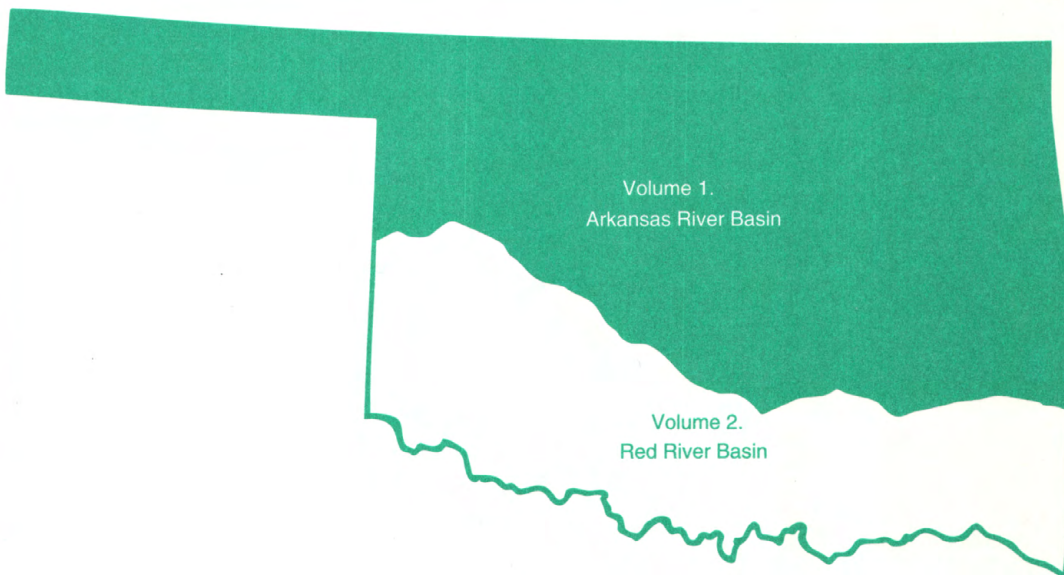
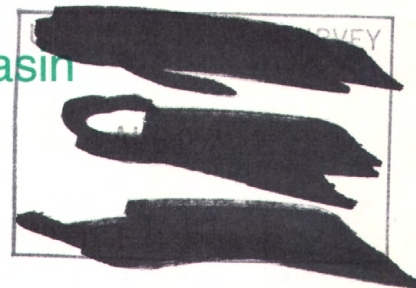


2007
a3
Oklahoma
1915



Water Resources Data Oklahoma Water Year 1995

Volume 1. Arkansas River Basin



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OK-95-1
Prepared in cooperation with the State of Oklahoma and
with other agencies

1994

[illegible]

1995

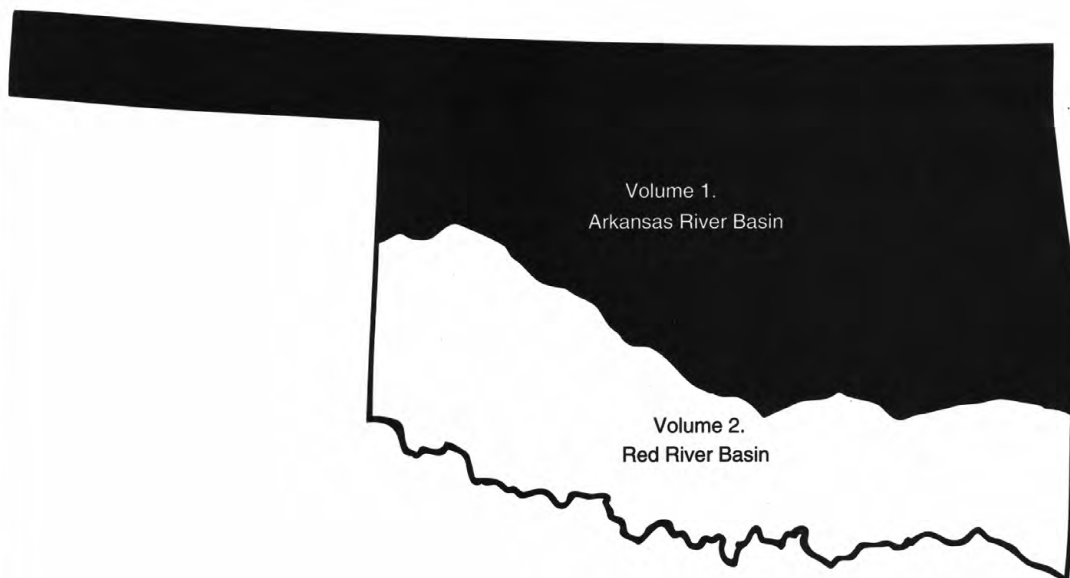
[illegible]



Water Resources Data Oklahoma Water Year 1995

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-95-1
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

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:

D.L. Adams	R.D. Gist	J.K. Kurklin	E.W. Smith
L.A. Alf	G.H. Haff	T.V. Nevitt	S.D. Smith
D.L. Boyle	J.R. Hanlon	J.E. Norvell	R.L. Tortorelli
C.R. Bullock	R.E. Johnson	M.L. Phillips	D.M. Walters
P.A. Carpenter	C.Z. Jones	D.L. Runkle	D.K. White
T.E. Coffey	J.F. Kerestes	M.L. Schneider	

L.A. Alf typed the text of the report.

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

Data for Oklahoma are in three volumes as follows:

Volume 1. Arkansas River Basin

Volume 2. Red River Basin and Ground-Water Records

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE May 1996		3. REPORT TYPE AND DATES COVERED Annual-Oct. 1, 1994 to Sept. 30, 1995
4. TITLE AND SUBTITLE Water Resources Data for Oklahoma, Water Year 1995			5. FUNDING NUMBERS	
6. AUTHOR(S) R.L. Blazs, D.M. Walters, T.E. Coffey, D.K. White, D.L. Boyle, J.K. Kerestes				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Geological Survey Water Resources Division 202 NW 66 St., Bldg. 7 Oklahoma City, OK 73116			8. PERFORMING ORGANIZATION REPORT NUMBER USGS-WDR-OK-95-1	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSORING / MONITORING AGENCY REPORT NUMBER USGS-WDR-OK-95-1	
11. SUPPLEMENTARY NOTES Prepared in cooperation with the State of Oklahoma and with other agencies.				
12a. DISTRIBUTION / AVAILABILITY STATEMENT No restrictions on distribution. This report may be purchased from: National Technical Information Service Springfield, VA 22161			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) Volumes 1 and 2 of the water resources data for the 1995 water year for Oklahoma consists of record of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes or reservoirs; and water levels of ground-water wells. This report contains discharge records for 114 gaging stations; stage and contents for 9 lakes or reservoirs and 2 gage height stations; water quality for 47 gaging stations; 17 partial-record or miscellaneous streamflow stations and 28 ground-water sites. Also included are lists of discontinued surface-water discharge and water-quality sites. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Oklahoma.				
14. SUBJECT TERMS *Oklahoma, *Hydrologic data, *Surface water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment, Water temperature, Sampling sites, Water analyses, Ground water, Gage height			15. NUMBER OF PAGES 459	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED	20. LIMITATION OF ABSTRACT UL	

CONTENTS

	Page
Preface	iii
List of surface-water stations, in downstream order, for which records are published in this volume	vi
List of discontinued surface-water discharge stations	ix
List of discontinued surface-water-quality stations	xiii
Introduction.....	1
Cooperation.....	1
Summary of hydrologic conditions	2
Streamflow	2
Chemical quality of streamflow	13
Ground-water.....	18
Special networks and programs	21
Explanation of records.....	21
Station identification numbers.....	21
Downstream order system.....	21
Latitude-longitude system.....	22
Records of stage and water discharge	22
Data collection and computation.....	23
Data presentation.....	24
Station manuscript.....	24
Data table of mean daily values	25
Statistics of monthly mean data	25
Summary statistics.....	25
Hydrographs	26
Identifying estimated daily discharge	26
Accuracy of the records.....	26
Other records available.....	26
Records of surface-water quality.....	27
Classification of records.....	27
Arrangement of records.....	27
On-site measurements and sample collection	27
Water temperature	28
Sediment.....	28
Laboratory measurements	28
Data presentation.....	28
Remark codes	29
Dissolved trace-element concentrations	29
Records of ground-water levels.....	29
Data collection and computation.....	29
Data presentation.....	29
Access to WATSTORE data	30
Definition of terms.....	31
Publications on Techniques of Water-Resources Investigations.....	37
Station records, surface water.....	44
Discharge at partial-record stations	409
Station records, ground-water: See Volume 2	
Index	422

ILLUSTRATIONS

Figures 1-8. Comparisons of daily, monthly, and annual discharges, for water year 1995 and period of record:	
1. North Canadian River at Woodward.....	5
2. Arkansas River at Ralston.....	6
3. Neosho River near Commerce.....	7
4. Baron Fork at Eldon.....	8
5. Canadain River at Calvin.....	9
6. Salt Fork Red River at Mangum.....	10
7. Washita River near Dickson.....	11
8. Blue River near Blue.....	12
Figure 9. Location of water-quality stations on selected principal stream:.....	13
Figures 10-13. Comparison of minimum and maximum concentrations of selected constituents, in mg/L, for the 1995 water year and period of record 1970-90:	
10. Dissolved - solids.....	14
11. Dissolved - chloride.....	15
12. Dissolved - sulfate.....	16
13. Suspended - sediment.....	17
Figures 14-18. Hydrographs of wells for the 1993-95 water years:	
14. Idabel well.....	18
15. Texhoma well.....	19
16. Sharon well.....	19
17. Taloga well.....	20
18. Fittstown well.....	20
Figures 19-22. Maps of Oklahoma showing:	
19. Locations of continuous- and partial-record surface-water stations, water year 1995.....	40
20. Locations of water-quality stations, water year 1995.....	41
22. Locations of ground-water wells, water year 1995.....	42

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]

LOWER MISSISSIPPI RIVER BASIN

MISSISSIPPI RIVER

ARKANSAS RIVER BASIN

Salt Fork Arkansas River near Alva (d).....	07148400	44
Salt Fork Arkansas River at Tonkawa (d).....	07151000	46
Chikaskia River near Blackwell (d).....	07152000	48
Arkansas River at Ralston (d).....	07152500	50
Black Bear Creek at Pawnee (d).....	07153000	52
Cimarron River near Kenton (d).....	07154500	54
Cimarron River near Forgan (d).....	07156900	56
Cimarron River near Waynoka (d).....	07158000	58
Cimarron River near Dover (d).....	07159100	60

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

vii

[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

LOWER MISSISSIPPI RIVER BASIN

MISSISSIPPI RIVER--Continued

ARKANSAS RIVER BASIN--Continued

Cottonwood Creek:		
Deer Creek:		
Bluff Creek above Bethany and Warr Acres Sewage Treatment Plant near Edmond (c)	07159639	62
Deer Creek below Bluff Creek at Oklahoma City (c).....	07159643	64
Deer Creek at Oklahoma City (c)	07159650	66
Chisholm Creek at Edmond (c)	07159730	68
Chisholm Creek near Edmond (c)	07159735	70
Cottonwood Creek near Seward (d)	07159750	72
Cimarron River near Guthrie (d)	07160000	74
Cimarron River near Ripley (d).....	07161450	76
Arkansas River at Tulsa (dcmts)	07164500	78
Joe Creek at 61st Street at Tulsa (d).....	07164600	90
Polecat Creek:		
Haikey Creek at 101st Street South at Tulsa (d)	07165562	92
Little Haikey Creek at 101st Street South at Tulsa (d)	07165565	94
Arkansas River near Haskell (d)	07165570	96
Verdigris River near Lenapah (d)	07171000	98
Caney River above Coon Creek at Bartlesville (d)	07174400	100
Caney River near Ramona (d)	07175500	102
Verdigris River near Claremore (d).....	07176000	104
Bird Creek near Avant (d).....	07176500	106
Hominy Creek:		
Bird Creek near Sperry (dcst)	07177500	108
Flat Rock Creek at Cincinnati Avenue at Tulsa (d)	07177650	122
Coal Creek at Tulsa (d)	07177800	124
Bird Creek near Owasso (dcst)	07178000	126
Mingo Creek at 46th Street North at Tulsa (dcst)	07178040	140
Bird Creek at State Highway 266 near Catoosa (dcst)	07178200	154
Neosho River near Commerce (d).....	07185000	168
Neosho River at Miami (c)	07185080	170
Spring River near Quapaw (d).....	07188000	174
Elk River near Tiff City, MO (d)	07189000	176
Lake O' The Cherokees at Langley (c).....	07190000	178
Neosho River near Langley (d)	07190500	180
Big Cabin Creek near Big Cabin (d)	07191000	182
Spavinaw Creek near Sycamore (d)	07191220	184
Spavinaw Lake at Spavinaw (c)	07191300	186
Lake Hudson near Locust Grove (c)	07191400	188
Neosho River near Chouteau (d).....	07191500	190
Illinois River near Watts (dc)	07195500	192
Sager Creek near West Siloam Springs (c).....	07195865	198
Flint Creek near Kansas (dc)	07196000	204
Illinois River near Tahlequah (dc).....	07196500	208

**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
<u>LOWER MISSISSIPPI RIVER BASIN</u>		
<u>MISSISSIPPI RIVER--Continued</u>		
ARKANSAS RIVER BASIN--Continued		
Baron Fork:		
Peachwater Creek at Christe (d)	07196973	216
Baron Fork at Eldon (dct).....	07197000	218
Illinois River near Gore (dct)	07198000	224
CANADIAN RIVER BASIN:		
Canadian River at Bridgeport (d).....	07228500	232
Canadian River at Purcell (d).....	07229200	234
Little River:		
Lake Thunderbird near Norman (c)	07229900	236
Little River below Lake Thunderbird near Norman (d)	07230000	238
Little River near Tecumseh (d).....	07230500	240
Little River near Sasakwa (d).....	07231000	242
Canadian River at Calvin (dcms).....	07231500	244
Beaver River near Felt (d).....	07232250	250
Coldwater Creek near Guymon (d)	07232900	252
Beaver River:		
Palo Duro Creek at Range (d).....	07233650	254
Beaver River at Beaver (d).....	07234000	256
North Canadian River at Woodward (dcms)	07237500	258
North Canadian River near Seiling (d).....	07238000	264
North Canadian River below Weavers Creek near Watonga (d).....	07239300	266
North Canadian River near Calumet (dct).....	07239450	268
North Canadian River near El Reno (dct)	07239500	288
Lake Hefner Canal near Oklahoma City (d).....	07240000	296
North Canadian River blw Lake Overholser near Oklahoma City (dct).....	07241000	298
North Canadian River at Britton Road at Oklahoma City (dct).....	07241520	314
North Canadian River near Harrah (dcmtb).....	07241550	332
North Canadian River near Wetumka (dcmts)	07242000	360
Deep Fork near Warwick (d)	07242380	366
Deep Fork near Beggs (d).....	07243500	368
Canadian River near Whitefield (d)	07245000	370
Poteau River East of Waldron, AR (c).....	07246940	372
Poteau River Northwest of Waldron, AR (c)	07246950	374
Poteau River near Hon, AR (c)	07246960	376
Jones Creek near Hon, AR (c).....	07246980	378
Poteau River at Cauthron, Ar (dc)	07247000	380
Poteau River at Loving (dct).....	07247015	384
Black Fork Below Big Creek near Page (dc)	07247250	388
Black Fork at Hodgen (c),	07247345	392
Fourche Maline near Red Oak (dc)	07247500	394
Fourche Maline near Leflore (c).....	07247650	398
Holson Creek at Summerfield (c).....	07247800	400
Poteau River near Panama (dct).....	07249413	402

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

ix

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

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

DISCONTINUED SURFACE-WATER STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Arkansas River near Ponca City, OK	07148140	46,530	1976-93
Salt Fork Arkansas River near Winchester, OK	07148350	856	1960-93
Salt Fork Arkansas River near Ingersoll, OK	07148450	1,140	1961-62 1974-79
Salt Fork Arkansas River near Cherokee, OK	07149500	2,439	1941-50
Salt Fork Arkansas River near Jet, OK	07150500	3,202	1938-93
Greasy Creek near Watchorn, OK	07152290	28.0	1974-76
Ranch Creek at Cleveland Dam near Cleveland, OK	07153100	21.9	1945-63
Cimarron River above Ute Creek near Boise City, OK	07155000	1,955	1906-07 1943-46 1947-54
Cimarron River near Boise City, OK	07155500	2,214	1939-42
Cimarron River near Mocane, OK	07157000	8,670	1943-65
Cimarron River near Buffalo	07157950	12,004	1960-94
Cimarron River near Englewood, KS	07157580	10,096	1982-87
Buffalo Creek near Lovedale, OK	07157960	408	1966-93
Cimarron River at Freedom, OK	07157980	12,706	1974-80
Salt Creek near Hitchcock, OK	07158150	44.4	1968-70
Salt Creek near Okeene, OK	07158400	196	1961-67 1974-79
Preacher Creek near Dover, OK	07158500	14.5	1952-57
Turkey Creek near Drummond, OK	07159000	248	1948-70
Cimarron River near Crescent, OK	07159400	16,453	1971-72
Bluff Creek above Lake Hefner near Oklahoma City, OK	07159500	1.62	1950-58
Cottonwood Creek near Navina, OK	07159720	247	1978-80 1982-89
Skeleton Creek near Lovell, OK	07160500	410	1950-93
Cimarron River near Perkins, OK	07161000	17,852	1940-89
Stillwater Creek near Stillwater, OK	07162000	168	1935-38
West Fork Brush Creek near Stillwater, OK	07162500	13.1	1935-38
Council Creek near Stillwater, OK	07163000	31	1934-93

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

DISCONTINUED SURFACE-WATER STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Cimarron River at Oilton, OK	07163500	18,669	1935-45
Cimarron River at Mannford, OK	07164000	18,849	1939-50 1960-63
Arkansas River near Tullahasse, OK	07165600	75,815	1970-72
Verdigris River near Oologah, OK	07171400	4,339	1961-92
Verdigris River near Sageeyah, OK	07171500	4,402	1939-45
Caney River near Hulah, OK	07173000	733	1938-93
Little Caney River near Copan, OK	07174000	424	1944-58
Little Caney River below Cotton Creek near Copan, OK	07174200	502	1959-81
Caney River at Bartlesville, OK	07174500	1,465	1950-56 1986-87
Sand Creek at Okesa, OK	07174600	139	1960-93
Caney River near Ochelata, OK	07174700	1,753	1956-76
Double Creek subwater shed 5 near Ramona, OK	07175000	2.39	1955-69
Caney River near Collinsville, OK	07175550	2,046	1936-38
Birch Creek below Birch Lake near Barnsdall, OK	07176465	66.0	1977-92
Candy Creek near Wolco, OK	07176800	30.6	1970-81
Hominy Creek below Skiatook Lake near Skiatook, OK	07177410	354	1985-93
Bird Creek at 66th Street near Tulsa, OK	07177600	967	1987-91
Hominy Creek near Skiatook, OK	07177000	340	1944-81
Flat Rock Creek at U.S. Highway 75 at Tulsa, OK	07177700	22.6	1987-91
Mingo Creek at 36th Street North at Tulsa, OK	07178035	56.0	1987-89
Verdigris River near Inola, OK	07178600	7,911	1945-70
Tar Creek at 22nd Street Bridge at Miami, OK	07185095	44.7	1984-93
Tar Creek at Miami, OK	07185100	52.0	1980-84
Lost Creek at Seneca, MO	07188500	42.0	1949-59
Neosho River near Grove, OK	07189500	9,969	1925-39
Big Cabin Creek near Pyramid Corners, OK	07190600	71.1	1964-72
Spavinaw Creek near Row, OK	07191200	128	1959-62
Pryor Creek near Pryor, OK	07192000	229	1948-63
Neosho River near Wagoner, OK	07192500	12,307	1924-25 1938-49
Neosho River below Fort Gibson Lake near Fort Gibson, OK	07193500	12,495	1951-89
Arkansas River near Muskogee, OK	07194500	96,674	1926-70
Dirty Creek near Warner, OK	07198500	227	1940-46

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

xi

DISCONTINUED SURFACE-WATER STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Deer Creek at Hydro, OK	07228400	274	1961-63 1978-80
Canadian River near Newcastle, OK	07229000	25,763	1939-45
Canadian River near Noble, OK	07229100	25,911	1960-61 1964-75
Walnut Creek at Purcell, OK	07229300	202	1966-93
Canadian Sandy Creek near Ada, OK	07229427	198	1987-88
Little River near Norman, OK	07229500	120	1952-55
Little River near Bowlegs, OK	07230597	550	1983-88
Salt Creek near Dewright, OK	07230800	210	1960-63 1966-67
Ti Creek near Blanco, OK	07231965	4.82	1980-81
Brushy Creek near Haileyville, OK	07231975	139	1978-83
Peaceable Creek near Haileyville, OK	07231990	134	1978-83
Gaines Creek near Krebs, OK	07232000	588	1943-63
Blue Creek near Blocker, OK	07232010	12.1	1976-83
Deer Creek near McAlester, OK	07232024	38.3	1979-80
Beaver River near Guymon, OK	07232500	2,139	1938-93
Coldwater Creek near Hardesty, OK	07233000	1,967	1940-64
Beaver River near Hardesty, OK	07233210	5,029	1978-86
Clear Creek near Elmwood, OK	07234100	170	1966-93
Wolf Creek near Shattuck, OK	07235500	1,183	1938-46
Wolf Creek near Fargo, OK	07236000	1,624	1943-76
Wolf Creek near Fort Supply, OK	07237000	1,739	1938-93
Bent Creek near Seiling, OK	07237800	139	1967-70
North Canadian River at Canton, OK	07239000	12,484	1938-93
North Canadian River near Watonga, OK	07239200	12,692	1980-83
North Canadian River near Oklahoma City, OK	07241500	13,354	1939-53 1960-61
Tecumseh Creek at Tecumseh, OK	07241750	2.38	1991-92
North Canadian River at NE 36th Street at Oklahoma City, OK	07241503	13,356	1989-91
Wewoka Creek near Wetumka, OK	07242100	396	1960-64 1967
Deep Fork near Arcadia, OK	07242350	105	1970-93
Bellcow Creek at Chandler, OK	07242500	46.0	1949-55

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

DISCONTINUED SURFACE-WATER STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Dry Creek near Kendrick	07243000	69.0	1956-94
Deep Fork near Dewar, OK	07244000	2,307	1938-50
North Canadian River near Eufaula, OK	07244500	17,657	1960-62
Taloka Creek near Stigler, OK	07245030	20.1	1979-81
Sallisaw Creek near Sallisaw, OK	07245500	182	1943-76
Sans Bois Creek near Keota, OK	07246000	346	1939-42
Arkansas River near Sallisaw, OK	07246500	147,757	1948-70
Coal Creek near Spiro, OK	07246615	15.4	1979-82
Fourche Maline near Wilburton, OK	07247450	56.2	1978-81
Red Oak Creek near Red Oak, OK	07247550	12.8	1978-82
Poteau River near Wister, OK	07248500	993	1938-87
Caston Creek at Wister, OK	07248600	72.9	1979-82
Morris Creek at Howe, OK	07248620	19.4	1979-81
Sugarloaf Creek near Monroe, OK	07248700	53.6	1979-81
Poteau River at Poteau, OK	07249000	1,240	1938-45
Brazil Creek near Walls, OK	07249080	69.1	1979-81 1984-85
Owl Creek near McCurtain, OK	07249100	27.9	1978-81

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

xiii

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

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

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

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

xv

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Cimarron River near Mocane, OK	07157000	8,670	1942-49, 1952-53, 1955-56, 1959-66, 1977-78
Cimarron River near Englewood, KS	07157580	10,096	1938-42, 1982-87
Buffalo Creek near Lovedale, OK	07157960	408	1917, 1973-80, 1987-90
Cimarron River near Buffalo	07157950	12,004	1953, 1961-63, 1968-94
Cimarron River at Freedom, OK	07157980	12,706	1953, 1973-80
Cimarron River near Waynoka, OK	07158000	13,334	1938-53, 1955-56, 1959-63, 1968-79, 1985-90
Main Creek near Waynoka, OK 23N-16W-03 DDD	07158010	89.7	1986, 1988
Eagle Chief Creek at Cleo Springs, OK 22N-12W-02	07158105	480	1986, 1988, 1991
Salt Creek near Hitchcock, OK	07158150	44.4	1968-70
Salt Creek near Okeene, OK	07158400	196	1973-80, 1986, 1988
Preacher Creek near Dover, OK 18N-08W-13 BBB	07158500	14.5	1952-53, 1986-89
Turkey Creek near Drummond, OK	07159000	248	1947-48, 1952-53, 1955-56, 1976
Cimarron River near Dover, OK	07159100	15,713	1953, 1973-80, 1986-90
Turkey Creek near Dover, OK	07159203		1961-62
Deer Creek Abv Waste Water Trmt Fac near Edmond, OK	07159630		1983-84
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

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Cottonwood Creek near Navina, OK	07159720	247	1977-80, 1982-89
Cottonwood Creek near Seward, OK	07159750	320	1973-82, 1989-91
Cottonwood Creek near Guthrie, OK	07159800	366	1953, 1955-56, 1960-61
Cimarron River near Guthrie, OK	07160000	16,892	1905, 1930-31, 1938-57, 1959-71, 1973-80, 1986-90
Skeleton Creek near Lovell, OK	07160500	410	1950-55, 1975-80, 1985-90
Cimarron River at Perkins	07161000	17,852	1950, 1953-63, 1965-94
Council Creek near Stillwater, OK	07163000	31	1986-90
Cimarron River near Ripley, OK	07161450	17,979	1987-90
Stillwater Creek at Stillwater, OK	07162000	168	1954-55
Council Creek near Stillwater, OK	07163000	31	1986-90
Cimarron River at Oilton, OK	07163500	18,669	1938, 1942, 1944-45, 1981
Cimarron River at Mannford, OK	07164000	18,849	1939-52, 1959-63
Arkansas River at Sand Springs near Tulsa, OK	07164400	74,615	1905, 1946-77, 1980
Polecat Creek Blw Heyburn Res near Heyburn, OK	07165500	123	1944-69, 1971-79
Polecat Creek near Jenks, OK	07165510		1959-63
Arkansas River at Bixby, OK	07165520		1948-49
Snake Creek near Leonard, OK	07165559		1960-61
Arkansas River near Haskell, OK	07165570	75,473	1972-83, 1986-88
Cane Creek near Jamesville, OK	07165581		1960-61
Arkansas River near Tullahassee, OK	07165600	75,815	1969-72

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

xvii

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Arkansas River at Muskogee, OK	07165610		1956, 1958, 1961-63, 1969-70
Verdigris River near S Coffeyville, OK	07170950		1952-53, 1974-78
Verdigris River near Lenapah, OK	07171000	3,639	1940-83, 1985-87, 1989-90
California Creek near Nowata, OK	07171080		1952-53, 1959
Verdigris River near Nowata, OK	07171100		1952-53
East Fork Big Creek near Hollow, OK	07171105	14.4	1979-80, 1982-83
Big Creek near Nowata, OK	07171220		1952-53, 1959, 1981
Salt Creek near Alluwe, OK	07171230		1952-53, 1959
Lightning Creek near Alluwe, OK	07171240		1952-53, 1959
Verdigris River near Talala, OK	07171260		1952-53
Verdigris River near Oologah, OK	07171400	4,339	1961-83, 1986, 1988-89
Verdigris River Ab Caney River near Claremore, OK	07171405		1941, 1945, 1948, 1952-55, 1959, 1961, 1978
Sweetwater Creek near Claremore, OK	07171490		1980-83
Verdigris River near Sageeyah, OK	07171500	4,402	1938, 1940-45, 1961
Caney River near Hulah, OK	07173000	733	1938, 1940-83, 1986
Little Caney River near Copan, OK	07174000	424	1976-77, 1979
Cotton Creek near Copan, OK	07174150		1967-68

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Little Caney River Blw Cotton Cr, near Copan, OK	07174200	502	1944-81, 1983, 1986
Caney River Above Coon Creek at Bartlesville, OK	07174400	1,392	1985-86, 1989-90
Caney River at Bartlesville, OK	07174500	1,465	1944-45, 1947, 1949-51, 1966-68, 1978-82
Sand Creek at Okesa, OK	07174600	139	1951-55, 1960-78, 1980-83, 1985-86, 1989-90
Caney River near Ochelata, OK	07174700	1,753	1959-61
Double Creek SWS 5 near Ramona, OK	07175000	2.39	1957-59, 1964-65, 1967-69
Caney River near Ramona, OK	07175500	1,955	1966-93
Caney River near Collinsville, OK	07175550	2,046	1949-53, 1959
Verdigris River near Claremore, OK	07176000	6,534	1944, 1947-54, 1977-81, 1985-87
Bird Creek at Pawhuska, OK	07176320		1944-46
Bird Creek near Barnsdall, OK	07176350		1949-53
Birch Creek near Barnsdall, OK	07176455		1964-66, 1978, 1980-81, 1983
Birch Creek Blw Birch Lake near Barnsdall, OK	07176465	66	1989-90
Bird Creek at Avant, OK	07176500	364	1945-55, 1957-81, 1983, 1986, 1989-90
Candy Creek near Wolco, OK	07176800	30.6	1978-80
Bird Creek near Skiatook, OK	07176910		1948-50, 1952-53
Hominy Creek near Hominy, OK	07176950		1949-53, 1955

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

xix

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Hominy Creek near Skiatook, OK	07177000	340	1944-55, 1957-71, 1977-78, 1980-81, 1983, 1986
Hominy C Bl Skiatook Lk near Skiatook, OK	07177410	354	1988-89
Bird Creek at 66th Street near Tulsa, OK	07177600	967	1988-90
Flat Rock Creek at Cincinnati Ave at Tulsa, OK	07177650	8.2	1988-89
Flat Rock Creek at Us Hwy 75 at Tulsa, OK	07177700	22.6	1988-90
Bird Creek near Owasso, OK	07178000	1,022	1948-50, 1987-90
Bird Creek near Catoosa, OK	07178050	1,080	1963-90
Verdigris River near Inola, OK	07178600	7,911	1940-71, 1976-79
Verdigris River (Newt Graham L&D) near Inola, OK	07178620	7,911	1971-86
Verdigris River near Okay, OK	07178670	.	1959-63
Neosho River near Commerce, OK	07185000	5,876	1944-54, 1959-73, 1975-83, 1985-89
Tar Creek at 22nd Street Bridge at Miami, OK	07185095	44.7	1988-89, 1989-92
Spring River near Quapaw, OK	07188000	2,510	1944-64, 1975-80, 1986, 1988-89
Neosho River near Langley, OK	07190500	10,335	1944-47, 1949-51, 1956-59, 1975-80, 1988
Big Cabin Creek near Welch, OK	07190590	28.1	1979-83
Big Cabin Creek Tributary Blw Wolfe Ck near Welch, OK	07190597		1980-83
West Fork Big Cabin Creek near Centralia, OK	07190620	13.1	1979-83
Middle Fork Big Cabin Creek near Centralia, OK	07190622		1979-80
Middle Fork Big Cabin Creek near Pyramid Corners, OK	07190625	13.4	1979-83
Big Cabin Creek near Vinita, OK	07190650		1944, 1949-51, 1980
Little Cabin Creek near Vinita, OK	07190850		1948-51

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Big Cabin Creek near Big Cabin, OK	07191000	450	1948, 1951-60, 1964-71, 1975-77, 1985-89
Spavinaw Creek near Sycamore, OK	07191220	133	1972-77, 1980-88
Spavinaw Creek near Colcord, OK	071912213		1980-81
Spavinaw Creek near Jay, OK	07191223		1958-61
Spavinaw Creek near Spavinaw, OK	07191310		1944, 1948-51
Salina Creek near Salina, OK	07191350		1948-53, 1958-59
Neosho River near Chouteau, OK	07191500	11,534	1921, 1940-48, 1950-58, 1960, 1975-80
Pryor Creek near Pryor, OK	07192000	229	1942-44, 1948-58, 1960-63
Pryor Creek at Elliot St Br near Pryor, OK	07192030		1947, 1966-71
Pryor Creek at Hwy 69a near Pryor, OK	07192050		1962-63
Pryor Creek Blw Sulfur Creek near Pryor, OK	07192060		1966-74
Neosho River near Wagoner, OK	07192500	12,307	1930-31, 1938-50
Neosho River below Fort Gibson Lake near Fort Gibson, OK	07193500	12,495	1952-93
Arkansas River near Muskogee, OK	07194500	96,674	1943-71, 1976-80
Bayou Manard near Fort Gibson, OK	07194512		1960-61
Greenleaf Creek near Braggs, OK	07194545		1951-55
Illinois River at Savoy, AR	07194800	167	1968, 1974-91
Illinois River 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

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

xxi

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Flint Creek near Kansas	07196000	110	1955-61, 1963, 1975-80, 1991-94
Tahlequah Creek at Tahlequah, OK	07196510	13.4	1976-77
Peach eater Creek at Christe, 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
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

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

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

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

xxiii

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
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
Beaver River at Beaver	07234000	7,955	1952, 1958-59, 1962-63 1968-94
Clear Creek near Elmwood, OK	07234100	170	1987-90
Kiowa Creek near Slapout, OK	07234200	371	1953-54, 1959-60, 1980
Clear Creek near May, OK	07234300	109	1953-54, 1960
Beaver River near Fort Supply, OK	07234500	9,615	1939-51, 1957, 1976
Wolf Creek near Shattuck, OK	07235500	1,183	1938-46
Wolf Creek near Fargo, OK	07236000	1,624	1941-64, 1967-68, 1971-72, 1976, 1978
Wolf Creek near Fort Supply, OK	07237000	1,739	1938-63, 1971, 1973, 1979, 1987-90
North Canadian River 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

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

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

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

xxv

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

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

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

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

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

xxvii

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Poteau River near Fort Smith, Ar	07249440		1972-79
Lee Creek near Short, OK	07249800	236	1958-61, 1975-77
Little Lee Creek near Short, OK	07249900		1960, 1977-79
Arkansas River at L&d #13 near Van Buren, Ar	07250550	150,547	1975-77
08N-06E-26 DDA 1	350756096380501		1978, 1980
08N-06E-23 AAD 1	350924096380401		1978, 1980
09N-05E-23 BBB 1	351440096452001		1974-75
09N-06E-13 DDA 1	351455096370401		1978-79
09N-05E-16 ADD 1	351518096464001		1978-79
09N-06E-17 BBA 1	351538096421101		1978-79
09N-06E-09 CDC 1	351540096405801		1978-79
09N-06E-10 DAA 1	351601096391301		1978-79
09N-06E-04 BCA 1	351706096410801		1978-79
09N-06E-03 AAB 1	351723096392301		1978-79
Squirrel Creek near Shawnee, OK	351815096544301		1983-84
North Canadian River at Shawnee Bridge	351857096553001		1983-84
North Canadian River East of Shawnee, OK	351959096520901		1983-84
North Canadian River Above Lake Eufaula, OK	352305095531001		1983-84
N Canadian River near Prague, OK	352359096401201		1983-84
North Canadian River West of Okemah, OK	352546096242701		1983-84
North Canadian River at 63rd St Bridge, OK City, OK	353211097222501		1983-84
Sallisaw Creek at Bunch, OK	354035094452001		1958-59
Bear Creek near Fallis, OK	354512097075301		1953-55
Eagle Creek near Hectorville, OK	355032095580401		1907, 1979
Tributary to Campbell Creek near Cashion, OK	355032097431501	3.15	1986, 1988
Campbell Creek near Cashion, OK	355032097432301	22.6	1986-88
Pawnee Creek near Crescent, OK	355125097371501	13.1	1986, 1988
Gar Creek near Guthrie, OK	355217097315601	10.6	1986-88
Cox Creek near Crescent, OK	355217097361901	7.47	1986, 1988

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Kingfisher Creek near Kingfisher, OK	355342097541001	501	1986-88
Bird Creek near Kingfisher, OK	355415097464801	8.5	1986-88
Trail Creek near Kingfisher, OK	355421097521601	16.1	1986-87
Baron Fork near Baron, OK	355510094371001		1958-59
East Fork Sooner Creek near Crescent, OK	355540097440701	11.2	1986-88
West Fork Sooner Creek near Crescent, OK	355540097442301	9.79	1986-88
Treaty Creek near Loyal, OK	355810097590501	6.86	1986, 1988
Turkey Creek at Dover, OK	355842097551201	428	1986-88
Cooper Creek near Dover, OK	355902097594501	116	1986-88
Ballard Creek at Ballard, OK	360540094352001		1958-59
Indian Creek near Ringwood, OK	361723098175701	75.4	1986-89
Sand Creek near Fairview, OK	361835098252601	41.8	1986-88
Gypsum Creek near Fairview, OK	361901098260701	13.8	1986, 1988
Cherokee Creek near Sycamore, OK	361919094394501		1980-81
Spavinaw Creek near Jay, OK	362059094470601		1980-81
Beaty Creek near Sycamore, OK	362119094463001		1980-81
Cheyenne Creek near Orienta, OK	362137098370501	38.8	1986, 1988
Cottonwood Creek at Orienta, OK	362150098282301	54.3	1986, 1988
Barney Creek near Orienta, OK	362414098420201	41.1	1986, 1988
Griever Creek near Waynoka, OK	362446098470001	88.8	1986, 1988
West Creek near Waynoka, OK	362933098554201	31.9	1986, 1988
24N-23E-08 B1 OWRB 24R, Well on Monkey	363324094502501		1980-81
Sand Creek near Belva, OK	363436098590301	54.1	1986, 1988
Chimney Creek near Belva, OK	363731099015301	27.5	1986, 1988
Doe Creek near Freedom, OK	363823099065201	14.2	1986, 1988

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

xxix

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
Long Creek near Freedom, OK	364244099070801	53.1	1986, 1988
Anderson Creek near Freedom, OK	364521099053901	34.5	1986, 1988
27N-23E-05 BDA 1 OWRB 22B, Neosho R near I-44	365108094511801		1980-82
27N-23E-06 AAD 1 WRB 22a, Neosho R Ab Tar C	365112094514401		1980-82
27N-23E-05 BBB 1 OWRB 22, Tar C Ab Neosho R	365118094513201		1981-82
28N-23E-30 Ddd 1 OWRB 21, Tar C at Hwy 10	365215094514001		1980-81
28N-23E-30 Ddb 1 OWRB 20, Tar C at Central	365230094514301		1980-82, 1984
28N-23E-30 Aac 1 Tar C at Rockdale Blvd	365255094514301		1984-85
28N-23E-19 Abb 1 OWRB 16, Tar C at 22nd Ave	365359094520401		1980-81, 1984-86
28N-23E-18 Abb 1 OWRB 14b, Tar C Blw Spring	365451094520401		1981-82
28N-22E-07 CAA 1 OWRB 14a, Weir Blw Site 14	365522094521301		1981, 1984
28N-23E-09 BCC 1 OWRB 15, Garrett C	365523094503201		1980, 1985
28N-23E-07 BBD 1 OWRB 13, Cactus Mine Disch	365533094522801		1979-83
28N-23E-05 CCC 1 OWRB 5, Tar C near Commerce	365544094513201		1980, 1984-85
29N-23E-31 DCD 1 OWRB 10, Tar C at Hwy 66	365637094511201		1980-82, 1984-85
29N-23E-32 BCA 3 Tar C Below Mine Trib	365710094504401		1984-85
29N-23E-32 BCA 1 Mine Trib at Tar C, South	365714094504401		1983-85
29N-23E-32 BBD 2 Mine Trib Pond	365715094504301		1984-85
29N-23E-32 BBD 3 Outflow from Mine Trib Pd	365715094504302		1984-85
29N-23E-32 BAC 1 Mine Trib S of Rr Culvert	365720094503801		1983-85
29N-23E-32 BAB 1 1132 M from Rr Borehole	365723094503511		1984-85
29N-23E-32 BAB 3 138 M from Rr Borehole	365723094503513		1984-85
29N-23E-32 BAB 20 Mine Trib, N of Rr Culvert	365723094503520		1984-85
29N-23E-29 CDC 3 Lavrion Tailings Pond/col	365730094503301		1984-85
29N-23E-29 CCD 1 OWRB 4t, Tailings Runoff	365730094504601		1980-81, 1985
29N-23E-29 CCD 3 OWRB Site 4 Tar C at Lytl	365732094504400		1980-82
29N-23E-29 CCD 2 OWRB Site 4a Tar C Ab Lyt	365732094504401		1980-82
29N-23E-29 CAC 2 Lytle C 400 M Ab Site 4	365744094503200		1981, 1985

xxx

WATER RESOURCES DATA — OKLAHOMA, 1995
DISCONTINUED SURFACE-WATER DISCHARGE OR SURFACE-WATER-QUALITY STATIONS

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ARKANSAS RIVER BASIN			
29N-23E-29 CAC 1 Collapse W of Lytle C	365744094503201		1984-85
29N-23E-29 BCA 1 Tar C Above Mine Disch	365807094504301		1984-85
29N-23E-29 ABD 1 Lytle C Above Mine Disch	365811094501301		1984-85
29N-23E-18 AAC 1 OWRB 7, Tar C at State Ln	365956094510701		1980-82, 1984-85
34S-23E-35 DDC 1 Tar C at Rt 166	370153094511101		1984-85

INTRODUCTION

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

Volumes 1 and 2 of this report includes records on both surface water and ground water in the State. Specifically they contain: (1) Discharge records for 114 streamflow-gaging stations, and 17 partial-record or miscellaneous streamflow stations, (2) stage and content records for 9 lakes, reservoirs and gage height records for 2 stations; (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-95-1" For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. Beginning with the 1990 water year, all water-data reports also will be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc.

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

COOPERATION

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

Oklahoma Water Resources Board.
Oklahoma Conservation Commission
Oklahoma City Water Utilities Trust.
City of Tulsa.
Oklahoma State University
Oklahoma Geological Survey.

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

Corps of Engineers, U.S. Army
Bureau of Reclamation, U.S. Department of Interior

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

Organizations that supplied data are acknowledged in the station descriptions.

WATER RESOURCES DATA — OKLAHOMA, 1995
Volume 1: ARKANSAS RIVER BASIN

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 February of the water year. Monthly totals were above normal in November, January, April through July, and September. October, December, August, and March totals were about average.

Precipitation was not spread uniformly across the State. Generally precipitation was far above normal (12 to 16 inches above average) in all regions of the State except the Panhandle, which was about normal. Oklahoma experienced the 5th wettest November in its recorded history in 1994, with every region recording about or greater than twice normal precipitation except the Panhandle. In January, Wilburton recorded greatest monthly snowfall in station history, 15.7 inches. February was very dry, 8th lowest since 1892. Heavy rains in May caused significant street flooding in northeastern Oklahoma towns of Cleveland, Sperry, Sapulpa, and northern Tulsa County; and the central Oklahoma cities of Minco, Norman, and Seminole. June was extremely wet with 6 inches falling during the first 10 days of the month. These June rains seriously delayed and diminished the wheat harvest. August was unusually wet due to moisture associated with former tropical storm Dean. Extensive and frequent rains occurred during September in the southwestern and south-central areas of the State, bringing statewide January-September precipitation totals to the 7th largest since 1892. The cumulative effect of an extremely cool and wet May through September in southwestern Oklahoma ruined the cotton crop, among the worst ever in Oklahoma.

A comparison of daily, monthly, and annual streamflow for the 1995 water year with the period of record at eight selected stations (fig. 1-8) reflected below-average conditions

in northwestern Oklahoma, and above-average streamflow for the rest of 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 1995 water year were minimal for the State. Streamflow was below normal in streams during most of the water year in northwestern Oklahoma (fig. 1). For the rest of the State, streamflow was above average most of the water year (fig. 2-8). In southwestern, north-central, and northeastern Oklahoma, there were high flows in November (fig. 2-3, 6). In east-central south-central, and southeastern Oklahoma flows were high from November through January (fig. 4-5, 7-8). East-central and southeastern Oklahoma had peak flows March through July (fig. 4, 8). In north-central, northeastern, central, southwestern, and south-central Oklahoma, streamflow was high during May through August (fig. 2-3, 5-7). Several streams had record monthly flows for June (fig. 2-3, 7) and August (fig. 6-7). The southern third of Oklahoma had high September flows (fig. 5-8). Overall the streamflow was below normal in western Oklahoma, and above normal in the rest of the State, with all annual peak flows in the medium to high flow range, except in the northwestern part of the State, which was in the low flow range.

The most serious flooding occurred during June affecting western and central Oklahoma on June 3-5, inundating about a quarter of Davidson (southwest), and June 7-9 in southwestern, central, north-central and northeastern Oklahoma, where most areas received more than 7 inches of rain. Towns of Guthrie, Kingfisher (central), and Miami and Bartlesville (northeastern) were flooded. Kingfisher and Cottonwood Creeks in central Oklahoma and the Salt Fork and Chickaskia rivers flooded in north-central Oklahoma. Heavy rains over most of the state in the beginning of August caused widespread local flooding except the northwestern, east-central and southeastern part of the State. Stillwater received over 5 inches in one day, Interstate Highway 35 was closed west of Tonkawa (north-central) for 15 hours when the Salt Fork of the Arkansas River covered the bridge and its approaches. Flooding along the Cimarron, Canadian and Washita rivers closed several highways in west-central Oklahoma. three people died from flood-related accidents

The average discharge streamflow statistic for the 1995 water year also illustrates the above-normal runoff conditions in all areas of Oklahoma, except the Panhandle, which was below normal. Most streamflow stations show about two

WATER RESOURCES DATA — OKLAHOMA, 1995
Volume 1: ARKANSAS RIVER BASIN

3

times the average streamflow for the period of record.

for the 1995 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 1995 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	82,900	86	10,430	211,000	14	4,826
				(Prior to regulation 1926-75)		
				174,000	52	5,892
				(Since regulation by Kaw Lake 1977-95)		
07185000 Neosho River near Commerce	71,000	66	6,229	267,000	0	3,788
						(1940-95)
07197000 Baron Fork at Eldon	18,800	39	500	50,600	1.8	325
						(1949-95)
07231500 Canadian River at Calvin	92,100	96	3,227	174,000	0	1,798
				(1906, 1939-42, 1945-1995)		
07237500 North Canadian River at Woodward	505	1.5	39.1	42,000	0	194
				(Prior to regulation 1939-78)		
				3,090	0	94.3
				(Since regulation by Optima Lake 1979-95)		
RED RIVER BASIN						
07300500 Salt Fork Red River near Mangum	14,200	0	188	72,000	0	87.0
						(1938-95)
07331000 Washita River near Dickson	52,100	275	4,307	98,000	0	1,573
				(Prior to regulation 1929-58)		
				118,000	0.10	1,833
				(Since regulation by Fort Cobb Reservoir 1962-95)		
07332500 Blue River near Blue	10,200	57	606	65,200	0	328
						(1937-95)

WATER RESOURCES DATA — OKLAHOMA, 1995**Volume 1: ARKANSAS RIVER BASIN**

Conservation storage in four selected reservoirs in the State indicates that conservation storage was increased 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 1995 water year for the four selected reservoirs:

STATION IDENTIFICATION	Conservation Storage Capacity			
	Start of 1995 water year		End of 1995 water year	
	(acre-feet)	(percent)	(acre-feet)	(percent)
ARKANSAS RIVER BASIN				
07190000 Lake O' the Cherokees at Langely	1,492,000	100	1,496,000	100
07229900 Lake Thunderbird near Norman	108,400	55	116,500	59
RED RIVER BASIN				
07302500 Lake Altus at Lugert	25,460	19	129,500	96
07324300 Foss Reservoir near Foss	154,200	35	177,100	41

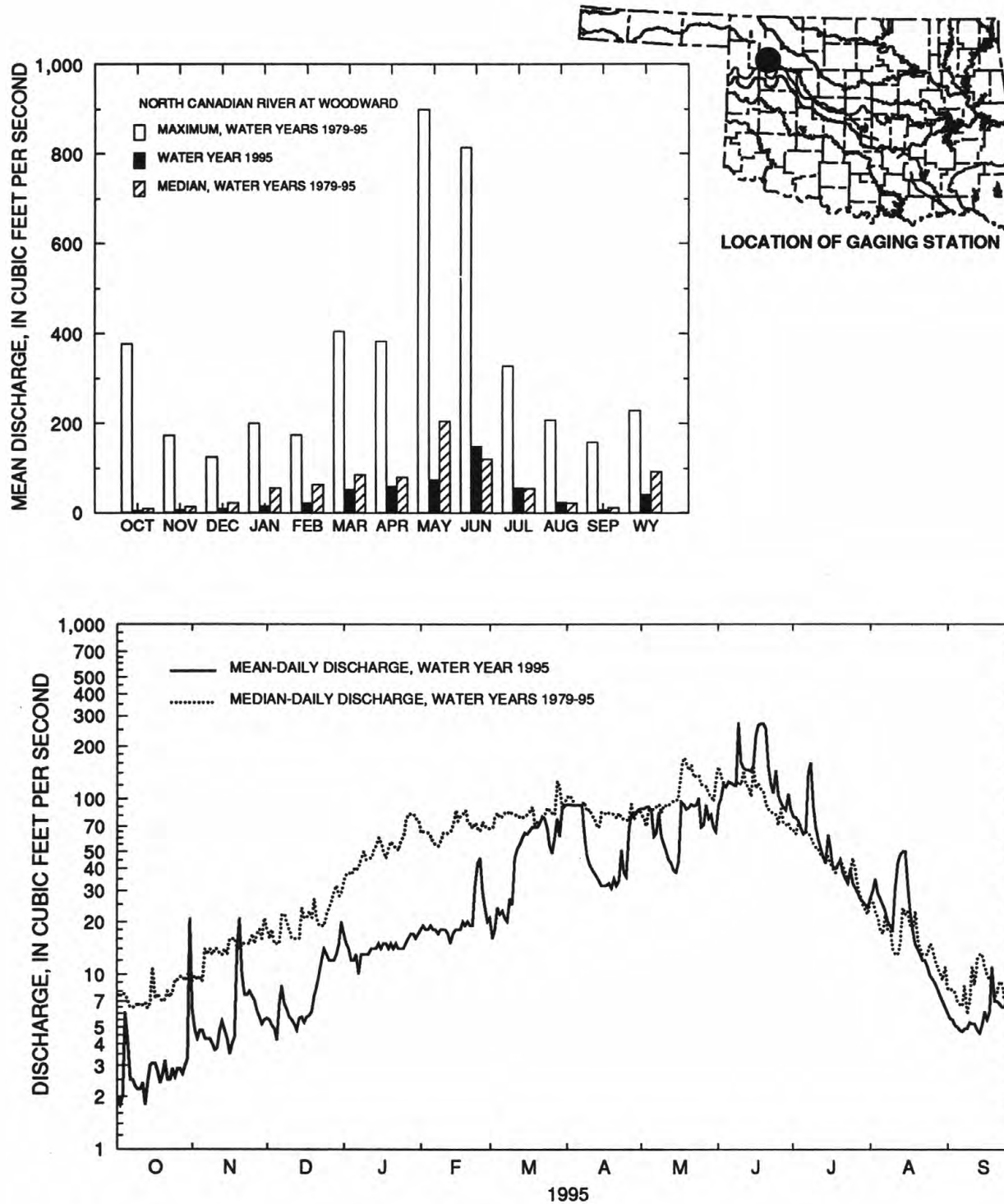


Figure 1. Comparison of daily, monthly, and annual discharges for water year 1995 and period of record for North Canadian River at Woodward, Oklahoma.

