGHEST DAILY MEAN	8150	Jan 4	5310 Dec 3 8150 Jan 4 1993
LOWEST DAILY MEAN	.33	Jul 28	.00 Sep 20-30 .00 at times
ANNUAL SEVEN-DAY MINIMUM	.64	Jul 24	.00 Sep 20 .00 Sep 20 1994
INSTANTANEOUS PEAK FLOW		10100	Dec 3 25800 Jan 4 1993
INSTANTANEOUS PEAK STAGE		14.78	Dec 3 18.45 Jan 4 1993
ANNUAL RUNOFF (AC-FT)	172200	125400	144800
10 PERCENT EXCEEDS	480	461	385
50 PERCENT EXCEEDS	87	45	52
90 PERCENT EXCEEDS	1.7	.84	1.5



ARKANSAS RIVER BASIN

07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1991 to current year.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAMPLE LOC - ATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPER - ATURE (DEG C) (00010)	BARO - METRIC PRES - SURE (MM OF HG) (00025)	AGENCY COL - LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA - LYZING SAMPLE (CODE NUMBER) (00028)	DIS - CHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPE - CIFIC CON - DUCT - ANCE (US/CM) (00095)	OXYGEN, DIS - SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND - ARD UNITS) (00400)
JUL											
22...	0800	4.00	27.0	745	1028	1028	12	4.27	36	5.2	7.0
22...	0804	7.00	26.5	745	1028	1028	12	4.27	34	5.2	7.0
22...	0808	10.0	27.0	745	1028	1028	12	4.27	33	5.3	7.0
22...	0813	13.0	27.0	745	1028	1028	12	4.27	33	5.3	7.0
22...	0817	16.0	27.0	745	1028	1028	12	4.27	33	5.3	7.0
22...	0821	19.0	27.0	745	1028	1028	12	4.27	33	5.4	7.0
22...	0825	22.0	27.0	745	1028	1028	12	4.27	33	5.4	7.0
22...	0828	25.0	27.0	745	1028	1028	12	4.27	33	5.4	7.0
22...	0833	28.0	26.5	745	1028	1028	12	4.27	33	5.4	7.0
22...	0837	31.0	26.5	745	1028	1028	12	4.27	33	5.4	7.0

COMPOSITE SAMPLES COLLECTED FROM AUTOMATIC SAMPLERS DURING STORM
EVENTS BY THE OKLAHOMA CONSERVATION COMMISSION
WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME START	TIME END	AGENCY COL - LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA - LYZING SAMPLE (CODE NUMBER) (00028)	SPE - CIFIC CON - DUCT - ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND - ARD UNITS) (00400)	NITRO - GEN DIS - SOLVED (MG/L AS N) (00602)	NITRO - GEN, TOTAL NITRATE (MG/L AS N) (00620)	NITRO - GEN, DIS - SOLVED (MG/L AS N) (00618)	NITRO - GEN, DIS - SOLVED (MG/L AS NO3) (71851)
OCT										
20-21	1000	0300	84015	80020	*27	**7.2	--	--	--	--
NOV										
14-15	0457	0357	84015	80020	*33	**6.7	--	--	--	--
DEC										
02-03	1115	1015	84015	80020	33	6.6	--	--	--	--
JAN										
26-27	1111	1011	84015	80020	*27	**6.0	--	--	--	--
FEB										
22-23	0700	0600	84015	80020	35	6.8	--	--	--	--
APR										
11-12	2116	0716	84015	80020	42	6.3	--	--	--	--
APR										
30-30	0130	0930	84015	80020	36	6.3	0.71	0.200	0.200	0.89

*SPECIFIC CONDUCTANCE, LAB (µs/cm)

**pH, LAB (STANDARD UNITS)

ARKANSAS RIVER BASIN

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07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OK--Continued

COMPOSITE SAMPLES COLLECTED FROM AUTOMATIC SAMPLERS DURING STORM
EVENTS BY THE OKLAHOMA CONSERVATION COMMISSION
WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)
OCT 20-21	--	--	--	--	--	--	0.70	--
NOV 14-15	--	--	--	--	--	--	0.40	--
DEC 02-03	--	--	--	--	--	--	0.40	--
JAN 26-27	--	--	--	--	--	--	0.50	--
FEB 22-23	--	--	--	--	--	--	0.40	--
APR 11-12	--	--	--	--	--	--	--	--
APR 30-30	0.010	0.03	0.210	0.210	0.190	0.24	0.51	0.31
DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	SEDI- MENT, SUS- PENDEED (MG/L) (80154)
OCT 20-21	0.70	0.40	0.70	0.110	0.010	--	--	--
NOV 14-15	0.40	<0.20	0.40	0.060	<0.010	--	--	16
DEC 02-03	0.40	<0.20	0.40	0.060	0.020	--	--	42
JAN 26-27	0.50	0.50	0.50	0.060	0.030	--	--	115
FEB 22-23	0.40	0.40	0.40	0.060	0.020	--	--	34
APR 11-12	--	0.80	--	0.130	0.070	--	--	--
APR 30-30	0.70	0.50	0.91	0.160	0.060	0.060	0.18	71

ARKANSAS RIVER BASIN

07247250-BLACK FORK BELOW BIG CREEK NEAR PAGE, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
OCT									
27...	1510	1028	80020	62	*33	6.9	14.5	13.5	760
DEC									
14...	1315	1028	80020	325	28	6.6	3.5	8.0	739
JAN									
12...	1030	1028	80020	52	35	6.9	8.0	6.0	755
FEB									
22...	1515	1028	80020	1940	26	6.7	13.5	10.5	735
APR									
13...	1330	1028	80020	221	42	6.7	25.0	16.0	742
29...	0930	84015	80020	102	*41	7.1	16.0	20.0	751
29...	1515	1028	80020	216	47	7.0	16.0	18.5	751
29...	2145	1028	80020	237	47	7.0	15.5	17.5	748
30...	0700	1028	80020	1890	30	6.5	11.0	15.5	746
30...	1100	1028	80020	1240	30	6.5	9.5	15.0	747
MAY									
12...	0815	1028	80020	149	29	7.1	19.5	19.0	743
JUN									
29...	1140	1028	80020	1.8	41	7.0	32.0	30.5	739
AUG									
11...	1510	1028	80020	0.72	43	7.0	34.0	29.5	744
SEP									
13...	1630	1028	80020	0.32	50	7.5	31.5	28.5	740

*SPECIFIC CONDUCTANCE, LAB ($\mu\text{s}/\text{cm}$)

ARKANSAS RIVER BASIN

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07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

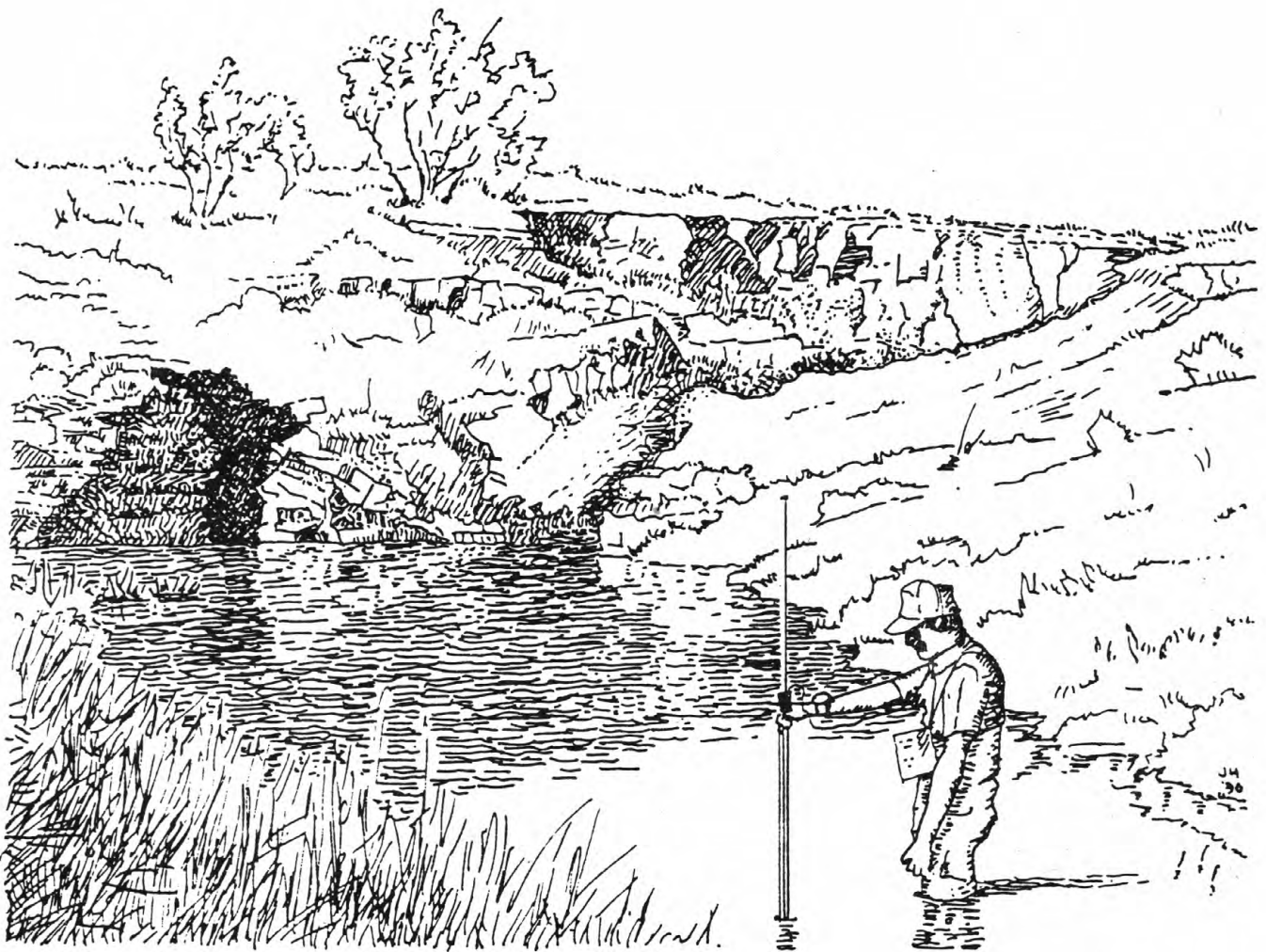
	OXYGEN, DIS- SOLVED	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
DATE	SOLVED (MG/L) (00300)	(00301)	(00453)	(00452)	(39086)	(00620)	(00630)	(00631)	(00608)
OCT									
27...	12.8	123	7	0	6	0.140	0.140	0.140	0.020
DEC									
14...	10.8	94	7	0	6	0.073	0.073	0.073	0.050
JAN									
12...	13.2	107	8	0	6	0.170	0.170	0.170	0.020
FEB									
22...	9.5	88	4	0	4	0.087	0.087	0.087	0.030
APR									
13...	9.8	102	7	0	6	0.087	0.087	0.087	0.040
29...	6.8	76	11	0	9	0.180	0.180	0.180	0.100
29...	7.6	82	10	0	8	0.190	0.190	0.190	0.300
29...	7.6	81	13	0	11	0.130	0.130	0.130	0.170
30...	8.9	91	8	0	7	0.083	0.083	0.083	0.080
30...	8.9	90	8	0	7	0.084	0.084	0.084	0.070
MAY									
12...	7.6	84	6	0	5	0.077	0.077	0.077	0.020
JUN									
29...	6.3	87	13	0	11	--	--	<0.050	0.050
AUG									
11...	7.3	99	12	0	10	--	--	<0.050	0.020
SEP									
13...	7.2	96	19	0	16	--	--	<0.050	0.020