WATER RESOURCES DATA — OKLAHOMA, 1995
Volume 1: ARKANSAS RIVER BASIN

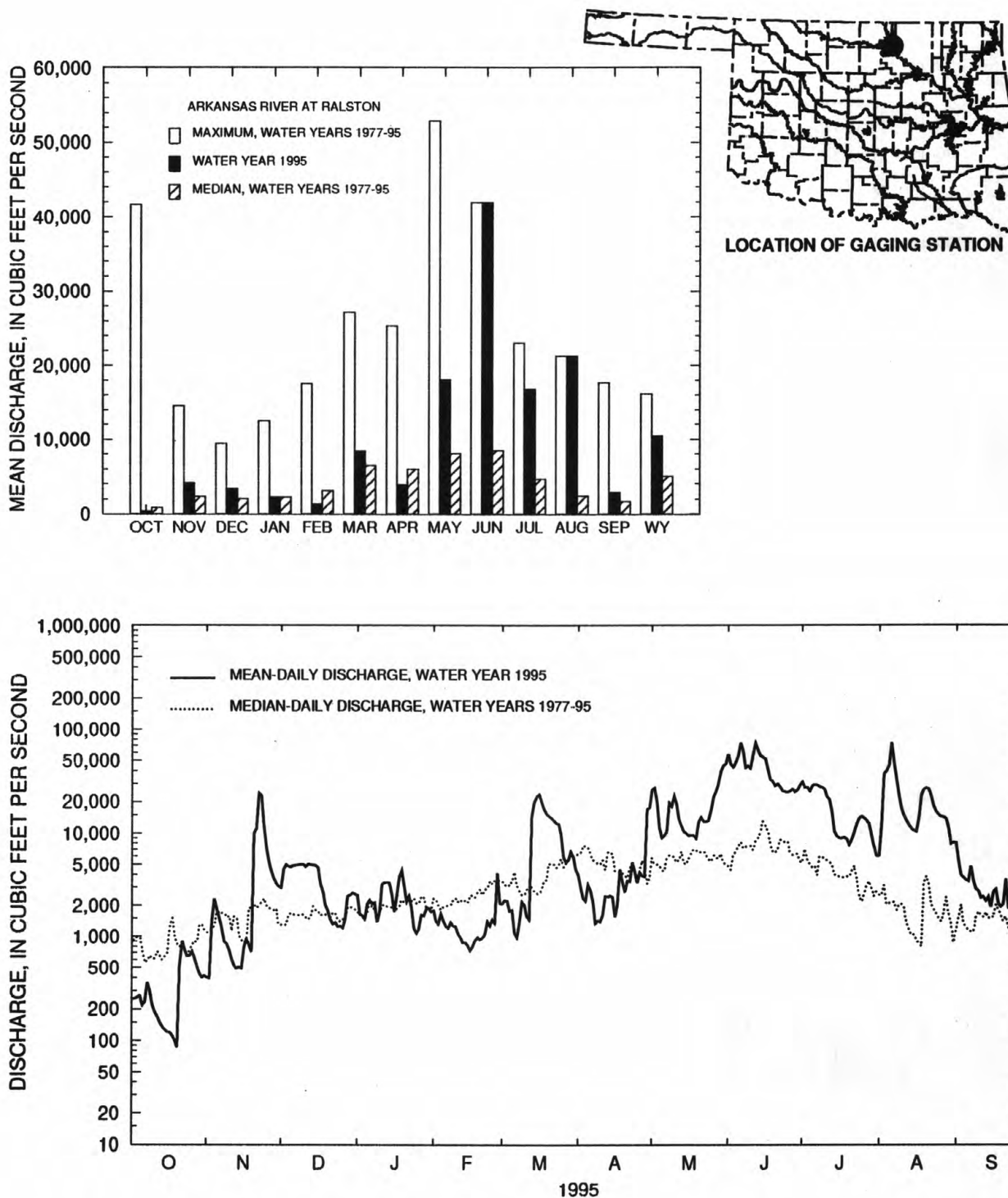


Figure 2. Comparison of daily, monthly, and annual discharges for water year 1995 and period of record for Arkansas River at Ralston, Oklahoma.

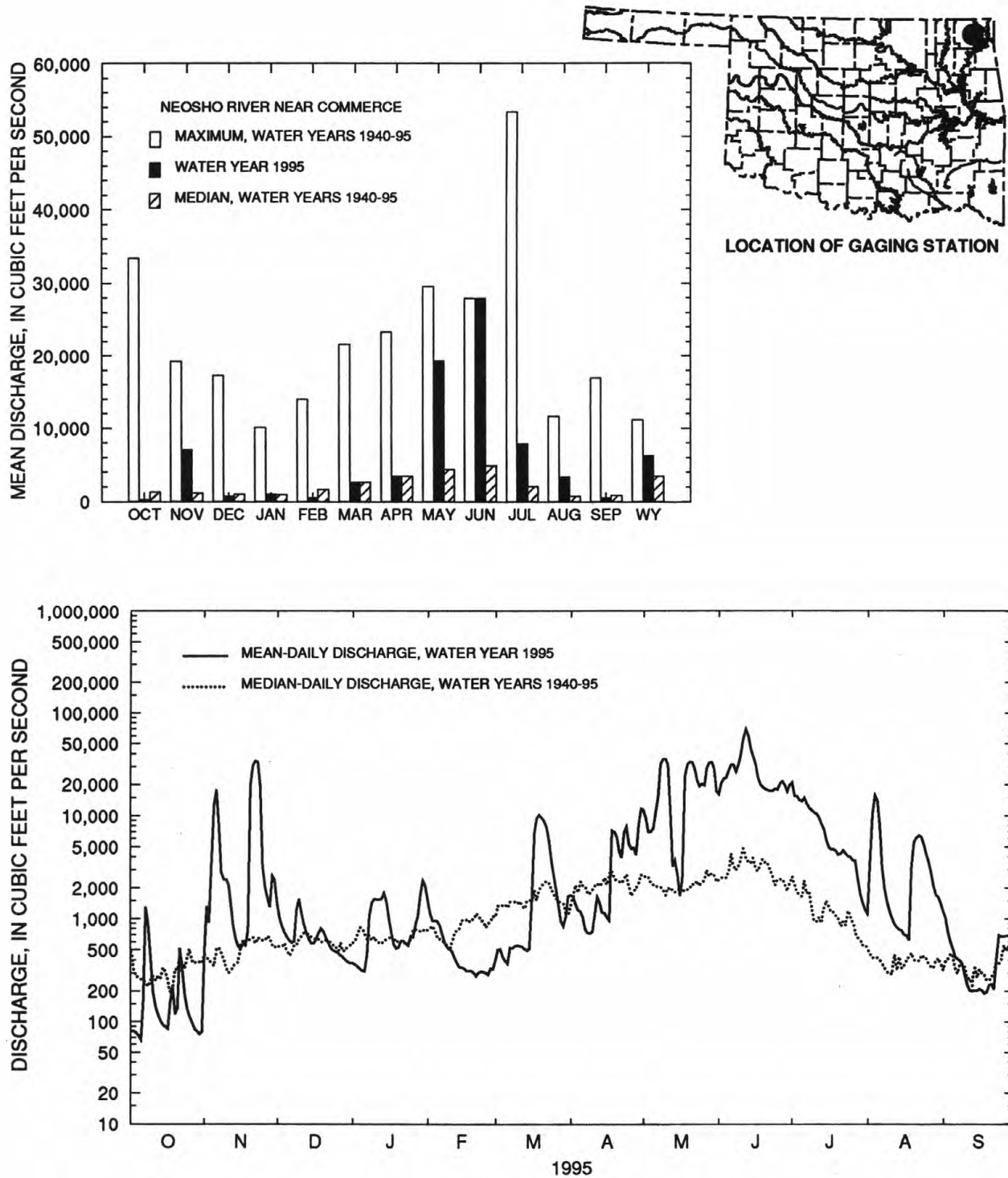


Figure 3. Comparison of daily, monthly, and annual discharges for water year 1995 and period of record for Neosho River near Commerce, Oklahoma.

WATER RESOURCES DATA — OKLAHOMA, 1995
Volume 1: ARKANSAS RIVER BASIN

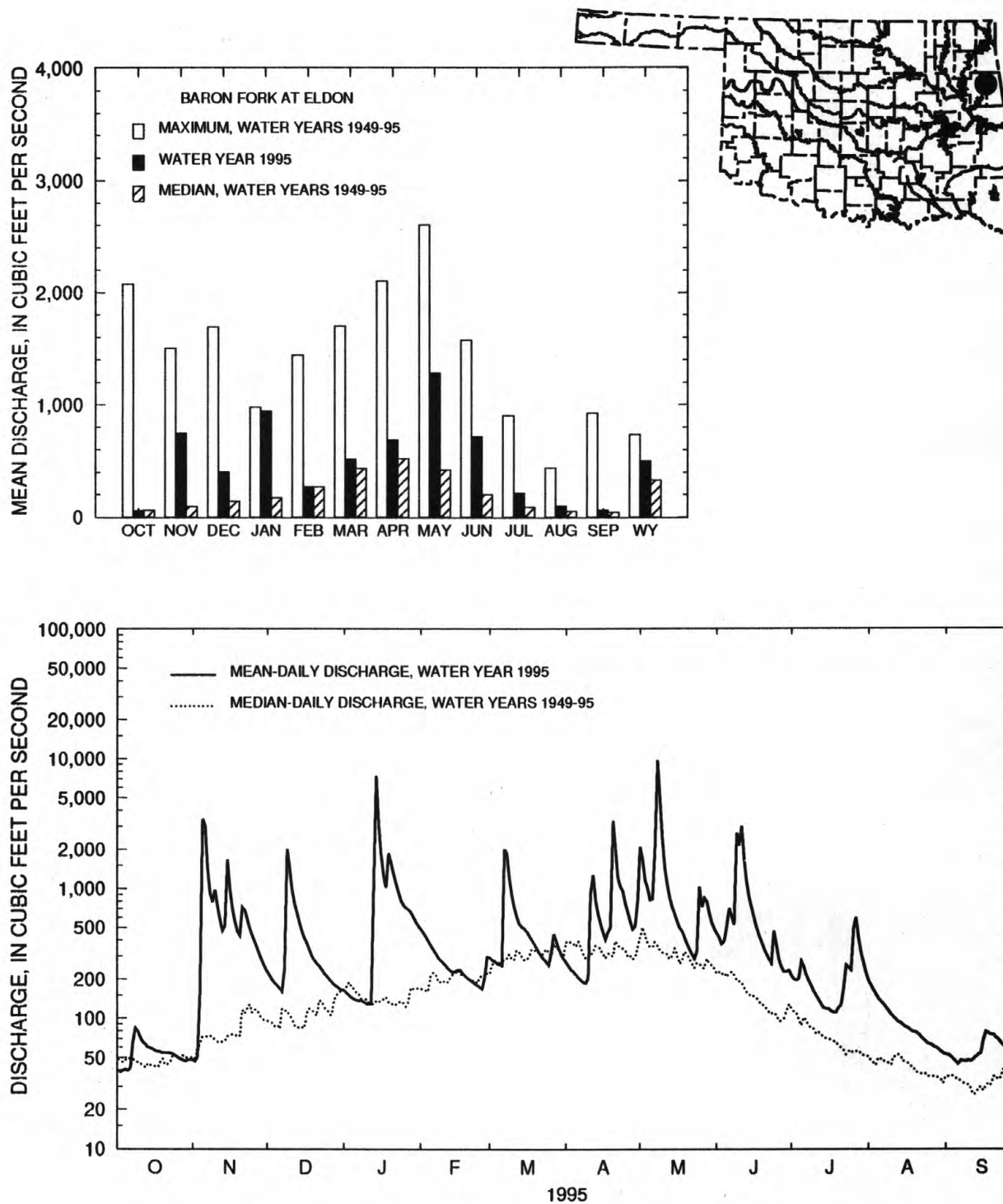


Figure 4. Comparison of daily, monthly, and annual discharges for water year 1995 and period of record for Baron Fork at Eldon, Oklahoma.

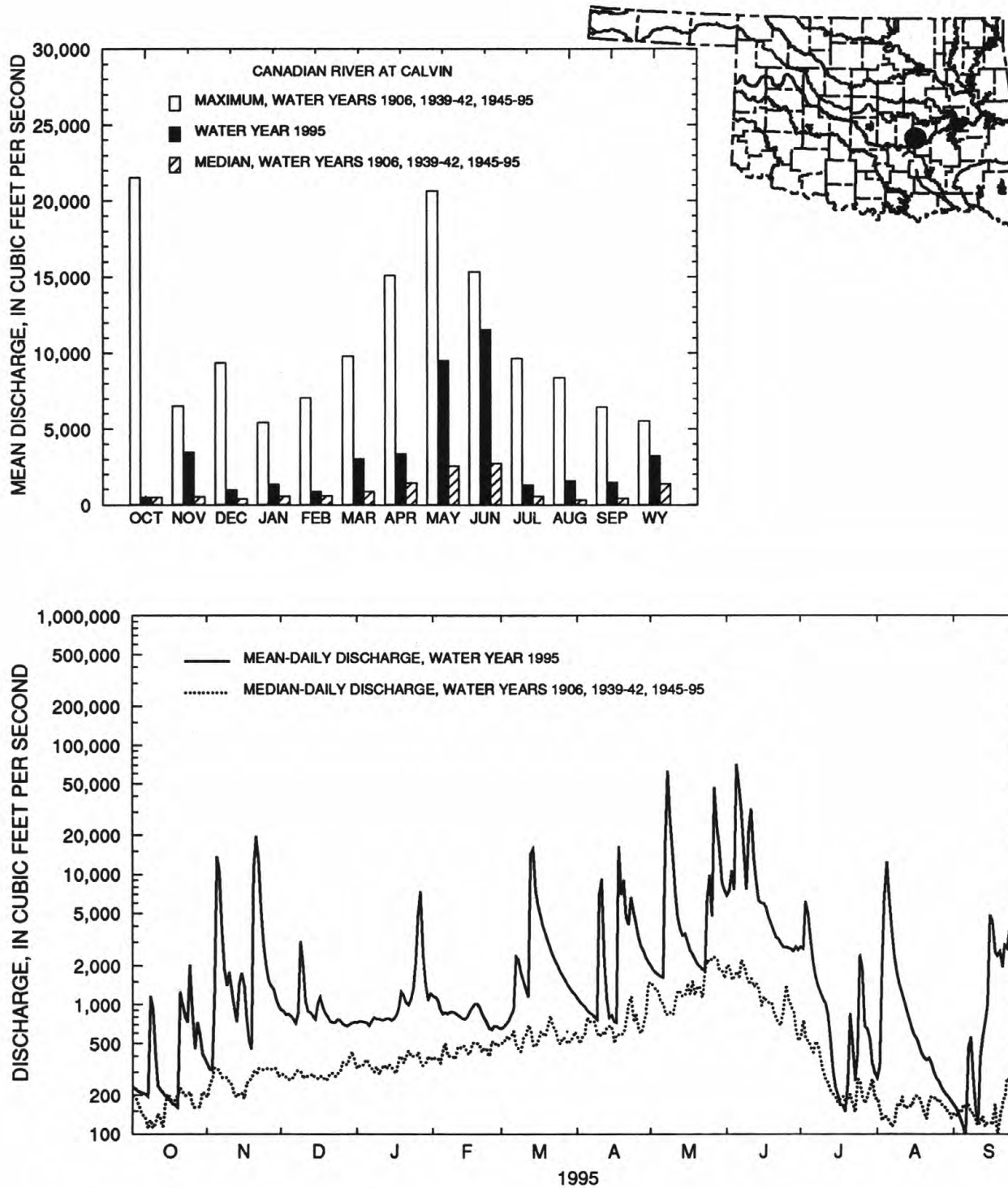


Figure 5. Comparison of daily, monthly, and annual discharges for water year 1995 and period of record for Canadian River at Calvin, Oklahoma.

WATER RESOURCES DATA — OKLAHOMA, 1995
Volume 1: ARKANSAS RIVER BASIN

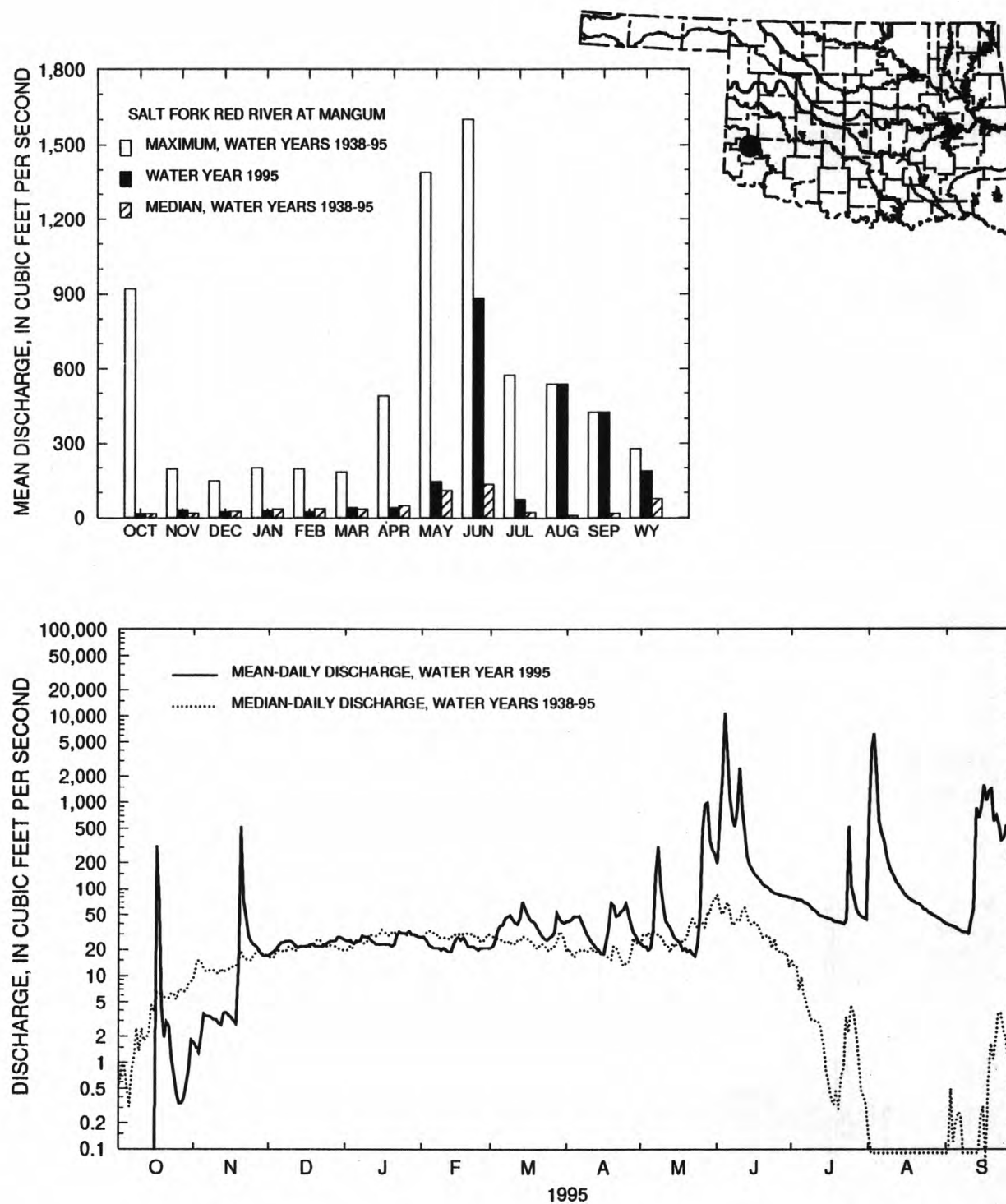


Figure 6. Comparison of daily, monthly, and annual discharges for water year 1995 and period of record for Salt Fork Red River at Mangum, Oklahoma.

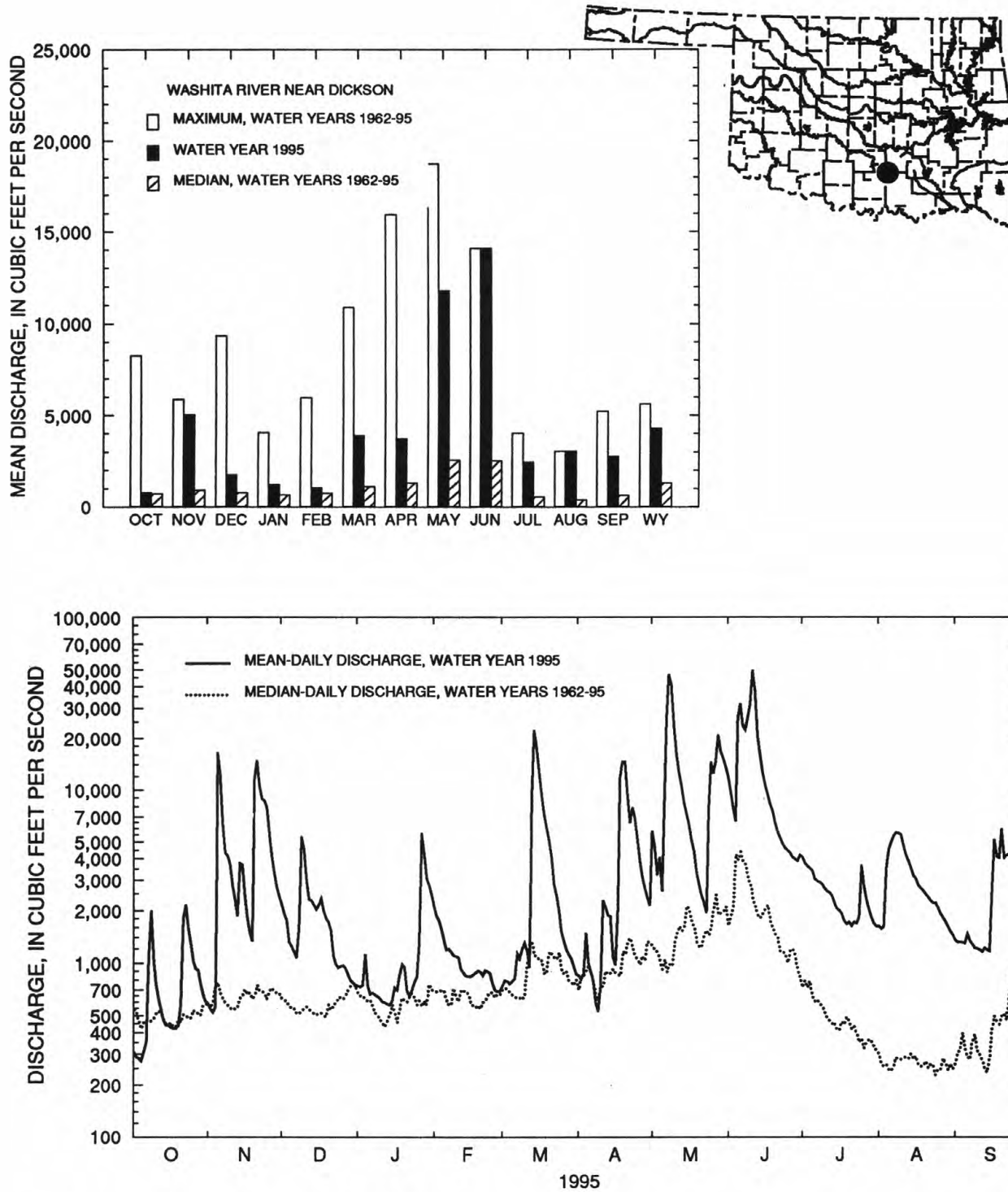


Figure 7. Comparison of daily, monthly, and annual discharges for water year 1995 and period of record for Washita River near Dickson, Oklahoma.

WATER RESOURCES DATA — OKLAHOMA, 1995
Volume 1: ARKANSAS RIVER BASIN

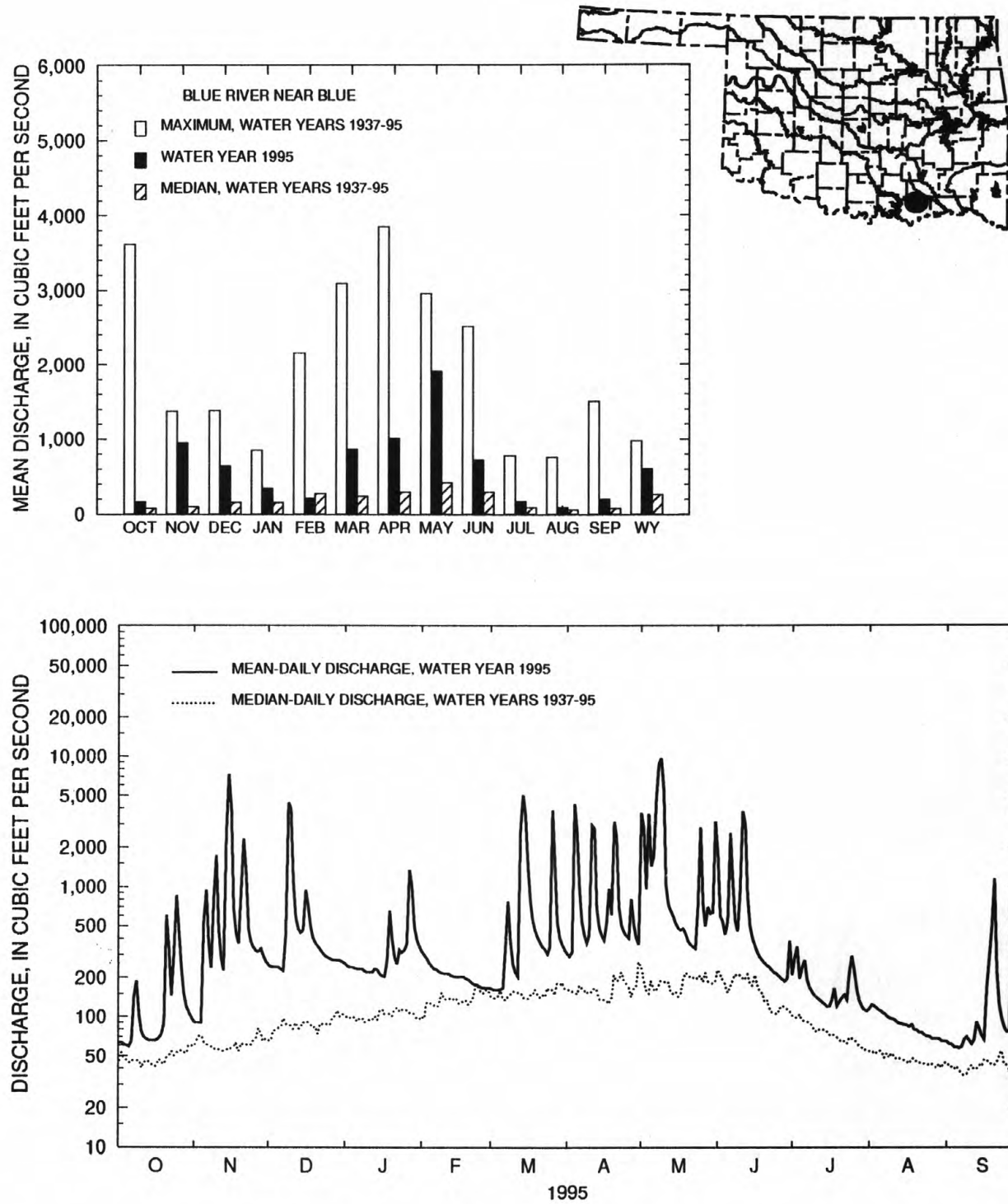


Figure 8. Comparison of daily, monthly, and annual discharges for water year 1995 and period of record for Blue River near Blue, Oklahoma.

Chemical Quality of Streamflow

The concentrations of selected dissolved chemical constituents measured at surface-water sampling stations in the State during the 1995 water year were generally within the ranges measured during previous years. The minimum values for the selected constituents for all stations were larger for the 1995 water year than the minimum values for the 1970 through 1990 water years. The maximum values for these

same constituents were smaller for all stations for the 1995 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 1995 water year are compared to maximum and minimum concentrations for the 1970 through 1990 water years.

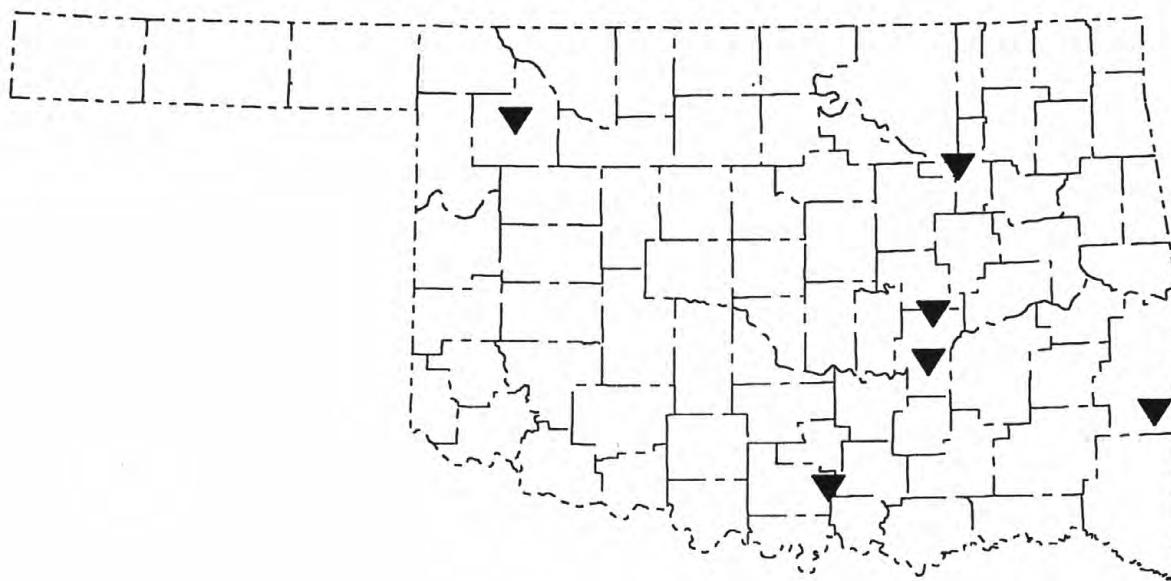


Figure 9.—Location of water-quality stations on selected principal streams.

WATER RESOURCES DATA — OKLAHOMA, 1995
Volume 1: ARKANSAS RIVER BASIN

The maximum dissolved-solids concentration measured in these streams in 1995 was 2,050 milligrams per liter (mg/L) in the North Canadian River at Woodward. The minimum concentrations for 1995 are larger than the 20-year minimum

concentrations. The maximum concentrations for 1995 are smaller than the 20-year maximum concentrations. Dissolved-solids concentrations, in mg/L, are shown in the following graphs:

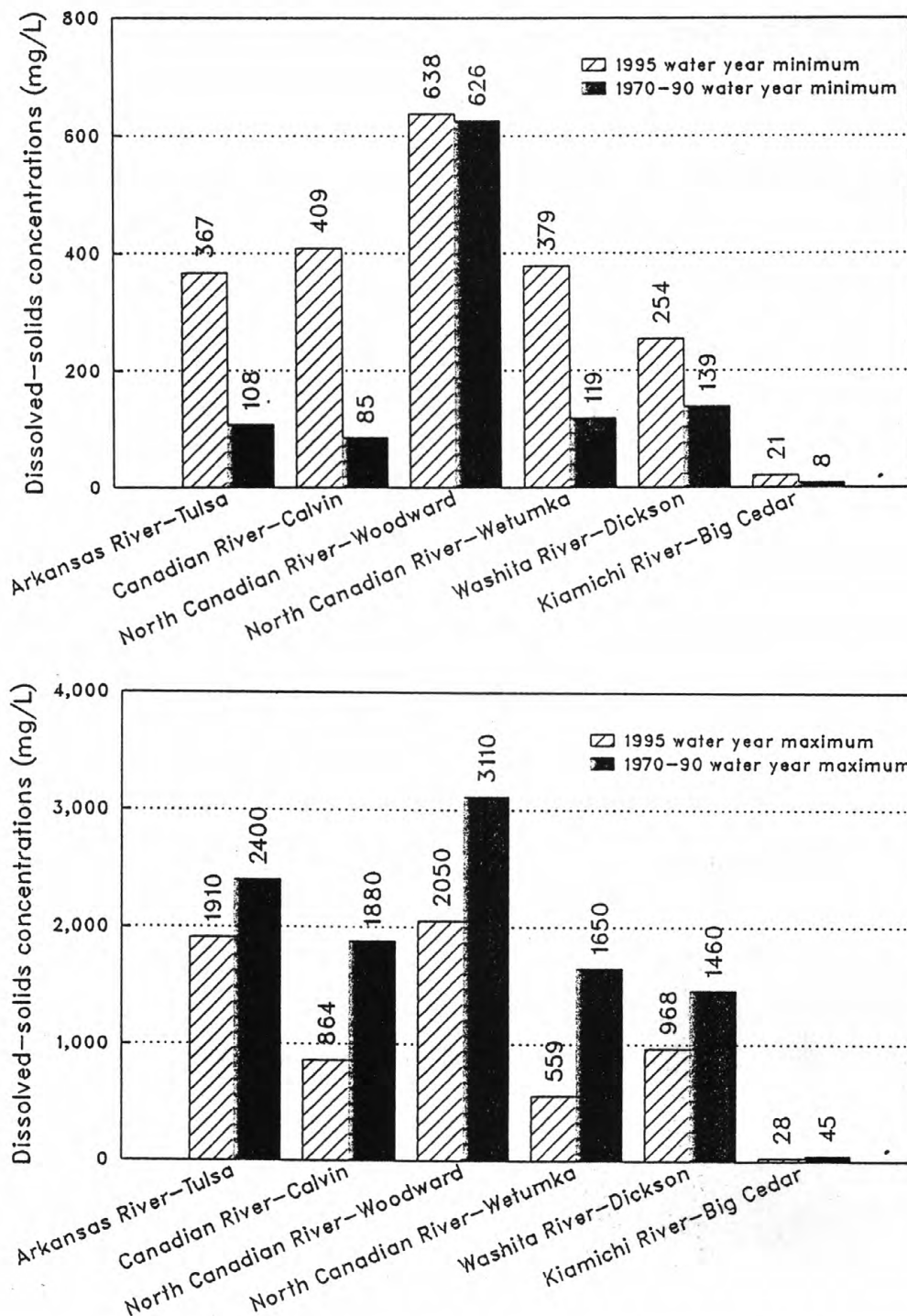


Figure 10.—Comparisons of minimum and maximum dissolved-solids concentrations, in milligrams per liter (mg/L), for water year 1995 and water years 1970-90.

The maximum dissolved-chloride concentration measured at the selected stations in 1995 was 910 mg/L in the Arkansas River at Tulsa. The minimum chloride concentrations for 1994 were larger than the 20-year minimum concentrations. The

maximum concentrations for 1995 were smaller than the 20-year maximum concentrations. Dissolved-chloride 1995 concentrations, in mg/L, are shown in the following graphs:

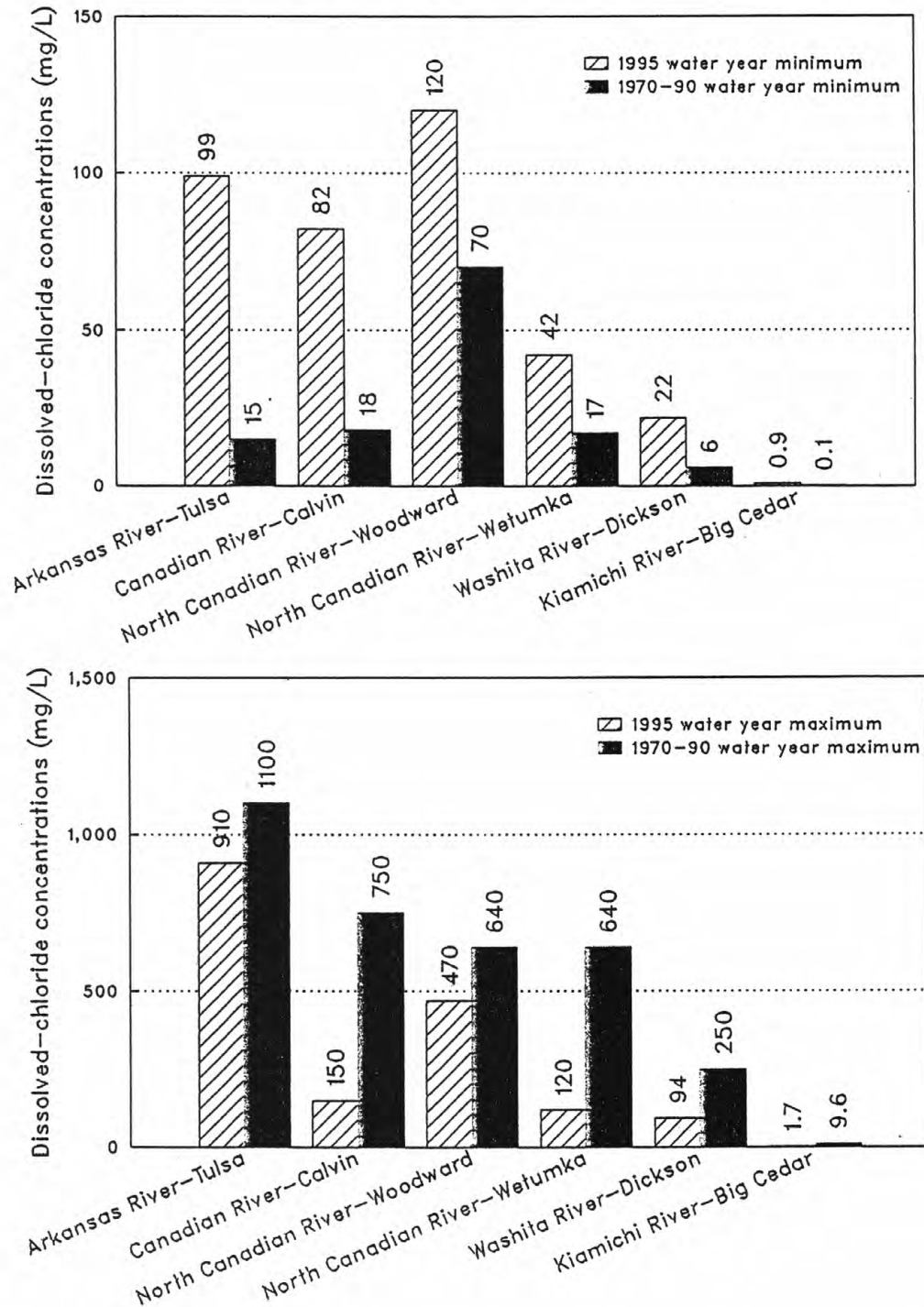


Figure 11.—Comparisons of minimum and maximum dissolved-chloride concentrations, in milligrams per liter (mg/L), for water year 1995 and water years 1970-90.

WATER RESOURCES DATA — OKLAHOMA, 1995
Volume 1: ARKANSAS RIVER BASIN

The maximum dissolved-sulfate concentration measured at the selected stations in 1995 was 620 mg/L in the North Canadian River at Woodward. The minimum concentrations for 1995 are larger than the 20-year minimum concentrations.

The maximum concentrations for 1995 are smaller than the 20-year maximum concentrations. Dissolved-sulfate 1995 concentrations, in mg/L, are shown in the following graphs:

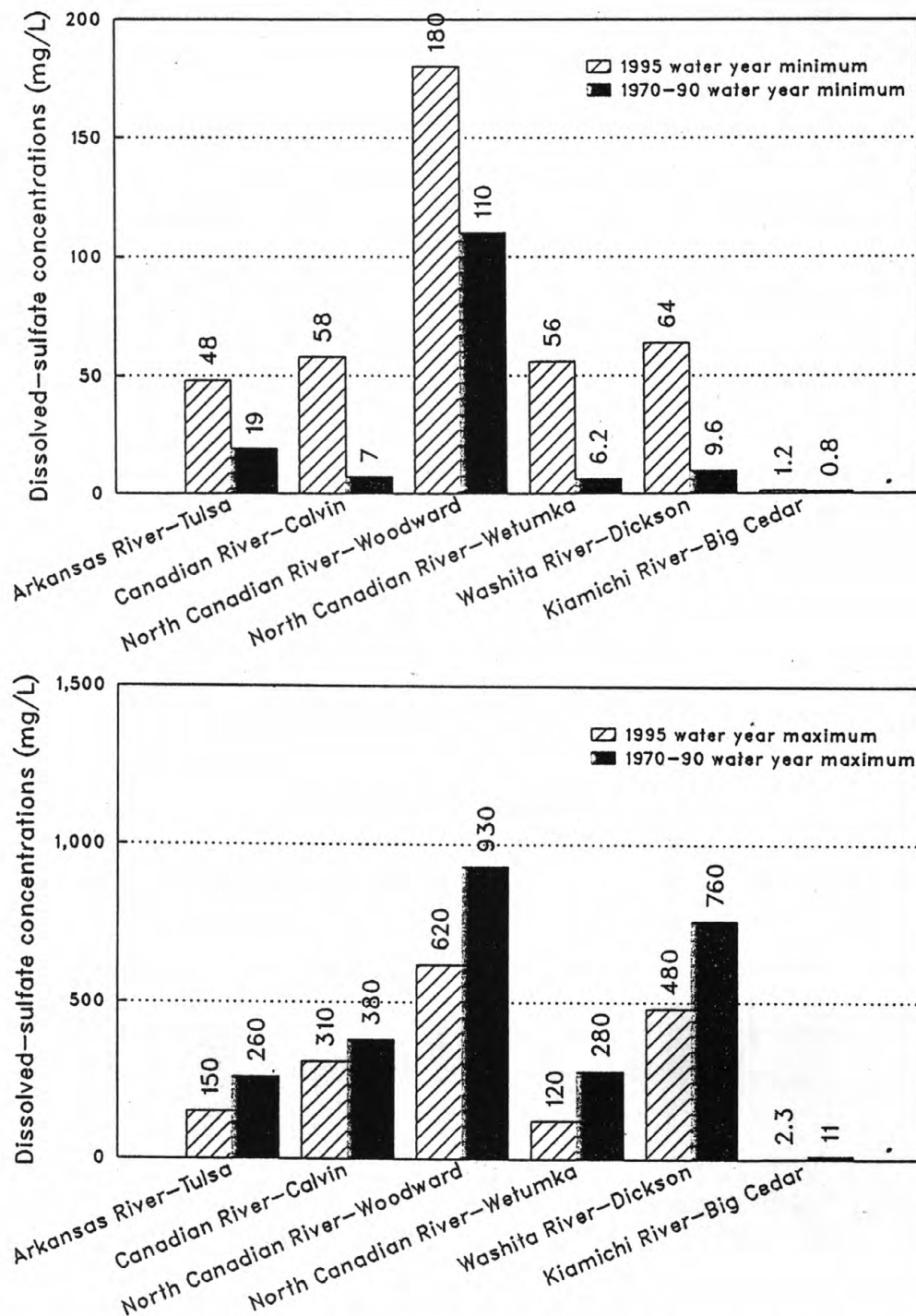


Figure 12.—Comparisons of minimum and maximum dissolved-sulfate concentrations, in milligrams per liter (mg/L), for water year 1995 and water years 1970-90.

The maximum suspended-sediment concentration measured at the selected stations in 1995 was 17,000 mg/L in the Washita River near Dickson. The minimum suspended-sediment concentrations for 1995 were larger than the 20-

year values. The maximum concentrations were smaller than the 20-year maximum concentrations. Suspended-sediment concentrations, in mg/L, are shown in the following graphs:

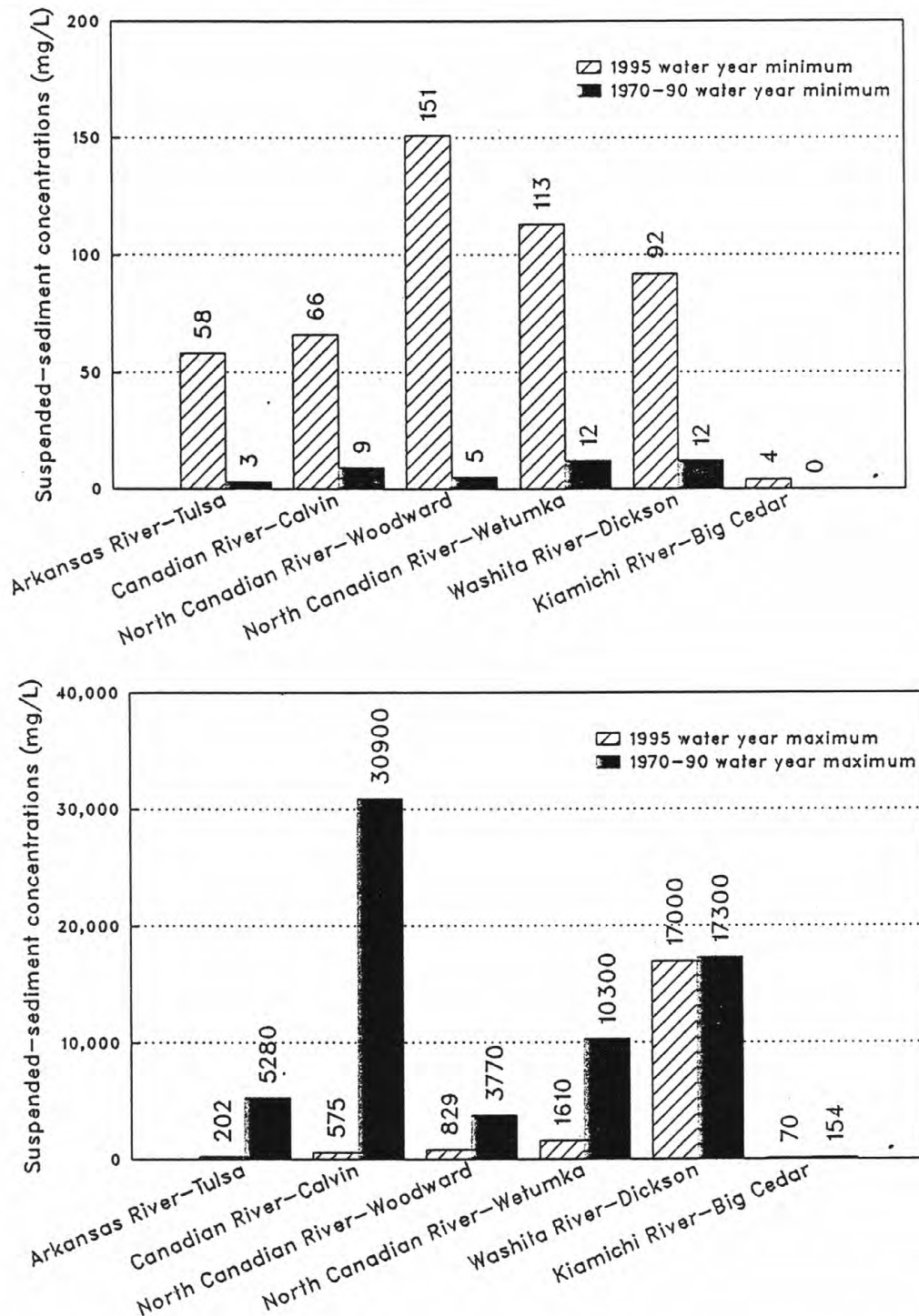


Figure 13.—Comparisons of minimum and maximum suspended-sediment concentrations, in milligrams per liter (mg/L), for water year 1995 and water years 1970-90.

WATER RESOURCES DATA — OKLAHOMA, 1995
Volume 1: ARKANSAS RIVER BASIN

Ground Water

Ground-water levels at 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 5 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 continued its decline of nearly one foot per year for the first eight months then had a reversal in the last four.

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

The hydrograph for the Fittstown GW well (Pontotoc County) (fig. 18) indicates water levels that respond rapidly to precipitation and slowly recede. Water levels show a rise over last year.

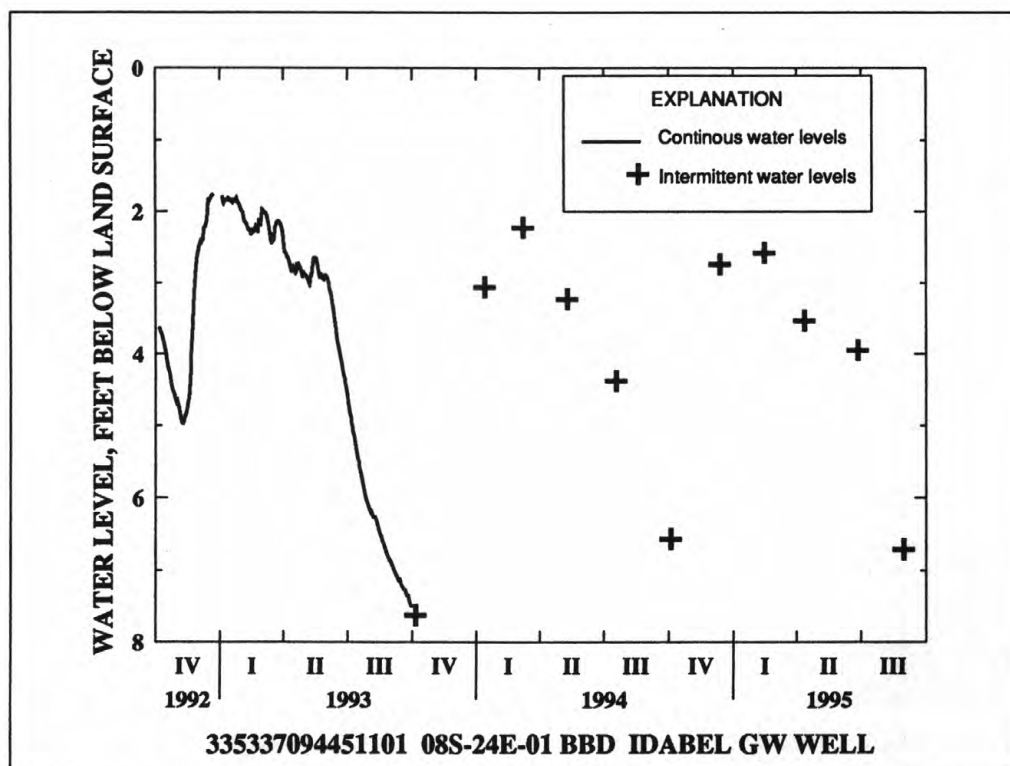


Figure 14.—Hydrograph for well 08S-24E-01 BBD 1 (Idabel GW Well, 335337094451101) for water years 1993-95.

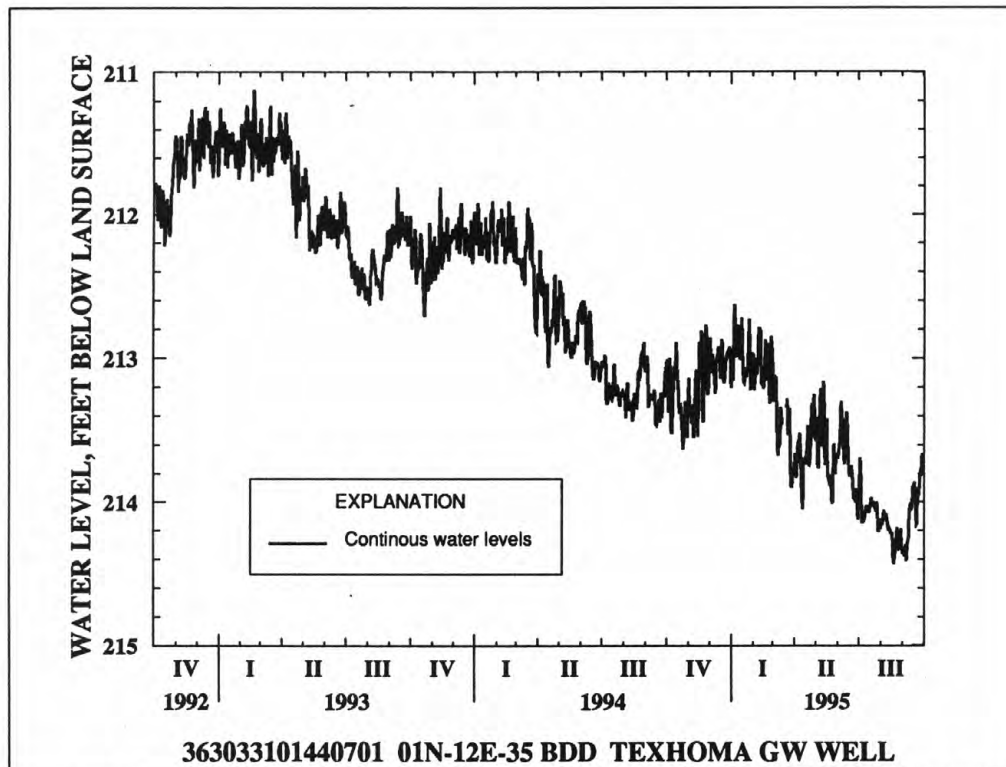


Figure 15.—Hydrograph for well 01N-12E-35 BBD 1 (Texhoma GW Well, 363033101440701) for water years 1993-95.

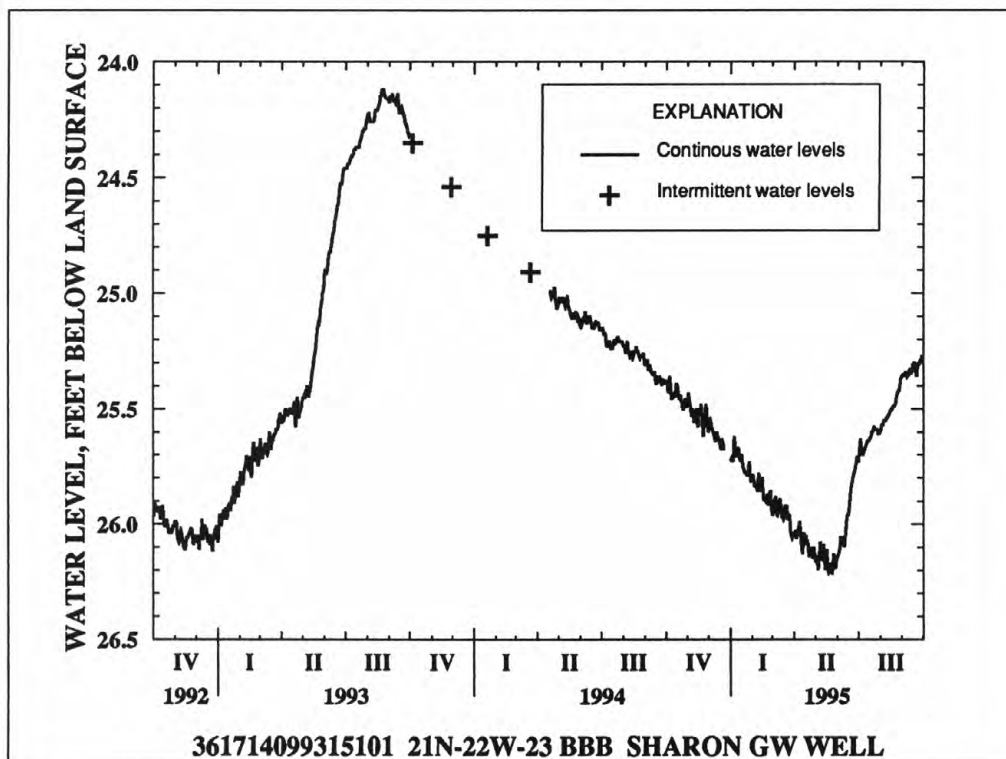


Figure 16.—Hydrograph for well 21N-22W-23 BBB 1 (Sharon GW Well, 361714099315101) for water years 1993-95.

WATER RESOURCES DATA — OKLAHOMA, 1995
Volume 1: ARKANSAS RIVER BASIN

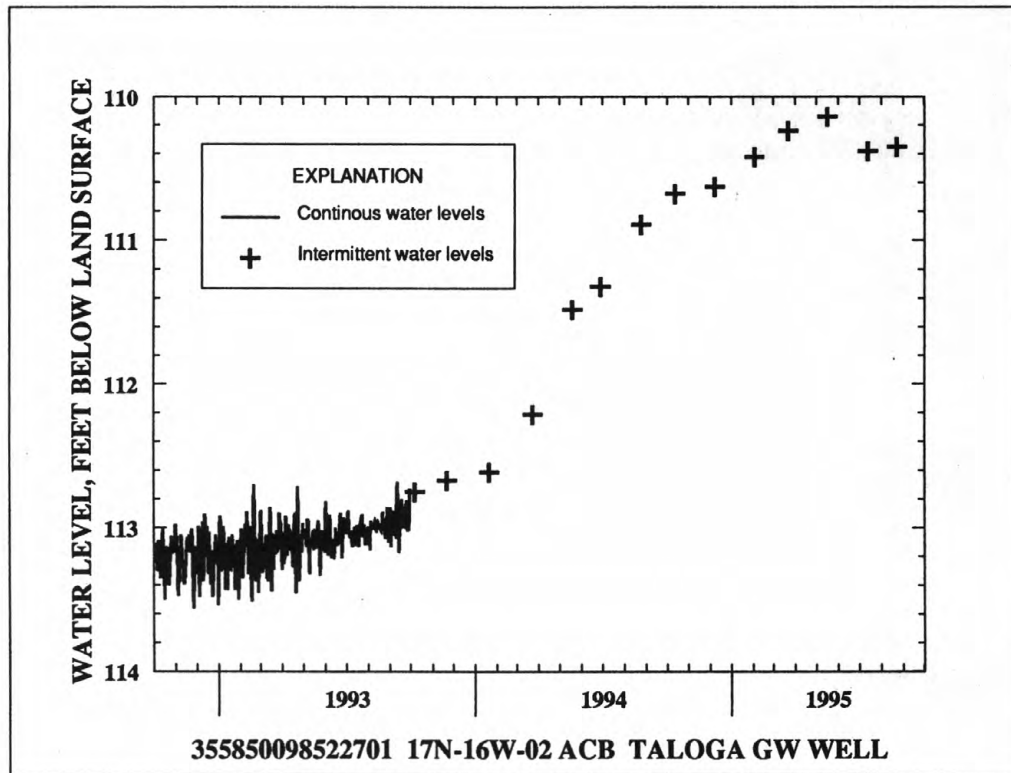


Figure 17.—Hydrograph for well 17N-16W-02 ACB 1 (Taloga GW Well, 355850098522701) for water years 1993-95.

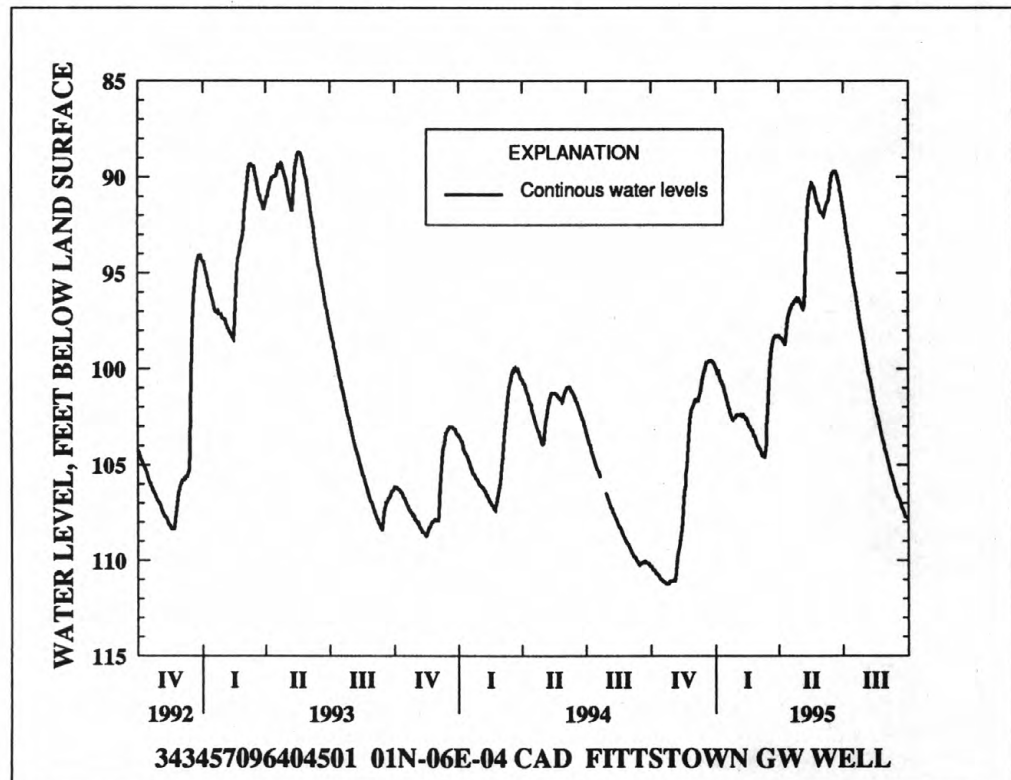


Figure 18.—Hydrograph for well 01N-06E-04 CAD 1 (Fittstown GW Well, 343457096404501) for water years 1993-95.

SPECIAL NETWORKS AND PROGRAMS

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

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

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

The National Water-Quality Assessment (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 1995 water year that began Oct. 1, 1994, and ended Sept. 30, 1995. 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.

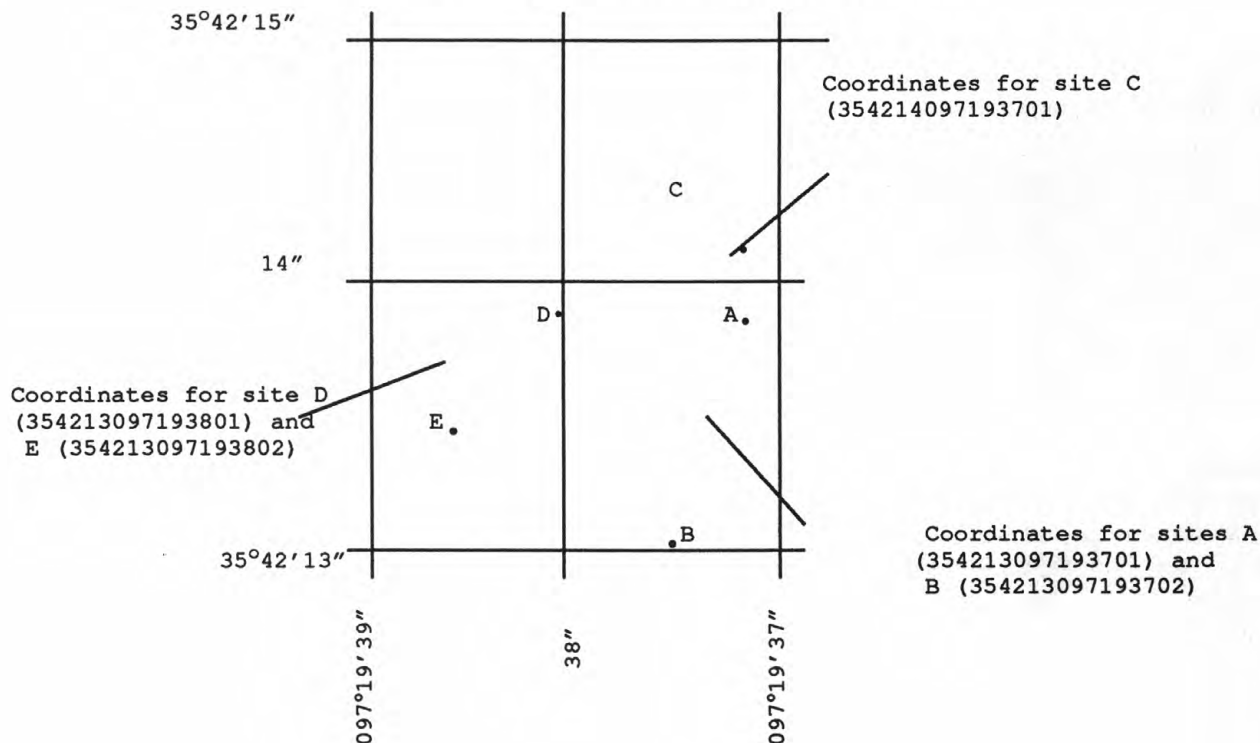
Station Identification Numbers

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 between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank

WATER RESOURCES DATA — OKLAHOMA, 1995
Volume 1: ARKANSAS RIVER BASIN



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

of any tributary with respect to the stream to which it is immediately tributary is indicated by an 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 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 one or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 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 for those years have not been corrected for this bias.

Data Presentation

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

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

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

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

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

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

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

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

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

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

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-

WATER RESOURCES DATA — OKLAHOMA, 1995
Volume 1: ARKANSAS RIVER BASIN

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 or 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 m membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water)

is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

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

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

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

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

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate (CaCO_3).

HWM is a high-water mark or flood mark.

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

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

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

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

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

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

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per unit area habitat, usually square meter (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

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

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

Parameter Code is a 5-digit number used in the U.S. Geological Survey 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 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm

(disintegrations per minute).

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

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment, and are commonly 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 algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

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

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

Milligrams of carbon per area or volume per unit time [mg C/(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 O/(m².time)] for periphyton and macrophytes and [mg O/(m³.time)] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Solute is any substance that is dissolved in water.

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

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

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

Substrate is the physical surface upon which an organism lives.

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

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

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

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

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

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected

on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 μ m 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, 1995, is called the "1995 water year."

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

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

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

The reports listed below are for sale by the U.S. Geological Survey, Branch of Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F. P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L.M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W. S. Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 pages.
- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W. E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurement at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F. A. Kilpatrick and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1989. 27 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by the moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 34 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.

- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F. A. Kilpatrick and E. D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F. A. Kilpatrick, R. E. Rathbun, Nobuhiro Yotsukura, G. W. Parker, and L. L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.
- 3-A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 31 pages.
- 3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A20. 1993. 38 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-B4. *Regression modeling of ground-water flow*, by R. L. Cooley and R. L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 pages.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow - Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R. L. Cooley: USGS--TWRI Book 3, Chapter B4. 1993. 8 pages.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction*, by O. L. Franke, T. E. Reilly, and G. D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 pages.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T. E. Reilly, O. L. Franke, and G. D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 pages.
- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E. J. Wexler: USGS--TWRI Book 3, Chapter B7. 1992. 190 pages.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L. C. Friedman, editors: USGS--TWRI Book 5, Chapter A1. 1989. 545 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R. L. Wershaw, M. J. Fishman, R. R. Grabbe, and L. E. Lowe: USGS--TWRI Book 5, Chapter A3. 1987. 80 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L. J. Britton and P. E. Greeson, editors: USGS--TWRI Book 5, Chapter A4. 1989. 363 pages.

- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.
- 6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S. A. Leake and D. E. Prudic: USGS--TWRI Book 6, Chapter A2. 1991. 68 pages.
- 6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L. J. Torak: USGS--TWRI Book 6, Chapter A3. 1993. 136 pages.
- 6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R. L. Cooley: USGS--TWRI Book 6, Chapter A4. 1992. 108 pages.
- 6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L. J. Torak: USGS--TWRI Book 6, Chapter A5, 1993. 243 pages.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

Figure 19.—Locations of continuous and partial-record surface-water stations, water year 1995

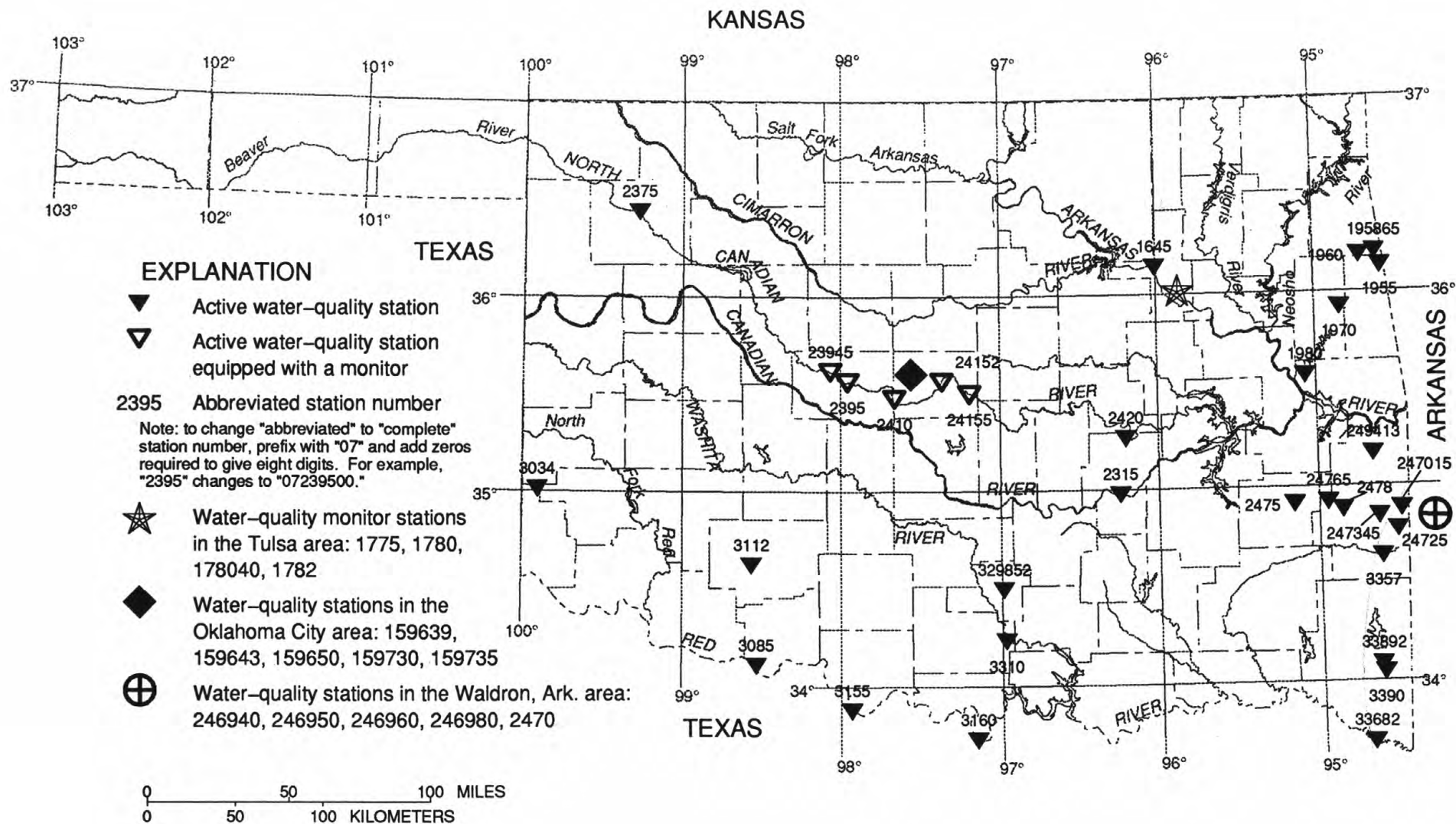


Figure 20.—Locations of water-quality stations, water year 1995

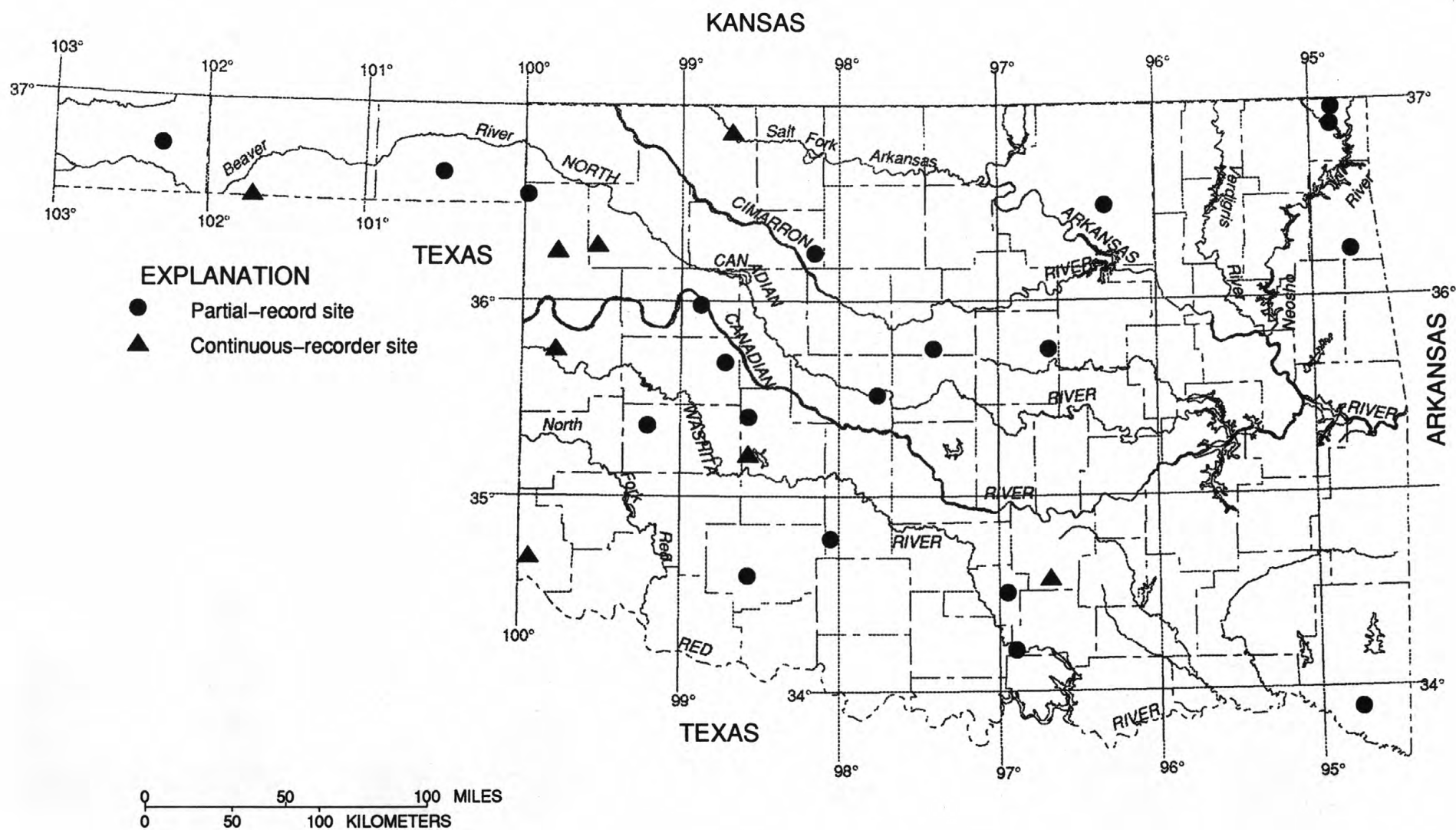


Figure 21.—Locations of network ground-water wells, water year 1995



MEASUREMENT EQUIPMENT USED DURING FLOODS.

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)
No peak greater than base discharge.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	8.8	22	36	35	e28	78	137	260	171	51	3.6
2	2.6	8.5	21	31	36	e22	73	113	231	236	47	3.4
3	2.2	4.6	21	30	37	e26	69	96	243	185	53	2.6
4	2.4	3.9	22	e32	34	34	66	91	394	142	57	2.3
5	6.6	3.6	21	e37	32	42	61	84	365	117	89	1.8
6	3.3	3.2	23	28	31	47	56	81	344	93	113	1.8
7	2.3	3.6	27	e41	32	e37	55	88	269	77	134	1.5
8	2.2	3.6	29	35	32	e33	57	456	332	66	66	1.5
9	1.9	3.6	30	29	33	e45	59	872	2420	61	47	1.8
10	1.9	3.1	31	35	33	56	55	543	1140	56	37	1.6
11	1.9	3.1	28	42	32	52	58	317	678	51	31	1.9
12	1.9	3.1	25	49	e20	50	52	245	456	45	26	6.1
13	1.9	3.1	25	48	e13	49	51	214	348	41	23	7.0
14	1.9	3.1	27	44	e23	75	47	193	286	37	21	7.9
15	2.5	3.1	28	41	33	66	45	169	241	36	22	5.4
16	2.6	3.1	28	39	41	70	44	152	205	35	61	6.2
17	4.8	3.1	27	38	40	64	59	205	176	37	54	4.6
18	3.2	3.1	27	36	39	63	71	309	158	31	35	4.4
19	3.1	16	27	35	38	64	63	207	142	29	29	7.2
20	2.7	63	28	33	39	56	63	174	127	427	24	7.2
21	2.6	112	28	32	35	51	54	153	118	298	20	9.7
22	2.6	48	28	32	33	47	53	139	109	222	17	10
23	2.6	36	28	32	34	41	65	129	101	128	16	10
24	2.6	32	28	33	33	35	79	127	109	137	13	8.9
25	2.6	30	29	32	32	48	72	131	107	216	10	9.7
26	2.6	28	28	35	33	78	71	196	97	132	8.8	10
27	2.6	27	28	37	33	207	61	1490	90	87	7.5	8.9
28	2.6	23	28	39	32	157	56	881	82	69	6.5	10
29	2.3	22	27	41	---	115	60	519	101	60	5.4	14
30	2.2	22	27	40	---	95	95	355	130	50	5.0	33
31	16	---	35	36	---	84	---	292	---	45	4.1	---
TOTAL	94.6	530.3	831	1128	918	1937	1848	9158	9859	3417	1133.3	204.0
MEAN	3.05	17.7	26.8	36.4	32.8	62.5	61.6	295	329	110	36.6	6.80
MAX	16	112	35	49	41	207	95	1490	2420	427	134	33
MIN	1.4	3.1	21	28	13	22	44	81	82	29	4.1	1.5
AC-FT	188	1050	1650	2240	1820	3840	3670	18160	19560	6780	2250	405

c Estimated

ARKANSAS RIVER BASIN

45

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1995, BY WATER YEAR (WY)

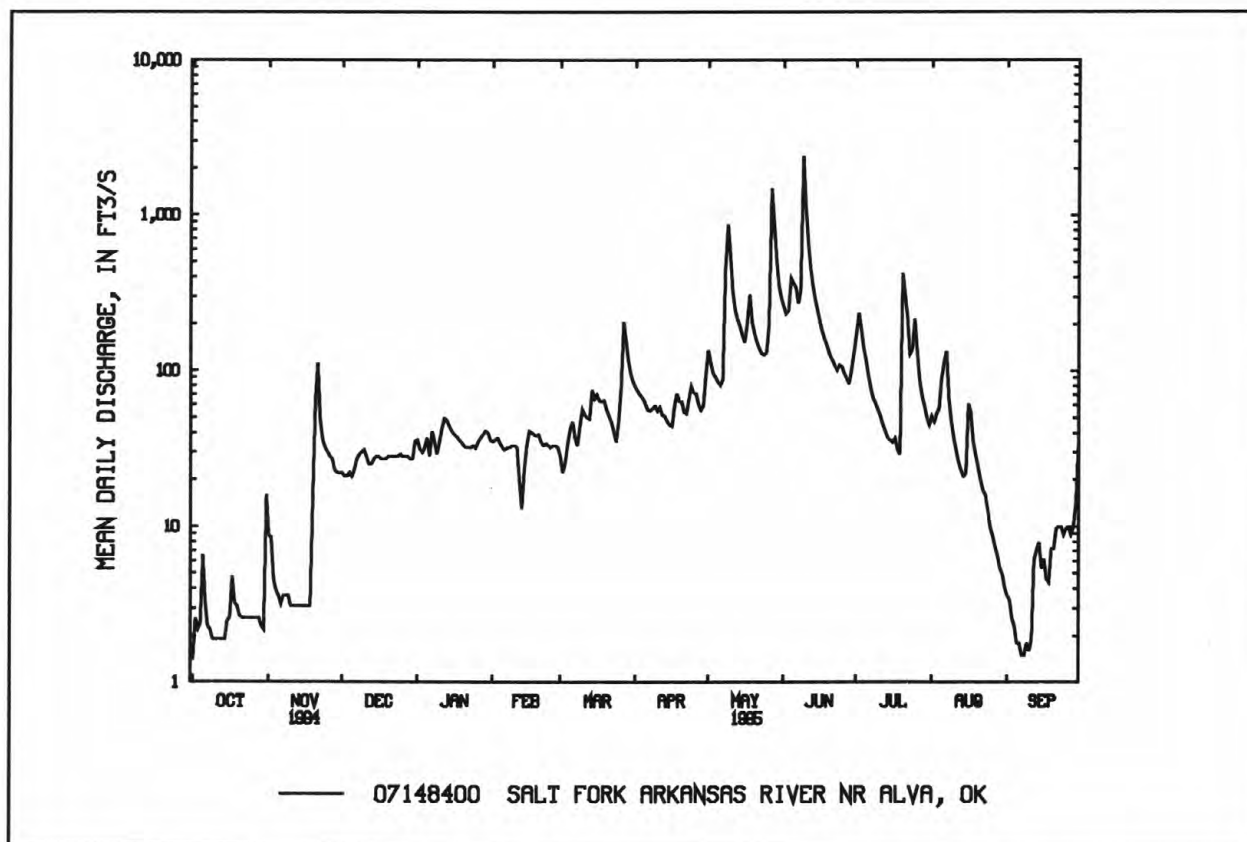
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	102	70.1	57.4	65.7	82.6	147	160	262	262	126	63.6	54.3
MAX	620	211	114	121	227	822	362	856	689	411	197	259
(WY)	1986	1982	1987	1988	1987	1987	1988	1993	1989	1982	1992	1989
MIN	2.35	.95	14.8	15.3	17.4	29.2	22.5	27.1	31.3	5.17	2.66	.94
(WY)	1992	1981	1981	1981	1981	1981	1981	1992	1994	1984	1980	1980

SUMMARY STATISTICS	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1980 - 95
ANNUAL TOTAL	13331.5	31058.2	
ANNUAL MEAN	36.5	85.1	^a 121
HIGHEST ANNUAL MEAN			271 1987
LOWEST ANNUAL MEAN			40.5 1994
HIGHEST DAILY MEAN	615 Jul 25	2420 Jun 9	7880 Mar 24 1987
LOWEST DAILY MEAN	1.4 Oct 1	1.4 Oct 1	^b .43 Aug 24 1984
ANNUAL SEVEN-DAY MINIMUM	1.6 Sep 25	1.7 Sep 5	.48 Aug 18 1984
INSTANTANEOUS PEAK FLOW		4160 Jun 9	^c 12800 Oct 10 1985
INSTANTANEOUS PEAK STAGE		12.67 Jun 9	15.24 Oct 10 1985
ANNUAL RUNOFF (AC-FT)	26440	61600	87770
10 PERCENT EXCEEDS	68	200	241
50 PERCENT EXCEEDS	29	36	57
90 PERCENT EXCEEDS	2.3	3.1	4.6

^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.



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)
Nov. 21	1300	15,300	18.84	June 11	2230	26,400	21.81
June 6	0130	16,400	19.49	Aug. 4	1900	40,900	26.28

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	1020	1210	527	556	372	537	5500	7260	5140	5070	538
2	51	2010	1100	542	551	357	561	5480	5860	3370	17500	505
3	62	1150	1000	620	537	328	543	4380	6170	2440	23100	454
4	73	789	939	580	531	362	518	2990	11100	2590	e35000	358
5	332	620	841	550	539	412	467	2680	14400	2660	e22000	341
6	241	514	800	607	507	412	394	2470	15600	2470	e16000	307
7	145	472	756	603	492	432	410	2890	12800	2180	e11000	280
8	142	425	721	554	488	430	395	e5980	8090	1950	e9000	266
9	143	373	719	550	476	508	367	e7000	12000	1710	8500	263
10	112	355	682	524	460	500	354	e5500	21200	1450	6320	251
11	96	331	675	514	453	506	338	4630	24900	1250	5050	248
12	88	290	663	510	430	541	354	3760	21000	1140	4250	262
13	79	268	634	508	408	2750	461	3430	11600	1020	3620	267
14	73	262	628	516	424	6080	343	3170	8560	887	3100	272
15	71	257	615	527	443	6730	236	2810	7480	778	2620	272
16	68	253	606	534	465	4580	241	2530	6740	771	2230	290
17	73	232	606	515	487	3010	228	2270	5960	1090	2050	301
18	108	229	666	518	479	1710	306	2180	5100	917	1840	348
19	1370	241	689	537	482	1250	750	2130	4440	737	1630	328
20	861	4670	640	501	494	1060	1010	2080	3880	745	1480	302
21	595	14100	630	521	463	964	949	2350	3390	1450	1310	314
22	495	12100	621	509	447	849	1110	2290	2910	2420	1190	300
23	533	6180	590	501	439	751	923	2090	2500	3560	1070	290
24	633	3790	571	509	457	708	1180	1880	2750	4030	976	301
25	425	2510	557	531	405	581	1550	1770	3020	3280	888	319
26	329	2050	543	512	400	514	1370	1760	4330	2760	811	327
27	275	1810	534	496	458	487	1100	3100	3550	2080	750	347
28	275	1660	528	483	429	636	854	6470	2170	1810	697	367
29	259	1540	527	595	---	543	1530	6270	4450	1570	653	362
30	245	1330	522	582	---	516	4270	5610	8170	1320	606	350
31	294	---	513	537	---	534	---	7990	---	1150	566	---
TOTAL	8598	61831	21326	16613	13200	39413	23649	115440	251380	60725	190877	9730
MEAN	277	2061	688	536	471	1271	788	3724	8379	1959	6157	324
MAX	1370	14100	1210	620	556	6730	4270	7990	24900	5140	35000	538
MIN	51	229	513	483	400	328	228	1760	2170	737	566	248
AC-FT	17050	122600	42300	32950	26180	78180	46910	229000	498600	120400	378600	19300

ARKANSAS RIVER BASIN

47

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1995, BY WATER YEAR (WY)

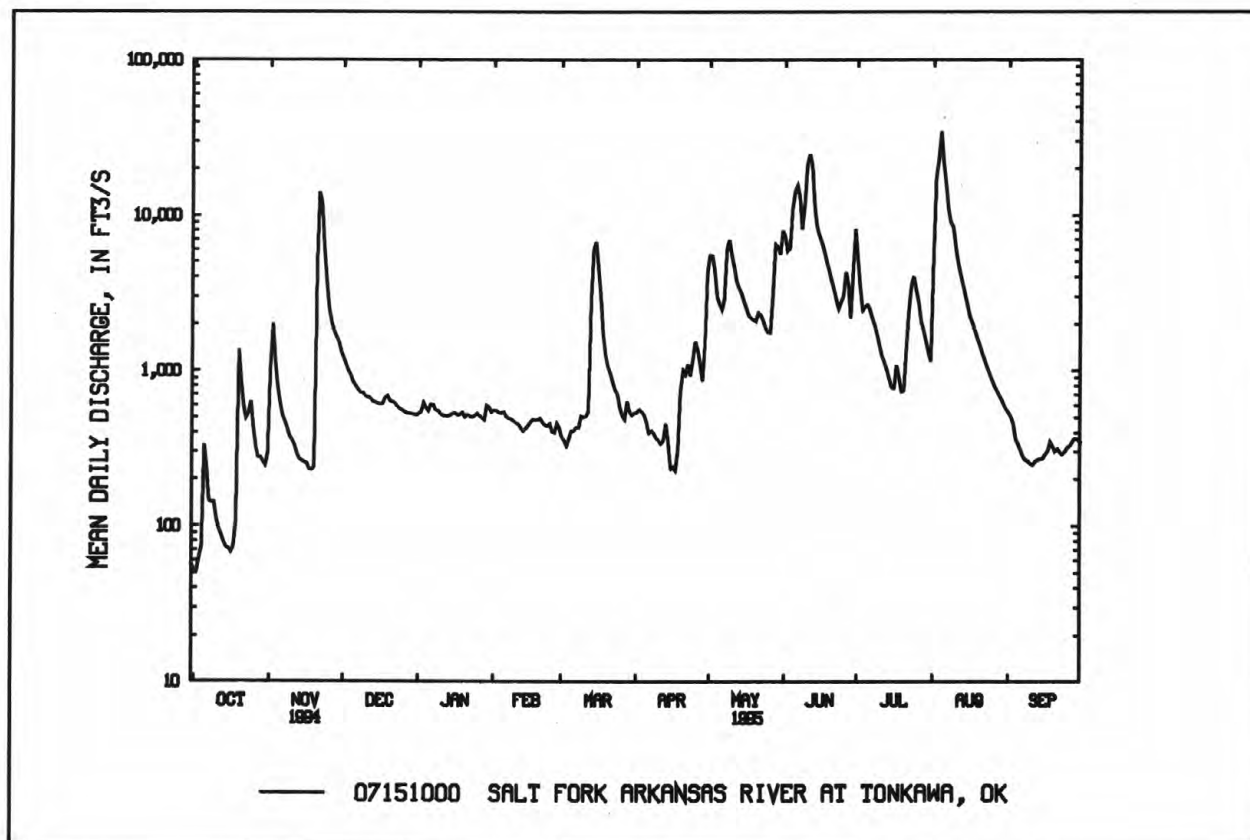
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	857	645	349	351	532	927	1173	1710	1538	888	625	585
MAX	9412	4431	1809	1649	5171	6188	7916	12770	8379	8821	6157	3448
(WY)	1987	1975	1945	1993	1949	1973	1973	1993	1995	1951	1995	1949
MIN	.64	4.82	3.56	7.52	10.9	10.6	13.6	8.78	7.92	5.69	5.50	.000
(WY)	1957	1955	1955	1957	1957	1955	1955	1956	1956	1954	1956	1956

SUMMARY STATISTICS	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1942 - 95
ANNUAL TOTAL	217864	812782	
ANNUAL MEAN	597	2227	849
HIGHEST ANNUAL MEAN			3260
LOWEST ANNUAL MEAN			95.5
HIGHEST DAILY MEAN	14100	Nov 21	57800
LOWEST DAILY MEAN	51	Oct 2	a.00
ANNUAL SEVEN-DAY MINIMUM	56	Aug 13	.00
INSTANTANEOUS PEAK FLOW		b40900	97300
INSTANTANEOUS PEAK STAGE		c27.64	28.98
ANNUAL RUNOFF (AC-FT)	432100	1612000	615300
10 PERCENT EXCEEDS	930	5900	1890
50 PERCENT EXCEEDS	310	621	242
90 PERCENT EXCEEDS	85	272	32

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

^bMaximum known discharge during backwater period.

^cOccurred during backwater.



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)
Nov. 21	0900	20,400	30.21	June 5	unknown	19,000	29.80 (HWM)
Apr. 30	1100	28,700	31.95	June 10	0400	35,000	33.00
May 9	0600	14,700	27.83	Aug. 4	1900	27,000	31.67
May 29	0900	19,700	30.04				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	826	182	152	159	126	205	15800	5840	1860	3280	173
2	22	319	174	140	161	127	194	2710	3420	1650	7730	171
3	30	182	171	134	157	120	188	1310	3280	1060	11600	166
4	21	146	167	124	147	125	180	987	13400	e510	23600	163
5	18	128	162	118	146	140	170	857	8000	e380	12300	158
6	17	110	161	109	145	142	165	950	5280	e320	3340	152
7	27	100	163	110	146	156	161	2030	2230	e289	4280	155
8	46	97	162	121	138	141	159	7890	4090	e255	2200	146
9	42	96	167	143	141	146	158	12900	24500	e234	545	146
10	56	93	173	155	142	168	157	4020	32900	e218	e456	149
11	40	86	161	175	140	180	159	1630	13500	e206	e346	152
12	35	84	152	186	135	188	155	1090	3430	e198	e274	171
13	31	89	148	174	129	2960	150	823	2500	e191	e239	172
14	30	98	158	165	122	6680	148	660	1840	e184	e208	169
15	32	98	151	156	151	4530	147	540	1430	e180	e185	165
16	34	96	155	152	163	1130	143	468	1170	e177	1310	169
17	52	93	163	152	157	564	158	557	978	e241	1030	165
18	100	93	165	147	148	390	326	2330	832	e193	594	164
19	113	107	150	145	146	311	443	2710	733	e176	390	166
20	106	7360	146	139	144	273	453	905	648	612	e294	180
21	115	17200	143	138	140	246	659	584	578	932	e224	227
22	150	4390	141	138	138	227	341	473	520	1370	e222	220
23	128	852	140	140	141	206	324	430	488	820	e220	203
24	106	476	138	139	136	191	568	477	775	e340	e218	196
25	117	343	138	140	136	192	427	678	2640	e271	e216	193
26	106	286	138	140	134	208	341	746	2020	e248	e210	186
27	91	258	139	149	131	272	239	4820	635	e234	e203	182
28	83	227	141	155	124	470	205	15300	463	e210	e197	179
29	79	206	141	164	---	313	14100	15600	655	e197	e191	178
30	79	192	141	172	---	250	27700	4370	2990	e189	e184	178
31	414	---	146	167	---	224	---	7150	---	e180	178	---
TOTAL	2345	34731	4777	4539	3997	21396	48923	111795	141765	14125	76464	5194
MEAN	75.6	1158	154	146	143	690	1631	3606	4725	456	2467	173
MAX	414	17200	182	186	163	6680	27700	15800	32900	1860	23600	227
MIN	17	84	138	109	122	120	143	430	463	176	178	146
AC-FT	4650	68890	9480	9000	7930	42440	97040	221700	281200	28020	151700	10300

e Estimated

ARKANSAS RIVER BASIN

49

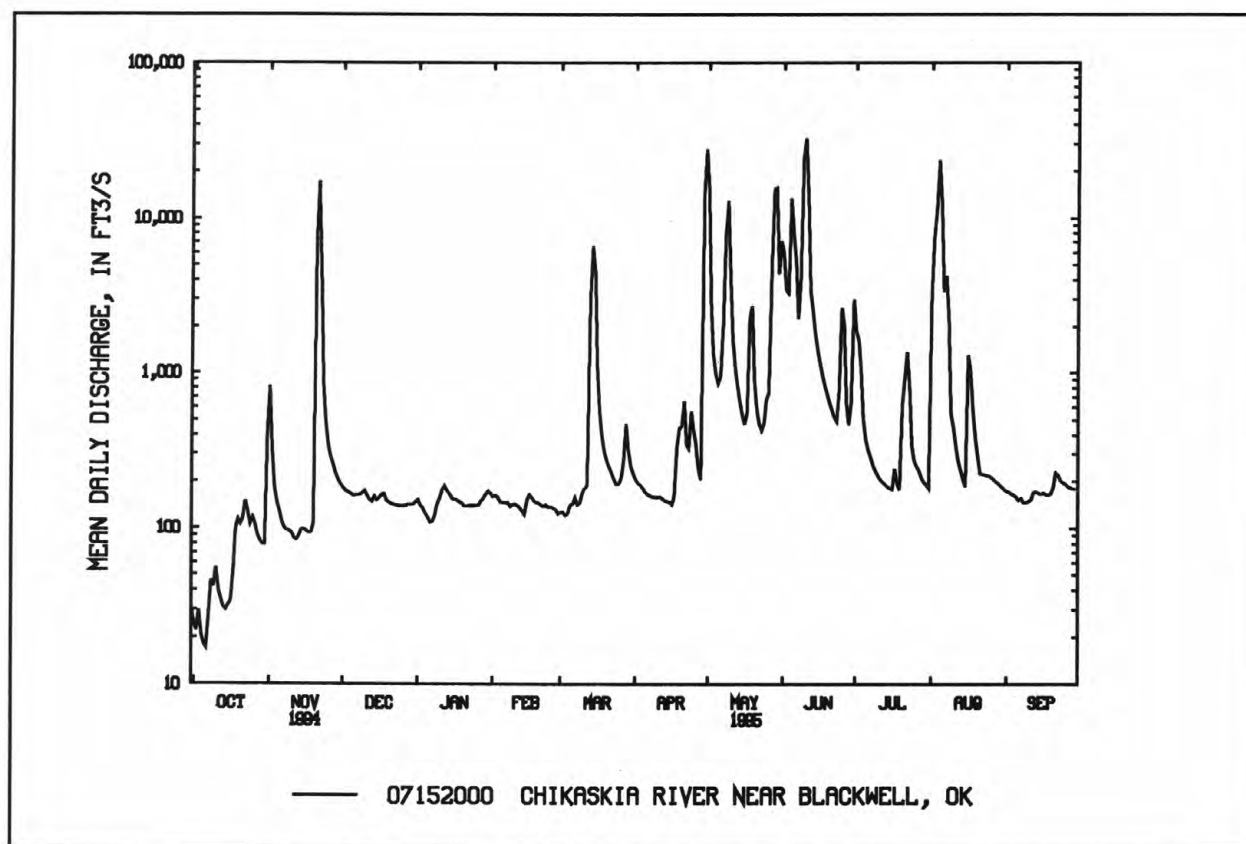
07152000 CHIKASKIA RIVER NEAR BLACKWELL, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	529	415	230	231	348	615	752	1091	1016	473	337	444
MAX	5244	4486	1649	1659	3732	4561	4748	8589	5093	5129	2467	3395
(WY)	1960	1965	1945	1949	1949	1973	1944	1993	1951	1951	1995	1973
MIN	.90	1.08	1.34	4.35	10.3	30.7	29.4	27.1	26.1	6.17	.55	.64
(WY)	1957	1955	1955	1957	1957	1957	1955	1956	1972	1954	1936	1956

SUMMARY STATISTICS	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1936 - 95
ANNUAL TOTAL	120724.0	470051	
ANNUAL MEAN	331	1288	545
HIGHEST ANNUAL MEAN			1732
LOWEST ANNUAL MEAN			71.0
HIGHEST DAILY MEAN	17200	Nov 21	69500
LOWEST DAILY MEAN	5.2	Sep 21	.00
ANNUAL SEVEN-DAY MINIMUM	8.5	Aug 26	.00
INSTANTANEOUS PEAK FLOW		35000	85000
INSTANTANEOUS PEAK STAGE		33.00	34.31
ANNUAL RUNOFF (AC-FT)	239500	932300	394600
10 PERCENT EXCEEDS	319	2810	804
50 PERCENT EXCEEDS	158	180	131
90 PERCENT EXCEEDS	28	106	20

^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.--No estimated daily discharges. Records fair. Flow regulated since April 1976 by Kaw Lake (station 07148130) 59.7 mi upstream; some regulation by Great Salt Plains Lake (station 07150000) since 1941. U.S. Army Corps of Engineers' satellite tele-meter 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	277	398	2960	2510	1780	2070	3970	25700	57200	30700	6030	7960
2	246	392	4490	1640	1410	2240	3010	27100	45300	27200	12300	5520
3	251	1410	4960	1590	1330	2210	2330	19800	42900	27200	37100	3940
4	257	2330	4760	1470	1660	1770	2220	11400	47300	25200	39500	3730
5	267	1830	4720	2070	1420	1810	3160	8960	54900	28200	44800	3540
6	217	1490	4860	2240	1260	1080	2770	9510	73700	29000	73900	3420
7	237	1200	4900	2080	1210	977	2210	10200	61100	28600	46700	4810
8	357	894	4920	2120	1360	1330	1330	19300	42300	27700	32600	3460
9	296	845	5010	1360	1260	2160	1420	18100	44000	26900	22900	2890
10	217	746	4980	1700	1250	2020	1380	22300	42000	26300	17100	2770
11	187	610	4740	3210	1060	1570	1610	18900	56000	22100	14500	2370
12	169	521	5040	3320	978	1460	2450	13200	72900	20700	13000	2430
13	149	489	4930	3340	870	14300	2420	11600	62700	16100	11900	2210
14	135	508	4950	3300	875	19800	2490	10400	55300	10300	11000	2420
15	127	490	4870	2570	814	22000	2420	9860	53500	9280	10500	1910
16	120	796	4660	1740	735	23500	1530	9420	51500	8920	10300	2670
17	119	930	3230	2450	803	19700	2060	9570	41000	8920	13700	2870
18	112	827	2740	3780	917	16900	4510	9460	32600	9050	23000	2060
19	100	711	2000	4340	976	15300	3340	8910	30900	8750	26000	1920
20	86	9920	1770	3110	934	14400	2700	12800	28100	7680	26700	2060
21	540	11000	1460	2170	972	13800	3460	13900	29600	8690	26300	3630
22	905	24000	1310	2480	1050	13100	3390	12900	27500	10200	22300	1900
23	737	23000	1360	1920	1390	12400	5190	12800	25300	12200	18000	2040
24	647	11900	1250	1200	1270	12100	4300	13100	24700	13700	15900	1790
25	651	7350	1260	1070	1460	9720	3280	16200	24500	14300	14900	1600
26	723	5300	1210	1180	1340	5890	4180	21900	25100	13700	14200	1870
27	619	4320	1440	1610	4130	5200	3890	24800	26300	13100	14000	2280
28	520	3690	2440	1580	2090	5500	3820	29500	24700	12100	13600	2930
29	436	3270	2520	1860	---	6580	17000	39100	25900	9340	11000	2190
30	400	3040	2640	1870	---	5880	17300	44700	28600	7320	7840	1630
31	417	---	2580	1740	---	4470	---	45800	---	5990	8070	---
TOTAL	10521	124207	104960	68620	36604	261237	115140	561190	1257400	519440	659640	86820
MEAN	339	4140	3386	2214	1307	8427	3838	18100	41910	16760	21280	2894
MAX	905	24000	5040	4340	4130	23500	17300	45800	73700	30700	73900	7960
MIN	86	392	1210	1070	735	977	1330	8910	24500	5990	6030	1600
AC-FT	20870	246400	208200	136100	72600	518200	228400	1113000	2494000	1030000	1308000	172200

ARKANSAS RIVER BASIN

51

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4614	4104	2917	3337	3950	7554	8250	10270	11050	6628	4433	3533
MAX	41580	14500	9430	12450	17510	27120	25290	52840	41910	23050	21280	17660
(WY)	1987	1980	1993	1993	1993	1987	1984	1993	1995	1993	1995	1989
MIN	161	251	453	500	487	402	305	2041	2139	908	390	205
(WY)	1992	1981	1983	1977	1981	1981	1981	1992	1988	1991	1978	1984

SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1977 - 95

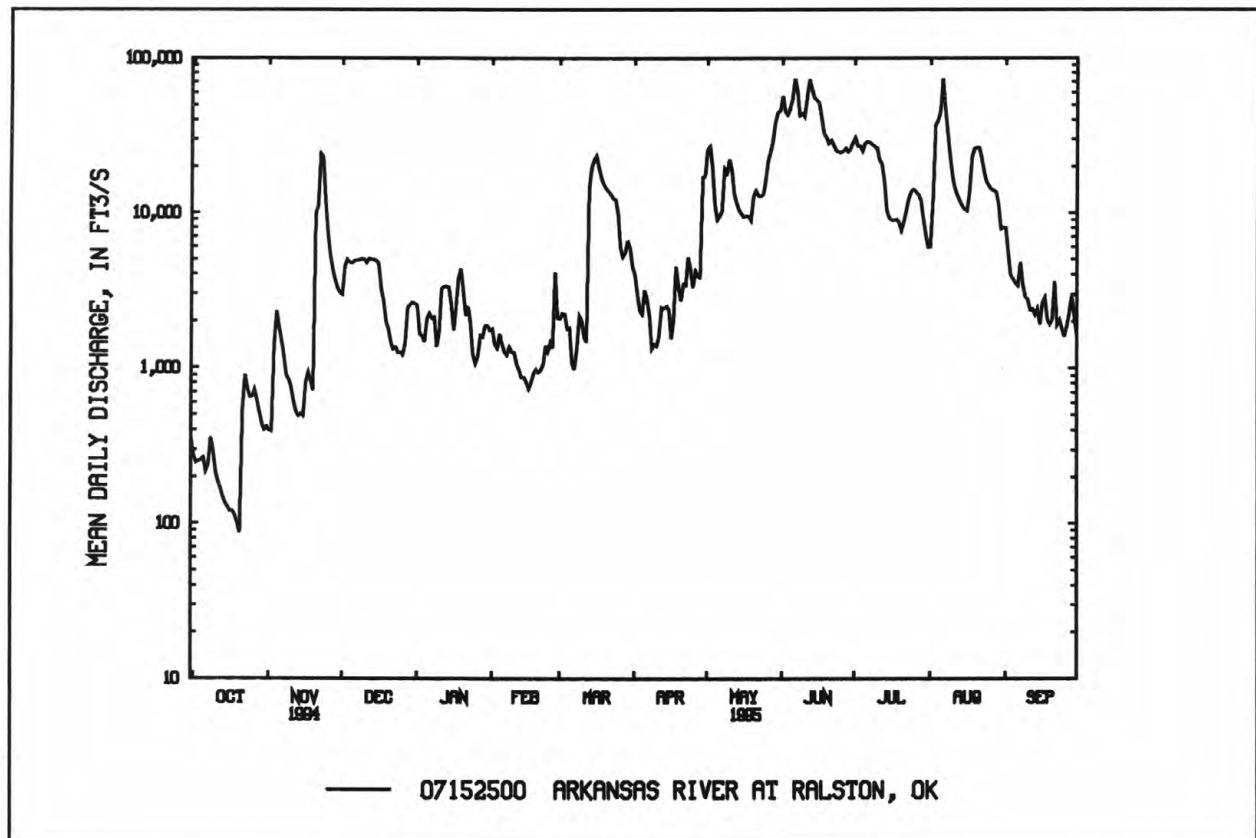
ANNUAL TOTAL	1417514	3805779	
ANNUAL MEAN	3884	10430	^a 5892
HIGHEST ANNUAL MEAN			16160 1993
LOWEST ANNUAL MEAN			1292 1981
HIGHEST DAILY MEAN	51500	Apr 30 73900	Aug 6 170000 Oct 4 1986
LOWEST DAILY MEAN	86	Oct 20 86	Oct 20 ^b 52 Sep 18 1978
ANNUAL SEVEN-DAY MINIMUM	114	Oct 14 114	Oct 14 103 Oct 19 1991
INSTANTANEOUS PEAK FLOW		82900	Jun 6 ^c 174000 Oct 4 1986
INSTANTANEOUS PEAK STAGE		16.22	Jun 6 ^d 22.20 Oct 4 1986
ANNUAL RUNOFF (AC-FT)	2812000	7549000	4269000
10 PERCENT EXCEEDS	7390	27900	14600
50 PERCENT EXCEEDS	1930	3690	2620
90 PERCENT EXCEEDS	490	718	434

^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 Skedee 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 good. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 19, 1943, reached a stage of 28.19 ft, from floodmark, discharge 17,800 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)
Mar. 13	2300	6,190	13.01	Jun. 9	1000	6,450	13.36
May 8	0500	5,450	12.04	Aug. 3	0500	5,720	12.40

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	12	50	23	24	28	46	375	1210	223	44	e20
2	3.8	24	41	21	22	23	43	221	662	172	1830	e19
3	5.1	24	35	24	23	21	41	160	414	125	3740	e19
4	6.2	25	32	22	21	21	39	151	2000	94	2040	e18
5	6.2	51	30	20	23	26	36	125	4200	74	1810	e18
6	6.6	55	29	e19	18	29	33	577	5360	60	1340	e18
7	8.1	51	30	e18	19	85	32	1850	4970	53	2070	352
8	12	53	29	e17	18	72	30	4720	4570	46	1180	e90
9	11	70	29	21	17	46	29	3160	5770	41	888	e43
10	15	50	27	20	16	39	35	1630	4910	36	727	e32
11	14	60	22	22	15	33	41	1000	5620	31	613	e25
12	14	55	20	21	15	31	36	652	3770	28	486	e43
13	13	46	18	23	15	3180	30	429	2620	25	370	e29
14	11	39	18	21	18	5140	26	306	1900	23	284	e21
15	13	33	18	21	18	3160	24	225	e1640	22	227	e41
16	12	33	19	20	18	1680	68	173	e1320	20	183	e68
17	13	32	19	22	19	1010	410	227	e1180	21	e130	e51
18	29	31	23	21	21	680	569	540	e1000	20	e106	e40
19	47	43	24	22	21	456	383	313	e880	96	e83	e33
20	38	1430	22	21	19	319	190	176	e690	64	e67	e43
21	20	2180	22	20	18	225	130	114	568	51	e51	e37
22	15	869	21	19	19	168	141	87	357	155	e42	e32
23	11	497	20	18	18	132	1010	71	e294	122	e37	e26
24	12	356	20	19	17	105	612	225	e260	140	e31	e20
25	9.5	261	19	20	17	89	292	356	e200	225	e28	e23
26	7.3	195	19	24	35	121	191	1310	e157	250	e25	e26
27	7.0	154	19	25	129	97	131	2760	e110	145	e23	e19
28	7.6	115	19	23	66	75	103	1660	e96	117	e21	e21
29	8.8	87	19	23	---	63	498	870	e445	73	e22	e18
30	8.9	65	20	27	---	57	698	557	339	51	e21	e18
31	12	---	24	27	---	52	---	559	---	42	e20	---
TOTAL	401.2	6996	757	664	699	17263	5947	25579	57512	2645	18539	1263
MEAN	12.9	233	24.4	21.4	25.0	557	198	825	1917	85.3	598	42.1
MAX	47	2180	50	27	129	5140	1010	4720	5770	250	3740	352
MIN	3.8	12	18	17	15	21	24	71	96	20	20	18
AC-FT	796	13880	1500	1320	1390	34240	11800	50740	114100	5250	36770	2510

e Estimated

ARKANSAS RIVER BASIN

53

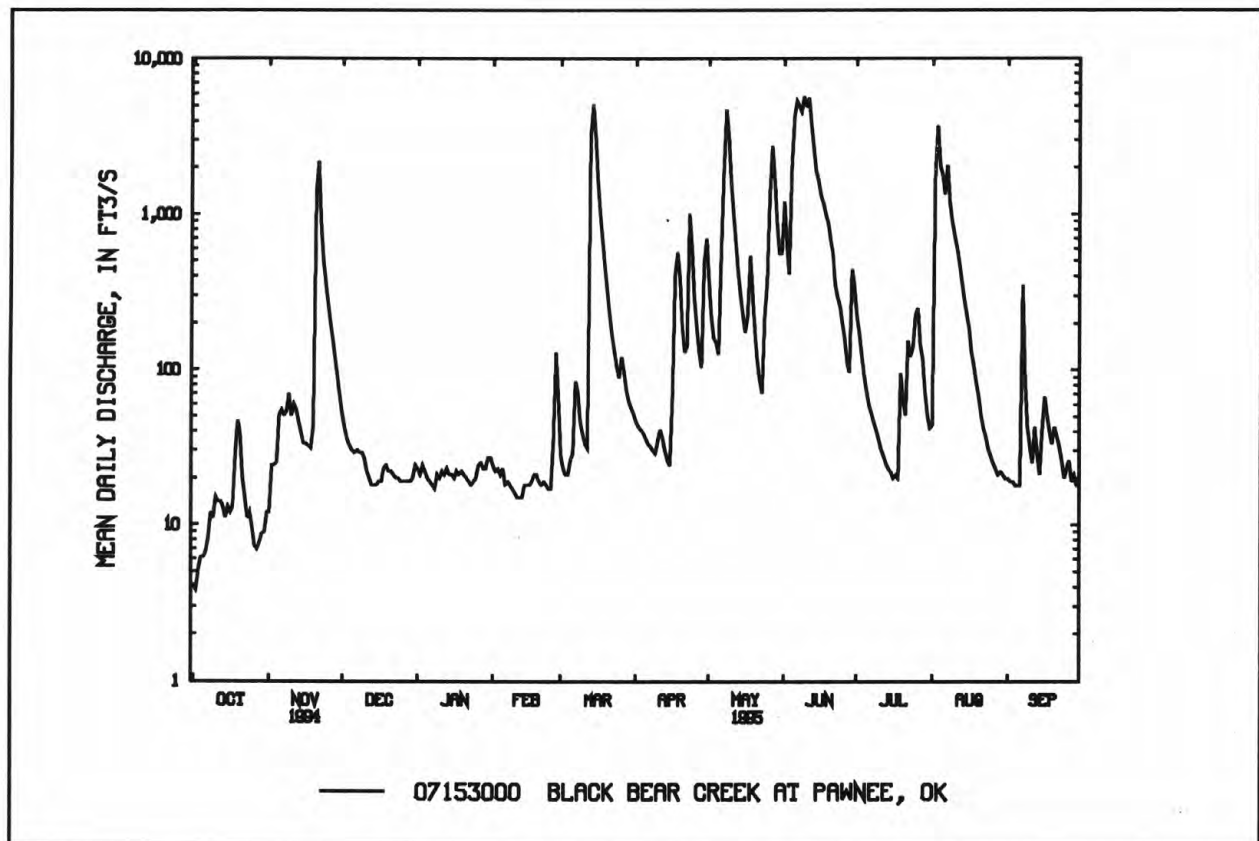
07153000 BLACK BEAR CREEK AT PAWNEE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	221	148	82.8	65.4	111	254	279	489	351	152	110	174
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 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1945 - 95

ANNUAL TOTAL	86433.5	138265.2	
ANNUAL MEAN	237	379	203
HIGHEST ANNUAL MEAN			835 1987
LOWEST ANNUAL MEAN			23.1 1954
HIGHEST DAILY MEAN	6560	Apr 12 5770	Jun 9 25400 Oct 3 1959
LOWEST DAILY MEAN	3.4	Sep 20 3.8	Oct 2 .00 at times
ANNUAL SEVEN-DAY MINIMUM	4.2	Sep 15 5.7	Oct 1 .00 Jul 17 1954
INSTANTANEOUS PEAK FLOW		6450	Jun 9 30200 Oct 3 1959
INSTANTANEOUS PEAK STAGE		13.36	Jun 9 31.43 Oct 3 1959
ANNUAL RUNOFF (AC-FT)	171400	274200	147400
10 PERCENT EXCEEDS	498	1010	367
50 PERCENT EXCEEDS	26	39	14
90 PERCENT EXCEEDS	5.6	18	.90



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)
July 17	2115	4,270	14.71	No other peak above base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	.00	.00	.19	.68	.94	.24	.14	20	1.9	.38	.00
2	e.00	.00	.00	.13	.28	1.2	.16	.10	2.3	52	.31	.00
3	e.00	.00	.00	.13	.80	1.6	.12	.13	4.2	22	.23	.00
4	.00	.00	.00	.14	.94	1.6	.11	.18	32	2.9	.23	.00
5	.00	.00	.00	.15	.99	1.5	.09	.50	164	.63	.47	.00
6	.00	.00	.00	e.14	.86	1.4	.09	.45	11	.22	.35	.00
7	.00	.00	.12	e.13	.40	1.3	.07	.92	2.5	.12	.22	.00
8	.00	.00	.39	e.13	.56	1.5	.05	.31	1.2	.10	.14	.00
9	.00	.00	.39	e.14	.63	.92	.05	.70	1.1	.07	.11	.00
10	.00	.00	.32	e.15	.31	.39	.12	.70	.77	.04	.10	.00
11	.00	.00	.36	.15	e.35	.12	.32	.34	.77	.01	.08	.00
12	.00	.00	.36	.12	e.45	.04	.25	.48	.68	.00	.06	.00
13	.00	.00	.41	.09	e.45	.02	.16	.65	.60	.00	.04	.00
14	.00	.00	.46	.11	e1.1	.01	.11	.55	.49	.00	.04	.00
15	.00	.00	.56	.19	.91	.01	.08	.49	.41	.00	.03	.00
16	.00	.00	.63	.07	.43	.02	.08	.44	.24	.00	.02	.00
17	.00	.00	.51	.04	.28	.29	.10	.31	.17	662	.01	.00
18	.00	.00	.53	e.05	.48	.19	.12	.29	.13	170	.01	.00
19	.00	.00	.45	e.05	.59	.15	.17	.23	.11	209	.01	.00
20	.00	.00	.17	e.10	1.0	.46	.18	.24	.09	231	.01	.00
21	.00	.00	.07	e.10	1.1	.28	.26	.32	.06	29	.00	.00
22	.00	.00	.03	e.12	1.1	.13	.34	.19	.03	7.8	.00	.00
23	.00	.00	.20	e.14	.88	.07	.29	.14	.02	3.3	.00	.00
24	.00	.00	.19	.15	.70	.06	.49	.16	.03	3.0	.00	.00
25	.00	.00	.07	.34	.43	.05	.29	.33	.12	1.9	.00	.00
26	.00	.00	.06	.60	.50	.11	.20	.30	.10	1.5	.00	.00
27	.00	.00	.10	.63	.97	.28	.19	.21	.09	.90	.00	.00
28	.00	.00	.09	.37	.77	.14	.26	.19	.05	.77	.00	.00
29	.00	.00	.12	.98	---	.12	.33	.46	.13	.66	.00	.00
30	.00	.00	.17	.97	---	.29	.20	3.1	12	.54	.00	.00
31	.00	---	.18	.96	---	.31	---	97	---	.44	.00	---
TOTAL	0.00	0.00	6.94	7.76	18.94	15.50	5.52	110.55	255.39	1401.80	2.85	0.00
MEAN	.000	.000	.22	.25	.68	.50	.18	3.57	8.51	45.2	.092	.000
MAX	.00	.00	.63	.98	1.1	1.6	.49	97	164	662	.47	.00
MIN	.00	.00	.00	.04	.28	.01	.05	.10	.02	.00	.00	.00
AC-FT	.00	.00	14	15	38	31	11	219	507	2780	5.7	.00

e Estimated

ARKANSAS RIVER BASIN

55

07154500 CIMARRON RIVER NEAR KENTON, OK--Continued

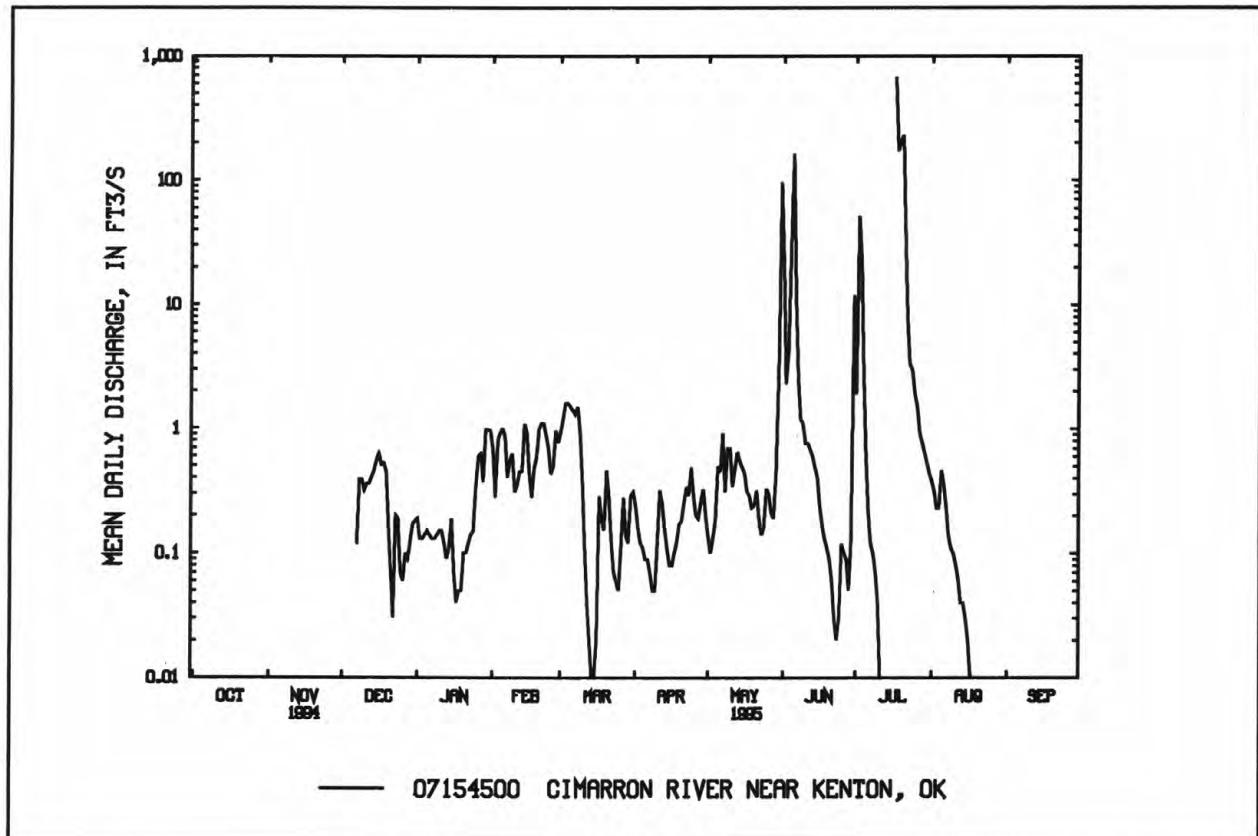
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.0	2.00	2.15	2.04	1.79	1.48	5.94	33.6	34.6	34.1	53.4	28.1
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	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1951 - 95
ANNUAL TOTAL	1129.63	1825.25	
ANNUAL MEAN	3.09	5.00	17.6
HIGHEST ANNUAL MEAN			95.2
LOWEST ANNUAL MEAN			.65
HIGHEST DAILY MEAN	136	Aug 2	662
LOWEST DAILY MEAN	.00	at times	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00
INSTANTANEOUS PEAK FLOW		4270	Jul 17
INSTANTANEOUS PEAK STAGE		14.71	Jul 17
ANNUAL RUNOFF (AC-FT)	2240	3620	12780
10 PERCENT EXCEEDS	.68	1.0	8.0
50 PERCENT EXCEEDS	.00	.12	.94
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)
No peak greater than base discharge.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	39	36	42	46	e40	44	44	34	35	31	e20
2	31	37	37	40	45	e39	41	42	33	40	30	e20
3	31	37	37	42	45	40	41	44	40	36	30	e19
4	31	38	37	e40	42	41	40	41	41	33	28	e19
5	35	38	37	e41	41	41	38	42	41	32	28	e18
6	32	38	38	42	40	40	40	44	39	30	27	e19
7	33	37	38	42	41	39	41	167	38	29	26	e18
8	32	35	35	44	41	39	38	157	35	27	25	e18
9	33	35	35	45	43	41	42	107	38	27	24	e17
10	33	36	36	45	44	40	46	61	37	28	24	e17
11	33	38	37	45	46	39	46	45	36	29	22	e18
12	34	38	38	45	e45	39	45	42	33	29	21	e18
13	33	37	37	45	e44	41	43	42	31	28	21	e17
14	34	37	38	44	e43	46	40	42	30	28	23	e18
15	35	38	38	44	43	47	40	39	27	31	24	e17
16	35	37	38	43	42	43	42	37	26	32	23	e17
17	37	35	38	41	42	43	46	39	25	29	22	e16
18	35	35	37	41	41	42	48	42	24	32	21	e21
19	35	40	37	42	40	44	45	39	24	32	20	e20
20	35	45	37	43	40	44	47	37	24	31	20	e21
21	35	41	37	42	37	41	46	38	24	34	19	e26
22	34	39	38	43	35	38	48	37	25	32	e19	e25
23	32	39	38	45	35	39	50	39	31	33	e18	e24
24	33	38	38	46	35	41	45	40	47	33	e18	e26
25	35	36	39	46	38	45	43	40	36	31	e18	e25
26	35	36	39	46	39	54	42	52	34	30	e17	e25
27	36	37	39	46	39	49	43	56	31	30	e18	e24
28	36	37	39	46	41	46	44	42	29	28	e17	e28
29	37	37	39	46	---	47	44	36	51	28	e16	e27
30	37	36	39	47	---	48	43	37	39	27	e25	e27
31	43	---	43	46	---	47	---	36	---	29	e23	---
TOTAL	1059	1126	1169	1355	1153	1323	1301	1606	1003	953	698	625
MEAN	34.2	37.5	37.7	43.7	41.2	42.7	43.4	51.8	33.4	30.7	22.5	20.8
MAX	43	45	43	47	46	54	50	167	51	40	31	28
MIN	29	35	35	40	35	38	38	36	24	27	16	16
AC-FT	2100	2230	2320	2690	2290	2620	2580	3190	1990	1890	1380	1240

c Estimated

ARKANSAS RIVER BASIN

57

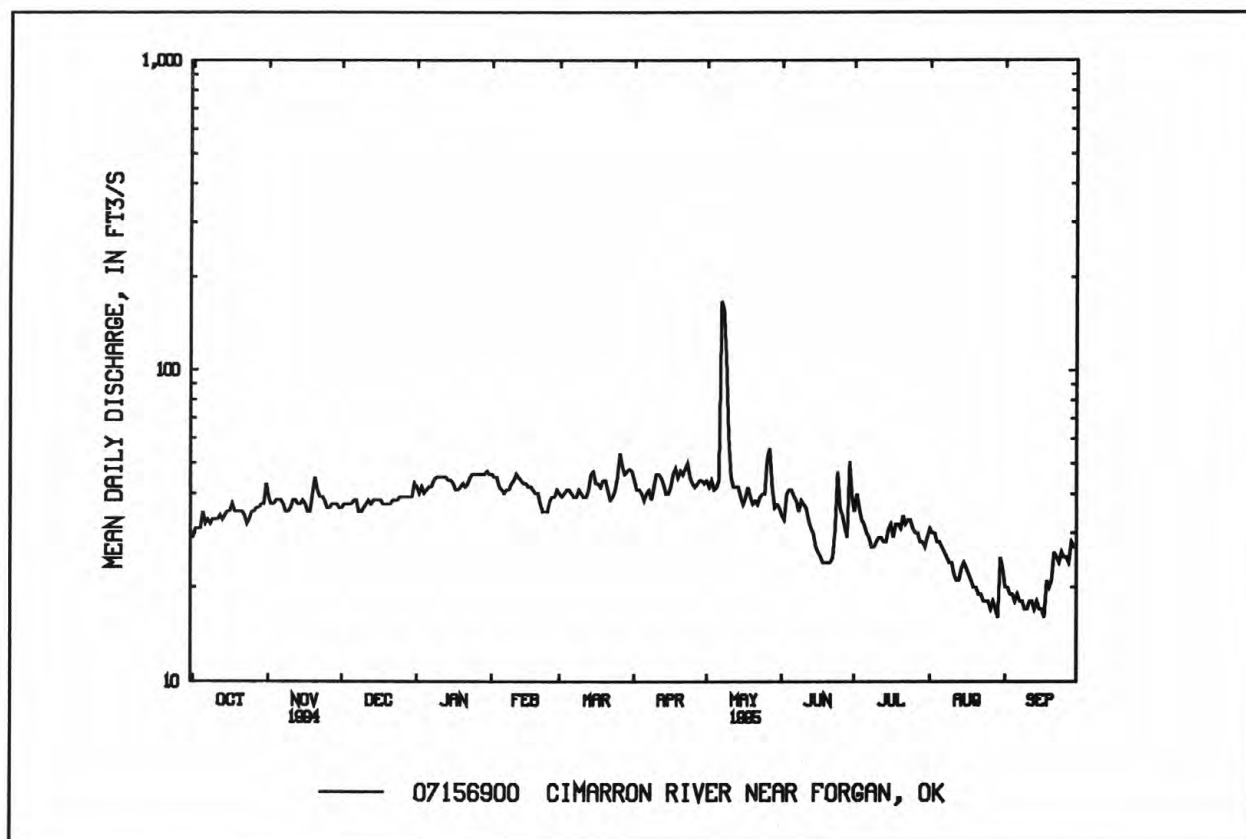
07156900 CIMARRON RIVER NEAR FORGAN, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	72.9	56.4	58.5	58.0	62.4	61.3	74.3	78.1	65.2	50.3	53.0	50.1
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	20.8
(WY)	1992	1988	1990	1988	1994	1994	1986	1986	1986	1991	1983	1995

SUMMARY STATISTICS	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1966 - 95
ANNUAL TOTAL	12724	13371	
ANNUAL MEAN	34.9	36.6	61.7
HIGHEST ANNUAL MEAN			145 1966
LOWEST ANNUAL MEAN			34.7 1994
HIGHEST DAILY MEAN	48 Jan 26	167 May 7	7490 Oct 20 1965
LOWEST DAILY MEAN	18 Jul 11	16 Aug 29, Sept 17	^a 13 Jun 19 1988
ANNUAL SEVEN-DAY MINIMUM	20 Jun 26	17 Sep 11	15 Jul 13 1986
INSTANTANEOUS PEAK FLOW		273 May 7	21200 Oct 20 1965
INSTANTANEOUS PEAK STAGE		3.51 May 7	8.10 Oct 20 1965
ANNUAL RUNOFF (AC-FT)	25240	26520	44690
10 PERCENT EXCEEDS	44	45	85
50 PERCENT EXCEEDS	37	37	48
90 PERCENT EXCEEDS	25	23	27

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



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)
June 9	1130	14,100	10.19	No other peak above base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	91	22	122	78	67	123	118	358	374	141	1.7
2	1.5	37	22	92	73	69	108	106	322	744	354	1.4
3	2.9	20	21	e66	70	68	94	117	377	565	271	.89
4	2.0	17	21	e61	66	86	89	138	637	390	195	.84
5	14	17	21	e54	64	85	88	114	799	306	142	.85
6	39	14	31	51	62	92	89	116	742	251	104	.80
7	26	11	65	51	62	e138	84	150	610	195	114	.69
8	14	9.8	73	52	59	e105	79	351	979	150	84	.60
9	12	8.2	53	59	59	117	74	894	8530	125	57	.58
10	12	7.9	49	66	59	129	80	1820	3580	108	46	.60
11	12	11	53	75	61	134	97	1030	1810	98	37	.60
12	11	11	50	96	62	124	76	721	985	84	30	4.0
13	9.9	9.6	46	84	60	118	63	535	622	67	25	3.1
14	8.7	8.2	44	70	53	133	58	420	421	55	20	3.5
15	10	8.1	47	64	62	168	56	336	307	49	19	3.7
16	11	7.6	48	61	81	175	56	295	228	48	18	4.7
17	12	7.0	46	57	76	169	72	362	171	57	20	4.9
18	11	6.2	44	59	96	160	97	414	135	55	18	4.4
19	7.1	26	42	59	89	143	81	300	117	52	16	5.3
20	6.0	218	40	55	75	125	84	291	104	84	14	5.5
21	10	123	38	54	69	106	90	272	90	236	13	6.3
22	6.5	58	38	62	67	89	84	247	80	1370	11	9.1
23	4.9	39	38	70	66	73	134	217	75	1610	9.8	24
24	4.5	30	39	65	66	57	154	222	122	648	8.2	18
25	4.2	27	39	61	67	81	114	244	238	425	6.8	18
26	4.0	32	39	68	65	302	95	239	164	278	5.6	16
27	3.8	30	42	81	64	283	88	774	183	231	4.7	14
28	4.0	26	44	85	64	169	88	618	156	180	3.7	12
29	4.8	23	46	85	---	158	93	491	444	155	3.1	18
30	5.5	21	47	84	---	167	126	436	1090	127	2.3	22
31	38	---	64	82	---	143	---	400	---	101	1.9	---
TOTAL	312.63	954.6	1312	2151	1895	4033	2714	12788	24476	9218	1795.1	206.05
MEAN	10.1	31.8	42.3	69.4	67.7	130	90.5	413	816	297	57.9	6.87
MAX	39	218	73	122	96	302	154	1820	8530	1610	354	24
MIN	.33	6.2	21	51	53	57	56	106	75	48	1.9	.58
AC-FT	620	1890	2600	4270	3760	8000	5380	25360	48550	18280	3560	409

ARKANSAS RIVER BASIN

59

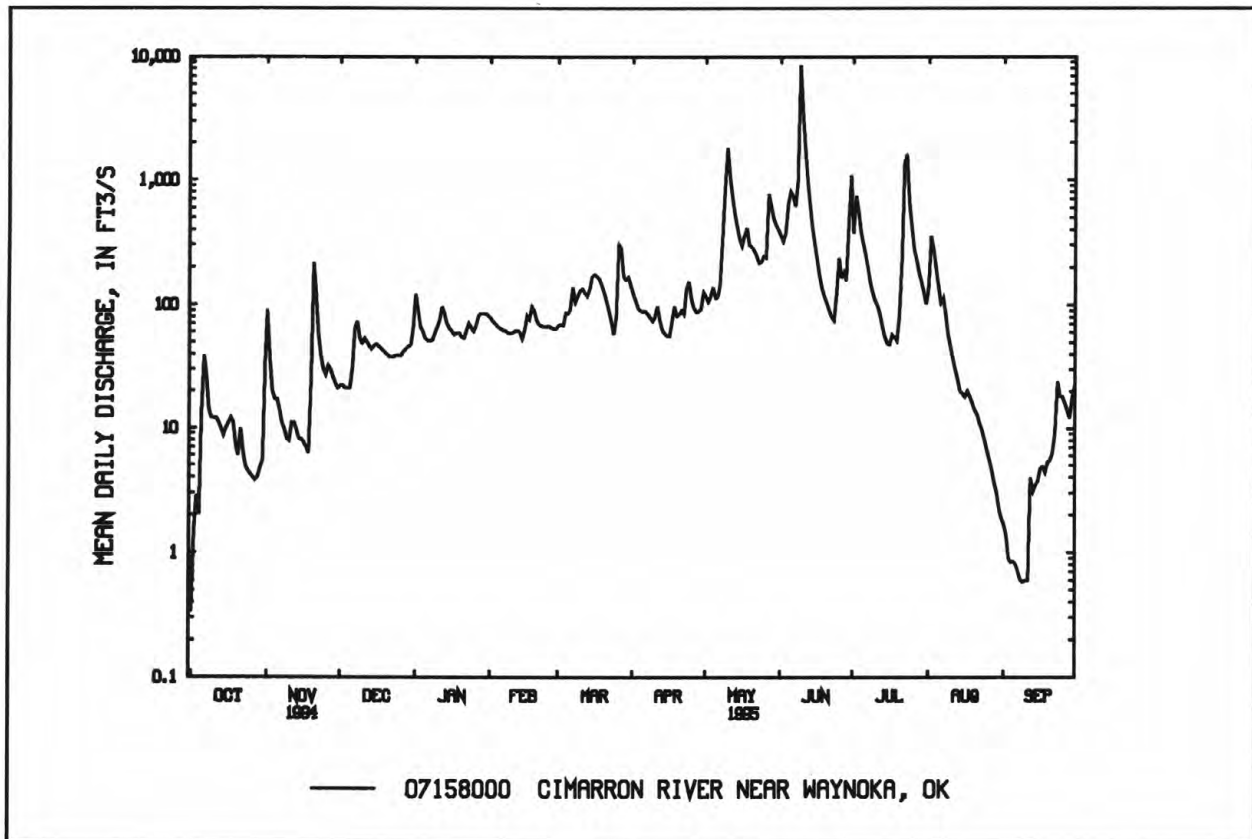
07158000 CIMARRON RIVER NEAR WAYNOKA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	218	116	110	123	176	235	353	809	611	344	221	253
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	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1938 - 95
ANNUAL TOTAL	16541.12	61855.38	
ANNUAL MEAN	45.3	169	298
HIGHEST ANNUAL MEAN			1081
LOWEST ANNUAL MEAN			43.2
HIGHEST DAILY MEAN	764	May 29	51600
LOWEST DAILY MEAN	.00	Aug 12	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 12	.00
INSTANTANEOUS PEAK FLOW		14100	^a 94500
INSTANTANEOUS PEAK STAGE		10.19	15.10
ANNUAL RUNOFF (AC-FT)	32810	122700	215800
10 PERCENT EXCEEDS	89	356	456
50 PERCENT EXCEEDS	35	66	83
90 PERCENT EXCEEDS	1.0	5.5	.34

^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.

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

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)
Nov. 21	0200	20,400	19.12	June 10	1300	60,400	23.10
June 6	1600	23,700	19.72	Aug. 3	2000	40,000	21.57

REVISIONS.--Revised daily discharges for water year 1994. These figures supersede those published in the report for 1994.

Date	Discharge(ft ³ /s)	Date	Discharge(ft ³ /s)	Date	Discharge(ft ³ /s)
Sept. 24	90	Sept. 27	66	Sept. 29	54
Sept. 25	83	Sept. 28	58	Sept. 30	50
Sept. 26	75				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e47	695	567	292	316	167	495	334	1390	1280	406	162
2	e43	1170	539	299	310	174	476	326	1030	1740	2360	153
3	1560	510	503	e290	289	187	438	337	2020	1240	24900	142
4	786	300	478	e282	277	196	413	334	11400	1240	18800	137
5	407	211	448	e300	262	200	378	311	15900	1180	8560	134
6	821	159	427	311	250	207	348	486	20800	1010	6020	135
7	615	129	422	332	237	226	329	1870	9480	898	4740	133
8	357	112	412	293	226	264	318	2530	4750	798	3190	156
9	185	374	404	291	218	277	305	3700	19300	717	2010	170
10	118	419	407	282	212	325	296	2970	53400	656	1400	187
11	83	135	421	280	208	304	303	1910	26100	602	1060	232
12	65	95	402	272	202	301	287	2260	9340	557	834	e275
13	52	90	393	269	199	1320	275	1590	5800	519	705	e375
14	44	90	386	273	206	2950	256	1220	4170	477	614	e462
15	45	75	370	298	217	5510	243	941	3010	444	555	e340
16	44	69	363	300	216	3470	235	766	2380	440	588	e720
17	60	64	354	288	213	1800	268	661	1990	433	561	e1220
18	3620	59	348	274	207	1240	672	580	1700	483	469	e780
19	2870	85	339	264	207	962	847	544	1530	444	410	e660
20	1590	7870	332	258	210	808	800	666	1390	414	371	e940
21	654	14300	323	258	209	696	608	598	1290	502	340	e725
22	368	6020	308	265	220	616	532	488	1210	474	321	e760
23	245	3710	301	276	207	554	532	447	1130	585	297	e1080
24	184	2420	301	281	194	503	782	462	1130	1680	282	e760
25	150	1490	296	278	185	465	1190	612	1290	1890	259	e565
26	125	1120	292	293	185	498	851	617	1250	1080	237	e495
27	108	891	291	307	186	498	593	2380	1220	821	220	e450
28	97	756	291	312	171	582	458	4580	1090	627	212	e390
29	89	672	291	312	---	791	391	4400	1120	524	201	e350
30	85	611	287	323	---	612	355	2560	1470	471	186	e325
31	114	---	286	326	---	527	---	1630	---	410	172	---
TOTAL	15631	44701	11582	8979	6239	27230	14274	43110	209080	24636	81280	13413
MEAN	504	1490	374	290	223	878	476	1391	6969	795	2622	447
MAX	3620	14300	567	332	316	5510	1190	4580	53400	1890	24900	1220
MIN	43	59	286	258	171	167	235	311	1030	410	172	133
AC-FT	31000	88660	22970	17810	12380	54010	28310	85510	414700	48870	161200	26600

c Estimated

ARKANSAS RIVER BASIN

61

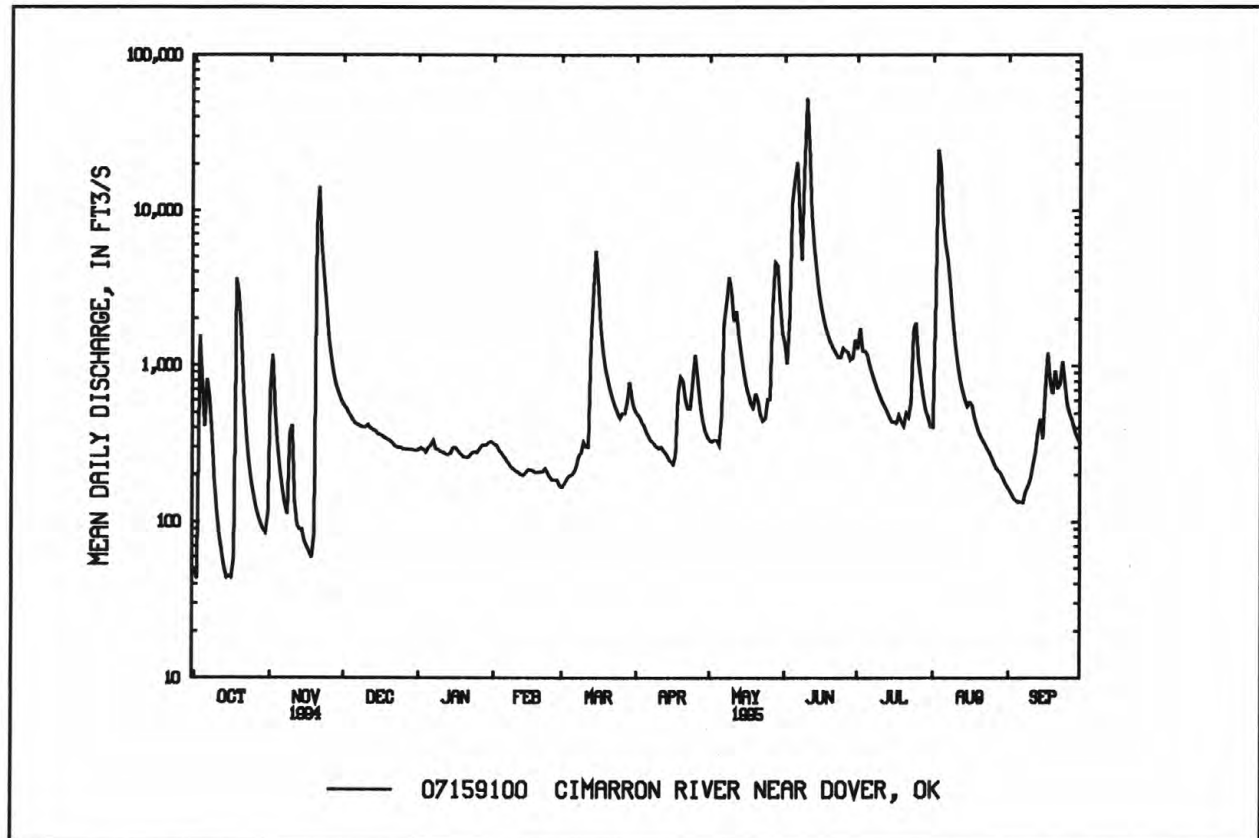
07159100 CIMARRON RIVER NEAR DOVER, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	840	758	386	350	504	1060	909	2480	1587	540	508	570
MAX	9071	3381	1218	1068	2410	4283	4218	11750	6969	2002	2622	1996
(WY)	1987	1975	1993	1988	1987	1987	1988	1993	1995	1987	1995	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	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1974 - 95
ANNUAL TOTAL	185759	500155	
ANNUAL MEAN	509	1370	876
HIGHEST ANNUAL MEAN			2804
LOWEST ANNUAL MEAN			265
HIGHEST DAILY MEAN	14300	Nov 21	53400
LOWEST DAILY MEAN	43	Oct 2	43
ANNUAL SEVEN-DAY MINIMUM	53	Aug 11	56
INSTANTANEOUS PEAK FLOW			60400
INSTANTANEOUS PEAK STAGE			23.10
ANNUAL RUNOFF (AC-FT)	368500	992100	634700
10 PERCENT EXCEEDS	768	2370	1740
50 PERCENT EXCEEDS	215	410	260
90 PERCENT EXCEEDS	82	161	58

^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 1994 TO SEPTEMBER 1995

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									
19...	1215	1028	80020	10	1060	8.0	22.0	16.5	737
JUN									
27...	0930	1028	80020	9.1	1160	7.9	25.5	22.0	730
JUL									
19...	1400	1028	80020	12	1110	8.2	30.5	27.5	740
AUG									
01...	1330	1028	80020	8.5	1010	8.0	28.0	25.5	732
SEP									
18...	1039	1028	80020	19	679	8.0	23.5	26.5	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									
19...	8.7	93	339	0	278	<0.010	<0.010	<0.010	
JUN									
27...	6.2	74	410	0	336	<0.010	<0.010	<0.010	
JUL									
19...	8.4	110	244	0	200	<0.010	<0.010	<0.010	
AUG									
01...	6.2	80	268	0	220	<0.010	<0.010	<0.010	
SEP									
18...	6.6	85	176	0	144	<0.010	<0.010	<0.010	

[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.

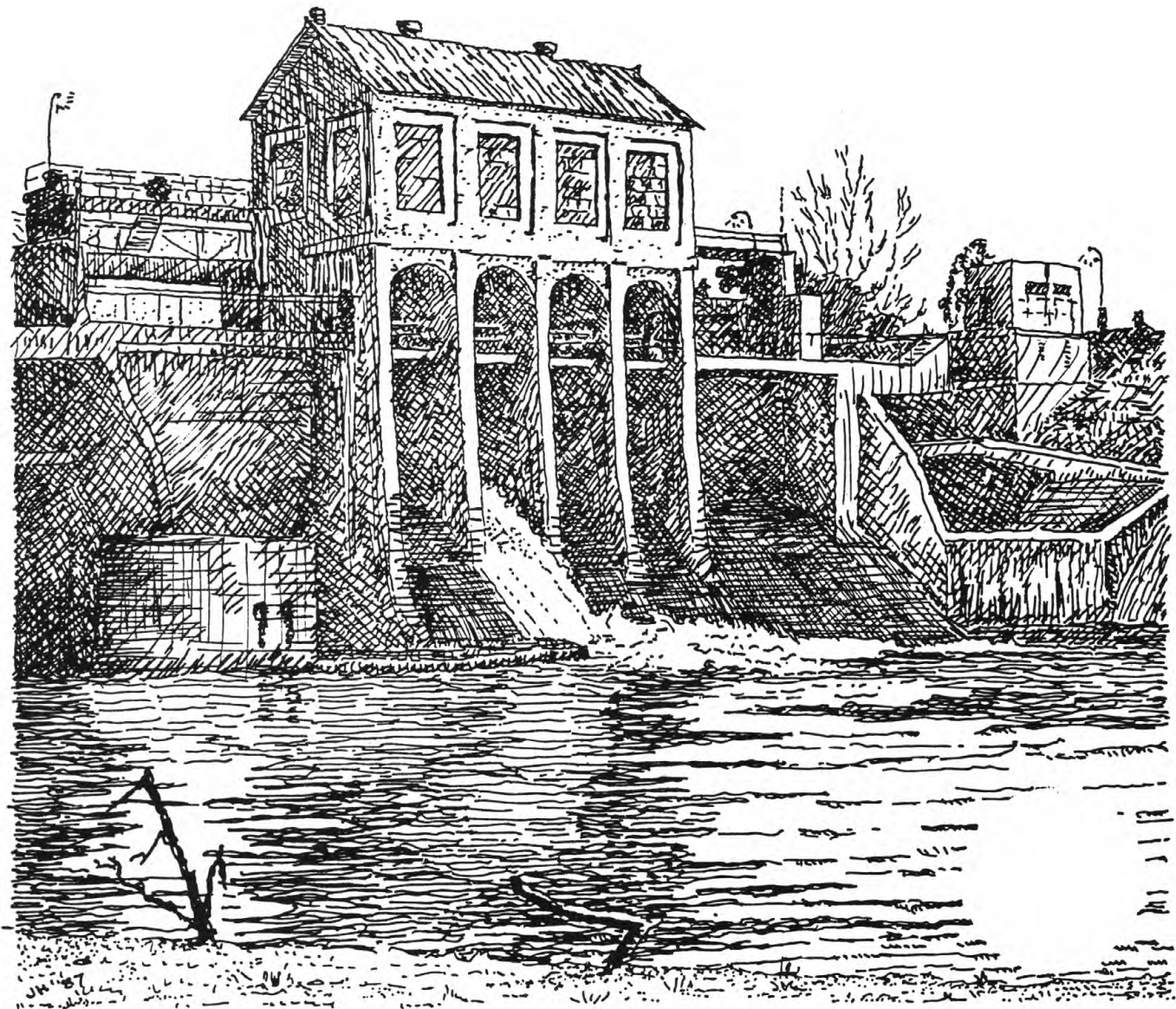
REMARKS.--Samples were collected monthly from May to September and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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)
MAY 19...	1045	1028	80020	43	1130	8.2	22.5	17.5	737
JUN 27...	1035	1028	80020	43	1150	7.9	28.5	22.5	732
JUL 20...	0930	1028	80020	22	1120	8.0	29.0	25.5	739
AUG 01...	1000	1028	80020	18	1160	8.0	25.5	25.5	735
SEP 27...	1100	1028	80020	76	881	8.0	19.5	18.0	735

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)	FONOFOS (DY- FONATE) WATER WHOLE TOT.REC (UG/L) (82614)	CHLOR- PYRIFOS TOTAL RECOVER (UG/L) (38932)	DEF TOTAL (UG/L) (39040)
MAY 19...	8.6	93	312	0	256	<0.01	0.01	<0.01
JUN 27...	7.1	86	376	0	308	<0.01	<0.01	<0.01
JUL 20...	7.4	94	258	0	212	<0.01	0.01	<0.01
AUG 01...	6.3	80	261	0	214	<0.01	0.02	<0.01
SEP 27...	8.3	92	217	0	178	<0.01	0.01	<0.01

[illegible]



Spillway at Lake Overholser near Oklahoma City

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 1994 TO SEPTEMBER 1995

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)
MAY									
19...	0930	1028	80020	56	1170	7.9	17.5	17.0	737
JUN									
27...	1200	1028	80020	53	1190	7.8	31.0	23.0	732
JUL									
20...	1040	1028	80020	27	1270	7.9	30.0	25.5	739
AUG									
01...	1130	1028	80020	39	1200	7.8	26.5	25.5	734
SEP									
27...	1315	1028	80020	66	947	7.9	24.5	19.0	734

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)	FONOFOS (DY- FONATE) WATER WHOLE TOT.REC (UG/L) (82614)	CHLOR- PYRIFOS TOTAL RECOVER (UG/L) (38932)	DEF TOTAL (UG/L) (39040)
MAY								
19...	8.7	94	290	0	238	<0.010	0.010	<0.010
JUN								
27...	7.1	86	329	0	270	<0.010	0.030	<0.010
JUL								
20...	7.3	92	230	0	189	<0.010	0.010	<0.010
AUG								
01...	5.8	74	198	0	162	<0.010	0.020	<0.010
SEP								
27...	7.7	86	210	0	172	<0.010	0.010	<0.010

[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. No flow June 27, 1995.

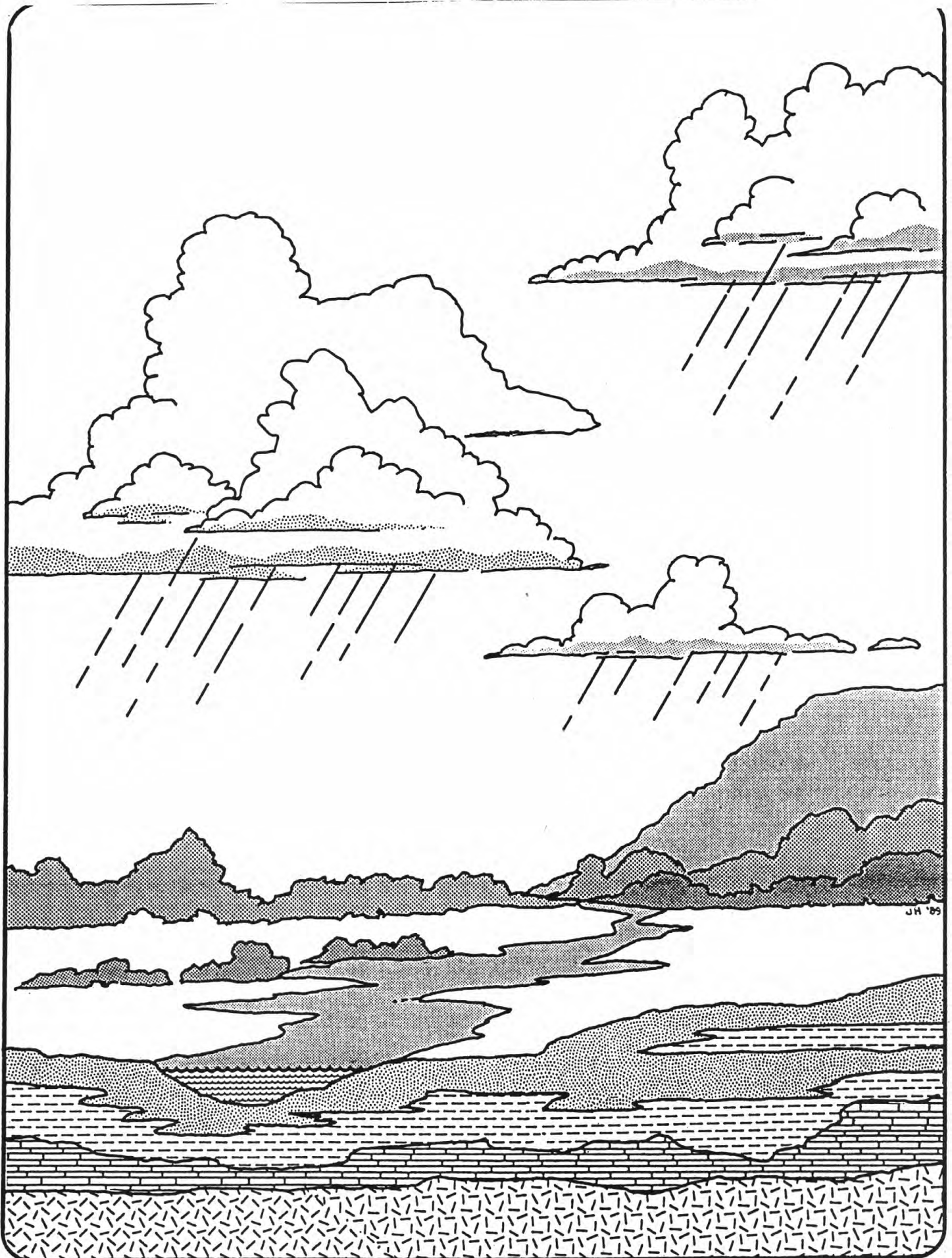
WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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)
MAY									
30...	1200	1028	1028	9.1	549	7.6	21.0	19.5	735
JUL									
19...	1310	1028	80020	1.2	1200	8.1	32.5	28.0	740
AUG									
07...	0945	1028	80020	2.7	535	7.8	31.0	26.5	733
SEP									
14...	1430	1028	80020	1.6	293	7.7	30.0	26.0	738

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)	FONOFOS (DY- FONATE) WATER WHOLE TOT.REC (UG/L) (82614)	CHLOR- PYRIFOS TOTAL RECOVER (UG/L) (38932)	DEF TOTAL (UG/L) (39040)
MAY								
30...	6.8	77	215	0	176	--	--	--
JUL								
19...	7.9	104	373	0	306	<0.010	<0.010	<0.010
AUG								
07...	5.3	69	210	0	172	<0.010	<0.010	<0.010
SEP								
14...	6.2	79	91	0	75	<0.010	<0.010	<0.010

DATE	DI- AZINON, TOTAL (UG/L) (39570)	DISUL- FOTON UNFILT RECOVER (UG/L) (39011)	ETHION, TOTAL (UG/L) (39398)	MALA- THION, TOTAL (UG/L) (39530)	METHYL PARA- THION, TOTAL (UG/L) (39600)	PARA- THION, TOTAL (UG/L) (39540)	PHORATE TOTAL (UG/L) (39023)	TOTAL TRI- THION (UG/L) (39786)
MAY								
30...	--	--	--	--	--	--	--	--
JUL								
19...	0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
AUG								
07...	0.210	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
SEP								
14...	0.150	<0.010	<0.010	E0.030	<0.010	<0.010	<0.010	<0.010

E Malathion was above the control limits in the set spike; therefore, there is a possibility that the malathion value is slightly high. The compound was definitely detected, but the value may not be exact.