ARKANSAS RIVER BASIN

07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	SEDI- MENT, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
OCT									
27...	0.03	--	<0.20	--	0.010	0.020	0.06	8	1.3
DEC									
14...	0.06	0.15	0.20	0.27	0.030	0.030	0.09	6	5.3
JAN									
12...	0.03	--	<0.20	--	0.010	<0.010	--	26	3.7
FEB									
22...	0.04	0.37	0.40	0.49	0.060	0.020	0.06	40	210
APR									
13...	0.05	0.36	0.40	0.49	0.030	<0.010	--	--	--
29...	0.13	0.50	0.60	0.78	0.060	0.030	0.09	6	1.7
29...	0.39	0.80	1.1	1.3	0.260	0.180	0.55	17	9.9
29...	0.22	0.53	0.70	0.83	0.190	0.100	0.31	21	13
30...	0.10	0.62	0.70	0.78	0.160	0.080	0.25	47	240
30...	0.09	0.63	0.70	0.78	0.120	0.050	0.15	29	97
MAY									
12...	0.03	--	<0.20	--	0.010	<0.010	--	59	24
JUN									
29...	0.06	0.45	0.50	0.50	0.040	<0.010	--	6	0.03
AUG									
11...	0.03	0.38	0.40	0.40	<0.010	<0.010	--	5	0.01
SEP									
13...	0.03	0.48	0.50	0.50	0.020	0.010	0.03	3	0.00



Measuring runoff into a sinkhole in the Blaine aquifer

ARKANSAS RIVER BASIN
07247345 BLACK FORK AT HODGEN, OK

LOCATION.--Lat 34°50'35", long 94°37'28", in SE 1/4 SE 1/4, sec. 01 T.4 N., R.25 E., LeFlore County, Hydrologic Unit 11110105, at county road bridge 0.4 mi east of Hodgen, OK.

DRAINAGE AREA.--179 mi².

PERIOD OF RECORD.--December 1991 to current year.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
JUL											
22...	0955	6.00	28.5	749	1028	1028	50	9.55	45	6.6	7.2
22...	0959	9.00	28.0	749	1028	1028	50	9.55	45	6.6	7.2
22...	1003	11.0	28.0	749	1028	1028	50	9.55	45	6.8	7.2
22...	1007	14.0	28.0	749	1028	1028	50	9.55	45	6.8	7.2
22...	1011	17.0	28.0	749	1028	1028	50	9.55	45	6.8	7.2
22...	1014	20.0	28.0	749	1028	1028	50	9.55	45	6.8	7.2
22...	1018	23.0	28.0	749	1028	1028	50	9.55	45	6.8	7.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
OCT									
28...	1000	1028	80020	88	33	6.7	14.5	13.0	753
DEC									
14...	1410	1028	80020	528	34	7.0	4.0	8.0	758
JAN									
11...	1330	1028	80020	48	41	7.0	7.5	5.5	767
FEB									
25...	0930	1028	80020	677	32	6.6	11.0	9.0	750
APR									
14...	1100	1028	80020	336	42	6.8	25.0	19.5	743
MAY									
19...	1115	1028	80020	94	41	7.1	23.0	23.0	753
JUN									
30...	0705	1028	80020	5.9	59	7.1	22.5	29.5	744
AUG									
10...	1420	1028	80020	3.7	42	7.1	30.0	28.0	750
SEP									
14...	1025	1028	80020	32	46	7.6	29.0	25.5	751

ARKANSAS RIVER BASIN
07247345 BLACK FORK AT HODGEN, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	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 TOTAL (MG/L AS N) (00620)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
OCT									
28...	10.2	98	6	0	5	0.140	0.140	0.140	0.020
DEC									
14...	10.8	92	6	0	5	0.100	0.100	0.100	0.230
JAN									
11...	12.2	96	10	0	8	0.076	0.076	0.076	0.030
FEB									
25...	10.6	94	5	0	4	0.096	0.096	0.096	0.010
APR									
14...	8.6	96	10	0	8	0.120	0.120	0.120	0.040
MAY									
19...	8.6	102	10	0	8	0.056	0.056	0.056	0.020
JUN									
30...	6.3	85	13	0	11	--	--	<0.050	0.050
AUG									
10...	6.8	88	15	0	12	--	--	<0.050	0.010
SEP									
14...	7.6	94	14	0	12	--	--	<0.050	<0.010
DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	SEDI- MENT, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
OCT									
28...	0.03	0.18	0.20	0.34	0.040	<0.010	--	5	1.2
DEC									
14...	0.30	--	<0.20	--	0.020	<0.010	--	5	7.1
JAN									
11...	0.04	--	<0.20	--	0.010	<0.010	--	5	0.65
FEB									
25...	0.01	--	<0.20	--	0.020	0.010	0.03	13	24
APR									
14...	0.05	0.36	0.40	0.52	0.080	0.020	0.06	13	12
MAY									
19...	0.03	--	<0.20	--	0.020	<0.010	--	--	--
JUN									
30...	0.06	0.55	0.60	0.60	0.050	<0.010	--	4	0.06
AUG									
10...	0.01	0.29	0.30	0.30	0.030	<0.010	--	4	0.04
SEP									
14...	--	0.40	0.40	0.40	0.040	<0.010	--	8	0.70

ARKANSAS RIVER BASIN

07247500 FOURCHE MALINE NEAR RED OAK, OK

LOCATION.--Lat 34°54'45", long 95°09'20", in NW 1/4 NW 1/4 sec.13, T.5 N., R.20 E., Latimer County, Hydrologic Unit 11110105, on downstream side of left abutment of county road bridge, 0.1 mi downstream from Little Fourche Maline, 5.0 mi southwest of Red Oak, and at mile 41.2.

DRAINAGE AREA.--122 mi².

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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
May 7	1500	3,920	16.51 (HWM)	No other peak discharges above base.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	20	151	27	68	800	36	762	12	1.1	2.4	3.2
2	110	16	336	23	60	1600	33	583	6.7	2.8	2.1	4.0
3	167	17	2200	21	54	1010	40	1480	4.8	2.1	2.4	2.8
4	95	20	1890	20	51	810	60	911	7.0	1.3	2.3	2.4
5	73	22	1050	20	47	587	59	634	5.0	.88	2.2	2.1
6	59	20	859	20	43	e400	60	411	3.9	.76	2.0	1.8
7	49	15	648	16	38	e300	54	1700	5.0	.93	3.8	1.7
8	43	14	539	13	35	894	46	1430	4.2	1.6	7.2	1.5
9	36	14	288	15	35	1530	41	841	3.7	1.8	5.5	1.3
10	31	17	206	13	37	1040	36	690	3.9	2.0	3.3	1.3
11	27	13	141	12	42	773	52	529	4.8	2.7	2.4	1.3
12	23	9.2	110	15	91	556	83	384	5.4	2.5	2.1	1.3
13	22	11	226	15	123	357	69	188	4.5	2.3	1.9	1.2
14	21	720	247	15	125	208	55	139	3.6	2.3	2.1	1.1
15	17	665	183	13	104	170	52	111	3.0	1.6	2.3	1.1
16	13	422	144	13	90	141	38	88	2.6	1.4	3.9	1.7
17	14	1500	120	62	78	120	31	70	2.5	1.3	2.9	1.9
18	13	842	103	81	67	108	23	59	2.5	1.2	2.4	2.0
19	98	504	92	75	63	93	20	48	2.5	1.0	2.1	1.6
20	286	318	84	51	385	84	19	37	2.6	.88	2.5	1.4
21	221	188	78	45	319	76	16	29	2.1	1.3	4.9	1.2
22	126	154	71	41	1220	70	14	22	2.0	2.4	6.1	1.1
23	87	140	62	41	1080	62	12	16	1.7	2.9	3.7	1.1
24	70	131	53	41	791	55	11	11	1.7	2.5	2.7	.80
25	59	117	47	45	557	49	22	8.8	1.7	2.5	2.2	.61
26	51	122	42	141	248	44	88	7.9	1.5	3.2	2.0	.53
27	44	134	37	229	177	61	59	6.1	1.4	4.8	1.8	.39
28	38	163	34	165	181	69	48	5.0	1.3	6.7	1.6	.32
29	34	156	31	117	---	57	455	20	1.3	3.9	1.5	.28
30	26	152	28	95	---	48	1290	60	1.3	2.9	1.3	.25
31	24	---	29	81	---	42	---	29	---	2.5	3.7	---
TOTAL	2031	6636.2	10129	1581	6209	12214	2922	11309.8	106.2	68.05	89.3	43.28
MEAN	65.5	221	327	51.0	222	394	97.4	365	3.54	2.20	2.88	1.44
MAX	286	1500	2200	229	1220	1600	1290	1700	12	6.7	7.2	4.0
MIN	13	9.2	28	12	35	42	11	5.0	1.3	.76	1.3	.25
AC-FT	4030	13160	20090	3140	12320	24230	5800	22430	211	135	177	86

c Estimated

ARKANSAS RIVER BASIN

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07247500 FOURCHE MALINE NEAR RED OAK, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1994, BY WATER YEAR (WY)