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 1994 TO SEPTEMBER 1995

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)
MAY									
15...	1400	1028	80020	15	1020	7.9	30.5	22.5	734
JUN									
27...	1400	1028	80020	20	1180	7.9	33.0	25.0	732
JUL									
19...	1140	1028	80020	9.6	1100	8.0	30.5	27.5	740
AUG									
04...	1400	1028	80020	13	599	8.1	31.5	27.5	734
SEP									
18...	1300	1028	80020	14	579	7.7	27.0	24.5	735

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- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	FONOFOS (DY- FONATE) WATER WHOLE TOT.REC (UG/L) (82614)	CHLOR- PYRIFOS TOTAL RECOVER (UG/L) (38932)	DEF TOTAL (UG/L) (39040)
MAY								
15...	7.4	89	329	0	270	<0.010	<0.010	<0.010
JUN								
27...	8.8	112	310	0	254	<0.010	0.030	<0.010
JUL								
19...	6.5	85	249	0	204	<0.010	0.030	<0.010
AUG								
04...	5.4	71	139	0	114	<0.010	0.020	<0.010
SEP								
18...	5.5	68	132	0	108	<0.010	0.010	<0.010

DATE	DI- AZINON, TOTAL (UG/L) (39570)	DISUL- FOTON UNFILT RECOVER (UG/L) (39011)	ETHION, TOTAL (UG/L) (39398)	MALA- THION, TOTAL (UG/L) (39530)	METHYL PARA- THION, TOTAL (UG/L) (39600)	PARA- THION, TOTAL (UG/L) (39540)	PHORATE TOTAL (UG/L) (39023)	TOTAL TRI- THION (UG/L) (39786)
MAY								
15...	0.080	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
JUN								
27...	0.110	<0.010	<0.010	0.010	<0.010	<0.010	<0.010	<0.010
JUL								
19...	0.120	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
AUG								
04...	0.240	<0.010	<0.010	0.010	<0.010	<0.010	<0.010	<0.010
SEP								
18...	0.160	<0.010	<0.010	0.020	<0.010	<0.010	<0.010	<0.010

E Malathion was above the control limits in the set spike; therefore, there is a possibility that the malathion value is slightly high. The compound was definitely detected, but the value may not be exact.



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 on Broadway Road, 6.5 mi southwest of Guthrie, and at mile 16.2.

DRAINAGE AREA.--320 mi².

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

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

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

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

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)
Nov. 21	0300	3,600	20.41	June 4	1700	21,700	30.65
May 8	1700	4,500	21.67	June 9	1600	43,500	34.47

REVISIONS.--The maximum discharge for the water year 1993 has been revised to 31,500 ft³/s, May 9 1993, gage height, 32.74 ft.

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	78	99	68	79	71	110	154	266	188	59	41
2	30	56	98	65	74	60	106	175	248	165	1110	41
3	31	52	97	65	69	62	88	132	262	161	1190	36
4	33	50	97	64	66	68	218	122	11900	155	594	32
5	55	453	92	61	64	77	122	112	10800	140	495	32
6	41	632	94	67	65	74	106	814	4570	129	441	33
7	38	169	91	74	62	136	96	2310	1640	e120	403	38
8	136	99	101	66	59	170	88	3250	1120	e110	293	34
9	93	86	195	65	57	108	84	2270	23600	e104	249	33
10	54	192	119	64	58	88	80	682	15100	e96	227	32
11	43	95	101	59	59	82	149	445	3980	e92	214	34
12	37	68	92	65	55	79	103	320	1670	e86	158	68
13	35	58	87	65	55	612	84	259	1140	e80	106	239
14	34	56	83	60	57	1290	79	214	1010	76	82	79
15	34	58	79	61	56	690	77	178	936	71	70	60
16	34	52	78	62	60	441	74	161	868	67	64	567
17	37	49	86	66	56	302	117	150	812	65	63	534
18	40	47	80	83	56	224	799	138	775	64	60	202
19	208	63	80	65	57	180	297	118	737	68	56	446
20	95	1850	80	60	57	157	179	108	714	68	53	549
21	50	2770	78	58	55	138	149	103	671	61	50	252
22	47	718	72	61	55	126	152	100	638	56	49	544
23	45	574	72	112	55	116	1290	96	614	72	45	302
24	40	492	72	110	54	104	632	152	593	204	43	189
25	37	313	72	98	51	108	376	323	578	397	44	146
26	36	202	69	103	54	222	249	767	512	167	42	167
27	36	163	69	185	68	157	182	2300	463	120	42	146
28	36	142	71	148	116	116	148	1010	439	83	42	117
29	35	121	68	105	---	103	140	395	355	69	46	104
30	34	107	69	89	---	101	141	277	266	58	41	97
31	38	---	69	84	---	113	---	238	---	53	37	---
TOTAL	1572	9865	2710	2458	1729	6375	6515	17873	87277	3445	6468	5194
MEAN	50.7	329	87.4	79.3	61.7	206	217	577	2909	111	209	173
MAX	208	2770	195	185	116	1290	1290	3250	23600	397	1190	567
MIN	30	47	68	58	51	60	74	96	248	53	37	32
AC-FT	3120	19570	5380	4880	3430	12640	12920	35450	173100	6830	12830	10300

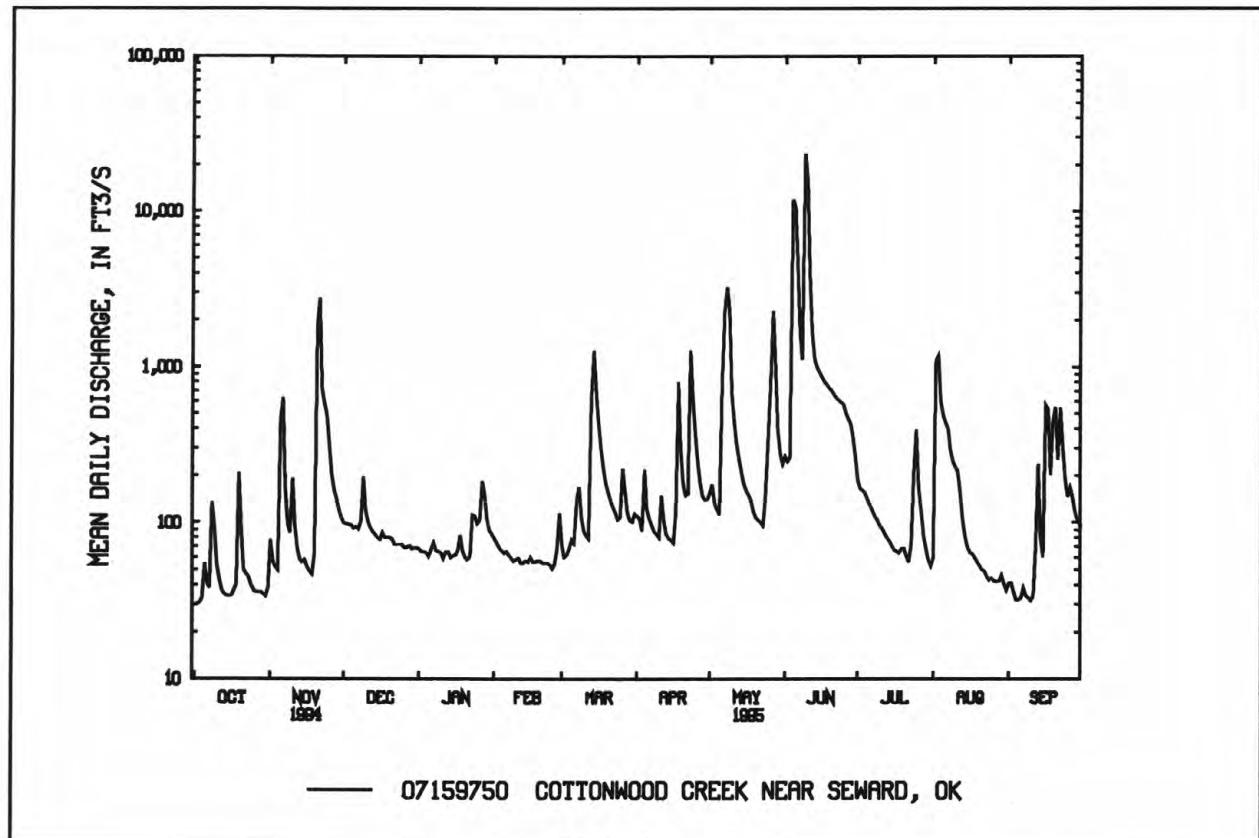
e Estimated

07159750 COTTONWOOD CREEK NEAR SEWARD, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	75.8	193	111	87.9	113	243	202	559	481	96.4	69.3	115
MAX	267	1218	570	265	336	1591	803	2267	2909	467	231	546
(WY)	1975	1975	1992	1975	1975	1990	1990	1993	1995	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	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1973 - 95
ANNUAL TOTAL	61739	151481	
ANNUAL MEAN	169	415	183
HIGHEST ANNUAL MEAN			438 1993
LOWEST ANNUAL MEAN			42.9 1981
HIGHEST DAILY MEAN	3160	Apr 12 23600	Jun 9 29300 May 9 1993
LOWEST DAILY MEAN	24	Aug 30 30	Oct 1-2 6.1 ^a Aug 15 1976
ANNUAL SEVEN-DAY MINIMUM	28	Aug 11 33	Sep 4 6.7 Aug 11 1976
INSTANTANEOUS PEAK FLOW		43500	Jun 9 ^b 43500 Jun 9 1995
INSTANTANEOUS PEAK STAGE		34.47	Jun 9 ^c 34.47 Jun 9 1995
ANNUAL RUNOFF (AC-FT)	122500	300500	132300
10 PERCENT EXCEEDS	331	634	362
50 PERCENT EXCEEDS	63	95	52
90 PERCENT EXCEEDS	34	42	18

^aAlso occurred on Aug. 22, 23, 1976.^bFrom indirect measurement.^cFrom high water mark.

07160000 CIMARRON RIVER NEAR GUTHRIE, OK

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

DRAINAGE AREA.--16,892 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)
Nov. 21	1400	39,900	12.32	June 10	2100	93,300	17.18
June 5	0600	41,200	12.47	Aug. 4	1500	40,200	12.36

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e105	e370	862	472	e511	380	863	838	2000	2050	629	469
2	e95	e470	797	465	483	364	825	829	1750	1790	2350	467
3	e500	714	760	483	466	363	806	793	1660	2220	16700	463
4	e1700	e1280	715	510	446	367	833	774	20700	1650	36200	e430
5	e780	e1100	e710	520	432	378	782	751	39200	1590	21000	396
6	440	e1250	e700	519	419	389	726	1280	35100	1530	11400	377
7	e840	e500	714	499	409	443	683	4450	29300	1320	8720	385
8	e520	e375	712	487	399	523	653	9960	12200	1160	6560	379
9	e335	e550	745	484	388	486	627	10300	48800	1050	4380	372
10	e250	e490	722	476	377	458	616	5940	77700	970	2910	367
11	e205	e494	676	473	377	457	626	e4000	65800	884	2170	368
12	e185	e350	660	462	374	454	643	2640	28600	814	1720	432
13	e171	e300	632	464	372	3770	600	2630	15300	750	1400	588
14	e155	e260	610	457	368	9860	565	1990	10900	691	1210	668
15	e145	e222	597	449	371	8150	546	1620	8340	651	1080	566
16	e132	210	586	451	372	6720	528	1370	6590	618	1050	867
17	e128	185	571	465	379	3790	632	1210	5490	609	1030	3460
18	e132	170	566	469	377	2300	1480	1100	4750	605	1000	2070
19	2940	268	539	466	364	1770	1380	992	4160	629	875	1350
20	2440	7060	534	450	358	1480	1190	928	3700	636	791	2030
21	e1500	33500	528	441	358	1310	1090	958	3300	594	739	1670
22	e760	13200	518	452	355	1180	1010	944	2970	617	691	2550
23	e500	6410	495	465	362	1080	2350	843	2660	590	655	3300
24	e400	4130	487	527	357	1000	2450	855	2450	722	623	1470
25	e300	2800	479	512	347	943	1720	1060	2300	2640	595	1010
26	e242	1930	478	527	337	953	1650	1270	2340	2770	579	865
27	e225	1520	472	565	367	964	1300	4180	2130	1600	561	826
28	e212	1260	472	667	377	905	1060	7180	2030	1170	531	747
29	e200	1090	472	602	---	888	947	5360	1900	911	510	653
30	e245	960	469	566	---	1000	868	4770	1760	743	504	601
31	e280	---	469	e540	---	930	---	2720	---	655	485	---
TOTAL	17062	83418	18747	15385	10902	54055	30049	84535	445880	35229	129648	30196
MEAN	550	2781	605	496	389	1744	1002	2727	14860	1136	4182	1007
MAX	2940	33500	862	667	511	9860	2450	10300	77700	2770	36200	3460
MIN	95	170	469	441	337	363	528	751	1660	590	485	367
AC-FT	33840	165500	37180	30520	21620	107200	59600	167700	884400	69880	257200	59890

e Estimated

ARKANSAS RIVER BASIN

75

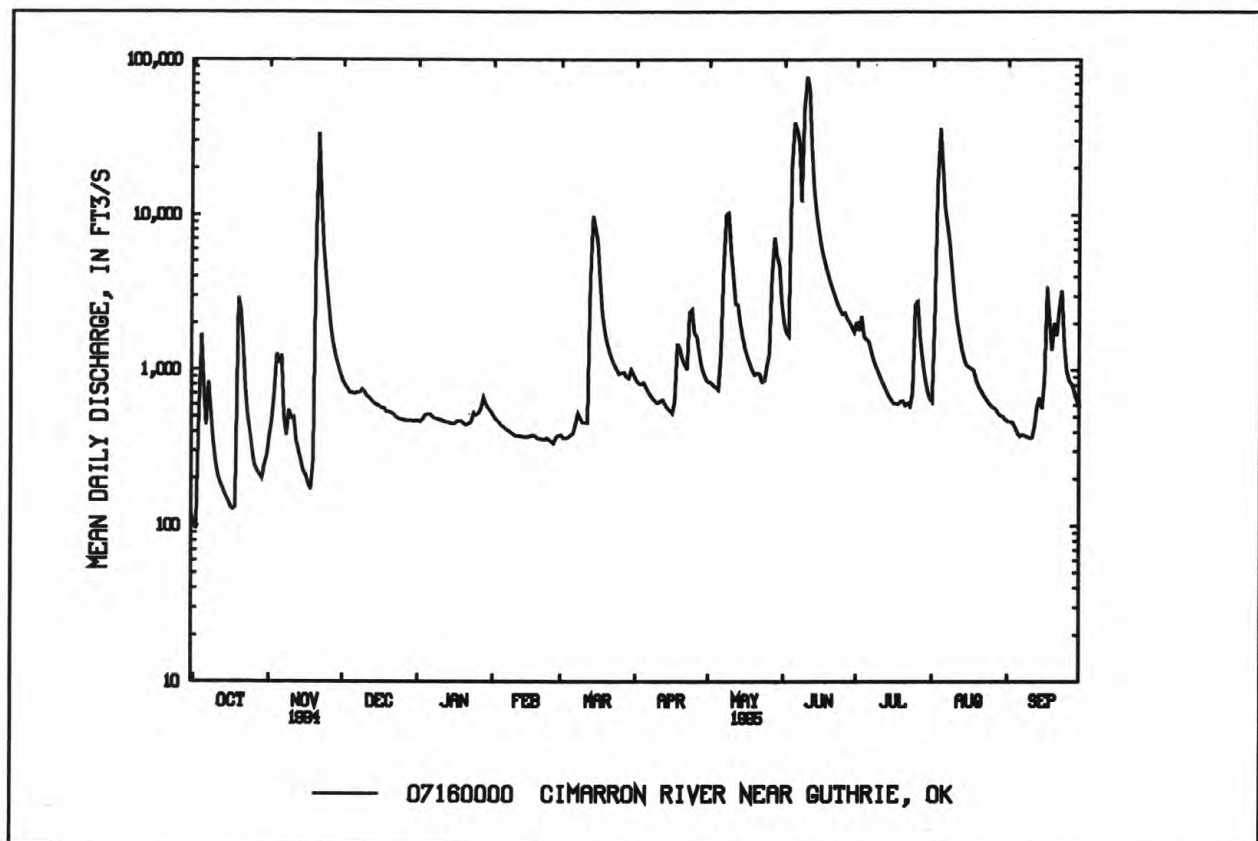
07160000 CIMARRON RIVER NEAR GUTHRIE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1088	715	442	427	593	1041	1400	2614	2222	863	627	870
MAX	13800	6145	2874	2266	4063	6337	8184	20630	14860	4220	4182	3988
(WY)	1987	1975	1993	1993	1987	1987	1942	1993	1995	1950	1995	1989
MIN	.79	.70	1.39	6.38	21.7	24.7	66.5	63.0	58.6	9.58	26.1	8.03
(WY)	1953	1955	1955	1940	1957	1955	1956	1971	1953	1954	1943	1954

SUMMARY STATISTICS	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1938 - 95
ANNUAL TOTAL	427881	955106	
ANNUAL MEAN	1172	2617	1071
HIGHEST ANNUAL MEAN			3901
LOWEST ANNUAL MEAN			192
HIGHEST DAILY MEAN	33500	Nov 21	77700 Jun 10
LOWEST DAILY MEAN	95	Oct 2	95 Oct 2
ANNUAL SEVEN-DAY MINIMUM	121	Aug 12	150 Oct 12
INSTANTANEOUS PEAK FLOW			93300 Jun 10
INSTANTANEOUS PEAK STAGE			17.18 Jun 10
ANNUAL RUNOFF (AC-FT)	848700	1894000	775800
10 PERCENT EXCEEDS	2390	4260	2070
50 PERCENT EXCEEDS	413	710	315
90 PERCENT EXCEEDS	170	364	51

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



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 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)
Nov. 21	2000	40,200	19.89	June 5	2300	45,600	20.59
Mar. 14	1500	16,400	15.88	June 10	1100	103,000	25.23
May 8	0300	18,500	16.31	Aug. 4	2100	47,000	20.76

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	360	1170	564	632	484	e1400	e1500	6380	2540	1220	850
2	148	356	1070	555	620	513	e1300	e1400	4140	2520	4340	823
3	148	476	1010	555	619	496	e1250	1360	3620	2300	10200	802
4	229	1100	961	557	571	490	e1200	1290	21900	2500	39500	792
5	2170	1390	926	546	562	500	e1300	1230	38300	2090	35200	759
6	1550	e1100	890	607	537	516	e1200	2710	41600	1990	17800	739
7	885	e1400	865	580	525	693	e1120	6630	39400	1900	12500	811
8	921	758	925	582	498	608	e1100	15600	22800	1720	10000	731
9	870	e680	856	563	493	656	e1080	13700	51600	1580	6080	722
10	778	e640	856	558	484	635	e1030	9960	89900	1490	4190	709
11	606	e760	828	549	467	585	e1000	7410	87000	e1460	3100	701
12	478	e900	773	546	454	577	e1100	5230	36400	e1430	2520	790
13	399	e660	759	545	456	4930	1060	4400	19000	1410	2110	795
14	351	560	730	529	456	14500	1030	4050	14000	1380	1840	830
15	321	505	709	514	475	10800	998	3150	10800	1340	1660	992
16	302	466	707	503	460	9050	967	2620	8480	1260	1540	1130
17	284	454	684	570	472	6530	1060	2270	6980	1210	1660	1160
18	303	440	669	535	492	4500	2480	2090	5920	1380	1540	3060
19	324	609	657	525	493	3080	2760	2030	5220	1290	1460	2270
20	2770	4790	639	511	480	2380	2590	1790	4650	1650	1330	1680
21	3000	31200	627	493	469	e2100	1950	1650	4140	1410	1240	2000
22	1820	21600	621	508	470	e1900	2170	1640	3740	1430	1170	1770
23	1080	9390	608	516	464	e1700	3310	1620	3400	1340	1120	2500
24	789	6710	593	531	459	e1500	4210	1680	3180	1420	1090	2810
25	641	4930	583	586	461	1410	3950	1630	2960	1430	1050	1680
26	544	3430	570	588	448	1360	e2600	3400	2850	3660	1020	1310
27	474	2470	565	618	449	e1400	e2100	4740	2780	2970	984	1140
28	427	1900	560	654	485	e1500	e1900	7960	2610	2010	950	1100
29	398	1550	561	735	---	e1400	e1700	9080	2630	1590	931	1040
30	381	1330	560	699	---	e1350	e1600	6700	2560	1340	903	969
31	389	---	567	653	---	e1500	---	6200	---	1190	882	---
TOTAL	23936	102914	23099	17575	13951	79643	52515	136720	548940	54230	171130	37465
MEAN	772	3430	745	567	498	2569	1750	4410	18300	1749	5520	1249
MAX	3000	31200	1170	735	632	14500	4210	15600	89900	3660	39500	3060
MIN	148	356	560	493	448	484	967	1230	2560	1190	882	701
AC-FT	47480	204100	45820	34860	27670	158000	104200	271200	1089000	107600	339400	74310

e Estimated

ARKANSAS RIVER BASIN

77

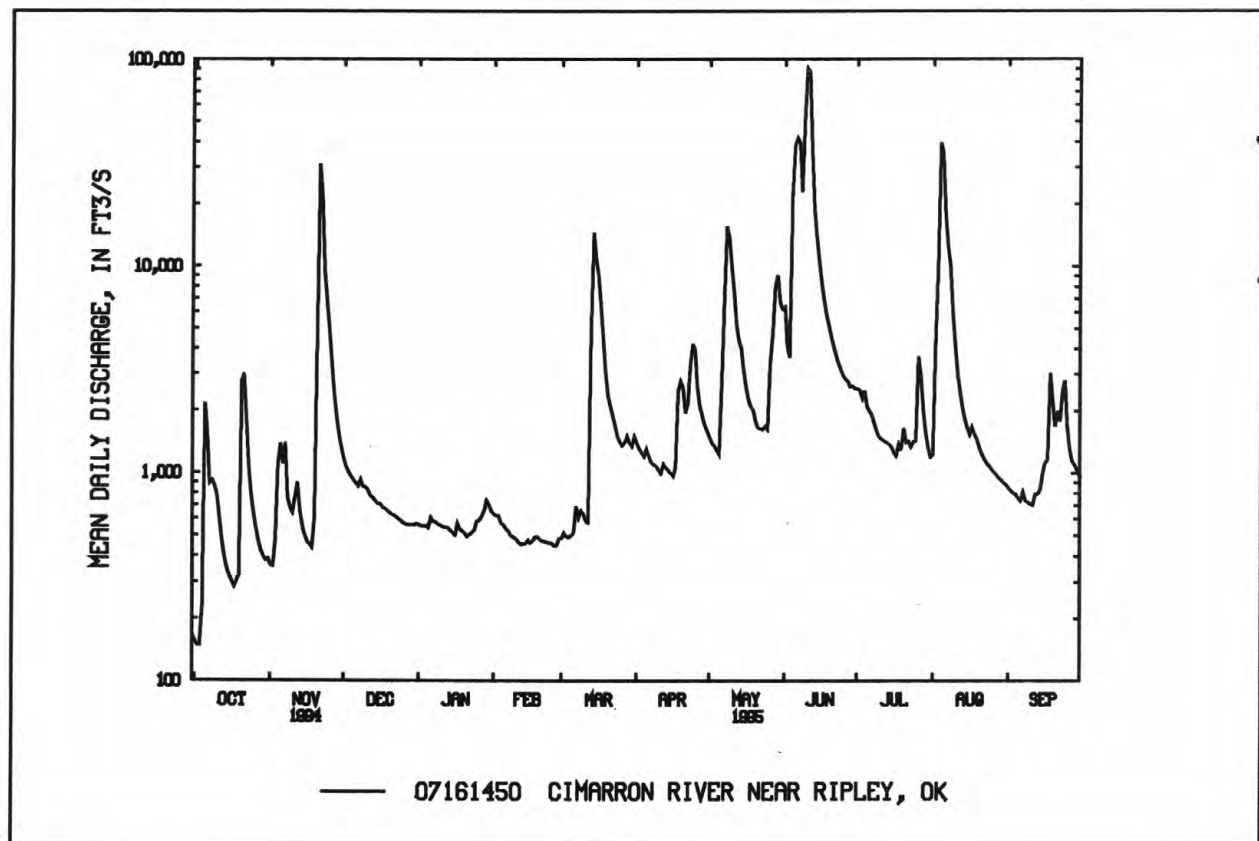
07161450 CIMARRON RIVER NEAR RIPLEY, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	580	1463	1625	1326	1093	3204	3615	5719	5105	1370	1677	1616
MAX	939	4070	4300	3541	3766	9824	7456	26790	18300	2973	5520	4554
(WY)	1990	1993	1993	1993	1993	1990	1988	1993	1995	1989	1995	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 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1988 - 95

ANNUAL TOTAL	577225	1262118	
ANNUAL MEAN	1581	3458	2369
HIGHEST ANNUAL MEAN			4983 1993
LOWEST ANNUAL MEAN			437 1991
HIGHEST DAILY MEAN	31200	Nov 21 89900	Jun 10 137000 May 10 1993
LOWEST DAILY MEAN	103	Aug 18 148	Oct 2-3 84 Oct 23 1991
ANNUAL SEVEN-DAY MINIMUM	117	Aug 13 326	Oct 13 87 Oct 19 1991
INSTANTANEOUS PEAK FLOW		103000	Jun 10 141000 May 10 1993
INSTANTANEOUS PEAK STAGE		25.23	Jun 10 28.36 May 10 1993
ANNUAL RUNOFF (AC-FT)	1145000	2503000	1716000
10 PERCENT EXCEEDS	3010	6440	5000
50 PERCENT EXCEEDS	560	1130	722
90 PERCENT EXCEEDS	233	477	235



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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	932	2600	12700	5010	2880	3550	5460	14700	60400	44900	12100	8660
2	127	736	12900	6200	1980	4170	4590	27900	65000	44900	16900	11100
3	428	1220	13000	7440	1110	4430	4580	28500	65400	45000	21400	8210
4	1620	1740	13200	8540	2250	2780	3870	28300	60500	44800	29500	8580
5	1430	3080	12800	5350	508	1830	4250	24300	62500	44300	34400	4910
6	2160	645	e9100	3910	1930	3210	4610	16900	64400	44100	36100	2790
7	1910	373	e9000	3440	3860	3830	5410	19300	85700	43600	34700	3500
8	432	1100	e8800	3170	3290	6080	2030	20500	85900	40800	32300	4200
9	227	198	e8900	2270	3040	5100	858	15600	100000	40900	32400	2170
10	67	1720	e6600	4210	3940	2940	3660	14900	109000	41200	32400	640
11	350	1610	e6900	3970	1690	1490	5180	16700	124000	41500	32200	2050
12	2110	1840	e8800	4590	116	919	3900	21500	124000	41400	32100	6930
13	555	1970	e7400	3910	1980	5770	5930	21500	117000	41100	32000	7270
14	413	1780	e6500	3360	3660	10800	6560	21400	111000	35100	32200	7470
15	1340	1710	7850	3790	3360	24500	4250	21700	98700	20300	32900	5070
16	279	1960	8170	3420	2130	28600	3930	21100	85900	20100	32800	2410
17	187	1850	6420	3830	1390	28600	4240	24800	68500	20000	33000	758
18	1290	1780	4410	4290	882	28700	4060	27700	67600	20100	34800	2040
19	1620	1960	2480	4260	105	28900	5230	27800	62800	20200	44000	6420
20	1170	3510	2540	4760	478	28500	6120	27700	48700	18900	43700	6320
21	280	2680	2860	2810	1010	28100	6220	27400	40400	13900	43300	7460
22	510	20300	2620	532	1750	27700	6720	25700	40100	11500	42900	9810
23	550	19600	2830	1750	1630	27300	7140	21800	41000	11200	42200	9800
24	216	17400	2960	2960	2910	24900	7140	22100	42100	12000	41300	9700
25	539	17400	985	847	2520	16200	10300	23200	41800	15100	39900	8340
26	2170	17400	2720	155	887	16000	9900	28900	41500	15200	37900	2180
27	1550	17100	5580	3210	4250	14200	9780	21800	43400	14600	36600	4570
28	808	17000	2740	3040	4170	11800	10400	33700	45400	14600	34000	5030
29	777	17200	4600	2410	---	9600	13300	47900	46800	15200	29900	4530
30	453	15200	3760	3160	---	9550	10200	50300	45200	14000	25600	4280
31	99	---	4360	2440	---	9550	---	59200	---	11100	16700	---
TOTAL	26599	194662	204485	113034	59706	419599	179818	804800	2094700	861600	1022200	167198
MEAN	858	6489	6596	3646	2132	13540	5994	25960	69820	27790	32970	5573
MAX	2170	20300	13200	8540	4250	28900	13300	59200	124000	45000	44000	11100
MIN	67	198	985	155	105	919	858	14700	40100	11100	12100	640
AC-FT	52760	386100	405600	224200	118400	832300	356700	1596000	4155000	1709000	2028000	331600

e Estimated

ARKANSAS RIVER BASIN

79

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7285	6601	4664	4918	5279	10280	11710	14290	15060	8679	5494	5431
MAX	72720	39390	16830	19630	22500	42890	44460	81400	69820	27790	32970	23280
(WY)	1987	1975	1993	1993	1993	1987	1973	1993	1995	1995	1995	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 1994 CALENDAR YEAR

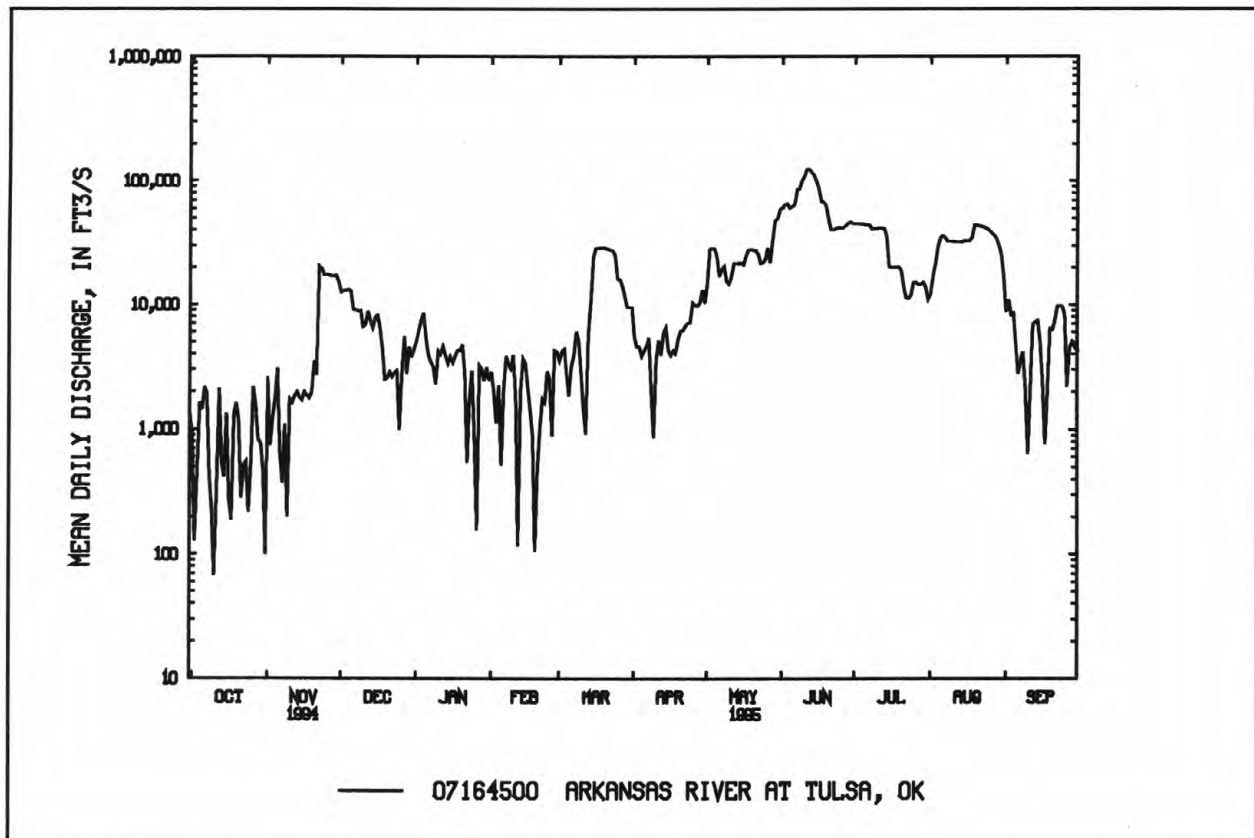
1995 WATER YEAR

WATER YEARS 1965 - 95

ANNUAL TOTAL	2282579	6148401	
ANNUAL MEAN	6254	16840	^a 8315
HIGHEST ANNUAL MEAN			22840
LOWEST ANNUAL MEAN			1813
HIGHEST DAILY MEAN	67100	May 3	124000
LOWEST DAILY MEAN	50	Jul 11	67
ANNUAL SEVEN-DAY MINIMUM	540	Aug 31	593
INSTANTANEOUS PEAK FLOW			127000
INSTANTANEOUS PEAK STAGE			15.90
ANNUAL RUNOFF (AC-FT)	4527000	12200000	6024000
10 PERCENT EXCEEDS	15200	43300	21500
50 PERCENT EXCEEDS	3210	7140	3940
90 PERCENT EXCEEDS	419	927	631

^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, March 1977 to September 1995 (discontinued).

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, 299 microsiemens, Nov. 5, 1994.

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

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 3,370 microsiemens, Feb. 23; minimum, 299 microsiemens, Nov. 5.

WATER TEMPERATURE: Maximum, 31.5° C, Aug. 31; minimum, 3.0° C, Jan. 7, Mar. 2.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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 1995											
28...	0800	1100	28.0	756	1028	1028	15000	5.46	1130	6.0	8.0
28...	0802	900	28.0	756	1028	1028	15000	5.46	1130	6.3	8.0
28...	0804	700	28.0	756	1028	1028	15000	5.46	1130	6.2	8.0
28...	0806	500	28.0	756	1028	1028	15000	5.46	1130	6.2	8.0
28...	0808	300	28.0	756	1028	1028	15000	5.46	1130	6.2	8.0
28...	0810	100	28.0	756	1028	1028	15000	5.46	1130	6.0	8.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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 1994											
24...	1130	1028	80020	171	1520	8.2	18.0	19.0	3.9	756	8.5
DEC											
19...	1200	1028	80020	2780	1630	8.0	14.5	7.5	25	757	11.1
FEB 1995											
23...	1345	1028	80020	894	3480	8.4	19.0	11.0	2.2	760	13.9
JUN											
26...	1500	1028	80020	41500	634	7.8	29.0	24.5	43	750	8.8
JUL											
28...	0830	1028	80020	15000	1130	8.0	29.0	28.0	7.5	756	6.2
AUG											
17...	1200	1028	80020	33200	790	7.9	30.0	29.0	36	755	7.6

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

81

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	E. COLI WATER 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)	SODIUM AD- SORP- TION RATIO (00931)
OCT 1994											
24... 93		98	42	56	220	84	58	18	210	67	6
DEC											
19... 94		24	21	21	200	92	56	15	230	71	7
FEB 1995											
23... 128		K1100	25	55	310	170	79	27	600	81	15
JUN											
26... 108		96	89	96	140	41	40	8.8	64	49	2
JUL											
28... 80		230	290	240	200	78	56	14	150	61	5
AUG											
17... 100		42	64	72	130	46	38	9.0	96	60	4
DATE	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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
OCT 1994											
24... 6.1		166	0	136	97	330	0.40	3.4	836	807	1.14
DEC											
19... 5.1		134	0	110	92	370	0.30	7.1	878	846	1.19
FEB 1995											
23... 6.1		170	0	139	150	910	0.30	5.4	1910	1860	2.60
JUN											
26... 6.3		116	0	95	48	99	0.20	10	367	336	0.50
JUL											
28... 5.8		146	0	120	77	210	0.20	9.3	626	596	0.85
AUG											
17... 6.2		105	0	86	53	150	0.20	8.2	436	416	0.59
DATE	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)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)
OCT 1994											
24... 386		0.420	--	--	<0.010	--	0.420	0.420	0.020	0.03	0.48
DEC											
19... 6590		0.750	0.750	3.3	0.020	0.07	0.770	0.770	0.140	0.18	0.36
FEB 1995											
23... 4610		0.530	0.530	2.3	0.020	0.07	0.550	0.550	0.170	0.22	0.43
JUN											
26... 41100		0.420	0.420	1.9	0.010	0.03	0.430	0.430	0.040	0.05	0.56
JUL											
28... 25400		0.370	0.370	1.6	0.020	0.07	0.390	0.390	0.040	0.05	0.36
AUG											
17... 39100		0.620	--	--	<0.010	--	0.620	0.620	<0.015	--	0.40

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	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 ORTH, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTH, 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 1994											
	24...	0.50	0.92	0.080	0.050	0.040	0.12	20	130	<3	5	11
	DEC											
	19...	0.50	1.3	0.110	0.080	0.090	0.28	20	120	<3	8	6
FEB 1995												
23...	0.60	1.2	0.080	0.060	0.060	0.18	--	--	--	--	--	
JUN												
26...	0.60	1.0	0.190	0.150	0.120	0.37	10	94	<3	31	7	
JUL												
28...	0.40	0.79	0.120	0.100	0.120	0.37	--	--	--	--	--	
AUG												
17...	0.40	1.0	0.110	0.110	0.100	0.31	40	97	<3	22	8	
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 1994												
24...	29	<10	2	<1	<1.0	670	<6	58	27	94		
DEC												
19...	22	<10	<1	1	<1.0	540	<6	--	--	--		
FEB 1995												
23...	--	--	--	--	--	--	--	122	294	97		
JUN												
26...	7	<10	2	<1	<1.0	300	7	175	19600	45		
JUL												
28...	--	--	--	--	--	--	--	146	5910	10		
AUG												
17...	4	<10	2	<1	<1.0	300	9	202	18100	18		

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

83

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1520	1490	1510	1570	1450	1540	1380	1320	1350	2170	1990	2100
2	1520	1490	1500	1560	1520	1550	1350	1310	1330	2090	1950	2010
3	1500	1440	1480	1590	784	1520	1320	1260	1290	2030	1800	1960
4	1510	1480	1500	1510	433	1040	1260	1240	1240	1910	1790	1840
5	1500	1480	1500	971	299	578	1250	1230	1240	2060	1850	1920
6	1510	1460	1490	601	310	399	1240	1210	1220	2090	2030	2060
7	1500	743	1390	747	549	654	1260	1210	1240	2040	1800	1890
8	1310	1000	1090	1350	747	1200	1310	1220	1270	2050	1860	1960
9	---	---	---	1330	956	1250	1290	1220	1240	2040	1940	2000
10	---	---	---	1500	1190	1390	1300	1230	1260	2210	1970	2080
11	---	---	---	1550	1480	1510	1280	1240	1260	2180	2090	2130
12	1460	1430	1450	1570	1510	1540	1390	1280	1330	2140	1950	1990
13	1460	1440	1450	1610	1550	1580	1480	1350	1400	1990	1930	1960
14	1450	1420	1440	1630	1590	1610	1530	1450	1490	2020	1870	1910
15	1580	1420	1550	1630	1590	1620	1530	1500	1520	2270	2020	2100
16	1560	1500	1530	1610	1560	1580	1520	1300	1430	2380	2230	2290
17	1520	1450	1480	1560	1470	1560	1500	1400	1440	2390	2250	2350
18	1630	1250	1500	1600	1440	1540	1550	1450	1490	2250	2170	2210
19	1490	1250	1450	1600	1480	1520	1580	1530	1570	2170	2050	2110
20	1500	1400	1480	1460	420	981	1750	1520	1690	2200	2000	2080
21	1480	1410	1450	1510	790	1280	1830	1640	1790	2200	2060	2130
22	1490	1400	1430	1550	1380	1500	1830	1680	1740	---	---	---
23	1510	1490	1500	1590	1530	1580	1760	1640	1730	---	---	---
24	1510	1460	1490	1590	1580	1590	1760	1670	1730	2590	2460	2510
25	1580	1450	1500	1580	1560	1580	1720	1640	1690	---	---	---
26	1580	1540	1550	1570	1550	1560	1880	1500	1670	---	---	---
27	1560	1530	1540	1550	1530	1540	1930	1860	1900	2940	2100	2600
28	1550	1510	1540	1530	1420	1470	2020	1830	1940	2750	2440	2590
29	1560	1520	1550	1480	1420	1450	2090	2000	2060	2720	2530	2630
30	1570	1550	1560	1420	1380	1410	2140	2000	2060	2680	2520	2620
31	1560	1340	1510	---	---	---	2150	2080	2130	2700	2630	2730
MONTH	---	---	---	1630	299	1370	2150	1210	1540	---	---	---

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

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	2670	2490	2520	2480	2310	2380	1770	1580	1650	1700	1530	1640
2	---	---	---	2330	2030	2130	1910	1740	1810	1540	1470	1510
3	---	---	---	2460	2070	2220	2080	1910	1940	1520	1420	1460
4	2660	2390	2440	2460	2260	2340	2160	2080	2110	1430	1290	1350
5	2400	2340	2370	2400	2150	2320	2140	2020	2050	1330	1270	1290
6	---	---	---	2530	2160	2390	2090	2020	2070	1320	1010	1210
7	2820	2560	2660	2460	1850	2200	2170	2030	2070	1360	450	1150
8	2630	2240	2390	2190	1800	1920	2220	2170	2210	1310	360	853
9	2770	2430	2580	2480	2120	2250	2180	2100	2140	1350	1130	1270
10	2770	2430	2570	2740	2390	2540	2100	1080	1960	1250	1020	1130
11	---	---	---	2750	2640	2710	2150	1620	1840	1250	1040	1170
12	---	---	---	2640	2350	2510	2220	1960	2080	1360	1100	1170
13	---	---	---	2360	1150	1780	2120	2010	2060	1380	1070	1230
14	2460	2050	2250	2000	1520	1850	2130	2010	2060	1070	1010	1040
15	2460	2090	2200	2020	1590	1830	2160	2000	2090	1070	1010	1050
16	2090	1860	1940	1930	1820	1870	2140	1990	2070	1090	1030	1070
17	---	---	---	1830	1740	1800	2190	2040	2120	1110	991	1030
18	---	---	---	1800	1630	1730	2070	1470	1750	1020	961	999
19	---	---	---	1680	1550	1620	1920	1710	1830	1000	961	984
20	---	---	---	1680	1430	1510	1830	1680	1730	1030	971	1000
21	---	---	---	1490	1440	1460	1770	1670	1720	1020	991	1000
22	---	---	---	1480	1260	1350	1730	1100	1570	1040	961	1000
23	3370	2510	2900	1300	1210	1260	1340	1020	1180	1290	1040	1150
24	3260	2880	2980	1380	1240	1310	1450	1340	1410	1260	1160	1210
25	2920	2780	2840	1350	1250	1280	1540	1440	1470	1290	1190	1240
26	2780	2020	2670	1270	1160	1200	1700	1540	1660	1240	410	966
27	2690	1430	2250	1220	1110	1150	1680	1540	1570	1200	591	967
28	2680	2460	2530	1240	1210	1230	1680	1530	1580	1130	1050	1080
29	---	---	---	1250	1210	1220	1710	500	1100	1190	1060	1130
30	---	---	---	1240	1210	1220	1680	1380	1560	1210	1160	1190
31	---	---	---	1570	1210	1340	---	---	---	1190	1060	1140
MONTH	---	---	---	2750	1110	1800	2220	500	1820	1700	360	1150

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

85

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	1120	931	1030	679	649	661	1360	1050	1300	1280	1060	1150
2	991	831	909	699	669	681	1050	852	914	1260	1140	1210
3	931	821	871	737	688	712	880	784	839	1250	1130	1190
4	931	781	855	718	627	688	1040	766	870	1200	1060	1140
5	851	721	806	646	597	615	1180	1040	1130	1220	1040	1100
6	931	791	866	656	597	629	1180	1050	1110	---	---	---
7	961	811	885	685	627	661	1060	753	876	1280	1190	1230
8	911	811	845	714	655	686	792	705	750	1190	981	1100
9	881	480	681	754	645	704	784	677	716	---	---	---
10	861	701	826	793	694	755	746	679	707	---	---	---
11	801	751	768	832	773	796	720	680	693	---	---	---
12	751	611	679	921	812	854	742	692	709	1230	1000	1090
13	611	520	564	921	871	883	754	703	720	1220	1130	1170
14	540	510	529	978	850	896	756	705	729	1200	1150	1180
15	540	500	515	1180	978	1090	778	727	749	1300	1170	1200
16	540	500	517	1190	1120	1160	790	758	769	1300	836	1200
17	601	540	569	1220	1110	1160	801	770	781	1220	1150	1190
18	641	601	616	1180	1120	1150	801	771	785	1420	1150	1220
19	671	631	644	1270	1100	1160	851	781	814	1390	1360	1370
20	671	651	658	1240	1040	1110	901	831	866	1390	1250	1310
21	681	651	664	1450	1210	1300	951	871	916	1340	1150	1290
22	691	641	669	1450	1310	1360	951	931	941	1150	1100	1130
23	691	651	674	1330	1170	1230	951	911	935	1150	1120	1130
24	671	641	656	1340	1050	1250	951	901	931	1150	1130	1140
25	671	641	651	1050	918	945	931	891	913	1150	1120	1130
26	681	631	654	1020	849	968	951	901	920	1180	1150	1160
27	651	621	638	1180	917	1000	921	881	906	1180	1150	1160
28	681	651	662	1110	886	963	941	911	928	1190	1170	1180
29	671	510	624	963	895	932	981	911	947	1250	1190	1230
30	660	640	649	1170	933	975	1080	911	959	1270	1240	1260
31	---	---	---	1300	1170	1230	1080	971	1020	---	---	---
MONTH	1120	480	706	1450	597	942	1360	677	876	---	---	---

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	24.0	21.0	22.5	17.0	14.0	15.5	11.0	9.5	10.5	6.0	4.5	5.5
2	25.5	22.0	23.5	17.0	14.5	15.5	11.5	10.0	10.5	7.0	4.5	5.5
3	25.5	22.5	24.0	20.5	17.0	18.5	11.0	10.5	11.0	6.0	4.5	5.5
4	25.0	21.5	23.0	20.5	15.5	18.5	11.5	10.5	11.0	5.5	4.0	5.0
5	24.5	21.5	22.5	15.5	12.0	13.5	11.0	10.0	10.5	5.0	3.5	4.5
6	23.0	20.5	22.0	14.5	11.0	12.5	10.5	9.5	10.0	5.0	4.5	5.0
7	22.0	19.0	20.5	15.5	13.0	14.0	10.5	8.5	9.5	5.0	3.0	4.0
8	19.0	17.5	18.5	17.5	14.0	16.0	9.0	8.5	8.5	6.0	4.0	5.0
9	---	---	---	17.5	14.0	15.5	9.0	8.0	8.5	6.5	4.0	5.5
10	---	---	---	15.0	12.5	14.0	9.0	7.5	8.0	8.0	6.0	7.0
11	---	---	---	14.5	13.5	14.0	8.0	6.0	7.0	8.0	6.0	7.0
12	21.0	18.0	19.5	15.0	13.0	14.0	8.5	6.0	7.5	7.5	6.0	6.5
13	20.5	19.0	19.5	15.5	14.5	15.0	8.5	7.5	8.0	6.0	5.5	6.0
14	20.0	18.0	19.0	16.0	14.5	15.5	8.5	7.5	8.0	7.0	5.0	6.0
15	19.0	18.0	18.5	14.5	13.5	14.0	8.5	8.0	8.0	7.0	4.5	6.0
16	19.0	17.5	18.0	15.0	12.5	13.5	9.0	7.5	8.5	7.5	5.5	6.5
17	19.5	18.5	19.0	14.5	13.0	13.5	8.5	6.5	7.5	8.5	6.0	7.5
18	21.0	19.5	20.0	15.0	13.0	14.0	8.5	7.0	7.5	6.0	4.5	5.0
19	20.5	19.0	19.5	15.0	13.5	14.0	8.0	6.5	7.5	6.5	4.0	5.5
20	21.0	19.0	20.0	13.5	11.5	13.0	9.0	7.0	8.0	7.0	4.5	5.5
21	22.5	20.0	21.0	13.5	11.0	12.5	9.0	7.0	7.5	6.5	4.5	5.5
22	23.0	19.5	21.0	13.0	12.5	13.0	8.0	6.5	7.5	---	---	---
23	20.5	18.5	19.5	13.5	12.0	12.5	8.0	6.0	6.5	---	---	---
24	20.0	18.0	19.0	12.5	11.5	12.0	7.0	5.5	6.5	7.5	4.0	6.0
25	18.0	15.0	16.5	12.5	12.0	12.0	7.0	5.5	6.0	---	---	---
26	17.5	15.5	16.5	12.5	12.0	12.0	7.5	4.5	6.0	7.5	7.5	7.5
27	17.5	15.5	16.5	12.5	11.0	12.5	8.0	6.0	7.0	10.0	7.5	8.5
28	17.5	14.0	16.0	12.0	10.5	11.0	8.0	7.5	7.5	8.0	5.5	6.5
29	17.5	15.5	16.5	11.5	10.0	11.0	8.0	7.0	7.5	5.5	4.5	5.0
30	18.5	17.5	18.0	11.5	10.0	10.5	8.5	6.5	7.5	7.5	4.5	6.0
31	18.0	14.5	16.0	---	---	---	7.5	6.0	7.0	8.0	4.5	6.5
MONTH	---	---	---	20.5	10.0	13.8	11.5	4.5	8.1	---	---	---

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

87

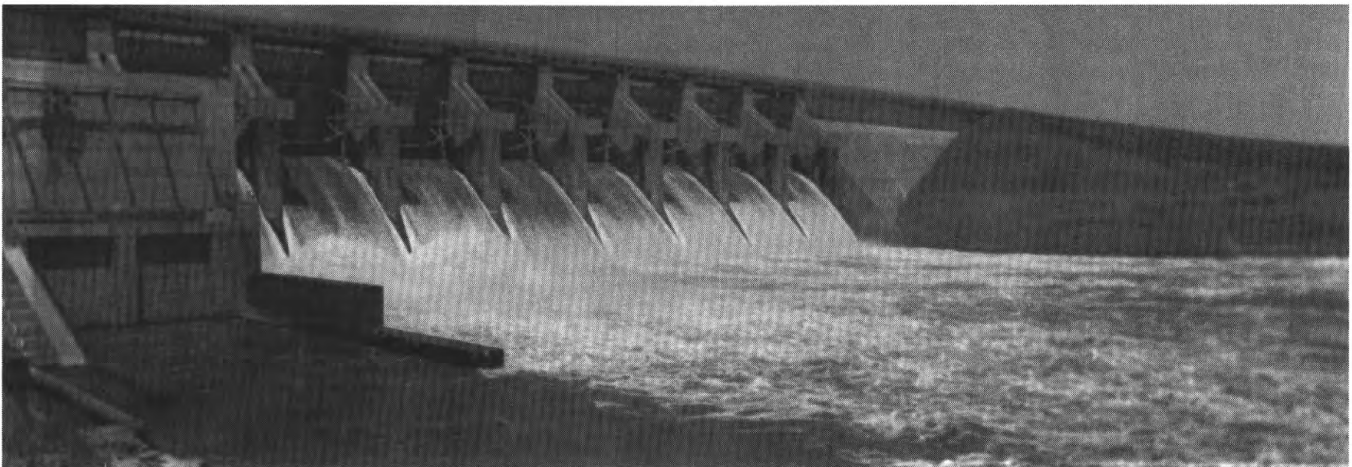
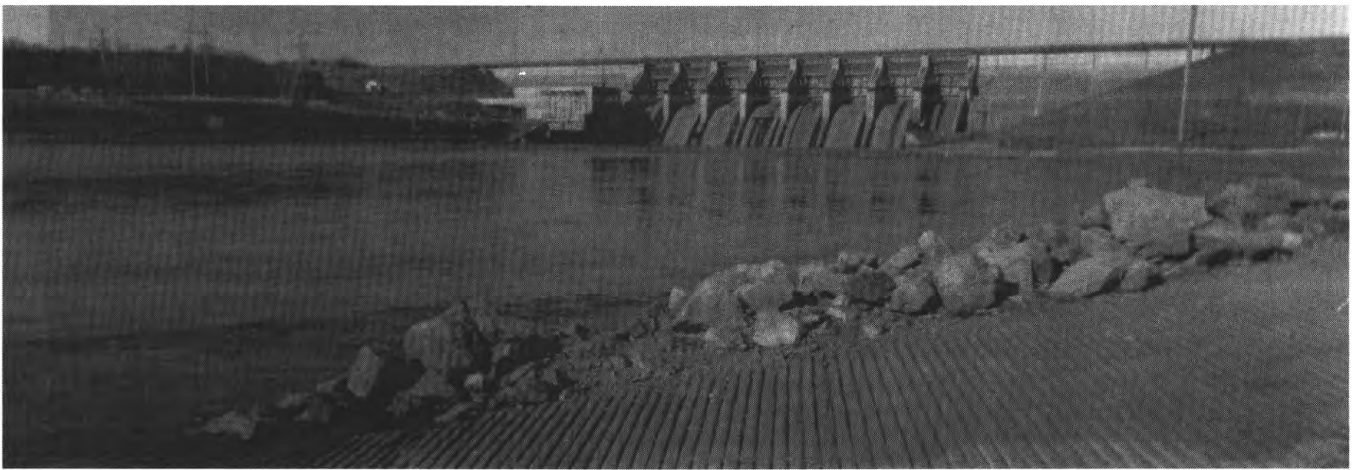
WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	9.0	5.5	7.5	6.0	3.5	4.5	17.5	13.0	15.0	15.5	15.0	15.5
2	10.0	7.5	9.0	5.0	3.0	4.0	17.5	13.5	15.5	16.0	14.5	15.5
3	9.5	7.0	8.0	7.0	4.5	5.5	15.5	14.0	15.0	15.5	15.0	15.0
4	8.0	6.0	7.5	6.5	6.0	6.0	16.5	14.0	15.0	17.0	15.0	16.0
5	---	---	---	7.5	6.0	7.0	17.5	13.0	15.0	17.0	15.0	16.0
6	---	---	---	8.0	7.0	7.5	17.5	14.0	15.5	16.5	15.0	15.5
7	7.0	5.5	6.5	7.5	4.5	5.5	18.5	14.0	16.0	16.5	15.5	16.0
8	7.0	4.0	6.0	7.0	3.5	5.5	20.5	15.5	18.0	18.0	15.5	16.5
9	8.5	5.0	6.5	8.5	4.5	6.5	24.0	19.5	21.5	19.0	15.5	17.0
10	8.5	6.0	7.0	10.5	6.5	8.5	21.0	14.5	18.5	17.5	15.5	16.5
11	6.0	5.0	5.5	12.0	7.5	10.0	15.5	12.0	14.0	19.0	15.5	17.0
12	---	---	---	14.5	11.5	13.0	16.5	12.0	14.5	17.5	16.0	17.0
13	---	---	---	14.5	10.0	13.5	18.5	14.0	16.0	20.0	17.0	18.5
14	5.5	4.0	4.5	11.0	8.5	10.0	18.5	14.5	16.5	19.5	17.0	18.0
15	6.5	5.0	6.0	10.0	8.0	9.0	18.5	15.5	17.0	20.5	17.5	18.5
16	5.0	4.0	4.5	10.5	8.0	9.0	19.0	17.0	18.0	19.5	18.0	19.0
17	8.0	4.0	6.0	11.5	8.5	10.0	18.0	16.5	17.0	19.5	18.5	18.5
18	8.5	5.5	7.0	12.0	9.5	10.5	18.0	15.5	17.0	19.0	18.0	18.5
19	---	---	---	13.0	10.0	11.5	17.5	14.5	16.0	20.5	17.5	19.0
20	---	---	---	13.5	10.5	12.0	19.0	15.0	17.0	20.5	18.0	19.5
21	10.5	7.5	9.5	14.0	11.0	12.5	19.0	15.0	17.0	21.0	18.5	19.5
22	---	---	---	15.0	12.5	13.5	17.0	13.0	14.0	21.0	19.0	20.0
23	12.0	7.5	9.5	14.5	12.5	13.5	15.0	13.0	13.5	19.5	18.5	19.0
24	10.0	6.5	8.0	15.0	12.5	13.5	17.0	13.5	15.0	19.5	19.0	19.0
25	11.5	6.5	9.0	14.5	13.0	14.0	18.0	14.5	16.0	20.0	19.0	19.5
26	14.0	11.0	12.5	15.5	14.0	14.5	17.5	15.0	16.0	20.5	18.0	19.5
27	14.0	7.5	11.5	16.0	13.0	14.5	17.5	14.0	15.5	22.0	19.0	20.5
28	7.5	6.0	6.5	14.5	13.0	13.5	17.0	14.5	15.5	22.5	19.5	21.0
29	---	---	---	15.0	13.0	13.5	17.0	14.0	15.5	21.5	20.5	21.0
30	---	---	---	14.5	12.0	13.5	17.0	15.0	15.5	21.0	20.5	20.5
31	---	---	---	16.5	13.0	14.5	---	---	---	21.5	20.5	21.0
MONTH	---	---	---	16.5	3.0	10.3	24.0	12.0	16.0	22.5	14.5	18.2

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	21.5	20.0	21.0	25.5	23.5	24.5	29.0	27.5	28.5	31.0	28.0	29.5
2	21.5	20.5	21.0	25.0	24.0	24.0	30.0	27.0	28.5	31.0	28.0	29.5
3	21.5	20.5	21.0	26.0	24.0	24.5	30.5	28.0	29.0	30.0	28.0	29.0
4	22.0	20.5	21.5	25.5	24.0	25.0	30.0	28.0	29.0	31.0	27.5	29.0
5	22.0	20.5	21.5	26.0	24.0	25.0	30.5	28.5	29.5	30.0	27.0	28.5
6	22.5	21.0	21.5	26.5	24.5	25.5	29.5	28.0	29.0	29.0	26.5	28.0
7	23.0	21.5	22.0	26.5	24.5	25.5	29.5	27.5	28.5	28.0	25.5	26.5
8	22.5	22.0	22.0	27.0	25.0	26.0	29.5	27.5	28.5	26.5	23.5	24.5
9	22.0	20.5	21.5	27.0	25.0	26.0	29.0	27.0	28.0	25.5	23.0	24.5
10	22.5	22.0	22.0	27.5	25.0	26.0	29.5	27.0	28.0	25.5	22.0	23.5
11	23.0	22.0	22.5	27.5	25.5	26.5	29.5	27.5	28.0	25.5	24.0	25.0
12	23.0	22.5	22.5	28.0	26.0	27.0	29.5	27.5	28.5	27.5	24.5	26.0
13	22.5	22.0	22.0	28.0	26.0	27.0	30.0	27.5	28.5	28.0	25.0	26.5
14	22.5	21.5	22.0	28.5	26.0	27.0	30.0	27.5	28.5	27.5	25.0	26.5
15	23.0	21.5	22.0	28.5	26.0	27.0	29.5	27.5	28.5	26.5	25.0	25.5
16	23.0	20.5	22.0	29.0	26.0	27.5	29.5	28.0	28.5	25.5	23.5	24.5
17	23.0	22.0	22.5	28.5	26.5	27.5	30.0	28.0	29.0	27.0	24.5	25.5
18	23.5	22.0	22.5	29.0	26.5	27.5	30.5	28.0	29.0	26.0	24.5	25.5
19	23.5	22.5	23.0	29.0	26.5	27.5	30.5	28.5	29.0	25.5	24.0	24.5
20	24.0	22.5	23.0	29.0	26.5	27.5	30.5	28.5	29.5	24.5	22.5	23.0
21	24.5	22.5	23.5	30.0	26.5	28.5	30.5	28.5	29.5	22.5	20.5	21.5
22	24.5	22.5	23.5	30.0	26.5	28.0	30.5	28.5	29.5	23.0	20.5	21.5
23	24.0	22.5	23.5	30.0	26.0	28.5	30.5	28.5	29.5	23.5	20.5	22.0
24	24.5	23.0	23.5	30.0	26.5	28.0	30.5	28.5	29.5	22.5	20.5	21.5
25	24.5	23.5	24.0	31.0	27.5	29.0	30.5	28.5	29.5	22.0	21.0	21.5
26	25.0	23.5	24.0	30.5	27.0	28.5	30.5	28.5	29.5	21.5	19.5	20.5
27	25.5	23.5	24.5	31.0	28.0	29.5	31.0	29.0	29.5	21.5	19.5	20.5
28	25.5	23.5	24.5	31.0	28.0	29.5	31.0	29.0	30.0	22.5	20.5	21.5
29	24.5	23.0	24.0	30.5	28.0	29.0	30.5	28.5	29.5	24.0	20.5	22.0
30	24.5	24.0	24.0	31.0	28.0	29.5	30.5	28.5	29.5	23.0	20.0	21.5
31	---	---	---	30.0	27.5	29.0	31.5	28.5	30.0	---	---	---
MONTH	25.5	20.0	22.6	31.0	23.5	27.1	31.5	27.0	29.0	31.0	19.5	24.6



KAW DAM NEAR PONCA CITY, OK OCTOBER, 1995. BEFORE AND AFTER GATE OPENINGS.

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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1.3	3.2	8.9	e5.2	8.7	.76	15	81	11	138	7.6
2	.78	1.3	3.2	8.9	e4.5	42	.97	5.5	9.7	16	18	9.1
3	.93	18	2.9	5.5	e4.1	18	4.3	57	11	12	9.1	7.1
4	1.5	471	2.9	12	e4.0	12	.63	7.1	89	21	23	5.7
5	.77	392	2.5	9.6	e3.9	9.1	.70	5.3	302	15	76	6.2
6	1.0	18	10	9.5	2.4	7.5	.77	249	332	19	15	10
7	230	9.6	3.6	7.8	4.0	91	.93	1010	18	12	3.6	99
8	172	6.2	27	4.5	5.7	10	.92	432	53	16	4.0	7.2
9	2.9	54	6.0	4.0	2.4	6.1	.97	14	780	18	3.6	3.2
10	1.3	4.5	4.9	3.5	2.0	5.5	196	6.8	48	15	9.3	3.1
11	1.2	4.0	4.5	3.8	1.9	5.3	4.7	4.0	127	14	16	3.9
12	2.8	3.5	3.1	e4.6	14	5.0	1.0	3.3	15	12	21	53
13	3.5	7.6	2.9	e4.1	12	160	.95	3.5	15	16	21	6.3
14	2.5	4.1	3.2	e4.6	8.5	14	1.3	2.2	6.9	17	16	3.7
15	15	2.3	4.9	e6.1	3.2	2.1	1.0	2.0	5.8	20	5.6	29
16	6.3	3.3	107	e5.8	2.1	1.3	1.0	2.7	4.9	22	4.1	83
17	2.7	4.0	7.1	e13	2.2	.97	42	120	5.0	23	2.9	5.2
18	194	2.6	5.7	e20	2.3	.97	38	5.1	5.0	13	3.1	3.2
19	14	134	5.9	e15.5	2.1	1.0	100	3.6	4.2	14	21	6.5
20	100	296	5.9	e9.0	2.1	.69	27	3.7	4.9	110	8.4	3.2
21	21	11	5.7	e7.1	2.8	.79	3.1	4.4	14	7.1	6.1	11
22	9.0	5.2	5.2	e7.7	3.9	.89	288	4.6	18	163	3.3	5.4
23	2.5	4.9	4.9	e7.2	2.9	.58	140	34	276	7.1	3.4	3.0
24	1.4	4.4	4.9	e5.8	2.4	.67	44	181	14	46	3.3	7.0
25	.85	3.6	4.9	e6.2	3.3	.66	13	5.9	5.2	14	3.9	9.1
26	.97	3.5	4.9	e16	149	.98	7.3	622	5.0	96	4.2	3.5
27	.99	3.0	4.9	e21	102	.69	4.9	258	4.9	7.3	3.3	5.7
28	1.1	2.9	4.9	e13	5.9	.59	5.4	12	4.9	4.0	8.3	10
29	2.2	2.7	4.9	e7.5	---	.68	632	5.9	327	3.7	9.4	5.4
30	1.2	2.6	5.9	e6.2	---	.55	18	40	22	3.6	11	48
31	14	---	22	e5.3	---	.60	---	204	---	6.3	8.6	---
TOTAL	809.99	1481.1	289.5	263.7	360.8	408.91	1579.60	3323.6	2608.4	774.1	483.5	463.3
MEAN	26.1	49.4	9.34	8.51	12.9	13.2	52.7	107	86.9	25.0	15.6	15.4
MAX	230	471	107	21	149	160	632	1010	780	163	138	99
MIN	.77	1.3	2.5	3.5	1.9	.55	.63	2.0	4.2	3.6	2.9	3.0
AC-FT	1610	2940	574	523	716	811	3130	6590	5170	1540	959	919
CFSM	2.14	4.05	.77	.70	1.06	1.08	4.32	8.79	7.13	2.05	1.28	1.27
IN.	2.47	4.52	.88	.80	1.10	1.25	4.82	10.13	7.95	2.36	1.47	1.41

e Estimated

ARKANSAS RIVER BASIN

91

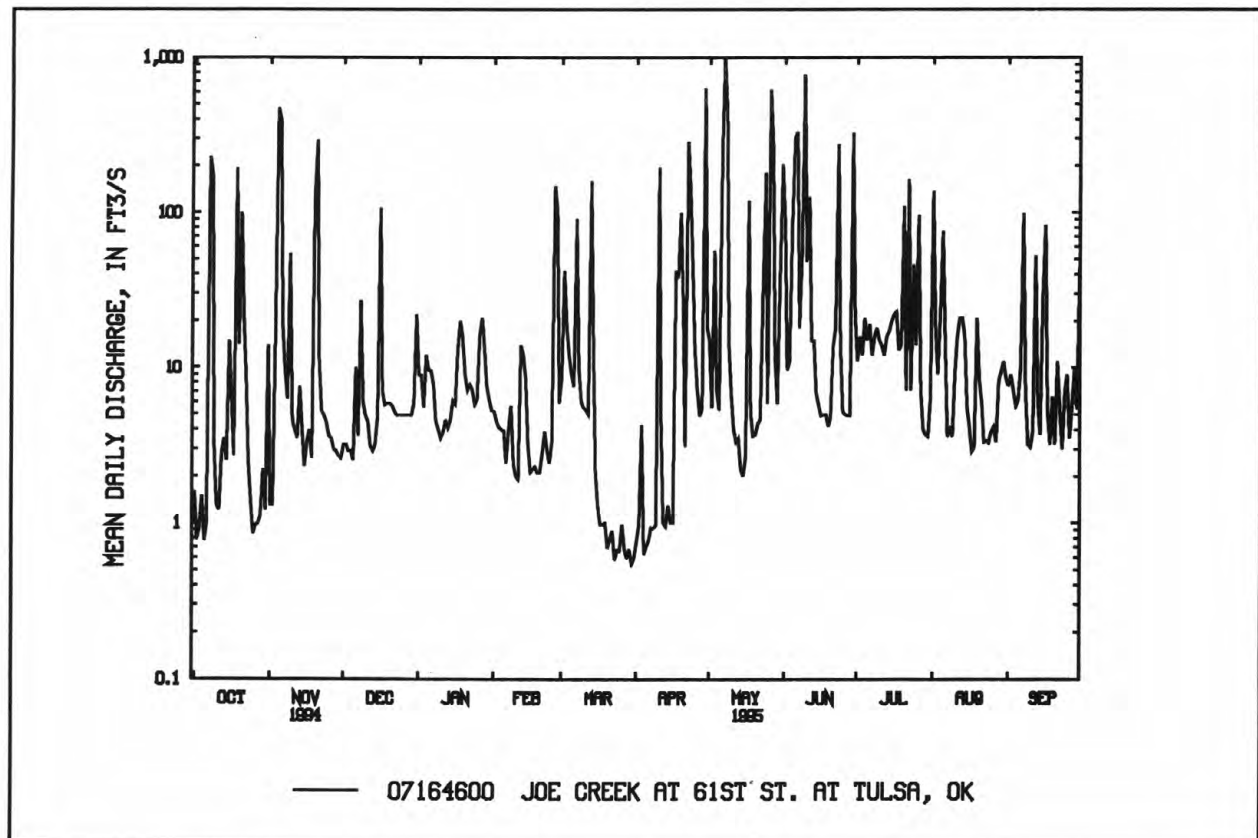
07164600 JOE CREEK AT 61ST STREET AT TULSA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.2	21.7	16.5	11.0	15.6	24.5	33.6	47.5	30.8	15.5	15.7	22.7
MAX	32.5	49.4	45.3	19.9	29.1	56.2	52.7	107	86.9	44.6	33.2	42.6
(WY)	1992	1995	1993	1993	1990	1990	1995	1995	1995	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	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1989 - 95
ANNUAL TOTAL	9846.36	12846.50	
ANNUAL MEAN	27.0	35.2	22.4
HIGHEST ANNUAL MEAN			35.2 1995
LOWEST ANNUAL MEAN			14.3 1991
HIGHEST DAILY MEAN	514 Apr 11	1010 May 7	1010 May 7 1995
LOWEST DAILY MEAN	.47 Feb 4	.55 Mar 30	^a .47 Oct 26 1993
ANNUAL SEVEN-DAY MINIMUM	1.1 Sep 29	.68 Mar 25	.67 Oct 22 1993
INSTANTANEOUS PEAK FLOW		11100 Jun 9	11100 Jun 9 1995
INSTANTANEOUS PEAK STAGE		9.72 Jun 9	9.72 Jun 9 1995
ANNUAL RUNOFF (AC-FT)	19530	25480	16220
ANNUAL RUNOFF (CFSM)	2.21	2.88	1.83
ANNUAL RUNOFF (INCHES)	30.02	39.17	24.93
10 PERCENT EXCEEDS	80	93	44
50 PERCENT EXCEEDS	4.5	5.8	3.5
90 PERCENT EXCEEDS	1.2	1.2	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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.56	e14	e1.9	e6.0	e2.4	e8.5	e2.1	28	e70	e15	3.9	.22
2	e.48	e2.8	e1.8	e3.5	e2.2	e7.0	e1.3	14	e25	e8.5	16	.22
3	e.46	32	e1.7	e2.5	e2.0	e30	e1.6	61	e11	e5.5	22	.22
4	e.43	510	e1.6	e4.0	e1.9	e14	e1.2	e32	38	e150	3.2	.19
5	e.40	399	e1.5	e3.2	e1.8	e10	e1.0	e6.0	60	e8.0	2.3	.18
6	e.38	56	e4.1	e2.6	e1.7	e7.2	e.90	e103	187	e2.8	1.3	.17
7	150	e10	e2.5	e2.1	e1.6	e30	e.74	e550	e15	e1.5	.70	61
8	210	e7.0	e15	e1.7	e5.5	e10	e.65	e287	e50	e1.1	.55	3.5
9	11	110	e20	e1.5	e4.5	e5.0	e.58	e80	885	e.90	.39	.52
10	e2.0	e8.0	e6.5	e1.4	e2.2	e3.6	1120	e16	142	e.80	.34	.24
11	e1.4	e4.0	e3.0	e1.3	e1.8	e2.9	260	e6.0	376	e.70	.32	.13
12	e1.1	e3.2	e2.0	e1.2	e1.6	e2.5	e6.0	e5.0	e30	e.60	.29	e88
13	e.95	e2.4	e1.6	e3.0	e1.4	e77	e3.0	e4.0	e8.0	e.52	.31	e40
14	e3.6	e2.2	e1.3	e1.7	e15	e4.0	e2.0	e3.8	e5.0	e.48	.29	e1.6
15	e14.1	e6.5	e1.1	e1.5	e3.0	e13	e1.5	e2.8	e3.5	e.44	.29	e4.6
16	e8.0	e3.5	92	e2.8	e2.0	e4.5	e1.1	e1.7	e2.7	e.40	.24	e120
17	e6.0	e2.6	22	e10	e1.8	e2.8	e6.0	20	e2.6	e.50	.22	e20
18	220	e10	e6.0	e5.0	e1.7	e2.0	e3.5	14	e1.9	e.40	.22	e2.0
19	25	128	e2.9	e3.5	e1.6	e1.7	e30	e4.5	e1.5	e.30	.22	e5.0
20	105	654	e2.4	e2.5	e1.5	e1.5	e6.0	e3.8	e1.2	80	.21	e2.0
21	12	e37	e2.1	e2.2	e1.4	e1.2	e3.4	e3.4	e.80	6.5	.27	e3.0
22	e4.5	e15	e2.0	e8.0	e1.3	e1.0	e110	e3.5	e.60	245	.31	e1.6
23	e2.5	e7.0	e1.9	e2.5	e1.2	e.90	e60	e4.3	148	9.3	.27	e1.0
24	e1.6	e5.0	e1.7	e3.0	e1.1	e.80	e18	e120	16	79	.25	e.70
25	e1.2	e4.2	e1.6	e1.7	e1.1	e.72	e7.0	e80	e4.0	9.0	.20	e.60
26	e1.0	e3.5	e1.4	e4.0	e200	e.66	e4.2	e310	e1.6	188	.18	e.50
27	e.95	e3.0	e1.2	e12	e105	e.62	e2.9	80	e.60	8.5	.21	e.45
28	e.88	e2.7	e1.1	e5.0	e34	e.56	e2.5	28	e.35	2.8	.22	e80
29	e.82	e2.4	e1.1	e4.0	---	e.52	e500	e6.0	700	1.5	.21	e2.0
30	e.78	e2.2	e1.0	e3.0	---	e.50	e70	e5.0	e130	.85	.19	e60
31	e15	---	e12	e2.7	---	e4.5	---	e90	---	1.0	.22	---
TOTAL	802.09	2047.2	218.0	109.1	402.3	249.18	2227.17	1972.8	2917.35	829.89	55.82	499.64
MEAN	25.9	68.2	7.03	3.52	14.4	8.04	74.2	63.6	97.2	26.8	1.80	16.7
MAX	220	654	92	12	200	77	1120	550	885	245	22	120
MIN	.38	2.2	1.0	1.2	1.1	.50	.58	1.7	.35	.30	.18	.13
AC-FT	1590	4060	432	216	798	494	4420	3910	5790	1650	111	991
CFSM	1.45	3.83	.40	.20	.81	.45	4.17	3.58	5.46	1.50	.10	.94
IN.	1.68	4.28	.46	.23	.84	.52	4.65	4.12	6.10	1.73	.12	1.04

e Estimated

ARKANSAS RIVER BASIN

93

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

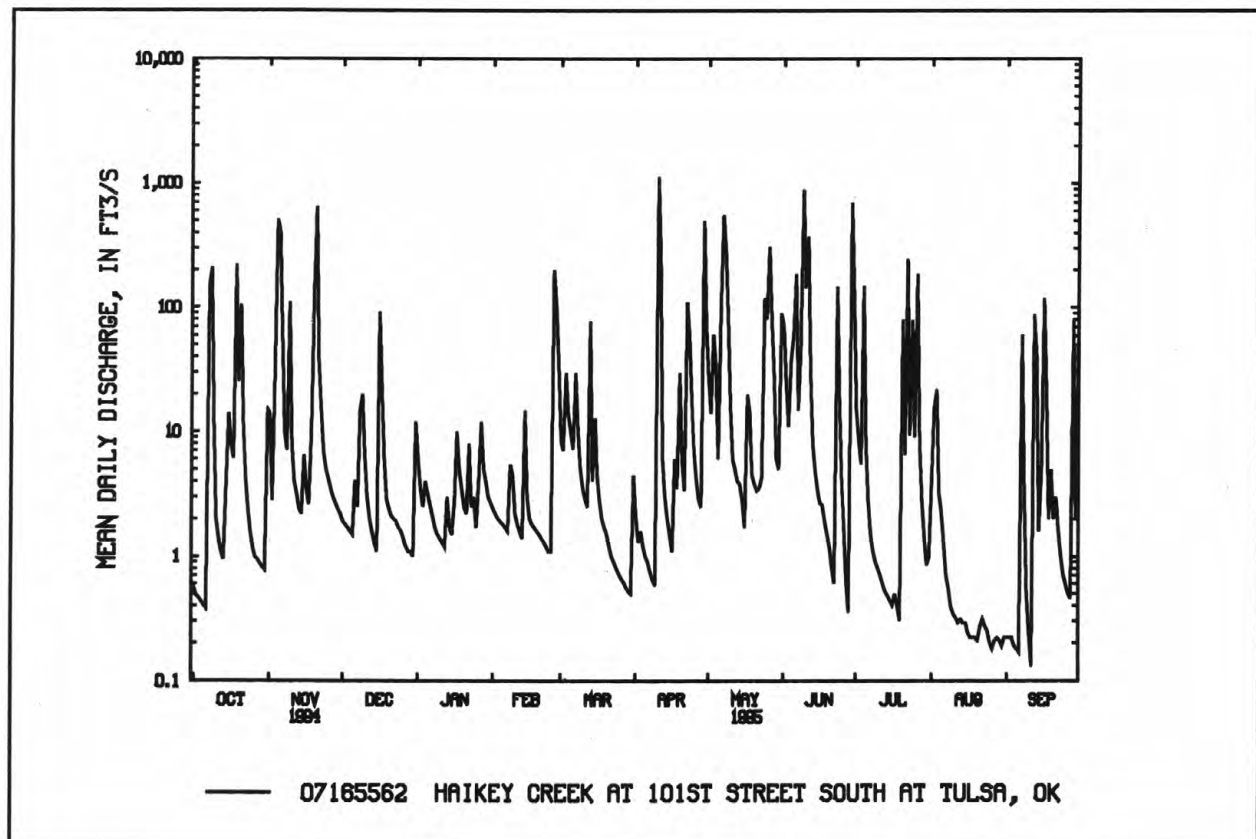
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.1	26.1	23.1	13.0	19.5	36.3	43.7	39.7	35.9	19.1	13.9	23.3
MAX	47.0	68.2	62.3	28.3	38.7	120	82.3	67.3	97.2	72.3	49.6	54.3
(WY)	1992	1995	1993	1993	1993	1990	1990	1993	1995	1994	1989	1993
MIN	.74	.76	1.67	3.52	1.67	6.22	5.07	14.0	3.63	.47	.36	10.7
(WY)	1989	1990	1990	1995	1991	1991	1989	1989	1990	1990	1991	1992

SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1989 - 95

ANNUAL TOTAL	11839.03	12330.54	
ANNUAL MEAN	32.4	33.8	25.6
HIGHEST ANNUAL MEAN			33.8 1995
LOWEST ANNUAL MEAN			11.0 1991
HIGHEST DAILY MEAN	761	May 29 1120	Apr 10 1620 Mar 14 1990
LOWEST DAILY MEAN	.00	May 18 .13	Sep 11 .00 at times
ANNUAL SEVEN-DAY MINIMUM	.00	May 18 .20	Aug 31 .00 Oct 12 1988
INSTANTANEOUS PEAK FLOW		6470	Apr 10 6470 Apr 10 1995
INSTANTANEOUS PEAK STAGE		17.42	Apr 10 ^a 17.42 Apr 10 1995
ANNUAL RUNOFF (AC-FT)	23480	24460	18560
ANNUAL RUNOFF (CFSM)	1.82	1.90	1.44
ANNUAL RUNOFF (INCHES)	24.74	25.77	19.56
10 PERCENT EXCEEDS	81	80	46
50 PERCENT EXCEEDS	2.7	2.8	2.8
90 PERCENT EXCEEDS	.42	.40	.00

^aFrom high water mark.



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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	e2.0	e1.3	3.8	2.0	6.0	.00	23	58	12	7.0	.37
2	.52	e1.2	e1.2	1.3	e1.8	3.9	.00	11	18	6.9	4.9	.43
3	.46	e21	e.90	2.0	e1.6	9.9	.24	30	22	5.9	.83	.37
4	.29	e260	e.80	2.5	e1.5	12	.20	17	42	19	.40	.38
5	.27	e180	e.74	2.3	e1.4	15	.00	8.8	132	11	.33	.26
6	.27	e50	e6.0	3.2	e1.2	11	.00	94	112	5.0	.62	.23
7	65	e10	e5.5	2.3	e2.1	53	.00	193	32	4.1	1.0	24
8	90	e5.0	e12	1.8	3.3	9.8	.23	258	56	3.6	.27	1.4
9	e2.1	e40	e18	1.8	e2.5	4.3	.00	22	258	3.1	.00	.76
10	e1.2	e7.0	e4.0	2.2	e1.4	2.3	34	12	47	3.0	.00	.49
11	e1.0	e5.0	e1.7	e2.4	e1.1	1.5	11	7.9	106	2.9	.02	.17
12	e.80	e2.0	e.55	e3.3	4.9	1.6	.77	6.6	11	2.7	.00	21
13	e.85	e3.0	e.61	e4.1	4.6	62	.16	7.1	6.5	2.7	.00	.96
14	e.77	e2.5	e.70	e3.3	e2.1	31	.17	6.8	3.4	2.7	.00	.04
15	e9.7	e1.7	6.0	e2.2	e1.9	10	1.8	7.1	2.8	2.7	.29	12
16	e4.3	e1.6	31	e2.1	e1.7	4.5	4.1	9.1	2.6	2.5	.43	36
17	e2.1	e3.0	3.4	e7.0	e1.5	3.9	9.6	28	2.6	2.1	.00	2.8
18	84	e7.0	.81	e5.2	e1.2	2.3	14	14	1.8	2.3	.00	.06
19	20	e80	e1.3	e9.0	e1.2	1.8	21	14	1.5	2.3	.00	2.1
20	e40	e248	e1.5	6.2	e.91	.68	39	15	1.1	28	.00	.20
21	e8.0	e28	e1.4	2.7	e2.0	.60	14	16	.73	7.6	.00	.16
22	e6.0	e10	e1.4	6.8	e2.9	1.1	54	18	.50	39	.00	.64
23	e2.0	e6.0	e1.3	4.8	e1.4	.24	86	23	40	4.6	.00	.00
24	e1.2	e3.0	e1.3	3.0	e1.0	.10	17	89	13	26	.06	.00
25	e.75	e2.5	e1.2	2.3	5.5	.26	19	21	2.7	5.3	.11	.01
26	e.80	e2.0	e1.3	8.2	30	.29	6.0	225	1.3	41	.14	.11
27	e.83	e1.7	e1.2	11	145	.14	4.5	94	.83	3.3	.20	.00
28	e.71	e1.6	e1.0	3.8	15	.00	4.6	26	.58	2.1	.21	22
29	e1.6	e1.5	e1.0	3.1	---	.00	201	16	264	1.3	.28	.03
30	e1.4	e1.4	e.93	2.8	---	.00	34	15	22	.57	.30	27
31	e7.0	---	11	1.9	---	.00	---	74	---	.49	.38	---
TOTAL	355.12	987.7	121.04	118.4	242.71	249.21	576.37	1401.4	1261.94	255.76	17.77	153.97
MEAN	11.5	32.9	3.90	3.82	8.67	8.04	19.2	45.2	42.1	8.25	.57	5.13
MAX	90	260	31	11	145	62	201	258	264	41	7.0	36
MIN	.27	1.2	.55	1.3	.91	.00	.00	6.6	.50	.49	.00	.00
AC-FT	704	1960	240	235	481	494	1140	2780	2500	507	35	305
CFSM	2.10	6.04	.72	.70	1.59	1.48	3.53	8.29	7.72	1.51	.11	.94
IN.	2.42	6.74	.83	.81	1.66	1.70	3.93	9.57	8.61	1.75	.12	1.05

c Estimated

ARKANSAS RIVER BASIN

95

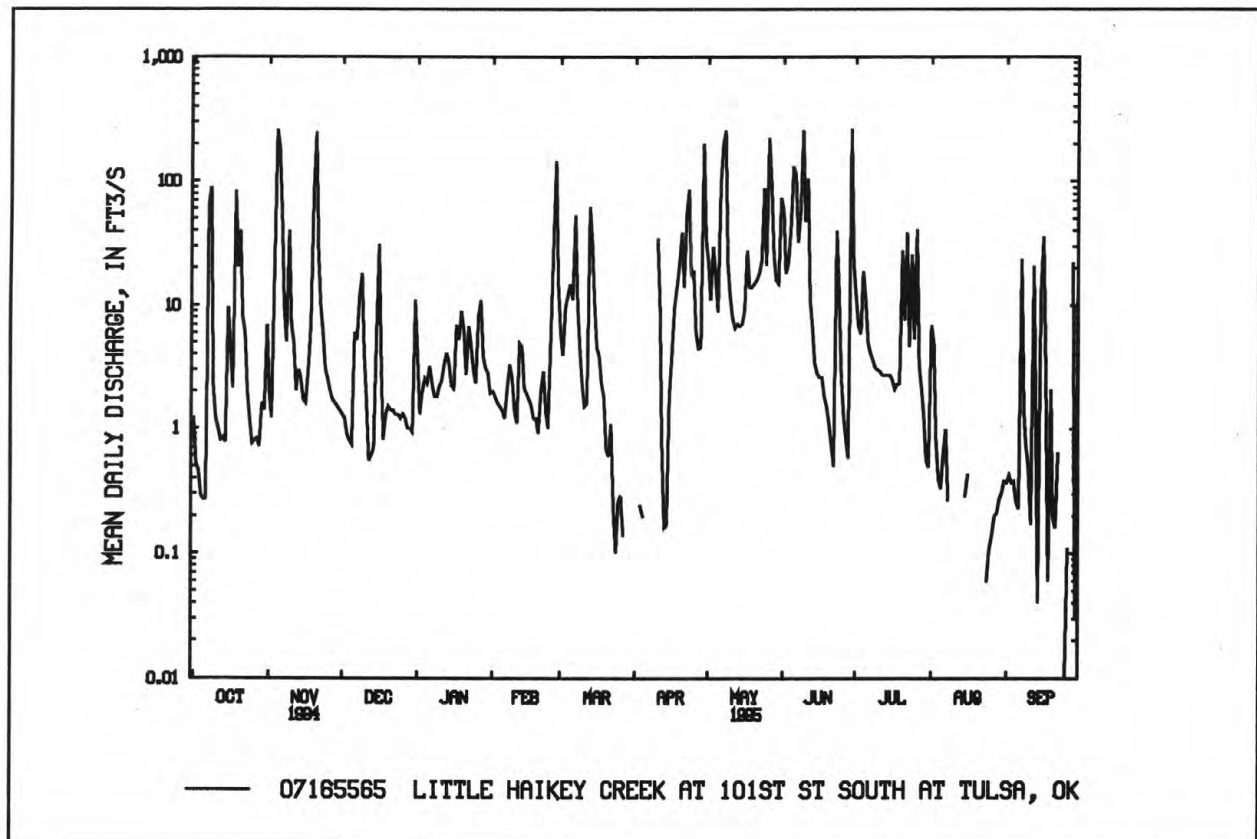
07165565 LITTLE HAIKEY CREEK AT 101ST STREET SOUTH AT TULSA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.90	9.17	8.26	3.23	5.00	11.4	10.4	14.2	9.83	4.84	3.34	6.64
MAX	11.8	32.9	19.9	6.77	10.1	28.3	19.2	45.2	42.1	17.4	9.62	15.2
(WY)	1992	1995	1993	1993	1993	1990	1995	1995	1995	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 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1988 - 95

ANNUAL TOTAL	3618.44	5741.39	
ANNUAL MEAN	9.91	15.7	7.52
HIGHEST ANNUAL MEAN			15.7 1995
LOWEST ANNUAL MEAN			2.73 1991
HIGHEST DAILY MEAN	260 Nov 4	264 Jun 29	374 Mar 14 1990
LOWEST DAILY MEAN	.00 Jan 1	.00 at times	.00 at times
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 9	.00 Aug 17	.00 Sep 5 1988
INSTANTANEOUS PEAK FLOW		1930 Jun 29	1930 Jun 29 1995
INSTANTANEOUS PEAK STAGE		16.82 Jun 29	16.82 Jun 29 1995
ANNUAL RUNOFF (AC-FT)	7180	11390	5450
ANNUAL RUNOFF (CFSM)	1.82	2.89	1.38
ANNUAL RUNOFF (INCHES)	24.70	39.19	18.75
10 PERCENT EXCEEDS	25	37	15
50 PERCENT EXCEEDS	.50	2.5	.85
90 PERCENT EXCEEDS	.00	.15	.00



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. No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1900	527	15200	4190	3840	6570	12000	17100	63600	50200	11800	15300
2	1540	1970	14000	4910	3850	5550	6530	24800	62400	49300	14600	13100
3	793	1320	14200	5340	3060	6140	5970	31600	70800	49400	18200	13000
4	667	1860	14300	7360	2230	5920	5410	32700	62300	50000	23400	11200
5	1660	9570	14400	7590	2350	3620	5410	30600	78400	50000	31500	11300
6	1670	11600	13200	5140	1280	2560	5680	23500	65400	48900	33800	8060
7	1940	5190	9500	3720	2150	4730	5320	27600	86100	48800	35300	5670
8	3770	2670	9450	3200	4730	7950	5330	55800	90400	46100	31900	6290
9	1940	3080	9260	2930	4250	7830	2270	40200	100000	44800	31700	6460
10	1160	2250	9180	2720	4210	5690	1800	25800	123000	44400	32000	4580
11	742	2500	7360	3790	4890	3630	7190	20400	138000	44500	31800	3550
12	578	2540	7010	4000	3050	2340	6960	23600	136000	43900	31600	5060
13	1780	2450	8380	4910	1170	1470	5730	25300	130000	43200	31500	9400
14	1090	2590	8370	4680	2270	15600	7150	24300	132000	42500	31300	9540
15	827	2360	6510	3270	5070	24600	6900	23600	122000	28500	32200	9250
16	1380	2470	8460	3370	4520	30900	4320	23500	104000	22800	32200	7700
17	742	2450	9290	3160	3350	31100	3990	23000	86300	22200	32300	4990
18	646	2430	6390	3670	2480	30400	5280	28200	77900	21900	32100	3290
19	1990	2470	4940	4510	1970	30300	6720	28300	75600	21600	39100	4310
20	1940	9230	3020	4740	1100	30000	9880	28200	61600	22400	42700	8260
21	1590	13000	2610	4970	969	29200	9300	27700	48900	18600	42500	8210
22	770	8860	2660	3040	1880	29800	7890	27400	46300	15900	42100	10100
23	637	23000	2470	1520	1960	29500	13100	24000	46100	13600	41800	11800
24	912	20200	2450	2280	3050	29300	13800	23800	49000	13200	41200	11800
25	567	17800	2390	3960	3300	23300	12100	23700	47100	14700	40200	11800
26	498	18000	1000	2380	2710	19100	14000	32700	46600	17000	38900	9320
27	1950	18000	2050	1380	3260	18200	13000	43100	46600	16500	37500	4710
28	1840	17500	4820	3370	11000	15300	12700	38600	50400	15700	36500	6640
29	754	17500	2660	3560	---	13400	19300	47600	55300	15500	32300	7050
30	900	18300	3950	3200	---	12200	24700	48600	52300	15800	30600	6410
31	812	---	3420	4080	---	12200	---	57700	---	13200	24100	---
TOTAL	39985	243687	222900	120940	89949	488400	259730	953000	2354400	965100	1008700	248150
MEAN	1290	8123	7190	3901	3212	15750	8658	30740	78480	31130	32540	8272
MAX	3770	23000	15200	7590	11000	31100	24700	57700	138000	50200	42700	15300
MIN	498	527	1000	1380	969	1470	1800	17100	46100	13200	11800	3290
AC-FT	79310	483400	442100	239900	178400	968700	515200	1890000	4670000	1914000	2001000	492200

ARKANSAS RIVER BASIN

97

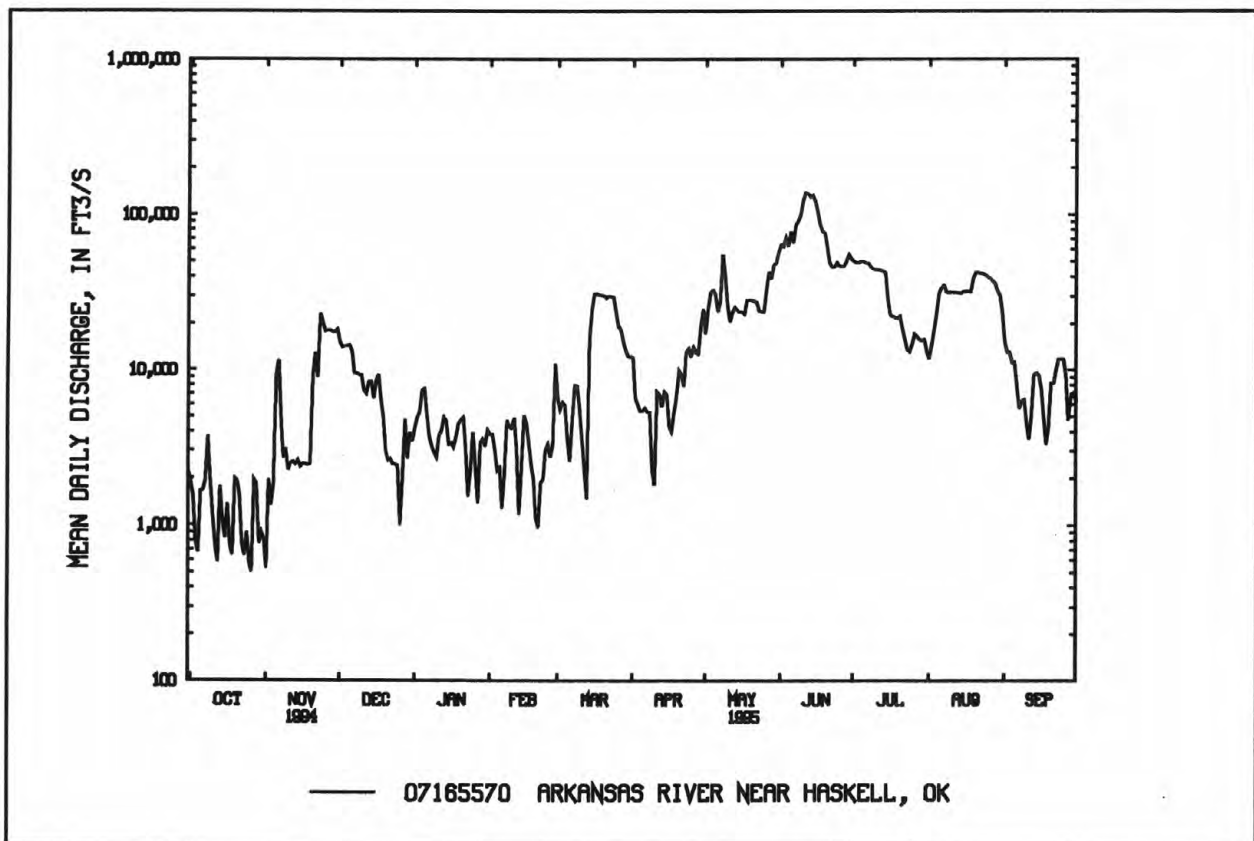
07165570 ARKANSAS RIVER NEAR HASKELL, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9131	7869	5787	6251	7258	13990	14790	18240	18720	9913	6399	5689
MAX	75500	42220	19930	21540	25540	50990	46910	85550	78480	31130	32540	23690
(WY)	1987	1975	1993	1993	1993	1987	1973	1993	1995	1995	1995	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 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1973 - 95

ANNUAL TOTAL	2560007	6994941	
ANNUAL MEAN	7014	19160	10340
HIGHEST ANNUAL MEAN			25440 1987
LOWEST ANNUAL MEAN			2097 1981
HIGHEST DAILY MEAN	64200	May 4 138000	Jun 11 243000 Oct 5 1986
LOWEST DAILY MEAN	498	Oct 26 498	Oct 26 87 Sep 13 1988
ANNUAL SEVEN-DAY MINIMUM	988	Oct 20 988	Oct 20 369 Feb 25 1977
INSTANTANEOUS PEAK FLOW		142000	Jun 11 259000 Oct 5 1986
INSTANTANEOUS PEAK STAGE		18.49	Jun 11 22.82 Oct 5 1986
ANNUAL RUNOFF (AC-FT)	5078000	13870000	7494000
10 PERCENT EXCEEDS	17300	47300	25900
50 PERCENT EXCEEDS	3830	9320	5440
90 PERCENT EXCEEDS	1160	1870	800



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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	1080	3960	352	805	217	1040	8810	14100	15800	900	114
2	34	757	3840	344	832	220	765	4650	15100	12200	3270	110
3	32	402	2010	295	729	221	651	5510	13000	15400	9910	115
4	31	1300	892	252	664	292	592	8870	13400	13200	14700	120
5	26	6520	520	231	734	311	404	9290	20200	12400	11900	118
6	24	8510	379	223	912	289	662	13800	25200	12100	7050	116
7	27	1680	359	221	914	247	636	16200	22600	11800	8140	130
8	116	746	471	217	900	204	394	28400	16200	11600	7180	152
9	92	1020	737	214	824	183	256	28200	30700	11400	5680	125
10	62	1310	853	214	638	212	240	19100	43600	11100	5300	94
11	60	717	759	243	496	439	410	4340	46200	10900	4300	80
12	49	450	735	376	442	461	517	2700	44000	10000	1860	78
13	40	340	833	396	435	495	594	3300	39800	9200	796	91
14	35	306	888	396	372	1090	1080	3870	e18300	8990	609	98
15	32	319	867	379	201	6860	1120	3580	e13300	8860	510	98
16	30	316	884	364	161	3850	869	4730	e12200	8720	471	89
17	38	274	966	365	155	6760	1040	7810	e13400	8590	406	79
18	39	231	983	365	152	10200	4480	24300	14600	7890	471	89
19	37	1130	895	361	149	10800	1690	19300	14800	5650	1160	92
20	35	23600	816	361	143	10700	1620	14300	14200	4910	1480	78
21	338	28200	659	379	131	10500	1930	10700	13400	5810	1380	77
22	199	19200	476	726	120	9880	2740	11400	12400	7230	1460	70
23	151	5850	447	737	112	7560	5120	13400	12000	7730	1170	56
24	102	3520	402	648	108	5230	3880	12300	11700	7440	832	50
25	78	3950	384	594	101	3730	3390	12400	11700	5880	416	49
26	56	4390	349	566	150	2030	2610	13000	12800	4760	249	48
27	46	4290	290	583	206	771	3050	20700	12300	3450	185	47
28	38	4320	305	614	219	523	2730	18500	11800	1690	157	47
29	34	4940	481	648	---	539	9040	14500	14900	897	145	42
30	32	4210	482	687	---	1220	5820	11400	17000	568	130	39
31	35	---	470	758	---	1490	---	11300	---	414	123	---
TOTAL	1987	133878	27392	13109	11805	97524	59370	380660	574900	256579	92340	2591
MEAN	64.1	4463	884	423	422	3146	1979	12280	19160	8277	2979	86.4
MAX	338	28200	3960	758	914	10800	9040	28400	46200	15800	14700	152
MIN	24	231	290	214	101	183	240	2700	11700	414	123	39
AC-FT	3940	265500	54330	26000	23420	193400	117800	755000	1140000	508900	183200	5140

e Estimated

ARKANSAS RIVER BASIN

99

07171000 VERDIGRIS RIVER NEAR LENAPAH, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2356	2959	2016	1741	2215	4345	4245	4420	5274	2381	947	1169
MAX	27970	15440	11000	7998	8983	17130	16300	12540	19160	13920	5364	5614
(WY)	1987	1975	1993	1973	1985	1973	1988	1994	1995	1976	1985	1989
MIN	15.5	20.0	29.2	17.6	20.0	19.7	30.2	366	84.3	17.9	16.1	9.99
(WY)	1981	1981	1967	1981	1981	1981	1981	1992	1972	1980	1983	1980

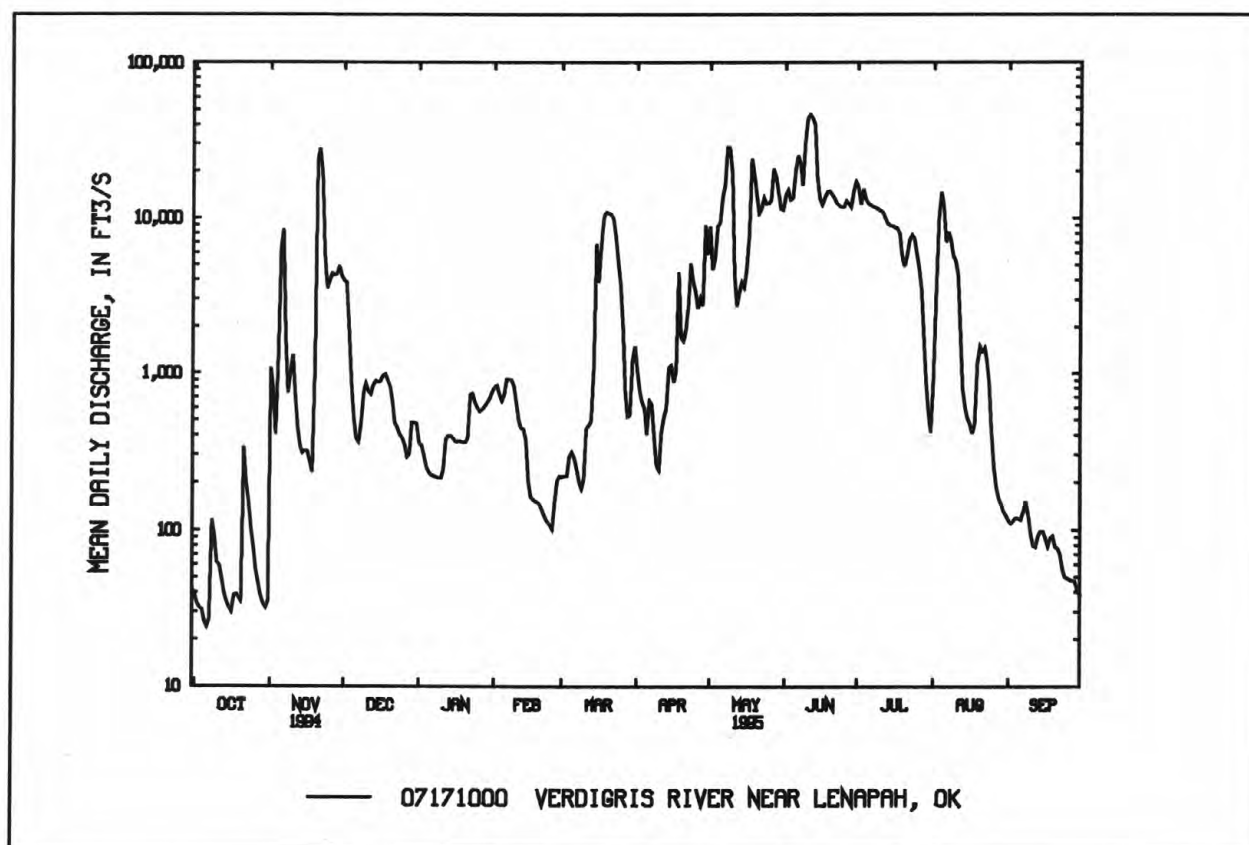
SUMMARY STATISTICS	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1967 - 95
ANNUAL TOTAL	1107579	1652135	
ANNUAL MEAN	3034	4526	^a 2837
HIGHEST ANNUAL MEAN			5906
LOWEST ANNUAL MEAN			329
HIGHEST DAILY MEAN	50500	Apr 12	46200 Jun 11
LOWEST DAILY MEAN	24	Oct 6	24 Oct 6
ANNUAL SEVEN-DAY MINIMUM	30	Oct 1	30 Oct 1
INSTANTANEOUS PEAK FLOW		46600	Jun 11
INSTANTANEOUS PEAK STAGE		35.57	Jun 11
ANNUAL RUNOFF (AC-FT)	2197000	3277000	2056000
10 PERCENT EXCEEDS	10600	13400	8830
50 PERCENT EXCEEDS	429	759	660
90 PERCENT EXCEEDS	41	78	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, Topcka, and Santa Fe railroad bridge, 1.0 mi upstream from confluence with Coon Creek, 2.7 mi downstream from confluence with Butler Creek, 5.0 mi upstream from confluence with Sand Creek, and at mile 68.7.