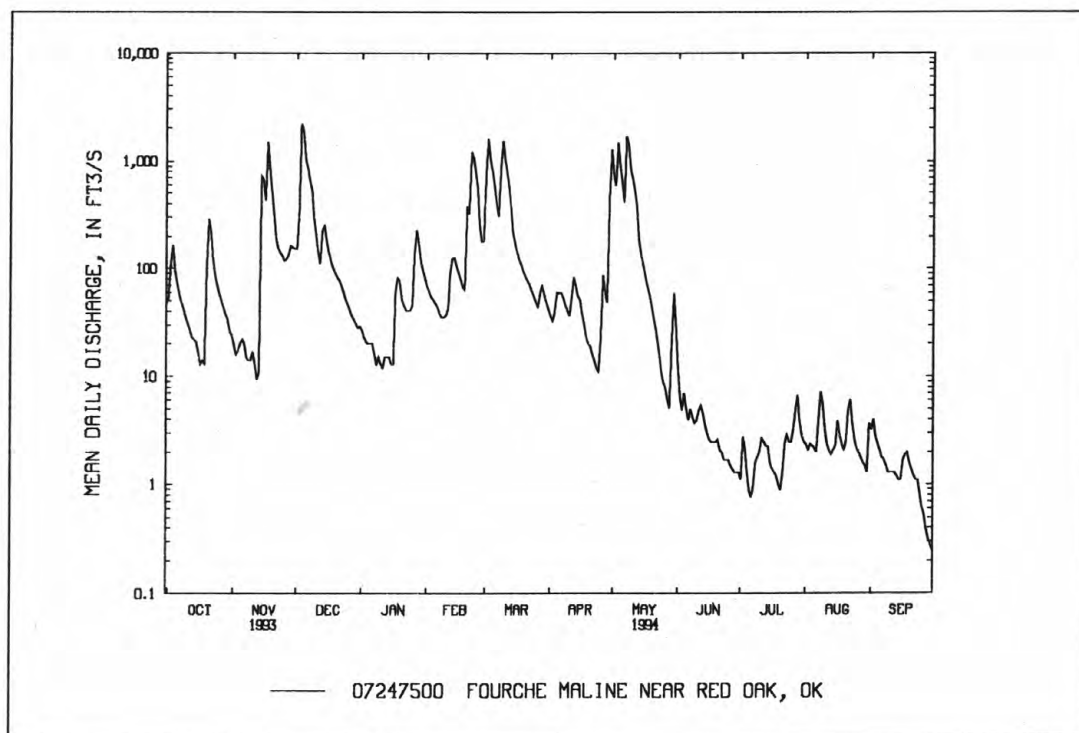
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	71.4	116	132	94.7	183	227	268	279	117	57.1	18.0	46.4
MAX	675	811	726	314	715	1100	1224	1377	695	847	189	547
(WY)	1971	1986	1972	1950	1945	1945	1957	1960	1945	1950	1964	1950
MIN	.000	.000	.000	.000	1.75	2.42	18.6	8.85	.91	.042	.000	.000
(WY)	1939	1957	1964	1964	1967	1967	1950	1988	1963	1955	1943	1939

SUMMARY STATISTICS 1993 CALENDAR YEAR 1994 WATER YEAR WATER YEARS 1939-94

ANNUAL TOTAL	67699.52	53338.83	
ANNUAL MEAN	185	146	134
HIGHEST ANNUAL MEAN			317 1945
LOWEST ANNUAL MEAN			18.3 1956
HIGHEST DAILY MEAN	3210 May 10	2200 Dec 3	18900 May 19 1960
LOWEST DAILY MEAN	.00 Aug 2	.25 Sep 30	.00 at times
ANNUAL SEVEN-DAY MINIMUM	.03 Aug 17	.45 Sep 24	.00 Oct 1 1938
INSTANTANEOUS PEAK FLOW		3920 May 7	^a 41500 May 19 1960
INSTANTANEOUS PEAK STAGE		^b 16.51 May 7	^b 24.79 May 19 1960
ANNUAL RUNOFF (AC-FT)	134300	105800	97140
10 PERCENT EXCEEDS	516	475	303
50 PERCENT EXCEEDS	67	31	16
90 PERCENT EXCEEDS	.86	1.5	.20

^aFrom rating curve extended above 25,000 ft³/s.

^bFrom floodmark.



ARKANSAS RIVER BASIN
07247500 FOURCHE MALINE NEAR RED OAK, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952, 1954, 1956-60, 1978, 1979, December 1991 to current year.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
JUL											
20...	1142	2.00	28.0	745	1028	1028	1.5	2.06	243	4.2	7.4
20...	1144	3.00	28.0	745	1028	1028	1.5	2.06	243	3.9	7.4
20...	1147	4.00	28.0	745	1028	1028	1.5	2.06	242	3.9	7.4
20...	1151	5.00	28.0	745	1028	1028	1.5	2.06	242	3.8	7.4
20...	1153	6.00	28.0	745	1028	1028	1.5	2.06	242	3.8	7.4
20...	1156	7.00	28.0	745	1028	1028	1.5	2.06	242	3.9	7.4
20...	1200	8.00	28.0	745	1028	1028	1.5	2.06	242	3.9	7.4

COMPOSITE SAMPLES COLLECTED FROM AUTOMATIC SAMPLERS DURING STORM
EVENTS BY THE OKLAHOMA CONSERVATION COMMISSION
WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME START	TIME END	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL NITRATE (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)
NOV										
14-14	0651	1751	84015	80020	*86	**6.9	--	--	--	--
DEC										
02-03	0930	0830	84015	80020	*112	6.6	--	--	--	--
MAR										
08-09	1300	1200	84015	80020	69	6.8	--	--	--	--
APR										
29-30	0838	0830	84015	80020	85	6.9	1.5	0.180	0.180	0.80

*SPECIFIC CONDUCTANCE, LAB (µs/cm)

**pH, LAB, (STANDARD UNITS)

ARKANSAS RIVER BASIN
07247500 FOURCHE MALINE NEAR RED OAK, OK--Continued

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COMPOSITE SAMPLES COLLECTED FROM AUTOMATIC SAMPLERS DURING STORM EVENTS
BY THE OKLAHOMA CONSERVATION COMMISSION
WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)
NOV 14-14	--	--	--	--	--	--	0.70	--
DEC 02-03	--	--	--	--	--	--	0.70	--
MAR 08-09	--	--	--	--	--	--	0.70	--
APR 29-30	0.010	0.03	0.190	0.190	0.140	0.18	1.3	1.2
DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	SEDI- MENT, SUS- PENDEED (MG/L) (80154)
NOV 14-14	0.70	0.40	0.70	0.120	0.040	--	--	94
DEC 02-03	0.70	0.40	0.70	0.140	0.040	--	--	142
MAR 08-09	0.70	0.40	0.70	0.110	0.020	--	--	123
APR 29-30	1.4	1.3	1.6	0.210	0.070	0.030	0.09	185

ARKANSAS RIVER BASIN
07247500 FOURCHE MALINE NEAR RED OAK, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT										
20...	1800	84015	80020	324	*132	**7.6	--	--	--	--
26...	1147	1028	80020	52	132	7.4	15.5	13.5	755	8.2
DEC										
13...	1300	1028	80020	246	103	7.7	12.5	9.0	731	9.9
JAN										
10...	1400	1028	80020	13	179	7.2	11.0	4.0	762	9.6
26...	1315	1028	80020	141	185	6.7	17.5	12.0	742	9.3
26...	1425	1028	80020	164	169	7.1	17.5	12.5	742	8.4
26...	1800	1028	80020	252	*161	7.0	15.0	12.5	742	8.0
27...	0845	1028	80020	243	*90	6.5	4.0	10.5	742	8.3
27...	1145	1028	80020	236	136	6.8	17.5	10.0	742	8.6
FEB										
24...	1420	1028	80020	771	67	7.1	7.5	9.5	754	10.5
APR										
12...	1115	1028	80020	76	152	7.0	14.5	16.0	749	6.5
MAY										
18...	1130	1028	80020	61	103	7.2	27.5	23.0	753	5.5
JUN										
29...	1410	1028	80020	103	230	7.4	37.0	30.0	738	3.0
AUG										
10...	0740	1028	80020	2.7	229	7.5	22.0	24.5	752	3.6
SEP										
12...	1210	1028	80020	0.93	262	7.7	28.0	23.5	750	4.1

*SPECIFIC CONDUCTANCE, LAB ($\mu\text{s}/\text{cm}$)

**pH, LAB, (STANDARD UNITS)

ARKANSAS RIVER BASIN
07247500 FOURCHE MALINE NEAR RED OAK, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	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 TOTAL (MG/L AS N) (00620)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	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)
OCT										
20...	--	--	--	--	--	--	--	--	--	0.50
26...	80	35	0	29	0.170	0.170	0.170	0.060	0.08	0.44
DEC										
13...	89	24	0	20	0.120	0.120	0.120	0.030	0.04	0.57
JAN										
10...	73	41	0	33	0.069	0.069	0.069	0.060	0.08	0.34
26...	88	39	0	32	0.160	0.160	0.160	0.070	0.09	0.73
26...	81	27	0	22	0.140	0.140	0.140	0.060	0.08	1.0
26...	77	27	0	22	0.085	0.085	0.085	0.050	0.06	0.95
27...	76	30	0	25	0.110	0.110	0.110	0.060	0.08	0.74
27...	79	27	0	22	0.098	0.098	0.098	0.050	0.06	0.65
FEB										
24...	93	14	0	11	0.088	0.088	0.088	0.040	0.05	0.66
APR										
12...	67	37	0	30	0.170	0.170	0.170	0.050	0.06	0.55
MAY										
18...	65	28	0	23	0.210	0.210	0.210	0.050	0.06	0.35
JUN										
29...	41	70	0	58	--	--	<0.050	0.040	0.05	0.56
AUG										
10...	44	75	0	62	0.150	0.150	0.150	0.120	0.15	0.68
SEP										
12...	49	112	0	92	--	--	<0.050	0.040	0.05	0.76

ARKANSAS RIVER BASIN
07247500 FOURCHE MALINE NEAR RED OAK, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
OCT									
20...	0.50	0.40	0.50	0.050	0.020	--	--	--	--
26...	0.50	--	0.67	0.060	--	0.020	0.06	17	2.4
DEC									
13...	0.60	--	0.72	0.100	--	0.010	0.03	46	31
JAN									
10...	0.40	--	0.47	0.050	--	<0.010	--	82	2.9
26...	0.80	--	0.96	0.110	--	<0.010	--	191	73
26...	1.1	--	1.2	0.210	--	<0.010	--	264	117
26...	1.0	--	1.1	0.190	--	<0.010	--	166	113
27...	0.80	--	0.91	0.140	--	<0.010	--	86	56
27...	0.70	--	0.80	0.100	--	<0.010	--	75	48
FEB									
24...	0.70	--	0.79	0.140	--	0.020	0.06	120	250
APR									
12...	0.60	--	0.77	0.100	--	0.030	0.09	44	9.0
MAY									
18...	0.40	--	0.61	0.060	--	0.030	0.09	30	4.9
JUN									
29...	0.60	--	0.60	0.050	--	<0.010	--	22	6.1
AUG									
10...	0.80	--	0.95	0.110	--	0.040	0.12	53	0.39
SEP									
12...	0.80	--	0.80	0.070	--	0.020	0.06	22	0.05



ARKANSAS RIVER BASIN
07247650 FOURCHE MALINE NEAR LEFLORE, OK

LOCATION.--Lat 34°55'11", long 94°56'43", in NE 1/4 SE 1/4, sec. 11 T.5 N., R.22 E., LeFlore County, Hydrologic Unit 11110105, at county road bridge 1.6 mi east of Leflore, OK.

DRAINAGE AREA.--270 mi².

PERIOD OF RECORD.--December 1991 to current year.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
JUL											
21...	1215	3.00	27.5	745	1028	1028	2.0	8.57	188	3.8	7.5
21...	1218	5.00	27.5	745	1028	1028	2.0	8.57	188	3.9	7.5
21...	1221	7.00	27.5	745	1028	1028	2.0	8.57	189	3.9	7.5
21...	1224	9.00	27.5	745	1028	1028	2.0	8.57	189	4.0	7.5
21...	1227	11.0	27.5	745	1028	1028	2.0	8.57	188	4.0	7.5
21...	1230	13.0	27.5	745	1028	1028	2.0	8.57	189	4.0	7.5
21...	1234	15.0	27.5	745	1028	1028	2.0	8.57	188	4.2	7.5
21...	1238	17.0	27.5	745	1028	1028	2.0	8.57	189	4.0	7.5
21...	1242	19.0	27.5	745	1028	1028	2.0	8.57	188	4.0	7.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
OCT									
26...	1150	1028	80020	57	119	7.4	18.5	14.5	755
DEC									
13...	1415	1028	80020	745	78	7.2	10.0	10.0	745
JAN									
11...	0845	1028	80020	28	131	7.4	7.0	5.0	767
FEB									
24...	1155	1028	80020	2480	59	7.0	9.0	8.0	752
APR									
12...	1530	1028	80020	365	85	7.2	21.0	19.0	748
MAY									
18...	1445	1028	80020	107	90	7.2	27.5	25.5	753
JUN									
30...	1105	1028	80020	3.0	165	7.4	31.0	29.5	747
AUG									
10...	1000	1028	80020	9.7	219	7.6	25.0	24.5	754
SEP									
14...	1210	1028	80020	2.4	104	7.1	31.0	24.5	745

ARKANSAS RIVER BASIN
07247650 FOURCHE MALINE NEAR LEFLORE, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	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 TOTAL (MG/L AS N) (00620)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
OCT 26...	8.2	81	36	0	29	0.130	0.130	0.130	0.050
DEC 13...	9.5	86	26	0	22	0.160	0.160	0.160	0.050
JAN 11...	11.8	91	32	0	26	0.099	0.099	0.099	0.050
FEB 24...	9.6	82	11	0	9	0.071	0.071	0.071	0.040
APR 12...	7.7	85	18	0	15	0.096	0.096	0.096	0.030
MAY 18...	5.8	72	30	0	24	0.220	0.220	0.220	0.040
JUN 30...	3.7	50	47	0	39	--	--	<0.050	0.040
AUG 10...	5.2	63	92	0	75	--	--	<0.050	0.040
SEP 14...	4.4	54	37	0	30	--	--	<0.050	0.040
DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHOSOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHOSOLVED (MG/L AS PO4) (00660)	SEDI- MENT, DIS- SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
OCT 26...	0.06	0.45	0.50	0.63	0.050	0.010	0.03	13	2.0
DEC 13...	0.06	0.55	0.60	0.76	0.100	0.030	0.09	106	213
JAN 11...	0.06	0.35	0.40	0.50	0.030	<0.010	--	25	1.9
FEB 24...	0.05	0.56	0.60	0.67	0.100	0.020	0.06	104	696
APR 12...	0.04	0.57	0.60	0.70	0.090	0.020	0.06	60	59
MAY 18...	0.05	0.36	0.40	0.62	0.050	0.030	0.09	27	7.8
JUN 30...	0.05	0.46	0.50	0.50	0.040	<0.010	--	14	0.11
AUG 10...	0.05	0.46	0.50	0.50	0.040	0.050	0.15	16	0.39
SEP 14...	0.05	0.56	0.60	0.60	0.070	0.040	0.12	19	0.12

ARKANSAS RIVER BASIN
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 mi².

PERIOD OF RECORD.--December 1991 to current year.

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
JUL											
20...	1503	3.00	33.0	740	1028	1028	1.6	21.60	55	6.0	7.8
20...	1506	4.00	33.0	740	1028	1028	1.6	21.60	55	6.4	7.8
20...	1509	5.00	33.0	740	1028	1028	1.6	21.60	55	6.5	7.8
20...	1512	6.00	33.0	740	1028	1028	1.6	21.60	55	6.8	7.8
20...	1515	7.00	33.0	740	1028	1028	1.6	21.60	55	6.5	7.8
20...	1518	8.00	32.5	740	1028	1028	1.6	21.60	55	6.6	7.7
20...	1522	9.00	33.0	740	1028	1028	1.6	21.60	55	6.6	7.8
20...	1525	10.0	33.0	740	1028	1028	1.6	21.60	55	6.6	7.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
OCT									
28...	0745	1028	80020	14	51	6.9	3.5	11.0	751
DEC									
15...	0840	1028	80020	75	49	7.5	4.5	8.0	762
JAN									
11...	1030	1028	80020	10	45	6.9	7.5	5.5	767
FEB									
24...	0755	1028	80020	219	36	6.9	-2.0	6.0	754
APR									
13...	1615	1028	80020	132	45	6.8	29.5	17.0	742
MAY									
19...	0900	1028	80020	28	41	7.1	20.0	20.0	753
JUN									
30...	0905	1028	80020	1.2	58	7.1	28.0	29.5	743
AUG									
10...	1140	1028	80020	0.85	56	7.3	27.0	28.0	748
SEP									
12...	1455	1028	80020	0.66	59	7.6	30.0	28.5	746

ARKANSAS RIVER BASIN
07247800 HOLSON CREEK AT SUMMERFIELD, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	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 TOTAL (MG/L AS N) (00620)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
OCT 28...	11.9	109	11	0	9	0.050	0.050	0.050	0.020
DEC 15...	10.6	89	7	0	5	--	--	<0.050	0.020
JAN 11...	12.6	99	10	0	8	0.059	0.059	0.059	0.020
FEB 24...	11.2	90	11	0	9	--	--	<0.050	0.020
APR 13...	10.1	107	7	0	6	--	--	<0.050	0.010
MAY 19...	7.6	84	9	0	7	--	--	<0.050	<0.010
JUN 30...	4.6	62	16	0	13	--	--	<0.050	0.030
AUG 10...	7.2	94	22	0	18	--	--	<0.050	0.010
SEP 12...	7.5	99	22	0	18	--	--	<0.050	0.020
DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
OCT 28...	0.03	--	<0.20	--	0.090	<0.010	--	4	0.16
DEC 15...	0.03	0.18	0.20	0.20	0.020	<0.010	--	2	0.40
JAN 11...	0.03	--	<0.20	--	0.010	<0.010	--	3	0.08
FEB 24...	0.03	--	<0.20	--	0.010	<0.010	--	4	2.4
APR 13...	0.01	--	<0.20	--	0.030	<0.010	--	11	3.9
MAY 19...	--	--	<0.20	--	<0.010	<0.010	--	5	0.37
JUN 30...	0.04	0.27	0.30	0.30	<0.010	<0.010	--	2	0.01
AUG 10...	0.01	0.29	0.30	0.30	0.040	<0.010	--	4	0.01
SEP 12...	0.03	0.38	0.40	0.40	0.030	0.010	0.03	3	0.01

ARKANSAS RIVER BASIN

07249413 POTEAU RIVER NEAR PANAMA, OK

LOCATION.--Lat 35°09'56", long 94°39'10", in SE 1/4, SE 1/4 sec.15, T.8 N., R.25 E., LeFlore County, Hydrologic Unit 11110105, on left pier of county bridge, 1.5 mi east of Panama, OK, .8 mi downstream from James Fork Creek, and at mile 26.4.

DRAINAGE AREA.--1,767 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1989 to December 1990, May 1992 to current year.

GAGE.--Water-stage recorder. Datum of gage is 387.961 ft above sea level. Prior to December 1990, at site .4 mi upstream at datum 5.00 ft higher.

REMARKS.--Records poor. 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 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1000	231	1420	335	5530	8670	894	12000	373	71	130	60
2	1070	221	1680	308	5640	11700	609	6460	344	120	71	89
3	1170	176	6320	306	5500	8920	598	11800	407	102	46	136
4	842	208	12200	1850	4100	5800	645	13200	340	89	32	118
5	489	319	10000	2380	1740	6760	566	8110	232	77	28	106
6	274	202	3500	2280	1190	7510	562	5950	135	72	26	106
7	191	101	3350	2130	1190	7430	562	8000	251	124	25	104
8	423	80	4860	784	2050	8630	1280	11700	352	258	26	100
9	349	72	6380	242	1350	13600	485	10400	235	102	25	84
10	188	68	7210	201	972	13100	238	7300	215	54	24	79
11	181	66	7130	213	1160	9550	243	7200	356	49	21	78
12	176	66	6930	626	1340	7850	2500	8650	207	51	20	75
13	171	86	7990	382	1640	7740	2450	10500	133	66	20	72
14	166	1490	9060	211	1440	7850	2030	10600	102	59	21	70
15	131	1950	8160	185	2160	7720	1970	9430	85	81	19	69
16	91	3090	7310	183	2290	7390	2260	8380	132	106	18	70
17	79	7630	6760	3030	1920	7050	2230	7710	156	65	18	64
18	64	5830	5550	2900	1410	6980	2200	7210	151	52	16	39
19	215	4380	4560	2600	1180	7010	2800	6770	151	53	15	24
20	1590	3660	4340	3460	3760	6820	2910	5430	149	58	19	17
21	2480	3150	4080	3640	4270	6570	2520	3460	139	48	28	14
22	2800	3010	2960	2960	6320	6310	2440	2970	104	40	30	13
23	3240	e3000	2050	2540	10700	5260	1940	2890	97	34	34	13
24	3260	e2900	1100	2570	7550	3860	1780	2760	96	31	30	17
25	3170	e1500	618	2550	4470	2880	1370	1630	90	31	25	20
26	3030	e471	580	4340	4590	1500	1160	782	89	36	22	19
27	1640	e340	552	8600	4820	1250	1050	685	82	38	20	18
28	761	e320	1010	6240	4710	1180	677	488	73	37	18	16
29	630	e330	1100	4890	---	1050	2440	418	71	36	17	15
30	364	1440	906	5170	---	959	11000	448	64	36	16	15
31	250	---	498	5330	---	920	---	413	---	128	19	---
TOTAL	30485	46387	140164	73436	94992	199819	54409	193744	5411	2204	879	1720
MEAN	983	1546	4521	2369	3393	6446	1814	6250	180	71.1	28.4	57.3
MAX	3260	7630	12200	8600	10700	13600	11000	13200	407	258	130	136
MIN	64	66	498	183	972	920	238	413	64	31	15	13
AC-FT	60470	92010	278000	145700	188400	396300	107900	384300	10730	4370	1740	3410