DRAINAGE AREA.--1,392 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 1994 TO SEPTEMBER 1995

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	56	4560	81	162	174	145	1760	4310	5760	6400	48
2	33	41	3800	80	162	245	134	2830	3980	6140	6270	47
3	22	37	943	81	162	243	135	3740	6670	10700	6190	47
4	26	195	436	310	144	243	415	4160	2480	10500	6090	51
5	27	e750	399	368	122	247	391	3910	1160	3550	3370	47
6	27	e640	110	190	121	248	191	4610	5340	3080	2740	47
7	53	e175	50	111	121	121	148	1880	1670	4970	2680	56
8	50	e85	131	110	94	51	114	8040	1200	6380	2650	48
9	33	190	177	110	72	199	99	974	9430	7020	2770	48
10	30	80	390	110	70	261	127	623	e10300	7100	2320	47
11	30	49	425	106	60	252	142	1890	4920	7130	1290	48
12	30	38	423	103	34	249	283	2320	634	7160	348	57
13	30	37	321	103	31	725	352	2470	532	7080	209	57
14	34	43	198	103	30	1300	454	2470	503	6760	205	52
15	28	43	204	103	31	845	236	2450	664	6610	205	50
16	32	40	235	103	30	3850	216	2430	2800	6500	205	103
17	34	38	237	110	31	5000	492	2590	5040	6420	185	98
18	34	41	237	111	134	5180	792	2830	5430	6300	127	95
19	35	162	237	325	176	5110	287	3140	5510	6370	78	103
20	33	3190	333	374	179	5020	972	4820	5970	6390	53	75
21	154	824	357	189	179	4930	1330	4800	5990	6290	49	47
22	76	1420	357	138	177	5180	1170	4570	6290	6200	47	35
23	32	4030	271	138	177	5060	1930	4390	6570	6130	42	30
24	24	4590	179	138	178	3370	1400	3170	5690	6060	48	30
25	25	4770	170	113	93	496	1150	3100	5610	6230	47	36
26	27	4700	167	118	38	59	1160	5040	5170	6340	43	36
27	27	4610	166	144	107	42	1160	5820	5850	6280	45	32
28	27	4510	98	92	56	563	1130	4160	6240	6260	36	30
29	27	4390	46	40	---	660	2740	3920	7390	6500	37	30
30	27	4660	55	36	---	372	1120	3790	4370	6490	44	30
31	66	---	78	97	---	194	---	4130	---	6360	50	---
TOTAL	1169	44434	15790	4335	2971	50489	20415	106827	137713	201060	44873	1560
MEAN	37.7	1481	509	140	106	1629	680	3446	4590	6486	1448	52.0
MAX	154	4770	4560	374	179	5180	2740	8040	10300	10700	6400	103
MIN	22	37	46	36	30	42	99	623	503	3080	36	30
AC-FT	2320	88130	31320	8600	5890	100100	40490	211900	273200	398800	89010	3090

e Estimated

ARKANSAS RIVER BASIN

101

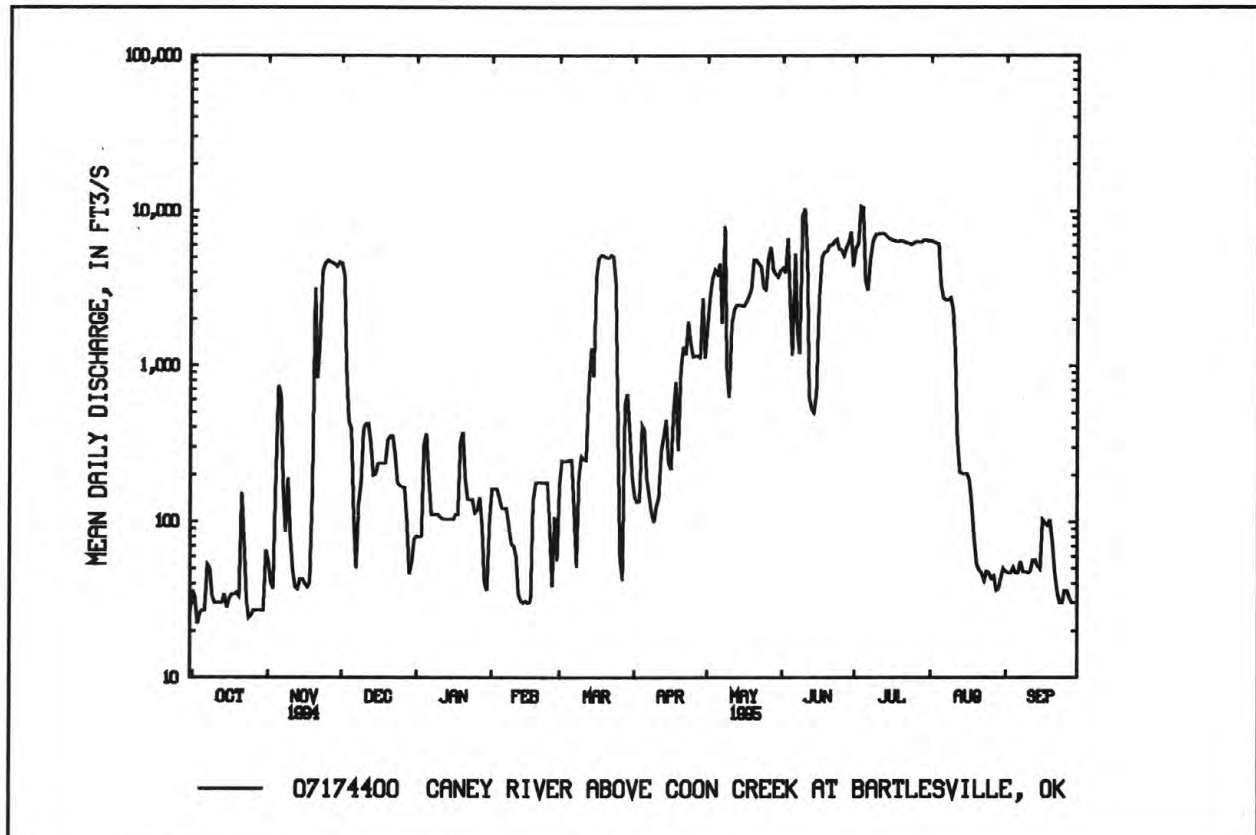
07174400 CANEY RIVER ABOVE COON CREEK AT BARTLESVILLE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1815	1113	996	952	751	1687	1824	2207	2504	1395	282	474
MAX	14800	3096	2663	4075	2721	4606	5185	5054	4590	6486	1448	2635
(WY)	1987	1987	1987	1993	1987	1990	1988	1993	1995	1995	1995	1989
MIN	13.2	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	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1986 - 95
ANNUAL TOTAL	347155	631636	
ANNUAL MEAN	951	1731	1336
HIGHEST ANNUAL MEAN			2888
LOWEST ANNUAL MEAN			204
HIGHEST DAILY MEAN	9000	Apr 11	64900
LOWEST DAILY MEAN	13	Sep 15	6.6
ANNUAL SEVEN-DAY MINIMUM	14	Sep 10	6.7
INSTANTANEOUS PEAK FLOW		12600	Jul 3
INSTANTANEOUS PEAK STAGE		^a 15.93	Jun 10
ANNUAL RUNOFF (AC-FT)	688600	1253000	968100
10 PERCENT EXCEEDS	4440	6130	4290
50 PERCENT EXCEEDS	107	216	212
90 PERCENT EXCEEDS	24	35	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.--Records fair. Flow regulated since February 1950 by Hulah Lake (station 07172500), and since April 1983 by Copan Lake (station 07174300). U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	160	4610	185	219	e95	316	8850	7760	7720	7320	44
2	26	155	4380	200	295	e200	272	6510	7500	7010	8600	44
3	24	165	3110	193	292	e330	254	5150	7920	9480	8760	44
4	25	992	861	203	282	e340	275	6540	10800	13900	7840	41
5	22	3620	577	481	240	e345	545	5380	12100	22500	6860	41
6	22	3900	491	501	207	e345	446	5430	12500	13400	4230	42
7	27	1000	257	299	202	e345	297	9520	14100	8840	3310	79
8	214	509	306	222	196	e215	259	18400	9850	7330	3140	341
9	200	3040	627	217	165	e125	217	21700	14300	7380	3130	281
10	86	2020	540	216	138	e220	508	9000	28800	7680	3130	107
11	58	777	685	224	132	442	1450	4070	33300	7770	2430	72
12	49	481	663	238	120	460	759	3790	21100	7800	1360	66
13	46	392	612	238	96	720	632	3760	8210	7820	451	64
14	54	345	465	230	88	6200	554	3720	3340	7700	285	60
15	55	346	353	226	96	3990	579	3600	1920	7410	258	54
16	56	322	410	218	103	2350	657	3520	2140	7230	244	611
17	67	287	497	219	107	4330	1980	3630	4550	7140	238	617
18	82	247	494	236	107	5110	9180	7410	6140	7060	214	332
19	76	771	463	259	205	5130	5710	5970	6500	6960	150	226
20	207	8110	441	516	263	5030	3300	5000	6590	7000	102	185
21	680	10700	532	508	264	4910	2740	5750	6840	7010	70	139
22	2390	6870	529	296	261	4930	2590	5610	6900	6940	64	102
23	513	3910	505	241	256	5080	e5660	5380	7080	6870	62	86
24	263	4940	386	234	247	4730	5970	5370	7830	6810	57	69
25	179	4960	303	234	238	2610	2910	5190	7660	6760	57	66
26	141	4810	290	202	155	484	1960	5380	7430	6880	51	69
27	121	4740	290	226	197	231	1740	9320	6820	6970	48	74
28	105	4630	284	258	e165	252	1580	10100	6830	6910	47	68
29	92	4520	205	208	---	810	5780	8080	7440	6870	45	61
30	85	4490	150	146	---	786	10300	5770	8740	7030	43	61
31	96	---	147	140	---	448	---	6170	---	7050	42	---
TOTAL	6083	82209	24463	8014	5336	61593	69420	213070	292990	255230	62638	4146
MEAN	196	2740	789	259	191	1987	2314	6873	9766	8233	2021	138
MAX	2390	10700	4610	516	295	6200	10300	21700	33300	22500	8760	617
MIN	22	155	147	140	88	95	217	3520	1920	6760	42	41
AC-FT	12070	163100	48520	15900	10580	122200	137700	422600	581100	506200	124200	8220

e Estimated

ARKANSAS RIVER BASIN

103

07175500 CANEY RIVER NEAR RAMONA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1995, BY WATER YEAR (WY)

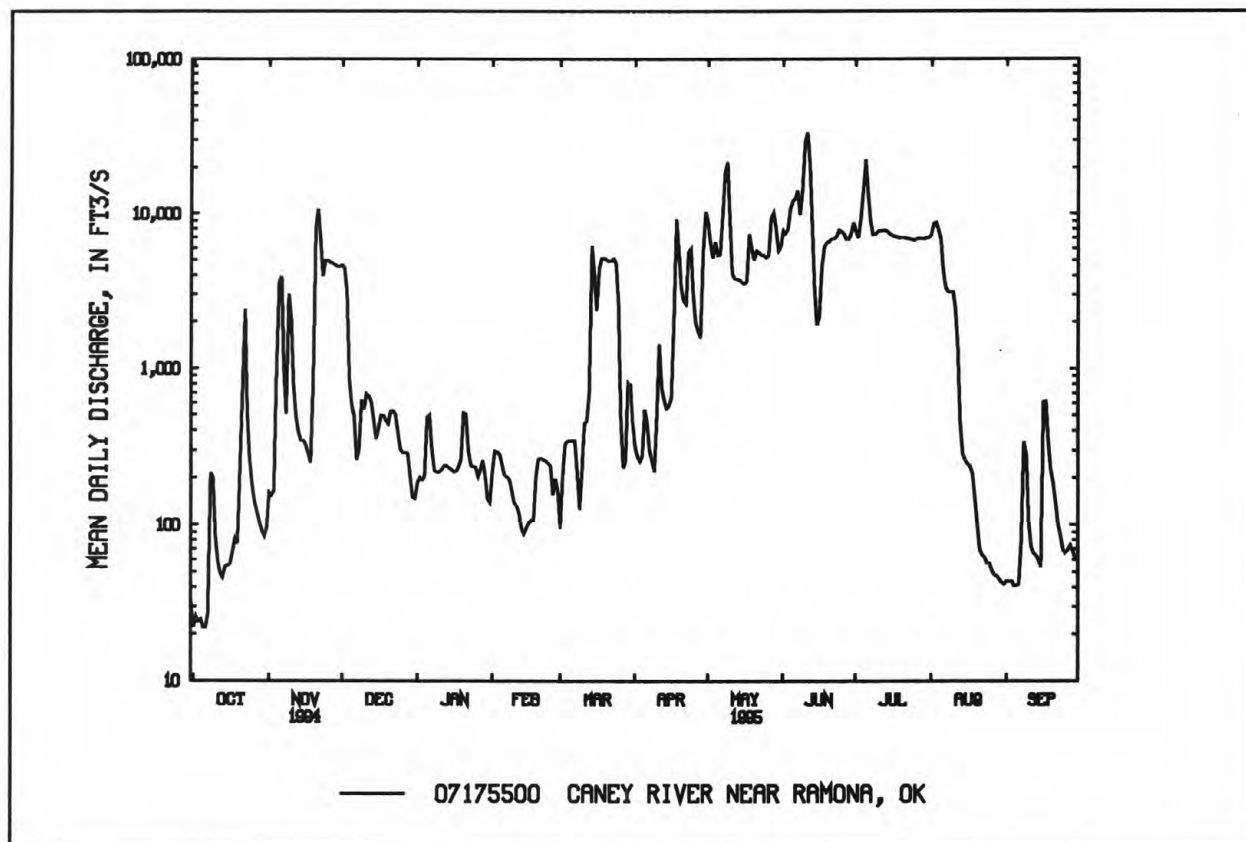
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2193	1524	1458	1185	1274	2978	3166	3198	3333	1602	365	701
MAX	19540	4390	3596	5204	4208	7228	6989	8547	9766	8233	2021	3178
(WY)	1987	1987	1993	1993	1987	1990	1988	1993	1995	1995	1995	1989
MIN	35.4	98.2	76.1	134	81.0	71.9	452	222	70.1	30.2	34.9	48.7
(WY)	1993	1991	1991	1984	1991	1991	1992	1992	1988	1984	1984	1984

SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1984 - 95

ANNUAL TOTAL	553494	1085192	
ANNUAL MEAN	1516	2973	^a 1917
HIGHEST ANNUAL MEAN			3887 1987
LOWEST ANNUAL MEAN			370 1991
HIGHEST DAILY MEAN	24400	Apr 12 33300	Jun 11 71700 Oct 5 1986
LOWEST DAILY MEAN	22	Oct 1 22	Oct 1 ^b 13 Sep 16 1984
ANNUAL SEVEN-DAY MINIMUM	24	Oct 1 24	Oct 1 16 Jul 31 1984
INSTANTANEOUS PEAK FLOW		35800	Jun 11 85600 Oct 5 1986
INSTANTANEOUS PEAK STAGE		28.86	Jun 11 31.16 Oct 5 1986
ANNUAL RUNOFF (AC-FT)	1098000	2152000	1388000
10 PERCENT EXCEEDS	5750	7760	5690
50 PERCENT EXCEEDS	281	497	431
90 PERCENT EXCEEDS	59	67	44

^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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	128	11200	390	1110	971	2210	22000	24600	29000	11500	146
2	92	169	11200	436	1190	506	2060	20400	23000	27500	12000	151
3	88	214	10600	411	1290	544	1330	17200	20300	31600	13200	156
4	86	7220	8220	363	1280	566	354	18700	22700	28500	15300	155
5	83	10700	6940	418	1250	643	415	17000	20000	28500	10900	150
6	82	8940	7730	818	1200	669	603	13100	15500	35900	10300	206
7	106	4180	8690	688	1160	1160	472	12600	15300	40300	12200	352
8	505	6370	8560	542	1140	1490	336	25500	14800	37000	11800	300
9	677	7090	8530	434	868	1740	328	19000	19900	32700	11700	514
10	416	6580	6820	408	372	1630	388	20800	21500	32000	11700	399
11	235	4030	6670	409	322	1650	2930	21800	20000	31000	11400	241
12	166	3280	6190	415	312	1570	2310	14700	23900	27700	10500	208
13	129	3020	3740	428	310	1570	2700	14400	26200	27600	9560	193
14	106	4160	3630	416	289	4520	2130	14300	22800	25800	8980	184
15	99	5560	3530	408	288	7670	1550	15200	19600	19700	8860	183
16	98	4030	3890	406	287	3440	1530	18800	30000	19200	8810	227
17	98	2290	3880	402	297	4690	6470	18900	33400	19100	8760	1180
18	243	2230	3720	406	e300	6150	11900	21500	34600	19000	7820	667
19	434	2670	3640	444	e300	6500	11800	29300	34900	18800	6680	459
20	663	10500	3560	652	e395	6460	7290	31000	34400	18800	6570	343
21	895	12800	3520	1080	459	8370	4740	30900	32100	18100	6490	287
22	3180	13600	3540	977	465	10900	3820	30700	27500	14600	6050	234
23	1780	9080	2630	760	459	11000	9340	30100	27300	14400	3360	183
24	619	11500	1430	749	434	11800	10200	27900	27900	14300	251	162
25	356	11900	1320	912	447	14800	6250	23200	27800	13000	175	148
26	237	11700	1230	1190	454	12100	5930	20700	26800	11400	161	143
27	e180	11600	1250	1190	401	10800	8420	19000	27900	11400	157	142
28	147	11400	1260	1220	1050	10600	9170	22400	27200	11400	155	154
29	143	11200	1200	1250	---	9970	16500	27600	29700	11300	154	147
30	129	11100	995	1160	---	5180	21400	24800	29500	11400	152	146
31	127	---	389	1120	---	2490	---	24200	---	11500	148	---
TOTAL	12297	209241	149704	20902	18129	162149	154876	667700	761100	692500	225793	8160
MEAN	397	6975	4829	674	647	5231	5163	21540	25370	22340	7284	272
MAX	3180	13600	11200	1250	1290	14800	21400	31000	34900	40300	15300	1180
MIN	82	128	389	363	287	506	328	12600	14800	11300	148	142
AC-FT	24390	415000	296900	41460	35960	321600	307200	1324000	1510000	1374000	447900	16190

e Estimated

07176000 VERDIGRIS RIVER NEAR CLAREMORE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1995, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3417	4511	3710	3428	3261	6615	8059	7173	8034	4497	1341	1453
MAX	47570	23150	16250	15850	11470	23920	25200	23480	25370	22340	7284	7538
(WY)	1987	1975	1993	1993	1975	1985	1988	1973	1995	1995	1995	1989
MIN	24.1	18.0	47.4	37.9	31.3	23.2	107	87.2	84.0	42.5	52.7	57.4
(WY)	1967	1967	1979	1981	1967	1967	1971	1971	1972	1966	1965	1979

SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1965 - 95

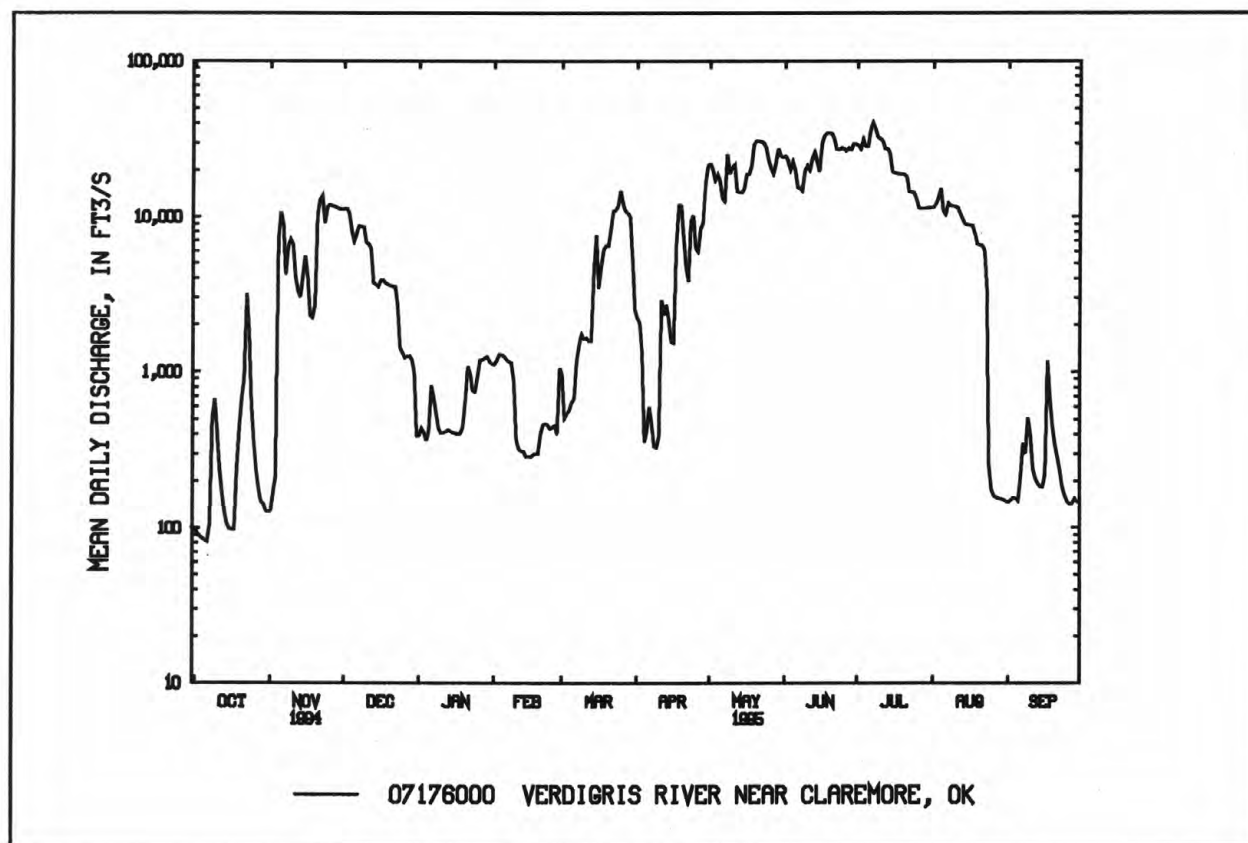
ANNUAL TOTAL	1956975	3082551	
ANNUAL MEAN	5362	8445	^a 4626
HIGHEST ANNUAL MEAN			10870 1987
LOWEST ANNUAL MEAN			365 1981
HIGHEST DAILY MEAN	36200	May 4 40300	Jul 7 77700 Oct 13 1986
LOWEST DAILY MEAN	82	Oct 6 82	^b 6.2 Jul 17 1966
ANNUAL SEVEN-DAY MINIMUM	90	Sep 30 91	Oct 1 8.6 Jul 12 1966
INSTANTANEOUS PEAK FLOW		40800	Jul 7 ^c 78400 Oct 12 1986
INSTANTANEOUS PEAK STAGE		29.76	Jul 7 ^d 44.99 Oct 12 1986
ANNUAL RUNOFF (AC-FT)	3882000	6114000	3351000
10 PERCENT EXCEEDS	20300	26000	13800
50 PERCENT EXCEEDS	1130	3640	1150
90 PERCENT EXCEEDS	152	168	63

^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.--No estimated daily discharges. Records good. Flow slightly regulated since 1958 by Bluestem Lake. Some regulation since March 1977 by Birch Lake (station 07176460), located on Birch Creek, 12.1 mi upstream. Small diversions upstream for municipal water supply for the cities of Pawhuska and Barnsdall. U.S. Army Corps of Engineers satellite telemeter at station.

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 20	1300	14,000	15.82	June 1	0900	6,940	9.49
Mar. 13	1900	9,750	12.05	June 6	1900	20,000	21.10
Apr. 18	0100	9,150	11.50	June 10	0800	19,400	20.51
Apr. 29	1600	11,100	13.22	June 29	1200	8,760	11.51
May 8	0700	17,100	18.51	July 3	1400	27,400	27.44

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	34	114	25	45	363	94	2180	4300	1780	117	42
2	25	48	72	28	42	265	91	1260	1250	1510	1030	40
3	25	50	69	47	37	156	90	1580	4510	19000	1160	39
4	25	104	63	63	32	142	90	1480	5310	4500	431	40
5	25	744	61	40	30	189	83	863	3560	847	245	40
6	25	688	60	34	30	212	82	2200	14700	1170	198	40
7	27	222	62	30	50	433	68	3350	3490	878	176	1280
8	54	126	109	29	49	373	64	11800	1080	581	155	444
9	79	1720	188	29	47	301	64	1420	13000	541	87	125
10	60	414	120	29	47	259	601	742	14000	510	75	64
11	41	178	87	29	47	226	536	736	1720	495	59	48
12	32	106	71	28	45	201	193	633	748	486	57	50
13	30	75	62	29	45	4150	122	586	460	478	54	48
14	28	87	57	34	46	3500	93	549	321	441	53	45
15	25	215	56	35	50	1280	80	518	296	266	50	38
16	28	196	55	31	56	971	720	499	393	261	50	1560
17	32	93	73	31	59	736	2300	973	363	284	48	811
18	33	61	94	32	57	581	3250	1640	338	266	47	194
19	34	502	88	53	56	526	690	724	322	264	48	129
20	124	8960	83	61	53	471	1350	572	315	240	50	87
21	49	1460	76	62	51	181	742	520	308	260	48	61
22	77	484	71	58	50	149	1470	495	311	271	47	55
23	85	598	48	53	47	133	3570	480	719	297	47	51
24	55	536	39	34	47	122	1560	1020	619	271	47	48
25	38	508	37	24	47	109	971	818	453	211	45	45
26	32	487	35	21	45	106	520	1760	381	78	45	45
27	28	473	32	21	969	120	452	3110	332	56	45	45
28	27	449	32	21	628	138	157	1310	366	48	45	54
29	27	432	29	26	---	115	6190	824	3470	19	45	55
30	27	400	18	35	---	101	2050	685	1830	35	45	47
31	29	---	22	42	---	94	---	1690	---	36	42	---
TOTAL	1251	20450	2083	1114	2807	16703	28343	47017	79265	36380	4691	5670
MEAN	40.4	682	67.2	35.9	100	539	945	1517	2642	1174	151	189
MAX	124	8960	188	63	969	4150	6190	11800	14700	19000	1160	1560
MIN	25	34	18	21	30	94	64	480	296	19	42	38
AC-FT	2480	40560	4130	2210	5570	33130	56220	93260	157200	72160	9300	11250

ARKANSAS RIVER BASIN

107

07176500 BIRD CREEK AT AVANT, OK--Continued

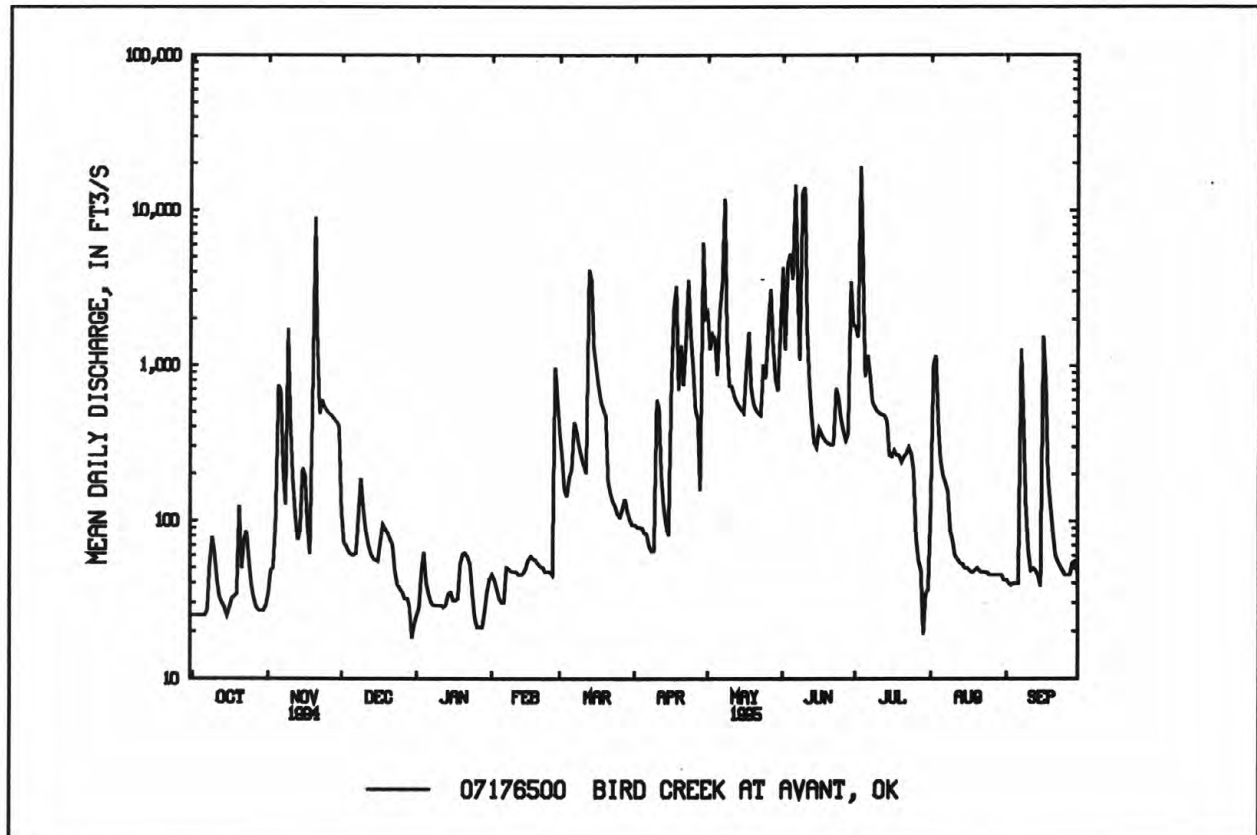
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	176	207	136	113	182	372	366	519	425	171	80.5	168
MAX	1940	1677	863	827	1376	2264	1235	2266	2648	1174	980	1585
(WY)	1987	1975	1972	1973	1985	1990	1973	1957	1957	1995	1950	1961
MIN	.000	.000	.000	.000	.000	.000	.000	.000	1.07	.000	.000	.000
(WY)	1949	1953	1953	1953	1957	1956	1956	1956	1963	1954	1952	1952

SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1946 - 95

ANNUAL TOTAL	115613	245774	
ANNUAL MEAN	317	673	243
HIGHEST ANNUAL MEAN			673 1995
LOWEST ANNUAL MEAN			5.50 1956
HIGHEST DAILY MEAN	17100	Apr 11 19000	Jul 3 28500 Mar 11 1974
LOWEST DAILY MEAN	15	Jul 6 18	Dec 30 .00 Jul 19 1946
ANNUAL SEVEN-DAY MINIMUM	23	Jul 1 25	Oct 1 .00 Jul 19 1946
INSTANTANEOUS PEAK FLOW		27400	Jul 3 ^a 32400 Oct 2 1959
INSTANTANEOUS PEAK STAGE		27.44	Jul 3 32.03 Mar 11 1974
ANNUAL RUNOFF (AC-FT)	229300	487500	175900
10 PERCENT EXCEEDS	558	1470	444
50 PERCENT EXCEEDS	66	94	21
90 PERCENT EXCEEDS	29	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.--Records fair. 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)
Nov. 21	0400	10,300	22.47	June 7	1800	13,200	25.63
Apr. 18	1400	11,500	23.97	June 11	0330	17,400	27.76
Apr. 30	0300	9,320	20.94	July 4	1800	17,900	27.92
May 9	0400	16,200	27.32				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158	88	1320	93	79	1180	142	2810	8180	5920	318	157
2	155	90	177	91	79	1090	146	3850	6140	5430	915	156
3	158	103	114	92	74	1010	144	3900	5180	6950	1680	154
4	159	2290	108	106	67	977	142	5560	8500	14100	1360	155
5	160	e4000	101	109	63	1010	133	4360	9220	10400	839	154
6	158	2780	97	81	59	e1050	141	4740	9360	4530	739	153
7	168	586	99	70	59	e1400	142	7090	12000	4710	702	185
8	383	273	262	67	70	1260	130	14300	7220	4340	685	1300
9	274	2340	468	67	73	1140	129	13600	9800	4110	598	413
10	218	1250	551	68	72	792	1090	3600	16700	4040	225	235
11	194	411	446	67	69	715	3440	3560	15500	4000	193	187
12	175	230	362	70	66	673	1180	3440	5620	3960	181	184
13	163	159	133	72	66	2250	993	3300	1130	3930	175	180
14	159	146	114	69	68	8160	775	3190	666	3860	174	172
15	159	202	109	71	74	3070	229	3110	571	2470	172	172
16	161	258	222	70	75	3120	237	3040	1400	2080	172	e250
17	169	195	189	68	79	2830	4350	3050	1500	2080	172	e1800
18	235	121	163	70	79	2570	9880	5250	1430	2090	169	e850
19	149	655	157	85	78	2450	3700	3960	1370	2060	166	355
20	189	6990	141	103	77	2180	3560	3730	1340	2080	165	295
21	283	9130	131	99	73	1180	2240	3620	1310	2040	165	228
22	160	1620	119	93	70	684	3370	3550	1290	2070	165	201
23	107	1330	110	84	67	549	6990	3500	1320	2060	162	189
24	122	1280	90	84	65	194	4770	3930	2190	2100	160	184
25	97	1320	83	67	66	165	3260	4860	1730	1950	161	183
26	74	2350	79	58	66	161	3810	5330	1460	1070	161	181
27	54	2420	77	61	216	163	3520	8680	1330	829	160	178
28	35	2380	74	63	1290	179	3640	5310	1300	235	160	372
29	68	2340	73	62	---	172	6360	3050	4950	198	160	226
30	83	2140	69	66	---	143	8110	3310	6980	171	159	197
31	89	---	74	74	---	134	---	4970	---	182	159	---
TOTAL	4916	49477	6312	2400	3339	42651	76753	149550	146687	106045	11572	9646
MEAN	159	1649	204	77.4	119	1376	2558	4824	4890	3421	373	322
MAX	383	9130	1320	109	1290	8160	9880	14300	16700	14100	1680	1800
MIN	35	88	69	58	59	134	129	2810	571	171	159	153
AC-FT	9750	98140	12520	4760	6620	84600	152200	296600	291000	210300	22950	19130

c Estimated

ARKANSAS RIVER BASIN

109

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	165	494	460	444	543	1340	1695	2022	1970	946	266	232
MAX	251	1649	1168	1921	1254	4949	2891	4824	4890	3421	520	366
(WY)	1990	1995	1993	1993	1993	1990	1994	1995	1995	1995	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 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1990 - 95

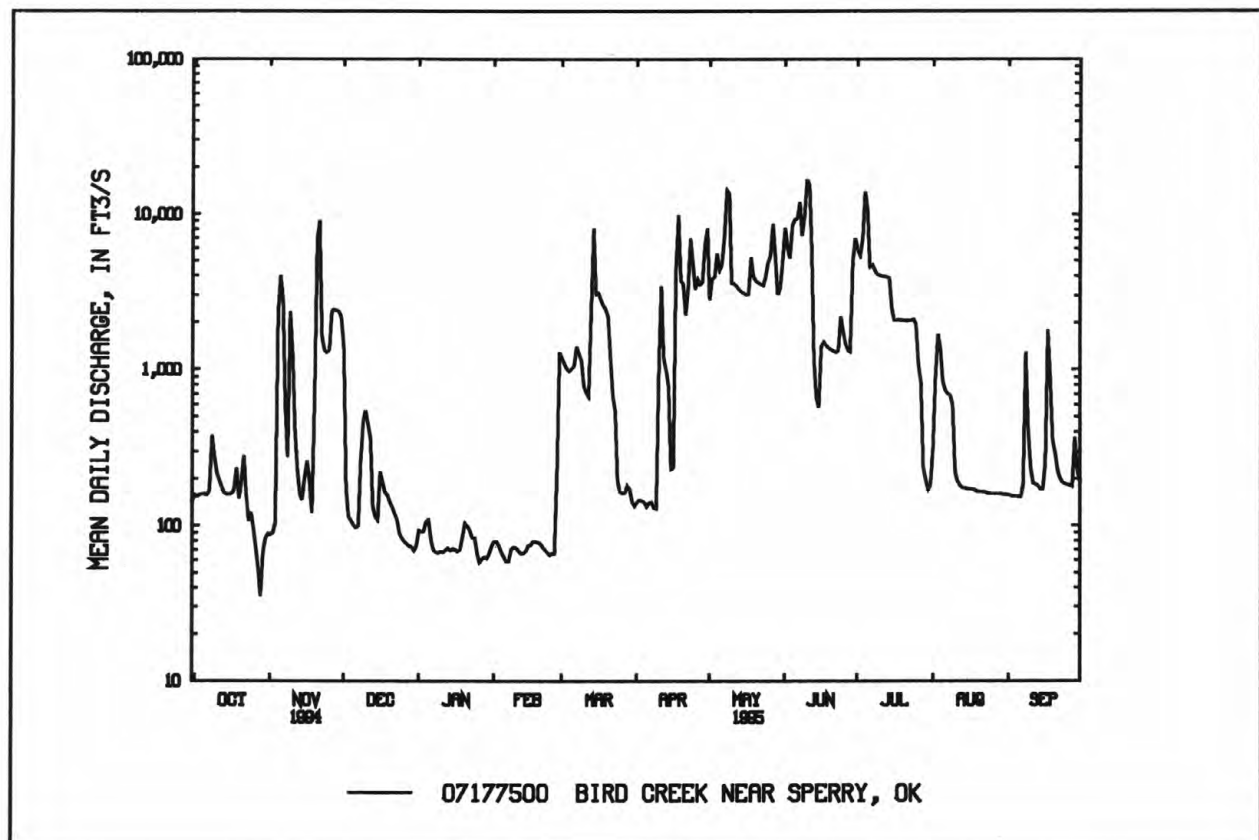
ANNUAL TOTAL	257625	609348	
ANNUAL MEAN	706	1669	^a 882
HIGHEST ANNUAL MEAN			1669 1995
LOWEST ANNUAL MEAN			282 1991
HIGHEST DAILY MEAN	20000 Apr 12	16700 Jun 10	27500 May 10 1993
LOWEST DAILY MEAN	35 Oct 28	35 Oct 28	^b 35 Oct 28 1994
ANNUAL SEVEN-DAY MINIMUM	53 Jan 1	64 Jan 25	46 Dec 23 1989
INSTANTANEOUS PEAK FLOW		17900 Jul 4	^c 30600 May 10 1993
INSTANTANEOUS PEAK STAGE		27.92 Jul 4	^d 29.88 May 10 1993
ANNUAL RUNOFF (AC-FT)	511000	1209000	638700
10 PERCENT EXCEEDS	1920	4810	2600
50 PERCENT EXCEEDS	171	230	175
90 PERCENT EXCEEDS	69	72	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, 1,680 microsiemens, Apr. 10; minimum, 97 microsiemens, July 4.

pH: Maximum, 8.2 units, Mar. 20; minimum, 6.7 units, June 11.

WATER TEMPERATURE: Maximum, 31.5°C, Aug. 20; minimum, 1.0°C, Jan. 5, 7, 8.

DISSOLVED OXYGEN: Maximum (observed), 14.2 mg/L, Jan. 9; minimum recorded, 3.8 mg/L, Sept. 8.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	320	313	317	427	396	409	273	259	266	620	605	610
2	323	314	319	412	386	403	291	271	283	703	620	678
3	329	321	324	429	392	408	327	289	306	647	574	601
4	332	324	326	641	132	222	370	327	349	574	566	570
5	329	324	326	268	127	190	396	369	385	569	558	564
6	333	325	327	368	175	282	408	391	401	584	555	568
7	330	315	323	293	261	276	438	408	422	613	584	602
8	1080	319	436	334	276	293	1500	420	510	636	611	626
9	423	311	351	351	156	254	485	381	421	659	634	649
10	328	304	317	300	153	226	424	341	364	681	656	670
11	319	300	310	313	268	294	345	338	343	704	678	693
12	308	300	305	338	277	291	370	338	349	715	701	708
13	315	307	312	338	291	306	458	370	426	713	705	709
14	317	312	315	355	315	337	495	456	476	715	702	708
15	321	315	318	372	355	366	522	495	509	713	705	709
16	324	319	322	360	323	340	856	513	581	710	699	705
17	370	324	345	363	318	335	521	457	483	706	694	699
18	413	319	361	401	363	389	487	458	477	716	705	711
19	857	356	461	474	183	375	513	487	505	788	713	732
20	412	377	393	265	145	197	527	511	520	942	788	901
21	450	303	377	176	143	152	524	509	518	841	717	756
22	385	301	343	238	141	177	546	517	531	717	704	709
23	392	352	376	240	231	235	569	545	559	709	701	705
24	405	348	387	248	231	241	583	569	577	710	700	703
25	437	374	412	259	246	252	590	579	585	717	702	711
26	440	424	433	263	254	258	600	587	593	726	714	720
27	438	414	427	273	261	266	609	592	600	739	723	730
28	450	422	432	272	261	266	603	596	600	767	737	749
29	537	431	456	269	259	264	607	596	602	794	767	785
30	665	416	519	267	254	262	604	596	600	790	759	778
31	461	396	427	---	---	---	612	598	604	759	736	744
MONTH	1080	300	368	641	127	286	1500	259	476	942	555	694

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

111

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	740	711	730	453	342	412	542	479	502	257	209	232
2	711	670	689	342	314	324	549	517	541	268	246	258
3	673	660	665	316	294	304	517	498	506	286	255	267
4	662	651	656	320	294	310	509	498	504	255	224	244
5	654	646	650	---	---	---	514	498	504	266	250	259
6	658	646	652	---	---	---	507	482	497	288	219	263
7	702	658	676	---	---	---	484	479	482	235	154	190
8	723	702	716	---	---	---	487	479	482	154	107	126
9	730	721	726	347	317	323	490	487	488	171	136	145
10	737	726	731	368	348	355	1680	252	503	271	175	219
11	741	733	737	351	341	347	283	233	255	270	266	268
12	741	736	739	339	331	334	300	261	290	269	260	265
13	742	734	739	440	288	350	299	290	294	268	263	266
14	738	729	735	288	186	216	338	293	306	268	260	264
15	746	734	741	250	108	208	417	338	383	268	258	265
16	744	734	740	267	114	252	437	410	418	273	261	269
17	791	738	767	270	262	266	453	166	213	278	265	271
18	788	756	769	282	258	270	216	130	154	279	212	248
19	758	744	753	287	274	280	311	149	225	273	255	269
20	745	726	734	290	274	282	326	243	272	271	263	268
21	731	724	727	292	277	283	283	239	268	272	266	270
22	732	726	729	324	292	303	290	246	274	293	267	275
23	742	729	734	319	299	306	246	164	191	292	260	286
24	756	738	746	362	319	346	264	166	211	317	281	290
25	762	745	754	391	359	368	272	262	268	292	264	277
26	1560	744	791	436	391	416	272	265	269	289	219	264
27	1340	694	828	469	435	450	275	269	272	244	171	210
28	694	412	526	464	455	459	275	268	271	233	174	201
29	---	---	---	461	451	456	287	160	239	253	233	247
30	---	---	---	466	455	462	216	174	190	252	237	243
31	---	---	---	481	466	473	---	---	---	242	197	219
MONTH	1560	412	721	---	---	---	1680	130	342	317	107	246

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

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	214	179	201	591	333	369	389	338	346
2	219	157	176	212	206	209	527	280	362	352	338	343
3	228	164	209	209	102	163	417	269	325	355	338	343
4	222	154	190	129	97	114	317	249	281	346	339	343
5	199	146	174	247	115	146	249	243	246	354	338	342
6	189	136	163	249	229	243	263	244	252	347	335	340
7	172	156	163	249	236	240	282	262	275	366	328	342
8	259	169	204	244	236	240	278	266	273	418	282	325
9	259	125	166	247	239	243	284	265	271	305	290	295
10	145	124	136	242	237	240	362	284	330	318	303	311
11	147	124	136	244	236	238	352	341	346	321	314	318
12	220	147	189	239	191	234	357	338	345	383	316	327
13	279	220	252	238	232	234	387	338	364	349	320	328
14	325	279	303	235	230	232	381	329	348	323	310	315
15	437	324	348	239	232	236	366	329	337	328	299	305
16	359	272	282	242	234	238	357	324	331	390	299	333
17	296	280	287	242	235	238	336	328	332	431	206	266
18	293	268	278	244	238	241	339	330	335	206	185	196
19	289	266	270	243	236	239	341	332	337	242	203	217
20	309	264	273	244	234	239	343	334	338	267	242	253
21	282	265	268	245	237	241	342	333	337	279	266	274
22	303	263	267	244	237	240	336	328	332	290	273	279
23	303	260	266	241	231	237	334	327	331	291	287	288
24	276	244	265	244	236	239	332	325	329	290	285	288
25	330	247	272	241	235	237	332	325	328	300	288	294
26	283	236	257	263	240	256	335	327	330	312	300	305
27	317	249	274	267	243	252	334	327	331	322	310	316
28	272	258	267	379	267	324	336	329	332	1110	290	402
29	263	118	210	387	341	349	338	331	335	348	291	321
30	180	121	159	378	335	345	338	331	335	377	331	353
31	---	---	---	409	334	346	354	333	338	---	---	---
MONTH	---	---	---	409	97	241	591	243	324	1110	185	310

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

113

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	23.0	21.5	22.5	15.0	13.5	14.0	12.0	10.5	11.5	6.0	4.5	5.5
2	23.0	21.5	22.5	14.5	13.5	14.0	10.5	9.5	10.0	5.0	4.0	4.5
3	23.0	22.0	22.5	17.0	14.5	15.5	10.5	10.0	10.0	4.5	3.0	4.0
4	23.5	22.0	23.0	18.0	16.5	17.0	11.0	10.5	10.5	3.0	2.0	2.5
5	23.5	22.0	22.5	16.5	12.0	13.5	11.0	10.5	11.0	2.5	1.0	1.5
6	22.5	21.5	22.0	12.5	12.0	12.5	10.5	10.5	10.5	1.5	1.5	1.5
7	22.5	21.0	22.0	13.0	12.5	13.0	10.5	9.0	10.0	1.5	1.0	1.5
8	21.0	18.5	20.0	14.5	12.5	13.5	9.0	7.0	8.5	2.0	1.0	1.5
9	19.0	17.5	18.5	15.5	14.0	14.5	7.0	6.0	6.5	2.5	1.5	2.0
10	18.5	17.0	18.0	14.5	13.0	13.5	8.5	6.0	7.5	4.0	1.5	3.0
11	18.0	17.0	17.5	13.0	12.0	12.5	8.0	7.5	7.5	5.5	3.5	4.5
12	18.5	16.5	17.5	12.5	11.5	12.0	8.0	7.0	7.5	6.0	4.5	5.5
13	18.5	17.5	18.0	13.0	12.0	12.5	7.0	5.5	6.0	6.0	5.5	6.0
14	18.5	18.0	18.5	13.5	13.0	13.0	5.5	5.5	5.5	6.5	5.5	6.0
15	18.5	18.0	18.0	13.5	12.5	13.0	6.0	5.5	6.0	6.5	5.5	6.0
16	19.0	18.0	18.5	12.5	12.0	12.0	7.0	6.0	6.5	7.0	5.5	6.5
17	19.5	19.0	19.0	12.0	11.5	11.5	7.0	6.5	6.5	8.0	6.5	7.5
18	19.5	19.0	19.5	12.0	11.0	11.5	7.0	6.0	6.5	7.0	5.5	6.5
19	19.0	18.5	19.0	12.0	11.0	11.5	7.0	5.5	6.0	6.0	5.0	5.5
20	19.5	18.5	19.0	11.5	11.0	11.0	7.5	6.0	6.5	6.0	5.0	5.5
21	19.5	18.0	18.5	11.0	10.5	10.5	7.5	6.5	7.0	5.5	5.0	5.0
22	19.0	17.5	18.5	10.5	9.0	10.0	7.0	6.5	7.0	5.0	4.5	5.0
23	19.0	18.0	18.5	11.0	10.0	11.0	7.0	6.5	6.5	5.0	4.5	4.5
24	18.5	17.5	18.0	11.5	10.5	11.0	6.5	5.5	6.0	5.0	4.5	4.5
25	18.0	16.0	17.0	12.5	11.5	12.0	5.5	5.0	5.0	6.0	4.5	5.0
26	16.0	14.5	15.5	13.0	12.5	12.5	5.0	4.5	5.0	6.0	5.0	5.5
27	15.0	14.0	14.5	13.0	12.5	13.0	5.0	4.5	5.0	7.5	5.0	6.5
28	15.0	13.0	14.0	12.5	12.0	12.5	5.5	4.5	5.5	8.0	6.5	7.5
29	15.0	13.5	14.0	12.5	12.0	12.0	6.0	5.0	6.0	6.5	6.0	6.0
30	15.0	14.0	14.5	12.0	11.5	11.5	6.5	6.0	6.0	7.0	5.5	6.0
31	16.0	15.0	15.5	---	---	---	7.0	6.0	6.5	7.0	5.5	6.0
MONTH	23.5	13.0	18.6	18.0	9.0	12.6	12.0	4.5	7.3	8.0	1.0	4.8