c Estimated

ARKANSAS RIVER BASIN

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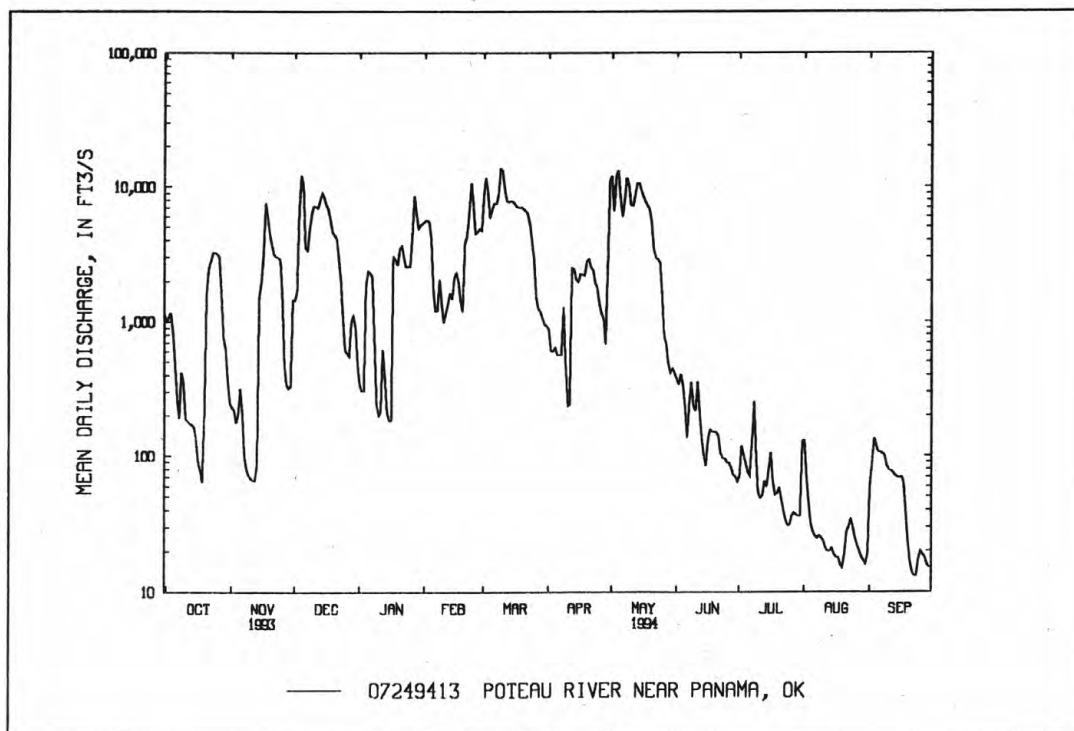
07249413 POTEAU RIVER NEAR PANAMA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	616	895	3151	3963	4790	4683	4893	7520	3422	342	330	987
MAX	983	1546	6344	6907	7467	6446	8000	16670	5531	630	818	2678
(WY)	1994	1994	1993	1993	1990	1994	1990	1990	1990	1992	1992	1992
MIN	15.0	11.5	10.4	2369	3393	2418	1814	1664	180	71.1	28.4	57.3
(WY)	1990	1990	1990	1994	1994	1993	1994	1992	1994	1994	1994	1994

SUMMARY STATISTICS	1993 CALENDAR YEAR	1994 WATER YEAR	WATER YEARS 1989-94
ANNUAL TOTAL	1043753	843650	
ANNUAL MEAN	2860	2311	3068
HIGHEST ANNUAL MEAN		3907	1990
LOWEST ANNUAL MEAN		2311	1994
HIGHEST DAILY MEAN	15900	May 11 13600	Mar 9 67000 May 3 1990
LOWEST DAILY MEAN	37	Sep 1 13	Sep 22,23 6.8 Dec 4 1989
ANNUAL SEVEN-DAY MINIMUM	41	Aug 31 16	Sep 20 7.4 Dec 2 1989
INSTANTANEOUS PEAK FLOW		14400	Mar 9 74600 May 3 1990
INSTANTANEOUS PEAK STAGE		32.58	Mar 9 ^a 46.59 May 3 1990
ANNUAL RUNOFF (AC-FT)	2070000	1673000	2222000
10 PERCENT EXCEEDS	7110	7410	7260
50 PERCENT EXCEEDS	1790	626	1080
90 PERCENT EXCEEDS	55	29	24

^aAt present datum.



ARKANSAS RIVER BASIN
07249413 POTEAU RIVER NEAR PANAMA, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1989 to January 1991, October 1993 to September 1994.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1993 to September 1994.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum 36.5°C, June 29, 1994; minimum 1.5°C, Jan. 18, 19, 1994.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum 36.5°C, June 29; minimum 1.5°C, Jan. 18, 19.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
JUN											
13...	1520	5.00	29.0	755	1028	1028	130	6.47	186	7.8	7.1
13...	1522	10.0	28.5	755	1028	1028	130	6.47	209	7.8	7.2
13...	1524	15.0	28.0	755	1028	1028	130	6.47	207	7.6	7.2
13...	1526	20.0	28.0	755	1028	1028	130	6.47	203	7.8	7.3
13...	1528	25.0	28.0	755	1028	1028	130	6.47	177	7.8	7.3
13...	1530	30.0	28.0	755	1028	1028	130	6.47	170	7.8	7.3
13...	1532	35.0	28.0	755	1028	1028	130	6.47	150	7.8	7.3
13...	1534	40.0	28.5	755	1028	1028	130	6.47	150	8.0	7.3
13...	1536	45.0	29.0	755	1028	1028	130	6.47	152	7.8	7.3
13...	1538	50.0	29.0	755	1028	1028	130	6.47	150	7.4	7.3

ARKANSAS RIVER BASIN
07249413 POTEAU RIVER NEAR PANAMA, OK--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT										
18...	1700	1028	80020	60	178	6.8	21.0	19.5	752	7.0
NOV										
03...	1300	1028	80020	171	126	6.9	15.5	10.5	762	11.7
DEC										
02...	1000	1028	80020	1170	99	6.6	13.0	10.5	760	10.9
JAN										
11...	1130	1028	80020	194	126	6.8	7.5	5.5	760	12.7
FEB										
24...	0900	1028	80020	8300	81	7.0	3.0	8.5	758	10.6
MAR										
30...	1115	1028	80020	959	83	7.1	13.0	14.0	765	10.8
APR										
12...	1200	1028	80020	2930	153	7.0	17.5	17.0	751	6.6
MAY										
17...	1130	1028	80020	8450	55	6.8	26.0	19.5	755	8.3
JUN										
13...	1500	1028	80020	130	196	7.5	33.5	28.0	755	7.6
JUL										
06...	1050	1028	80020	72	157	7.6	33.0	31.0	755	6.2
AUG										
09...	1500	1028	80020	25	219	7.7	33.5	30.5	760	7.6
SEP										
01...	1030	1028	80020	62	307	7.7	26.5	27.0	760	5.0

ARKANSAS RIVER BASIN
07249413 POTEAU RIVER NEAR PANAMA, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	CHLO- RINE, TOTAL RESI- DUAL (MG/L) (50060)	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)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
OCT 18...	78	0.08	48	0	40	34	110	6	1.9
NOV 03...	105	<0.02	32	0	26	23	83	3	<0.10
DEC 02...	98	0.06	32	0	26	17	66	4	0.30
JAN 11...	102	<0.02	50	0	41	24	81	4	<0.10
FEB 24...	91	0.06	17	0	14	14	--	2	0.10
MAR 30...	104	0.06	18	0	14	15	64	1	<0.10
APR 12...	69	0.10	35	0	29	27	89	6	<0.10
MAY 17...	91	0.08	12	0	10	7.8	38	4	<0.10
JUN 13...	99	0.10	55	0	45	36	120	2	<0.10
JUL 06...	84	0.12	52	0	42	17	100	1	<0.10
AUG 09...	102	0.20	65	0	54	33	134	2	<0.10
SEP 01...	63	0.16	76	0	62	51	167	2	<0.10

ARKANSAS RIVER BASIN
07249413 POTEAU RIVER NEAR PANAMA, OK--Continued

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WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	23.0	22.0	22.5	10.5	9.5	10.0	---	---	---	6.0	5.0	5.5
2	23.0	20.5	22.5	10.5	10.0	10.0	9.5	8.0	8.5	6.0	5.5	5.5
3	20.5	19.5	20.0	11.5	10.5	10.5	11.5	9.5	10.5	5.5	5.0	5.5
4	20.5	19.5	20.0	12.5	11.0	11.5	12.0	11.5	11.5	5.5	5.0	5.5
5	21.0	19.5	20.5	12.0	11.5	12.0	11.5	10.5	11.0	5.5	5.0	5.5
6	21.5	20.0	20.5	11.5	9.5	10.5	10.5	9.0	9.5	6.0	5.5	6.0
7	21.5	20.5	21.0	9.5	8.0	9.0	9.5	8.5	9.0	6.0	5.0	6.0
8	22.5	21.0	21.5	9.0	7.5	8.5	10.0	9.5	9.5	5.0	4.5	5.0
9	22.0	19.5	21.0	10.0	8.5	9.0	10.5	10.0	10.5	4.5	4.0	4.0
10	19.5	18.5	19.0	10.5	8.5	9.5	11.0	10.5	10.5	5.0	4.5	4.5
11	18.5	18.0	18.5	11.0	9.0	10.0	10.5	10.5	10.5	5.5	4.5	5.0
12	18.5	17.5	18.0	11.5	10.5	11.0	10.5	10.0	10.0	6.5	5.5	6.0
13	19.0	18.5	19.0	13.5	11.5	12.5	10.0	9.5	10.0	6.0	5.5	6.0
14	19.0	18.5	19.0	14.0	13.0	14.0	9.5	9.0	9.5	6.0	5.5	5.5
15	19.5	18.5	19.0	13.5	12.5	13.5	9.0	8.5	9.0	5.5	4.5	5.0
16	19.5	19.0	19.5	12.5	11.0	12.0	8.5	8.5	8.5	4.5	3.0	4.0
17	20.0	18.5	19.5	11.0	11.0	11.0	8.5	8.5	8.5	3.0	2.0	2.5
18	19.5	19.0	19.5	11.5	11.0	11.5	8.5	8.5	8.5	2.0	1.5	2.0
19	19.5	19.0	19.0	12.0	11.5	12.0	8.5	8.0	8.5	3.0	1.5	2.0
20	19.0	18.5	19.0	12.0	11.5	11.5	8.5	8.0	8.5	3.5	3.0	3.5
21	18.5	18.0	18.5	11.5	11.0	11.0	8.0	4.0	8.5	3.5	3.0	3.0
22	18.5	18.0	18.0	---	---	---	7.5	4.0	7.0	3.5	3.0	3.5
23	18.0	18.0	18.0	---	---	---	7.5	6.5	6.5	4.0	3.5	3.5
24	18.0	17.5	17.5	---	---	---	6.5	5.0	5.5	4.5	4.0	4.5
25	17.5	17.0	17.5	---	---	---	5.5	5.0	5.0	6.0	4.5	5.5
26	17.5	17.0	17.0	---	---	---	6.0	4.5	5.5	10.5	6.0	8.0
27	17.0	16.0	16.5	---	---	---	7.0	6.0	6.5	11.0	9.5	10.5
28	16.0	15.0	15.5	---	---	---	7.0	6.0	6.5	9.5	7.0	8.0
29	15.5	14.5	15.0	---	---	---	6.0	6.0	6.0	8.0	7.0	8.0
30	14.5	11.5	13.0	---	---	---	6.0	5.0	5.5	8.0	7.5	7.5
31	11.5	10.5	11.0	---	---	---	5.5	4.5	5.0	7.5	6.5	7.0
MONTH	23.0	10.5	18.6	---	---	---	---	---	---	11.0	1.5	5.3

ARKANSAS RIVER BASIN
07249413 POTEAU RIVER NEAR PANAMA, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

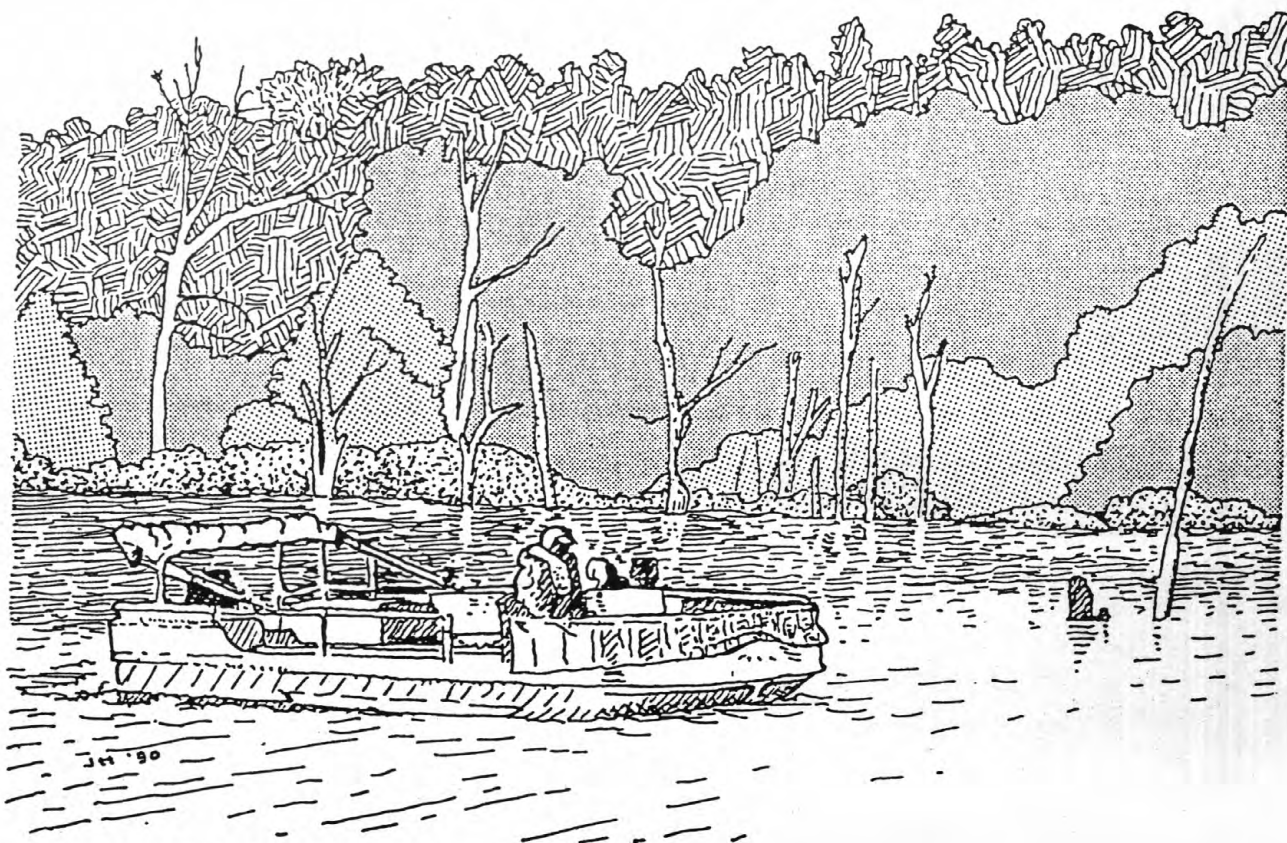
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	6.5	6.0	6.5	8.0	7.5	7.5	15.0	13.5	14.5	15.0	14.0	14.5
2	6.0	5.5	6.0	7.5	7.0	7.5	16.5	14.5	15.5	15.0	13.5	14.5
3	6.0	5.0	5.5	8.5	7.0	7.5	16.5	15.0	16.0	13.5	12.0	12.5
4	6.0	5.5	6.0	9.5	8.5	9.0	16.5	15.0	16.0	15.0	12.0	13.5
5	7.0	6.0	6.5	10.0	9.5	9.5	16.5	15.5	16.0	17.0	15.0	16.0
6	7.5	6.5	7.0	10.5	9.5	10.0	15.5	13.5	14.5	17.5	16.5	17.0
7	7.5	7.0	7.5	10.5	9.5	10.0	14.5	12.5	13.5	18.5	17.0	18.0
8	8.0	7.5	7.5	10.5	8.5	10.0	14.5	13.0	13.5	18.5	18.0	18.0
9	8.0	5.0	6.5	8.5	5.0	7.0	14.0	13.0	13.5	18.0	17.0	17.5
10	5.0	4.5	5.0	7.0	5.0	6.0	16.5	14.0	15.0	18.0	17.5	17.5
11	5.0	4.5	4.5	9.5	7.0	8.0	18.0	16.5	17.5	18.0	16.5	17.0
12	4.5	4.5	4.5	10.0	9.0	9.5	18.5	16.5	17.5	19.0	17.0	18.0
13	5.0	4.5	4.5	10.0	9.5	10.0	17.5	16.0	16.5	19.5	18.5	19.0
14	5.5	4.5	4.5	10.5	10.0	10.0	18.5	17.0	17.5	20.0	18.5	19.5
15	6.5	5.5	6.0	11.5	10.5	11.0	19.5	18.5	19.0	22.0	20.0	21.0
16	7.5	6.0	6.5	11.5	11.0	11.0	19.5	18.5	19.0	22.0	21.0	21.0
17	8.0	6.5	7.5	11.5	11.0	11.0	19.5	18.5	19.0	21.0	19.0	20.0
18	9.0	7.5	8.0	12.5	11.5	12.0	20.5	19.0	19.5	20.5	19.0	19.5
19	10.0	9.0	9.5	13.5	12.0	12.5	21.5	19.0	20.5	21.0	20.5	20.5
20	12.0	10.0	11.5	14.5	13.0	13.5	22.0	20.5	21.5	22.0	21.0	21.5
21	12.0	11.5	12.0	15.0	14.5	14.5	22.5	21.0	21.5	22.0	21.5	22.0
22	11.5	10.5	11.0	15.0	14.5	15.0	22.5	21.0	21.5	22.5	22.0	22.5
23	10.5	9.5	10.0	16.0	15.0	15.5	22.5	21.5	22.0	23.0	22.5	22.5
24	9.5	8.5	8.5	16.0	16.0	16.0	23.5	21.5	22.5	25.0	23.0	24.0
25	9.0	8.0	8.5	16.0	15.0	15.5	23.5	22.5	23.0	26.0	24.5	25.0
26	9.0	8.5	8.5	15.5	15.0	15.5	23.0	21.5	22.5	25.5	24.0	24.5
27	8.5	8.0	8.5	15.0	13.5	14.5	22.5	22.0	22.5	25.0	23.5	24.5
28	8.5	8.0	8.5	14.0	13.0	13.5	22.5	21.5	22.0	24.5	23.0	23.5
29	---	---	---	14.5	13.0	13.5	22.0	16.5	19.5	24.0	22.5	23.0
30	---	---	---	14.0	13.0	13.5	17.0	15.0	15.5	24.0	22.0	23.0
31	---	---	---	14.5	13.0	13.5	---	---	---	25.5	23.5	24.5
MONTH	12.0	4.5	7.4	16.0	5.0	11.4	23.5	12.5	18.3	26.0	12.0	19.8

ARKANSAS RIVER BASIN
07249413 POTEAU RIVER NEAR PANAMA, OK--Continued

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WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	26.5	24.5	25.5	35.0	30.0	32.0	27.5	24.5	26.0	28.5	27.0	28.0
2	27.5	25.0	26.5	33.5	30.0	31.5	28.0	26.0	27.0	27.0	26.0	26.5
3	28.0	26.0	27.0	34.5	30.0	32.0	31.0	26.0	28.0	26.5	25.0	26.0
4	27.5	25.5	26.0	35.0	31.0	33.0	31.5	27.5	29.0	27.0	25.5	26.5
5	26.5	25.0	25.5	35.5	31.0	33.0	30.5	27.5	28.5	28.0	26.5	27.0
6	28.5	26.0	27.0	35.0	31.0	32.5	30.5	26.5	28.5	28.0	27.0	27.5
7	29.5	27.0	28.0	32.5	30.0	31.5	28.5	26.5	27.5	27.5	26.5	27.0
8	29.0	28.0	28.5	31.0	29.0	29.5	30.5	25.0	27.5	27.5	26.5	27.0
9	28.0	26.0	27.0	29.0	27.5	28.5	32.0	26.5	28.5	27.5	26.0	27.0
10	26.0	24.0	25.0	30.5	26.5	28.5	32.5	26.5	29.5	27.5	26.0	26.5
11	25.5	24.0	24.5	27.5	26.5	27.0	34.0	27.5	30.5	28.0	25.5	26.5
12	27.5	25.0	26.0	29.0	25.5	27.5	33.5	28.0	30.5	28.5	26.0	27.0
13	29.0	27.0	28.0	28.0	26.5	27.5	33.5	28.0	30.5	29.0	26.5	27.5
14	30.0	27.5	28.5	29.5	26.5	27.5	33.0	28.0	30.0	29.0	26.5	27.5
15	29.5	28.0	28.5	28.0	26.5	27.5	29.5	27.0	28.0	29.5	27.0	28.0
16	30.5	28.0	29.0	29.0	26.5	27.5	32.0	25.5	28.0	29.0	27.0	27.5
17	31.0	29.0	30.0	30.5	27.0	28.5	31.5	25.0	28.0	28.0	25.5	27.0
18	31.5	29.0	30.5	32.5	28.0	29.5	32.5	25.0	28.5	28.0	24.0	25.5
19	32.0	30.0	31.0	33.0	29.0	30.5	31.5	26.5	28.5	27.5	23.0	25.0
20	32.0	30.0	31.0	32.0	29.5	30.5	27.0	25.5	26.0	27.5	22.0	25.0
21	32.5	30.0	31.0	30.5	29.0	30.0	29.0	24.0	26.5	28.0	21.5	24.5
22	33.5	29.5	31.5	33.0	28.0	30.0	29.0	23.5	26.0	24.5	20.5	22.0
23	32.5	29.0	30.5	34.0	28.5	31.0	27.5	24.0	26.0	20.5	18.5	19.0
24	33.0	28.0	30.0	34.0	29.5	31.5	---	---	---	18.5	17.0	18.0
25	33.5	27.5	30.0	32.0	29.0	30.0	---	---	---	18.5	16.0	17.0
26	35.0	29.0	31.5	30.0	28.0	29.0	30.5	26.5	28.0	20.0	15.5	17.5
27	35.0	29.5	32.0	30.0	26.0	28.0	31.5	27.0	29.0	22.0	15.5	18.5
28	35.5	30.5	32.5	29.5	25.0	27.0	33.0	27.0	30.0	23.5	17.5	20.5
29	36.5	31.0	33.0	29.5	24.5	26.5	33.5	27.5	30.0	26.0	18.0	21.5
30	36.0	31.0	33.0	29.0	25.0	27.0	32.5	27.5	30.0	25.5	20.0	22.5
31	---	---	---	26.5	25.0	25.5	31.0	28.0	29.5	---	---	---
MONTH	36.5	24.0	28.9	35.5	24.5	29.4	---	---	---	29.5	15.5	24.5



Sampling on Eufaula Lake

DISCHARGE AT PARTIAL-RECORD STATIONS
AND MISCELLANEOUS SITES

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As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Crest-stage partial record stations

The following table contains peaks for a crest-stage station. A crest-stage gage is a device that will register the peak stage occurring between inspections of the gage. The date of the peak is not always certain, but is determined by nearby continuous-record stations, weather records or local inquiry. On this particular station, peaks through July were in an earth channel. Peaks from October 1994 will be from a concrete-lined channel.

Station number	Station name	Location	Drainage Area (mi ²)	Period of Record	Peaks	
					Date	Gage height (ft)
07178018	Millcreek 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	June 1994 to present	June 4	9.17
					July 14	12.37
					July 21	10.25
					July 25	9.03
					July 26	10.45
					Sept. 15	9.88*

Miscellaneous Sites

Discharge measurements in the following table were made at special study and miscellaneous sites throughout the state.

Station number	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
ARKANSAS RIVER BASIN						
07159639	Bluff Creek above Bethany and Warr Acres Sewage Treatment Plant near Edmond, OK.	Lat 35°40'02", long 97°35'45", in NE 1/4, NW 1/4, sec.26, T.14 N., R.4 W., Oklahoma County, Hydrologic Unit 11050002, at county road bridge 0.4 mi upstream of Deer Creek and 0.6 mi west of State Highway 74.		1986	05-13-94	10
				1993-94	06-20-94	7.5
					07-19-94	8.2
					08-25-94	5.8
					09-28-94	5.6

* May be backwater from construction during lining of channel.

DISCHARGE AT PARTIAL-RECORD STATIONS
AND MISCELLANEOUS SITES

Station number	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
ARKANSAS RIVER BASIN						
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.		1993-94	05-13-94	52
					06-21-94	22
					07-19-94	16
					08-25-94	8.4
					09-28-94	13
07159650	Deer Creek at Oklahoma City, OK.	Lat 35°41'24", long 97°35'06", in SW 1/4, NW 1/4, sec.13, T.14 N., R.4 W., Oklahoma County, Hydrologic Unit 11050002, at bridge on State Highway 74, 0.4 mi south of Logan County line.		1993-94	05-13-94	70
					06-21-94	31
					07-19-94	26
					08-25-94	19
					09-28-94	24
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 Western Avenue, 1.8 mi south of Logan County line.		1993-94	05-16-94	4.7
					06-20-94	4.4
					07-18-94	2.0
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.		1993-94	05-16-94	9.8
					06-20-94	25
					07-18-94	8.1
					08-26-94	5.9
					09-27-94	7.5
07161000	Cimarron River at Perkins, OK.	Lat 35°57'27", long 97°01'54", in SW 1/4, NW 1/4, sec.4, T.14 N., R.3 W., Oklahoma County, Hydrologic Unit 11050003, at bridge on U.S. Highway 177, 1.0 mi south of Perkins.	17,892	^a 1939-89	10-12-93	348
				1990-94	12-06-93	681
					04-19-94	1,770
					06-22-94	419
					08-02-94	300

^a Continuous streamflow records for this period.

DISCHARGE AT PARTIAL-RECORD STATIONS
AND MISCELLANEOUS SITES

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Station number	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
ARKANSAS RIVER BASIN						
07246940	Poteau River east of Waldron, AR.	Lat 34°53'46", long 94°03'57", in SW 1/4, SE 1/4, sec.22 T.3 N., R.29 W., Scott County, Hydrologic Unit 11110105, at bridge on State Highway 80, 1.8 mi east of high school.	15.0	1993-94	10-27-93	.26
					10-29-93	.30
					12-14-93	31
					01-04-94	2.4
					05-12-94	79
					08-11-94	0
					08-12-94	0
					09-13-94	0
07246950	Poteau River northwest of Waldron, AR.	Lat 34°54'47", long 94°06'28", in SE 1/4, SW 1/4, sec.17 T.3 N., R.29 W., Scott County, Hydrologic Unit 11110105, at bridge on U.S. Highway 71, 0.9 mi north of city limits.	46.1	1983-94	10-27-93	5.0
					12-14-93	93
					08-11-94	1.3
					09-13-94	1.8
07246960	Poteau River near Hon, AR.	Lat 34°55'34", long 94°10'03", in SW 1/4, SE 1/4, sec.10 T.3 N., R.30 W., Scott County, Hydrologic Unit 11110105, at bridge on State Highway 80, 1.0 mi southwest of Hon, AR.	69.5	1993-94	08-11-94	2.0
					09-13-94	1.7
07246980	Jones Creek near Hon, AR.	Lat 34°55'13", long 94°09'58", in SE 1/4, NE 1/4, sec.15 T.3 N., R.30 W., Scott County, Hydrologic Unit, 11110105, at low-water crossing on unimproved county road, 1.5 mi southeast of Hon, AR.	93.2	1993-94	08-11-94	.13
					09-13-94	.93
07247345	Black Fork at Hodgen, OK.	Lat 34°50'35", long 94°37'28", in SE 1/4, SE 1/4, sec.1 T.4 N., R.25 E., LeFlore County, Hydrologic Unit 11110105, at county road bridge .4 mi east of Hodgen.	179	1992-94	10-28-93	88
					12-14-93	528
					01-11-94	48
					02-25-94	677
					04-14-94	336
					05-19-94	94
					06-30-94	5.9
					07-22-94	50
					08-10-94	3.7
					09-14-94	32

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Station number	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
ARKANSAS RIVER BASIN						
07247650	Fourche Maline near LeFlore, OK.	Lat 34°55'11", long 94°56'43", in NE 1/4, SE 1/4, sec.11 T.5 N., R.22 E., LeFlore County, Hydrologic Unit 11110105, at county road bridge 1.6 mi east of LeFlore.	270	1992-94	10-26-93	57
					12-13-93	745
					01-11-94	28
					02-24-94	2,480
					04-12-94	365
					05-18-94	107
					06-30-94	3.0
					07-21-94	2.0
					08-10-94	9.7
	09-14-94	2.4				
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.	71.6	1992-94	10-28-93	14
					12-15-93	75
					01-11-94	10
					02-24-94	219
					04-13-94	132
					05-19-94	28
					06-30-94	1.2
					07-20-94	1.6
					08-10-94	.85
	09-12-94	.66				

DISCHARGE AT PARTIAL-RECORD STATIONS
AND MISCELLANEOUS SITES

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FLOOD HYDROGRAPH STATIONS

The following tables contain rainfall and discharge for indicated times at a flood hydrograph station. Records of discharge above the base discharge are obtained from a water-stage recorder. A stage-discharge relation for each gage is developed from indirect methods. Records of rainfall are obtained from a water-stage recorder collecting rain in a holding pipe.

07165515 Fred Creek at Evanston Ave., at Tulsa, OK

LOCATION.--Lat 36°03'08", long 95°56'48", in NW 1/4, SE 1/4, sec.8, T.18 N., R.13 E., Tulsa County, Hydrologic Unit 11110101, at left bank, 50 ft upstream of culvert, near intersection of Evanston Ave. and 76th Place, and at mile 1.2.

DRAINAGE AREA.--1.87 mi²

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

DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, IN INCHES, AT INDICATED TIME,
WATER YEAR ENDING SEPT. 30, 1994

Date	Hour	Discharge	Rainfall*	Date	Hour	Discharge	Rainfall*
May 29	0615	<67	.16	June 9	0655	<67	.08
	0620	<67	.40		0700	<67	.15
	0625	192	.22		0705	<67	.18
	0630	447	.17		0710	<67	.39
	0635	792	.21		0715	134	.24
	0640	1,060	.24		0720	273	.26
	0645	1,440	.19		0725	556	.19
	0650	1,630	.27		0730	778	.17
	0655	1,810	.42		0735	1,260	.09
	0700	2,080	.20		0740	1,250	.03
	0705	2,230	.00		0745	1,120	.05
	0710	2,280	.04		0750	968	.00
	0715	2,330	.00		0800	687	.00
	0720	2,250	.00		0830	141	.00
	0725	2,170	.06		0855	<67	.00
	0730	2,070	.00	*1.84 inches of rainfall this date.			
	0745	1,310	.00				
	0800	750	.00				
	0900	489	.00	July 14	<67	.00	
	1000	111	.00		1510	<67	.13
	1030	<67	.00		1515	<67	.18

*2.25 inches of rainfall this date.

**DISCHARGE AT PARTIAL-RECORD STATIONS
AND MISCELLANEOUS SITES**

07165560 Little Haikey Tributary at Tulsa, OK

LOCATION.--Lat 36°02'10", long 95°53'09", in NW 1/4, SW 1/4, sec.13, T.18 N., R.13 E., Tulsa County, Hydrologic Unit 11110101, at downstream wingwall of culvert, on south Memorial, 0.5 mile south of 81st on east side of road, and at mile 0.3.

DRAINAGE AREA---.50 mi²

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

DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, IN INCHES, AT INDICATED TIME,
WATER YEAR ENDING SEPT. 30, 1994

Date	Hour	Discharge	Rainfall*	Date	Hour	Discharge	Rainfall*
May 29	0610	<5	.00	July 26	0745	<5	.00
	0625	<5	.07		0750	<5	.30
	0630	<5	.15		0755	34	.65
	0635	7	.25		0800	128	.25
	0640	56	.63		0805	176	.04
	0645	104	.07		0810	150	.02
	0650	127	.03		0815	109	.01
	0655	114	.06		0820	83	.01
	0700	108	.20		0900	27	.11
	0705	136	.23				
	0710	200	.14				
	0715	252	.04				
	0720	252	.02				
	0725	219	.01				
	0730	189	.01				
	0800	138	.01				
	0900	126	.33				
	1000	34	.01				
	1205	<5	.00				

*1.89 inches of rainfall this date.

*2.01 inches of rainfall this date.

July 14	1515	<5	.00
	1520	<5	.23
	1525	10	.35
	1530	63	.38
	1535	145	.39
	1540	228	.30
	1545	321	.17
	1550	301	.18
	1555	309	.29
	1600	300	.08
	1605	271	.01
	1610	197	.00
	1620	120	.01
	1640	56	.00
	1700	23	.01
	1800	<	.02

*2.67 inches of rainfall this date.

**DISCHARGE AT PARTIAL-RECORD STATIONS
AND MISCELLANEOUS SITES**

455

07178010 Brook Hollow at South 136th Street at Tulsa, OK

LOCATION.--Lat 36°07'19", long 95°49'32" SE 1/4, SW 1/4, sec.16, T.19 N., R.14 E., Tulsa County, Hydrologic Unit 11070107, at right bank, 40 ft upstream of culvert, near intersection of S 136th E Ave. and E 28th Place, and at mile 2.7

DRAINAGE AREA.--2.17 mi²

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

DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, IN INCHES, AT INDICATED TIME,
WATER YEAR ENDING SEPT. 30, 1994

Date	Hour	Discharge	Rainfall*	Date	Hour	Discharge	Rainfall*
Apr. 11	0540	<43	.02	May 25	2235	<43	.05
	0600	<43	.19		2240	<43	.05
	0615	<43	.06		2245	<43	.25
	0620	78	.10		2250	<43	.19
	0625	110	.21		2255	<43	.25
	0635	170	.12		2300	263	.16
	0700	241	.19		2305	317	.01
	0740	192	.01		2310	294	.02
	0750	186	.11		2325	225	.02
	0755	199	.13		2345	292	.01
	0800	236	.20		2400	285	.00
	0805	330	.06	May 26	0030	213	.03
	0810	459	.05		0040	188	.06
	0815	523	.01		0045	192	.34
	0825	471	.02		0050	238	.27
	0900	388	.01		0055	304	.16
	1100	181	.00		0100	483	.09
	1105	181	.17		0105	597	.05
	1115	225	.12		0110	566	.01
	1130	319	.05		0115	523	.01
	1200	238	.01		0130	447	.01
1400	124	.03	0200		359	.08	
1440	114	.13	0400		164	.04	
1445	126	.11	0600		69	.01	
1450	155	.18	0720		<44	.00	
1500	297	.09	*2.26 inches of rainfall these dates.				
1505	373	.18					
1515	433	.06	July 14	1525	<44	.00	
1520	450	.01		1530	<44	.03	
1540	388	.03		1535	<44	.15	
1600	340	.00		1540	<44	.20	
1800	216	.01		1545	<44	.28	
2000	110	.00		1550	104	.53	
2200	62	.00		1555	495	.27	
2325	<43	.00		1600	679	.05	
2 inches of rainfall this date.				1605	686	.02	
				1610	625	.02	

DISCHARGE AT PARTIAL-RECORD STATIONS
AND MISCELLANEOUS SITES

07178010 Brook Hollow at South 136th Street at Tulsa, OK--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, IN INCHES, AT INDICATED TIME,
WATER YEAR ENDING SEPT. 30, 1994

Date	Hour	Discharge	Rainfall*	Date	Hour	Discharge	Rainfall*
				July 14	1615	556	.01
				(Cont.)			
					1620	489	.01
					1630	400	.01
					1700	225	.00
					1800	76	.02
					1840	<44	.01

*1.77 inches of rainfall this date.

DISCHARGE AT PARTIAL-RECORD STATIONS
AND MISCELLANEOUS SITES

457

07178020 Tupelo Creek at US 169 at Tulsa, OK

LOCATION.--Lat 36°09'04", long 95°51'39", in SE 1/4, SW 1/4, sec.6, T.19 N., R.14 E., Tulsa County, Hydrologic Unit 11070107, at left downstream wingwall of culvert, on US 169 south between Admiral and 11 St exit, and at mile 0.6.

DRAINAGE AREA.--3.53 mi²

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

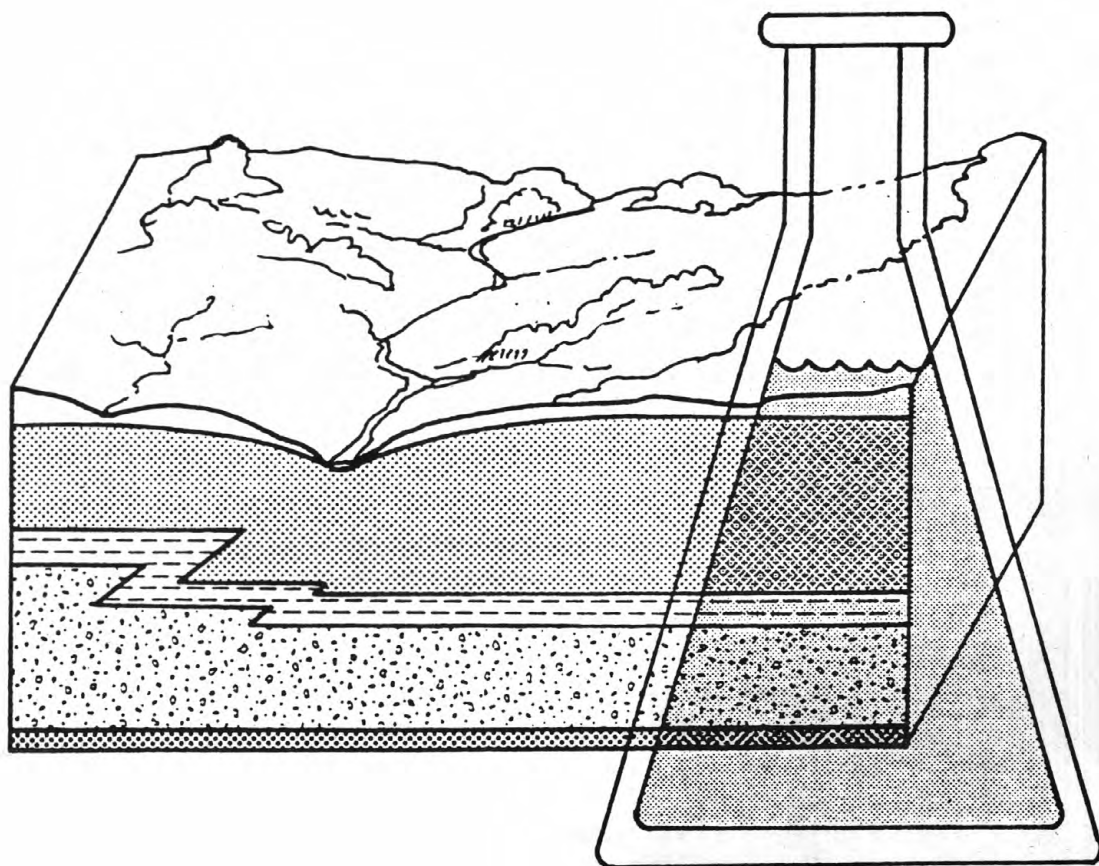
DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, IN INCHES, AT INDICATED TIME,
WATER YEAR ENDING SEPT. 30, 1994

Date	Hour	Discharge	Rainfall*	Date	Hour	Discharge	Rainfall*
July 14	1520	<630	.00	July 21	0315	<630	.05
	1525	<630	.10		0325	<630	.14
	1530	<630	.22		0335	<630	.08
	1535	<630	.22		0345	<630	.01
	1540	<630	.29		0355	<630	.04
	1545	<630	.43		0405	<630	.07
	1550	<630	.50		0410	<630	.18
	1555	725	.26		0415	<630	.35
	1600	1,090	.13		0420	<630	.19
	1605	1,330	.05		0425	<630	.14
	1610	1,480	.02		0430	<630	.12
	1615	1,540	.01		0435	<630	.08
	1620	1,640	.01		0440	756	.04
	1625	1,620	.00		0445	874	.03
	1630	1,640	.00		0450	988	.12
	1635	1,550	.00		0455	1,040	.06
	1640	1,540	.01		0500	1,110	.13
	1650	1,410	.00		0505	1,090	.09
	1700	1,310	.00		0510	1,190	.09
	1710	1,120	.00		0515	1,110	.05
	1720	900	.00		0520	1,110	.03
	1730	656	.01		0525	1,060	.04
	1740	<630	.00		0530	1,110	.02
					0535	1,170	.02
					0540	1,150	.03
					0545	1,100	.05
					0550	1,070	.06
					0555	1,000	.03
					0605	933	.04
					0615	747	.03
					0625	652	.03
					0635	<630	.01

*2.42 inches of rainfall this date.

*2.70 inches of rainfall this date.

DISCHARGE AT PARTIAL-RECORD STATIONS
AND MISCELLANEOUS SITES



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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
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
<i>Area</i>		
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
<i>Volume</i>		
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
<i>Flow</i>		
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
<i>Mass</i>		
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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