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	7.5	6.0	6.5	8.5	7.0	7.5	15.5	13.5	14.5	15.5	15.0	15.5
2	8.0	6.5	7.5	7.0	6.5	6.5	17.0	14.5	15.5	15.0	14.5	14.5
3	8.5	7.5	8.0	7.0	6.0	6.5	17.0	15.5	16.0	14.5	14.0	14.5
4	8.0	7.0	7.5	7.0	6.5	6.5	17.0	15.5	16.0	15.0	14.0	14.5
5	8.5	6.5	7.5	---	---	---	17.5	15.5	16.5	15.0	14.5	15.0
6	8.0	6.5	7.5	---	---	---	18.0	16.0	17.0	15.5	15.0	15.0
7	8.0	6.5	7.0	---	---	---	18.5	17.0	18.0	17.0	15.5	16.0
8	7.0	5.5	6.0	---	---	---	20.5	18.0	19.0	17.0	16.5	16.5
9	7.0	5.5	6.0	7.0	5.0	6.0	21.5	19.5	20.5	18.0	16.5	17.0
10	7.5	6.0	6.5	8.0	6.0	6.5	21.5	16.5	19.5	18.5	16.5	18.0
11	7.0	5.5	6.5	9.5	7.5	8.5	16.5	14.5	15.5	17.0	16.0	16.5
12	5.5	4.0	5.0	10.0	9.0	9.5	14.5	13.0	14.0	16.5	16.0	16.5
13	4.5	4.0	4.0	12.5	10.0	11.0	14.5	12.5	13.5	18.0	16.5	17.0
14	4.0	3.5	4.0	13.0	12.5	12.5	15.5	13.0	14.0	17.5	16.5	17.0
15	4.5	3.5	4.0	14.0	11.0	13.0	18.5	15.5	17.0	17.5	16.5	17.0
16	4.5	3.5	4.0	10.5	9.5	10.0	19.5	18.0	18.5	18.0	17.0	17.5
17	4.5	3.5	4.0	10.5	9.0	10.0	19.0	17.0	18.0	18.0	17.5	17.5
18	5.5	4.0	5.0	11.0	9.5	10.0	17.0	16.0	16.5	19.0	17.5	18.5
19	7.0	5.0	6.0	12.0	10.0	11.0	17.0	15.5	16.5	18.0	17.5	18.0
20	7.5	6.0	7.0	12.5	11.0	11.5	16.5	15.0	16.0	18.0	17.0	17.5
21	9.0	6.5	8.0	13.0	11.0	12.0	16.5	15.0	15.5	17.5	17.0	17.5
22	10.0	7.5	9.0	15.5	13.0	14.0	15.0	13.5	14.5	18.0	17.0	17.5
23	12.0	9.0	10.5	15.5	14.0	15.0	13.5	12.0	12.5	18.0	17.0	17.5
24	12.0	10.0	11.0	18.5	15.5	16.5	14.0	12.0	12.5	18.0	17.0	17.5
25	13.0	10.0	11.5	18.0	16.5	17.0	15.0	13.5	14.0	18.0	17.5	17.5
26	13.5	11.5	12.5	17.0	16.0	16.5	15.0	14.5	15.0	18.0	17.0	17.5
27	13.0	12.0	12.5	16.5	14.5	15.0	15.0	14.5	14.5	19.5	18.0	19.0
28	12.0	8.5	10.5	15.5	14.0	14.5	14.5	14.0	14.5	21.0	19.5	20.0
29	---	---	---	15.0	14.0	14.5	15.0	14.0	14.5	19.5	18.0	19.0
30	---	---	---	14.5	13.0	13.5	15.5	14.5	15.0	18.0	18.0	18.0
31	---	---	---	15.0	13.0	14.0	---	---	---	19.0	18.0	18.5
MONTH	13.5	3.5	7.3	---	---	---	21.5	12.0	15.8	21.0	14.0	17.1

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

115

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	20.0	19.0	19.5	21.0	20.5	20.5	29.0	27.0	28.0	30.0	28.5	29.5
2	22.5	21.0	21.0	20.5	20.0	20.5	27.5	26.0	26.5	30.0	28.5	29.0
3	20.5	19.5	20.0	21.5	20.0	20.5	27.0	25.5	26.0	29.5	28.0	29.0
4	22.0	20.5	21.5	23.0	21.0	21.5	26.5	25.0	25.5	30.0	28.0	29.0
5	21.5	21.5	21.5	24.0	23.0	23.5	25.0	23.5	24.5	29.5	28.0	28.5
6	22.0	18.5	21.5	24.0	21.0	21.5	24.5	23.5	24.0	29.0	27.5	28.0
7	23.0	18.5	21.5	22.0	21.0	21.5	25.0	23.5	24.0	28.5	26.5	27.0
8	24.0	23.0	23.5	22.0	21.0	21.5	25.0	24.0	24.5	26.5	24.0	25.5
9	23.5	20.5	21.5	22.5	21.0	21.5	25.0	24.0	24.5	24.0	23.0	23.5
10	21.0	20.5	21.0	22.0	20.5	21.5	29.0	25.0	26.5	24.0	22.0	23.0
11	21.5	20.5	21.0	22.5	21.0	21.5	30.5	27.5	29.0	24.0	22.5	23.0
12	22.5	21.0	21.5	22.0	20.5	21.5	30.5	28.5	29.5	25.0	22.5	23.5
13	23.0	21.5	22.0	22.0	21.0	21.5	31.0	28.5	29.5	25.0	23.5	24.0
14	24.5	22.0	23.0	22.0	21.0	21.5	31.0	28.5	30.0	26.5	24.5	25.5
15	26.0	23.5	24.5	22.5	21.5	22.0	30.5	29.0	30.0	26.0	25.0	25.0
16	24.5	20.0	21.0	22.5	21.0	22.0	30.5	28.5	29.5	25.0	24.0	24.5
17	21.5	20.5	21.0	22.5	21.0	22.0	30.5	28.0	29.5	24.5	23.0	23.5
18	21.5	20.0	21.0	22.5	21.5	22.0	30.5	28.0	29.5	24.0	23.0	23.5
19	21.0	20.0	20.5	22.0	21.0	21.5	31.0	28.5	29.5	24.0	23.0	23.5
20	21.5	20.0	20.5	22.5	21.5	22.0	31.5	29.0	30.0	23.5	21.5	22.5
21	21.5	20.0	21.0	22.5	21.0	22.0	31.0	29.0	30.0	21.5	19.0	20.0
22	21.5	20.0	21.0	23.0	21.5	22.5	30.5	28.0	29.5	19.0	17.5	18.5
23	21.5	20.5	21.0	23.0	22.0	22.5	30.0	28.0	29.0	19.0	17.0	18.0
24	22.5	20.5	21.5	23.0	22.0	22.5	30.0	27.5	28.5	18.5	17.0	18.0
25	22.0	20.5	21.5	23.0	21.5	22.5	29.5	27.0	28.0	18.5	18.0	18.5
26	21.5	20.0	21.0	23.5	22.5	23.0	29.5	27.0	28.5	19.0	17.5	18.5
27	22.0	20.0	21.0	24.0	22.0	23.0	30.0	28.0	29.0	20.0	18.0	19.0
28	22.0	20.5	21.0	29.5	24.0	26.5	30.5	28.5	29.5	20.5	19.5	20.0
29	22.0	19.0	20.5	30.5	28.0	29.5	30.5	28.5	29.5	22.0	20.5	21.0
30	22.0	21.0	22.0	30.0	28.0	29.0	30.0	28.0	29.0	22.5	21.5	22.0
31	---	---	---	30.0	28.0	28.5	30.5	28.5	29.5	---	---	---
MONTH	26.0	18.5	21.3	30.5	20.0	22.7	31.5	23.5	28.1	30.0	17.0	23.5

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

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

117

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

PHI, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	7.3	7.2	7.2	7.6	7.4	7.6	7.4	7.2	7.3
2	7.4	7.2	7.3	7.2	7.1	7.2	7.6	7.4	7.5	7.4	7.2	7.3
3	7.4	7.0	7.3	7.2	6.9	7.1	7.6	7.3	7.5	7.4	7.3	7.3
4	7.4	7.1	7.3	7.0	6.8	7.0	7.5	7.3	7.4	7.4	7.3	7.4
5	7.4	7.2	7.2	7.0	6.8	6.8	7.4	7.3	7.3	7.3	7.1	7.2
6	7.3	7.0	7.1	7.2	7.0	7.2	7.5	7.3	7.4	7.3	7.2	7.3
7	7.4	7.0	7.2	7.2	7.1	7.1	7.5	7.4	7.4	7.4	7.2	7.3
8	7.1	7.0	7.1	7.1	7.1	7.1	7.4	7.4	7.4	7.6	7.3	7.5
9	7.1	7.0	7.0	7.1	7.0	7.0	7.4	7.4	7.4	7.6	7.4	7.5
10	7.2	6.9	7.0	7.0	7.0	7.0	7.4	7.2	7.3	7.4	7.3	7.4
11	7.0	6.7	6.9	7.1	6.8	7.0	7.3	7.2	7.2	7.3	7.2	7.3
12	7.0	6.8	6.9	7.4	6.9	7.4	7.4	7.2	7.3	7.3	6.9	7.1
13	7.1	7.0	7.1	7.4	7.4	7.4	7.4	7.3	7.3	7.1	7.0	7.1
14	7.3	7.1	7.2	7.4	7.4	7.4	7.4	7.3	7.4	7.3	7.1	7.2
15	7.3	7.2	7.3	7.4	7.4	7.4	7.4	7.3	7.4	7.1	6.9	7.0
16	7.3	7.2	7.2	7.4	7.3	7.4	7.5	7.3	7.4	7.2	6.9	7.1
17	7.3	7.2	7.3	7.4	7.4	7.4	7.6	7.3	7.4	7.4	7.1	7.2
18	7.3	7.2	7.3	7.5	7.4	7.4	7.5	7.4	7.5	7.3	7.2	7.3
19	7.3	7.3	7.3	7.4	7.4	7.4	7.6	7.4	7.5	7.3	7.2	7.2
20	7.3	7.3	7.3	7.5	7.4	7.4	7.6	7.4	7.5	7.3	7.1	7.2
21	7.3	7.3	7.3	7.4	7.4	7.4	7.6	7.4	7.5	7.4	7.3	7.3
22	7.4	7.3	7.3	7.4	7.4	7.4	7.6	7.4	7.5	7.4	7.3	7.3
23	7.5	7.3	7.4	7.4	7.3	7.4	7.6	7.4	7.4	7.4	7.3	7.4
24	7.5	7.4	7.4	7.4	7.1	7.4	7.6	7.3	7.5	7.4	7.4	7.4
25	7.5	7.3	7.4	7.4	7.3	7.4	7.6	7.4	7.5	7.5	7.4	7.4
26	7.4	7.3	7.3	7.4	7.3	7.4	7.6	7.5	7.6	7.5	7.5	7.5
27	7.4	7.3	7.4	7.5	7.4	7.5	7.6	7.4	7.5	7.5	7.5	7.5
28	7.4	7.3	7.3	7.6	7.4	7.5	7.6	7.4	7.5	7.5	7.4	7.5
29	7.4	7.0	7.2	7.6	7.5	7.6	7.4	7.3	7.4	7.4	7.2	7.3
30	7.3	7.0	7.2	7.6	7.5	7.6	7.4	7.3	7.4	7.3	7.1	7.2
31	---	---	---	7.7	7.6	7.6	7.5	7.3	7.4	---	---	---
MAX	---	---	---	7.7	7.6	7.6	7.6	7.5	7.6	7.6	7.5	7.5
MIN	---	---	---	7.0	6.8	6.8	7.3	7.2	7.2	7.1	6.9	7.0

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

119

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	7.9	7.4	7.7	12.2	11.0	11.5	12.2	11.4	11.8
2	---	---	---	8.0	7.6	7.8	11.5	10.8	11.2	12.7	11.7	12.3
3	8.2	7.3	7.8	---	---	---	11.1	10.4	10.7	13.0	12.3	12.7
4	7.2	6.2	6.5	---	---	---	11.0	9.4	10.5	13.9	12.5	13.2
5	6.6	6.2	6.3	---	---	---	10.7	9.9	10.2	13.8	13.0	13.5
6	7.2	6.6	6.9	---	---	---	10.7	9.7	10.2	14.1	12.9	13.5
7	7.2	6.9	7.1	---	---	---	10.9	9.6	10.3	14.1	13.2	13.6
8	7.2	6.3	6.8	---	---	---	11.3	10.5	10.9	14.1	13.3	13.8
9	---	---	---	---	---	---	12.0	11.1	11.6	14.2	13.4	13.7
10	---	---	---	---	---	---	12.0	11.1	11.5	14.0	12.9	13.6
11	---	---	---	---	---	---	12.0	10.7	11.3	13.7	12.6	13.2
12	---	---	---	---	---	---	11.8	10.9	11.4	13.3	11.7	12.7
13	---	---	---	---	---	---	12.5	11.1	11.8	12.8	11.0	12.0
14	---	---	---	9.0	8.7	8.8	12.3	10.9	11.8	12.5	11.2	11.9
15	8.2	7.7	7.9	8.9	8.6	8.8	11.9	11.3	11.6	12.3	10.8	11.8
16	8.0	7.6	7.8	9.3	8.9	9.1	11.6	10.6	11.3	12.3	11.0	11.8
17	7.8	7.4	7.6	9.2	9.0	9.1	11.4	10.4	11.1	12.1	10.4	11.4
18	7.6	6.9	7.3	9.1	8.9	9.0	11.8	10.5	11.3	11.9	10.2	11.2
19	---	---	---	9.3	8.7	8.9	11.9	11.0	11.5	11.8	10.3	11.2
20	7.6	7.1	7.3	9.5	7.6	8.6	11.8	10.9	11.4	12.1	10.7	11.5
21	7.7	7.3	7.5	8.9	8.0	8.3	11.6	11.0	11.1	12.1	11.0	11.6
22	7.3	6.9	7.1	9.6	8.4	9.1	11.3	10.7	11.0	12.1	11.2	11.8
23	7.2	6.7	6.9	---	---	---	11.3	10.8	11.0	12.7	11.0	12.0
24	7.3	6.8	7.0	---	---	---	11.6	11.1	11.3	12.3	11.4	11.9
25	7.5	7.0	7.3	---	---	---	11.8	11.4	11.6	12.2	11.3	11.8
26	8.0	7.5	7.8	---	---	---	12.1	11.6	12.0	11.9	10.8	11.5
27	8.4	7.7	8.1	---	---	---	12.3	11.9	12.1	11.8	10.5	11.1
28	8.7	7.7	8.1	---	---	---	12.3	11.8	12.1	11.2	10.5	10.8
29	8.5	7.6	8.0	---	---	---	12.3	11.8	12.0	12.1	10.6	11.3
30	8.0	7.5	7.8	12.2	11.5	11.8	12.3	11.6	12.1	12.3	10.9	11.7
31	8.1	7.2	7.6	---	---	---	12.2	11.3	11.8	11.9	11.0	11.6
MONTH	---	---	---	---	---	---	12.5	9.4	11.3	14.2	10.2	12.2

[illegible]

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

121

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	8.5	7.5	8.0	6.4	5.4	6.2	6.5	5.0	5.7
2	---	---	---	8.3	7.9	8.1	6.5	6.0	6.3	6.6	4.9	5.7
3	---	---	---	8.2	6.2	7.3	7.5	6.2	7.0	6.2	5.0	5.7
4	---	---	---	6.5	5.6	6.2	7.7	7.1	7.4	6.6	5.1	5.8
5	---	---	---	5.8	4.6	5.1	7.8	7.4	7.6	6.5	5.1	5.8
6	---	---	---	---	---	---	8.0	7.4	7.7	6.6	5.1	5.9
7	---	---	---	---	---	---	8.0	7.5	7.6	6.2	5.2	5.5
8	---	---	---	---	---	---	7.9	7.4	7.6	5.9	3.8	4.9
9	---	---	---	---	---	---	7.9	7.2	7.5	6.8	5.9	6.5
10	---	---	---	---	---	---	7.4	6.8	7.1	7.1	6.6	6.9
11	---	---	---	---	---	---	7.3	6.3	6.7	7.1	6.9	7.0
12	---	---	---	9.4	8.8	9.0	7.1	6.1	6.5	7.1	6.9	7.0
13	7.7	7.2	7.5	9.2	8.8	9.0	7.0	5.9	6.4	7.0	6.8	6.9
14	7.7	7.2	7.5	9.1	8.7	8.9	7.0	5.9	6.3	7.3	6.8	7.1
15	7.4	6.3	7.2	8.7	8.1	8.4	6.8	5.8	6.2	7.3	6.7	6.9
16	8.5	6.5	8.1	8.7	8.2	8.4	6.9	5.7	6.3	7.3	6.9	7.1
17	8.8	8.1	8.4	8.5	8.2	8.4	7.1	5.8	6.4	7.3	5.2	6.3
18	8.7	7.5	8.3	8.6	8.2	8.4	7.1	5.9	6.4	7.6	6.8	7.2
19	8.7	7.5	8.3	8.6	8.3	8.5	7.1	5.9	6.4	7.5	7.0	7.3
20	8.6	8.1	8.3	8.5	8.2	8.4	7.1	5.8	6.4	7.7	7.3	7.5
21	8.6	8.1	8.4	8.5	8.2	8.4	7.1	5.7	6.3	8.2	7.7	7.9
22	8.7	8.1	8.3	8.4	8.1	8.2	7.4	5.9	6.5	8.8	8.2	8.5
23	8.4	7.8	8.2	8.5	8.1	8.3	7.3	6.0	6.6	8.9	8.6	8.7
24	8.2	6.9	7.6	8.4	8.1	8.2	7.1	5.8	6.4	8.9	8.6	8.8
25	8.0	7.5	7.8	8.3	7.7	8.2	7.1	5.8	6.4	8.9	8.5	8.7
26	8.4	7.9	8.1	8.0	7.4	7.7	6.9	5.7	6.3	9.1	8.5	8.8
27	8.5	8.0	8.2	8.0	7.3	7.8	6.9	5.4	6.1	9.1	8.5	8.8
28	8.5	8.0	8.2	7.3	6.3	6.7	6.7	5.4	6.0	8.8	6.9	7.8
29	8.8	5.9	7.6	6.8	5.9	6.3	6.7	5.3	5.9	7.2	6.6	7.0
30	7.5	6.0	6.5	6.9	6.3	6.6	6.6	5.3	5.9	7.6	6.9	7.3
31	---	---	---	6.8	6.2	6.5	6.6	5.2	5.8	---	---	---
MONTH	---	---	---	---	---	---	8.0	5.2	6.6	9.1	3.8	7.0

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)
Nov. 5	1100	2,090	10.26	May 26	1230	2,170	10.38
Nov. 20	0545	1,060	8.52	June 6	0300	838	8.04
Apr. 29	0430	1,480	9.28	June 9	1330	4,220	12.82
May 7	1815	2,910	11.38				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.11	1.0	2.0	1.4	1.9	1.3	10	156	.47	1.8	.00
2	.10	.09	.96	1.5	1.3	1.6	1.3	5.1	2.8	.40	3.5	.00
3	.08	.57	.95	1.4	1.3	2.0	1.3	28	2.5	.39	1.3	.00
4	.08	186	.95	1.3	1.1	4.4	1.3	13	111	.33	.27	.00
5	.05	393	.95	1.2	1.1	5.4	1.1	5.1	177	.31	.19	.00
6	.05	8.4	1.0	1.2	1.0	3.2	1.2	164	295	.31	.22	.00
7	2.2	2.0	1.3	1.4	1.1	22	1.2	534	6.4	.31	.19	.12
8	7.7	1.0	7.1	1.3	.85	3.8	1.2	250	4.6	.27	.19	.04
9	1.4	1.9	3.2	1.3	.94	2.6	1.2	e28	833	.31	.31	.04
10	.53	.91	2.1	1.2	1.1	2.1	85	e12	45	.23	.15	.00
11	.28	.42	1.6	1.2	.96	1.7	14	e6.5	15	.23	.15	.00
12	.04	.25	1.5	1.2	.82	1.7	3.7	e4.0	5.9	.20	.15	.12
13	.00	.18	1.4	1.2	.75	106	2.6	e2.7	3.1	.19	.48	.08
14	.00	.24	1.4	1.2	.98	29	2.0	e1.9	2.4	.19	.04	.04
15	.03	.16	1.4	1.1	1.2	8.5	1.8	1.4	1.5	.19	.00	.12
16	.07	.05	18	1.1	1.1	5.4	1.5	1.3	1.2	.19	.00	.81
17	.07	.00	3.5	1.4	.85	4.1	45	1.2	.91	.19	.00	.20
18	47	.00	2.4	1.6	.85	3.4	65	1.2	.88	.19	.04	.15
19	4.2	12	2.0	2.5	.84	2.9	18	1.1	.83	.19	.04	.18
20	1.7	217	1.7	2.0	.75	2.7	30	.95	.67	.28	.04	.15
21	1.1	7.6	1.6	1.5	.75	2.5	6.2	1.0	.63	.20	.04	.20
22	.71	3.0	1.5	1.5	.75	2.5	95	.92	.57	.42	.00	.23
23	.47	2.2	1.4	1.4	.75	2.2	72	.74	.46	.31	.00	.19
24	.28	1.8	1.4	1.4	.67	2.0	10	18	.46	.39	.00	.23
25	.25	1.7	1.4	1.5	.59	2.0	8.4	1.6	.40	.43	.00	.27
26	.16	1.5	1.3	1.4	.78	1.8	5.0	417	.40	.45	.00	.23
27	.13	1.4	1.3	1.9	17	1.5	3.9	255	.35	.35	.00	.23
28	.09	1.3	1.3	1.8	2.8	1.4	3.5	6.0	.28	.32	.00	.82
29	.08	1.1	1.3	1.5	---	1.4	285	2.2	1.5	.31	.00	.35
30	.08	1.0	1.3	1.5	---	1.4	13	1.4	.84	.31	.00	.52
31	.17	---	1.4	1.4	---	1.3	---	34	---	.34	.00	---
TOTAL	69.22	846.88	69.61	45.1	44.38	234.4	781.7	1809.31	1671.58	9.20	9.10	5.32
MEAN	2.23	28.2	2.25	1.45	1.58	7.56	26.1	58.4	55.7	.30	.29	.18
MAX	47	393	18	2.5	17	106	285	534	833	.47	3.5	.82
MIN	.00	.00	.95	1.1	.59	1.3	1.1	.74	.28	.19	.00	.00
AC-FT	137	1680	138	89	88	465	1550	3590	3320	18	18	11
CFSM	.27	3.44	.27	.18	.19	.92	3.18	7.12	6.80	.04	.04	.02
IN.	.31	3.84	.32	.20	.20	1.06	3.55	8.21	7.58	.04	.04	.02

c Estimated

ARKANSAS RIVER BASIN

123

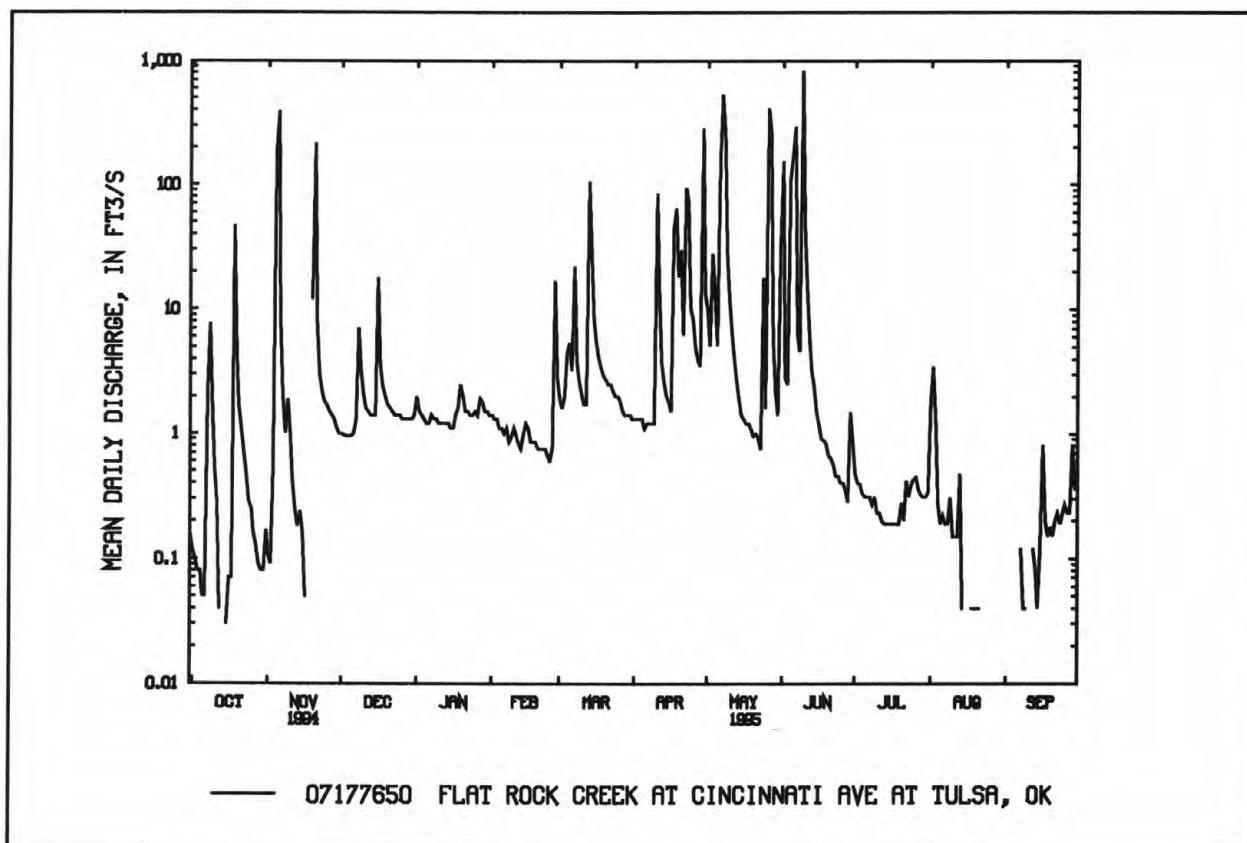
07177650 FLAT ROCK CREEK AT CINCINNATI AVENUE AT TULSA, OK.--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.88	7.27	4.91	3.50	5.87	12.4	11.9	16.5	13.2	2.14	2.23	1.22
MAX	2.23	28.2	16.0	10.3	14.5	34.4	26.1	58.4	55.7	8.28	13.6	6.54
(WY)	1995	1995	1993	1993	1993	1990	1995	1995	1995	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 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1989 - 95

ANNUAL TOTAL	2708.35	5595.80	
ANNUAL MEAN	7.42	15.3	6.83
HIGHEST ANNUAL MEAN			15.3 1995
LOWEST ANNUAL MEAN			.81 1991
HIGHEST DAILY MEAN	407	Apr 11 833	Jun 9 833 Jun 9 1995
LOWEST DAILY MEAN	.00	Aug 11 .00	at times .00 at times
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 11 .00	Aug 22 .00 Oct 14 1988
INSTANTANEOUS PEAK FLOW		4220	Jun 9 4220 Jun 9 1995
INSTANTANEOUS PEAK STAGE		12.82	Jun 9 12.82 Jun 9 1995
ANNUAL RUNOFF (AC-FT)	5370	11100	4940
ANNUAL RUNOFF (CFSM)	.90	1.87	.83
ANNUAL RUNOFF (INCHES)	12.29	25.39	11.31
10 PERCENT EXCEEDS	8.1	12	8.9
50 PERCENT EXCEEDS	.58	1.2	.66
90 PERCENT EXCEEDS	.09	.05	.01



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)
Oct. 7	1445	1,160	9.85	June 9	1345	3,060	12.36
Nov. 4	1045	1,350	10.19	June 23	1630	5,190	14.18
May 7	1845	3,330	12.62	June 29	0815	3,260	12.56
May 26	1100	3,620	12.90				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.67	1.1	2.1	2.6	3.2	1.1	e.85	15	36	3.2	34	.16
2	.74	.96	2.0	1.3	3.1	2.1	.79	7.0	11	1.8	16	.20
3	.59	38	2.0	e1.0	3.1	11	2.9	20	9.9	e1.5	5.7	.24
4	.70	229	2.0	e.94	3.0	4.9	1.1	6.9	36	e1.3	1.7	.20
5	.77	208	1.9	e.90	3.0	4.4	1.8	4.0	89	e1.2	1.0	.17
6	.67	23	5.5	3.1	3.0	3.6	1.1	63	97	e1.1	12	.18
7	65	10	2.5	1.7	2.9	31	1.9	443	20	e1.0	2.1	35
8	40	6.3	16	1.4	2.5	4.1	1.1	214	14	e.95	.80	.56
9	2.6	25	2.8	1.3	1.5	3.3	.52	32	292	e.90	.64	.35
10	e1.0	5.5	1.7	e1.3	1.8	2.8	45	16	41	e.85	1.5	.28
11	e.68	4.4	1.2	e1.2	1.5	2.5	6.3	10	31	e.80	.59	.25
12	e.62	3.6	1.2	e1.2	1.1	2.5	3.8	7.1	14	e.78	.52	7.9
13	e.56	3.8	1.1	e1.2	1.2	55	2.2	4.2	7.6	e.76	1.4	.42
14	e.52	3.8	1.2	e1.1	6.0	15	1.8	1.8	3.5	e.74	.64	.29
15	e.48	2.4	1.2	e1.1	1.9	8.3	1.6	2.3	2.5	e.72	.43	5.4
16	5.9	1.9	31	e1.1	1.2	8.4	1.3	2.8	1.9	e1.0	.53	34
17	1.6	1.8	3.9	9.3	1.1	4.4	12	22	1.4	e.78	.30	1.8
18	41	1.4	2.9	9.3	1.2	3.8	22	4.9	.95	e.68	e.26	.93
19	3.4	36	2.5	5.6	1.1	2.7	22	4.1	2.5	e.67	e.24	.88
20	e2.2	99	2.3	3.4	1.1	3.2	18	2.6	2.4	26	e.22	.55
21	e1.5	12	2.1	3.1	1.0	3.5	4.1	1.9	2.2	3.1	e.20	2.8
22	e1.1	6.0	1.8	4.5	1.1	3.1	64	2.7	1.7	47	e.19	1.3
23	e.92	4.4	1.7	2.9	1.2	3.2	51	3.0	400	2.5	e.19	.50
24	e.82	3.6	1.6	2.7	.86	3.0	14	51	26	16	e.18	.39
25	e.76	3.2	1.3	3.2	1.1	1.7	6.9	5.2	9.0	1.6	e.18	1.9
26	e.70	2.8	1.3	9.7	5.0	1.6	3.2	237	4.7	20	e.18	.97
27	e.60	2.9	e1.2	8.0	23	1.2	2.5	147	3.4	1.5	e.17	.39
28	e.56	2.1	e1.2	4.6	1.8	.99	2.2	20	2.9	1.2	e.17	21
29	e.54	2.1	e1.1	3.8	---	1.0	150	9.3	95	1.5	e.17	1.4
30	e.52	2.2	e1.0	3.1	---	e.95	18	21	5.8	1.6	.53	2.8
31	9.2	---	5.5	3.3	---	e.90	---	53	---	4.4	.16	---
TOTAL	186.92	746.26	106.8	98.94	79.56	195.24	463.96	1433.81	264.35	147.13	82.89	123.21
MEAN	6.03	24.9	3.45	3.19	2.84	6.30	15.5	46.3	42.1	4.75	2.67	4.11
MAX	65	229	31	9.7	23	55	150	443	400	47	34	35
MIN	.48	.96	1.0	.90	.86	.90	.52	1.8	.95	.67	.16	.16
AC-FT	371	1480	212	196	158	387	920	2840	2510	292	164	244
CFM	.80	3.30	.46	.42	.38	.84	2.05	6.14	5.60	.63	.36	.55
IN.	.92	3.69	.53	.49	.39	.96	2.29	7.08	6.25	.73	.41	.61

c Estimated

ARKANSAS RIVER BASIN

125

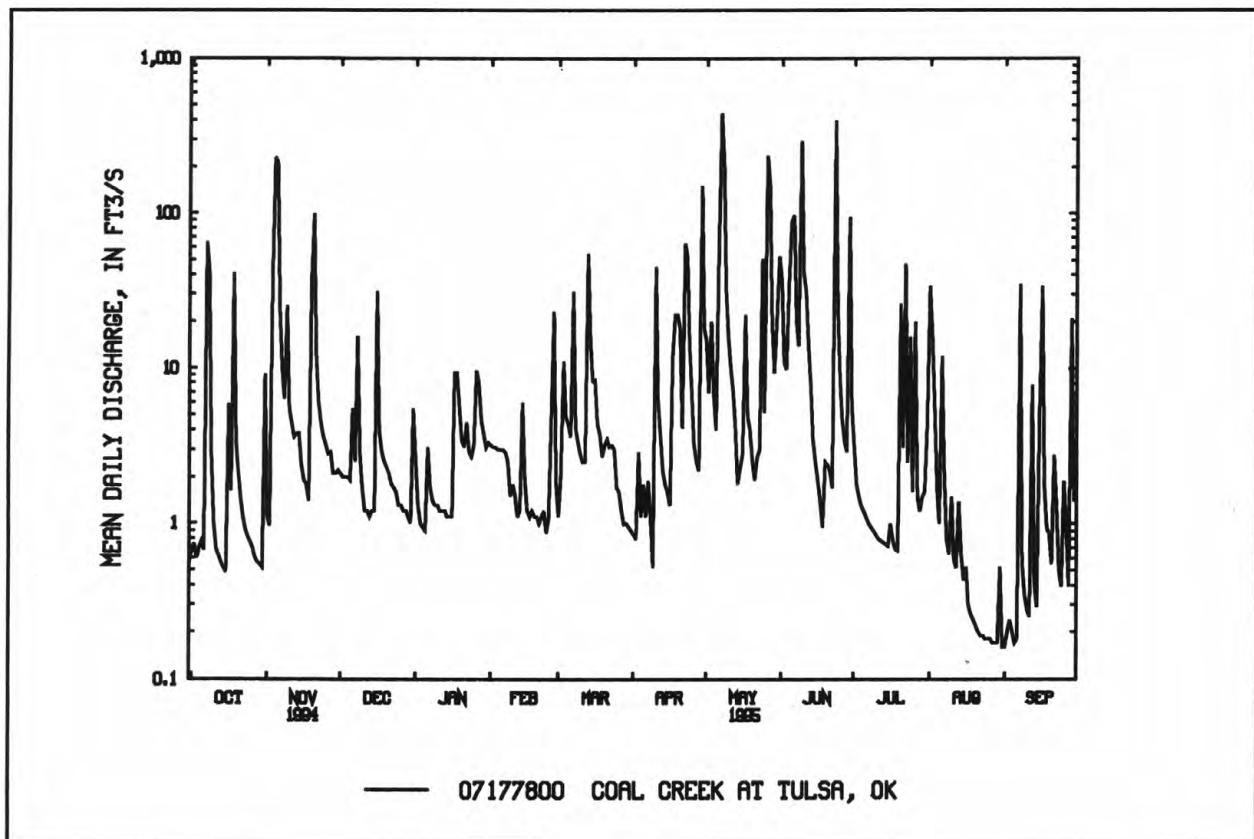
07177800 COAL CREEK AT TULSA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.90	9.92	8.30	5.84	6.23	10.5	11.0	17.1	12.0	6.20	4.72	5.46
MAX	8.17	24.9	20.3	9.60	12.2	33.2	16.8	46.3	42.1	24.8	18.7	7.85
(WY)	1992	1995	1993	1993	1990	1990	1990	1995	1995	1994	1989	1993
MIN	1.11	2.24	3.45	2.24	2.64	1.71	1.62	6.10	2.20	.29	.75	1.91
(WY)	1993	1990	1995	1992	1991	1992	1989	1994	1990	1991	1991	1992

SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1989 - 95

ANNUAL TOTAL	3380.88	4929.06	
ANNUAL MEAN	9.26	13.5	8.53
HIGHEST ANNUAL MEAN			13.5 1995
LOWEST ANNUAL MEAN			4.30 1991
HIGHEST DAILY MEAN	229	Nov 4 443	May 7 508 Aug 20 1989
LOWEST DAILY MEAN	.14	Jul 11 .16	Aug 31 .00 at times
ANNUAL SEVEN-DAY MINIMUM	.19	Jun 21 .18	Aug 23 .00 Jul 30 1991
INSTANTANEOUS PEAK FLOW		5190	Jun 23 5190 Jun 23 1995
INSTANTANEOUS PEAK STAGE		14.18	Jun 23 14.18 Jun 23 1995
ANNUAL RUNOFF (AC-FT)	6710	9780	6180
ANNUAL RUNOFF (CFSM)	1.23	1.79	1.13
ANNUAL RUNOFF (INCHES)	16.70	24.35	15.39
10 PERCENT EXCEEDS	20	28	17
50 PERCENT EXCEEDS	2.0	2.2	1.9
90 PERCENT EXCEEDS	.40	.54	.27



ARKANSAS RIVER BASIN
07178000 BIRD CREEK NEAR OWASSO, OK

LOCATION.--Lat 36°14'54", long 95°52'01" , 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 arca. 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)
Nov. 21	0500	12,200	17.97	May 8	0815	19,800	23.60
Mar. 14	1730	9,960	15.22	May 26	1730	12,800	18.77
Apr. 18	2000	12,300	18.07	June 5	0830	12,400	18.26
Apr. 23	1745	9,170	14.27	June 11	1200	17,400	22.58
Apr. 29	2130	11,300	16.91	July 5	0915	13,500	12.48

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	244	100	1860	125	129	1500	143	3460	8760	5160	228	131
2	249	97	391	127	133	1370	148	3560	7960	4880	960	131
3	246	109	162	122	129	1260	148	3510	4230	5670	1840	131
4	244	5380	152	122	119	1180	148	5470	8820	10700	1640	131
5	244	e9200	147	133	107	1250	139	4150	11500	12600	978	131
6	244	5710	140	130	106	1320	140	5100	11400	4810	771	131
7	452	1040	141	118	103	2020	144	9540	12200	4070	713	212
8	818	476	263	112	100	1950	139	19200	10000	3840	663	1210
9	532	1970	610	109	100	1500	135	18400	10800	3610	623	552
10	359	2090	627	109	99	904	810	9680	16200	3550	263	224
11	307	622	543	109	94	792	4750	3670	17100	3500	176	167
12	276	339	474	109	89	735	1610	3410	12100	3480	163	158
13	260	237	225	109	89	1930	1180	3230	2010	3460	155	154
14	251	207	172	109	89	9260	962	3120	913	3440	152	148
15	247	218	163	106	94	4570	296	3020	590	2600	146	162
16	244	296	496	106	94	3210	211	2960	1240	2050	144	257
17	254	286	398	113	94	3120	3740	2960	1480	2040	144	1920
18	583	202	255	107	94	2920	10100	4520	1410	2040	142	928
19	435	522	224	143	94	2810	6410	4000	1380	2020	138	353
20	277	8470	200	144	92	2660	3620	3420	1390	2040	138	286
21	433	11700	182	143	93	1570	2660	3370	1370	2020	138	235
22	318	3420	167	138	91	712	3510	3300	1280	2090	135	208
23	216	1850	159	132	91	596	8460	3240	2250	2060	134	192
24	208	e1750	140	128	86	239	6020	3590	2530	2070	129	186
25	172	1680	129	123	86	173	3200	4510	1900	2030	128	185
26	102	e2500	122	110	90	163	3550	7780	1560	1400	129	185
27	82	e2650	117	133	317	162	3360	11900	1440	1000	131	179
28	59	2650	118	127	1570	166	3460	7470	1370	326	131	486
29	62	2550	112	121	---	176	8370	3200	4510	179	131	319
30	80	2550	107	121	---	163	10400	3230	7690	157	131	212
31	92	---	107	124	---	148	---	4560	---	147	131	---
TOTAL	8590	70871	9103	3762	4472	50529	87963	172530	167383	99039	11625	9904
MEAN	277	2362	294	121	160	1630	2932	5565	5579	3195	375	330
MAX	818	11700	1860	144	1570	9260	10400	19200	17100	12600	1840	1920
MIN	59	97	107	106	86	148	135	2960	590	147	128	131
AC-FT	17040	140600	18060	7460	8870	100200	174500	342200	332000	196400	23060	19640

c Estimated

ARKANSAS RIVER BASIN

127

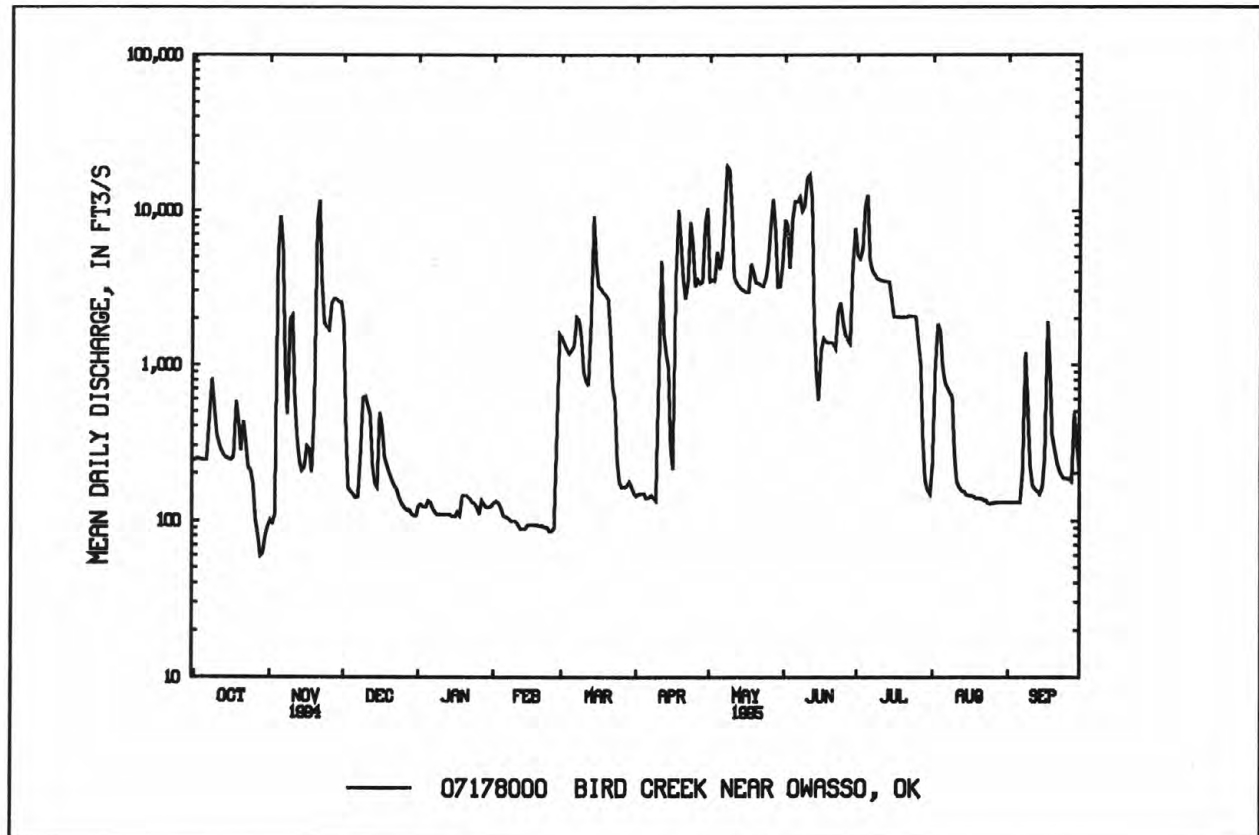
07178000 BIRD CREEK NEAR OWASSO, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	212	675	597	520	617	1610	2032	2394	2212	1000	290	276
MAX	307	2362	1561	2119	1393	5861	3589	5565	5579	3195	537	458
(WY)	1990	1995	1993	1993	1993	1990	1994	1995	1995	1995	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	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1990 - 95
ANNUAL TOTAL	333990	695771	
ANNUAL MEAN	915	1906	1037
HIGHEST ANNUAL MEAN			1906
LOWEST ANNUAL MEAN			306
HIGHEST DAILY MEAN	20000	Apr 13	19200
LOWEST DAILY MEAN	56	Jan 7	59
ANNUAL SEVEN-DAY MINIMUM	58	Jan 1	82
INSTANTANEOUS PEAK FLOW		19800	May 8
INSTANTANEOUS PEAK STAGE		23.60	May 8
ANNUAL RUNOFF (AC-FT)	662500	1380000	751000
10 PERCENT EXCEEDS	2230	5120	2950
50 PERCENT EXCEEDS	239	319	211
90 PERCENT EXCEEDS	95	109	91

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



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, 1.2 mg/L, Sept. 8, 1995.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1040 microsiemens, Feb. 27; minimum, 83 microsiemens, July 4.

pH: Maximum recorded (more than 20 percent missing record), 8.4 units, Oct. 1, 2; minimum recorded, 6.7 units, July 5.

WATER TEMPERATURE: Maximum, 32.0°C, Aug. 19, 20, 21; minimum, 1.5°C, Jan. 7.

DISSOLVED OXYGEN: Maximum, 13.7 mg/L, Jan. 7, 8, 9, 10; minimum, 1.2 mg/L, Sept. 8.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	292	264	272	546	145	457	286	274	278	607	594	597
2	273	268	271	584	474	538	330	291	314	637	601	621
3	281	268	272	474	412	444	354	330	340	622	617	620
4	285	268	272	465	161	287	384	354	370	709	620	664
5	300	271	276	196	116	163	412	384	405	707	615	659
6	281	271	273	308	116	222	451	411	435	615	588	602
7	303	253	272	298	285	290	462	450	455	590	571	581
8	358	187	275	302	285	293	541	459	482	589	574	582
9	695	347	429	375	160	274	949	492	597	589	583	585
10	372	313	341	242	163	200	493	397	432	623	601	614
11	318	295	306	295	242	275	538	363	384	637	619	629
12	317	294	300	321	122	296	365	361	363	641	625	636
13	322	194	280	350	321	337	373	364	370	644	640	656
14	305	275	283	375	350	367	442	384	410	658	645	649
15	300	194	273	394	371	383	492	442	474	675	658	669
16	318	278	293	414	391	404	549	398	479	678	667	674
17	322	288	296	392	380	386	680	547	602	672	663	668
18	337	204	282	391	383	387	536	466	488	670	654	663
19	381	206	324	434	389	406	481	460	467	696	657	674
20	498	318	404	421	140	244	503	480	495	769	665	711
21	399	316	360	166	139	147	538	518	525	778	701	741
22	398	290	335	208	154	189	530	521	527	889	797	851
23	329	313	322	250	204	232	527	521	525	871	791	814
24	327	311	317	264	244	252	543	526	535	721	688	701
25	327	178	302	268	262	265	557	543	548	689	656	664
26	331	317	324	269	261	264	571	557	562	656	623	642
27	376	331	352	274	268	270	577	571	575	635	609	622
28	402	376	387	270	268	269	587	578	580	673	592	614
29	423	402	412	272	269	270	583	573	577	673	637	650
30	472	423	429	278	272	275	627	582	597	665	649	659
31	467	146	422	---	---	---	627	607	616	699	665	678
MONTH	695	146	321	584	116	303	949	274	478	889	571	658

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

129

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	707	699	702	571	421	468	499	482	488	257	207	242
2	703	673	685	425	335	360	517	499	506	284	235	264
3	673	668	670	338	322	330	564	516	533	307	266	282
4	668	644	655	431	338	384	568	543	560	297	230	256
5	644	618	628	424	388	408	550	529	539	269	261	264
6	618	611	614	393	354	366	532	522	527	343	157	265
7	615	599	607	487	354	402	535	524	529	262	159	200
8	609	594	601	402	367	384	534	516	525	163	99	123
9	642	599	623	367	346	351	522	514	517	143	112	126
10	661	645	650	406	351	379	626	486	527	242	143	194
11	698	673	685	388	373	378	568	152	265	275	242	263
12	732	698	722	375	367	370	318	269	299	283	272	278
13	739	733	737	478	265	377	325	308	315	288	188	265
14	743	726	735	296	191	238	331	314	321	288	278	284
15	771	733	750	241	209	231	388	331	360	397	275	288
16	796	762	772	268	235	260	473	388	431	282	275	279
17	797	773	784	275	266	273	503	187	284	317	277	285
18	791	777	786	282	274	279	256	130	177	291	209	260
19	787	776	781	286	278	282	287	142	212	298	182	267
20	826	780	800	291	278	284	339	250	293	289	275	279
21	829	812	822	310	291	301	291	251	269	280	276	279
22	815	793	806	356	307	328	322	274	284	279	275	277
23	793	758	773	339	328	333	298	131	214	279	275	277
24	760	726	746	359	336	344	249	129	199	349	274	295
25	747	732	741	408	354	383	283	249	273	317	257	281
26	761	739	752	430	408	423	282	269	276	306	182	252
27	1040	672	755	469	430	447	285	278	282	228	167	192
28	992	504	638	475	466	472	287	277	282	209	163	193
29	---	---	---	480	472	477	328	179	251	253	188	235
30	---	---	---	487	471	476	209	156	187	260	252	255
31	---	---	---	493	483	488	---	---	---	271	225	253
MONTH	1040	504	715	571	191	364	626	129	357	397	99	250

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

131

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	24.0	22.5	23.5	15.5	14.0	15.0	11.5	11.0	11.5	6.5	5.5	6.0
2	24.0	23.0	23.5	14.5	14.0	14.5	11.5	11.0	11.5	5.5	5.0	5.0
3	24.0	23.0	23.5	16.5	14.5	15.5	11.5	11.5	11.5	5.0	3.5	4.5
4	24.5	23.0	24.0	18.0	16.0	17.0	11.5	11.5	11.5	3.5	2.5	3.0
5	24.0	23.5	23.5	16.5	12.0	14.0	11.5	11.0	11.0	2.5	2.0	2.5
6	24.0	23.0	23.5	13.0	12.0	12.5	11.0	11.0	11.0	2.5	2.0	2.0
7	23.0	21.0	22.5	13.5	12.5	13.0	11.0	9.5	10.5	2.5	1.5	2.0
8	21.0	19.5	20.0	14.0	13.5	13.5	9.5	8.5	9.5	3.0	2.0	2.5
9	20.0	19.0	19.5	15.5	14.0	14.5	8.5	6.5	7.5	3.5	2.0	2.5
10	19.0	18.0	18.5	14.5	13.0	14.0	6.5	6.0	6.5	4.5	3.0	3.5
11	19.0	18.0	18.5	13.0	12.0	12.5	7.5	6.5	7.0	5.5	4.0	4.5
12	19.0	18.0	18.5	12.5	12.0	12.0	7.5	6.5	7.0	6.5	5.0	5.5
13	18.5	18.0	18.5	13.0	12.0	12.5	7.0	7.0	7.0	6.5	6.0	6.5
14	19.0	18.5	18.5	13.0	12.5	13.0	7.0	6.5	6.5	7.5	6.0	6.5
15	18.5	18.5	18.5	13.5	12.5	13.0	6.5	6.0	6.5	7.0	6.0	6.5
16	19.0	18.5	18.5	13.0	12.0	12.5	7.5	6.5	7.0	7.5	6.5	6.5
17	19.0	18.5	19.0	12.0	12.0	12.0	7.5	6.5	7.0	8.0	7.0	7.5
18	20.0	19.0	19.5	12.0	11.5	12.0	7.0	6.5	6.5	7.0	6.5	7.0
19	20.0	19.5	19.5	12.0	11.5	12.0	7.0	6.0	6.5	7.0	6.0	6.5
20	20.0	19.5	19.5	11.5	11.0	11.5	7.5	6.5	7.0	6.0	5.0	6.0
21	20.5	19.5	20.0	11.0	10.5	10.5	7.5	7.0	7.5	6.0	5.0	5.5
22	20.5	19.5	20.0	11.0	9.5	10.0	7.5	7.0	7.5	6.0	5.0	5.5
23	20.0	19.0	19.5	10.5	8.5	10.0	7.0	6.5	6.5	6.0	4.5	5.0
24	19.5	18.5	19.0	11.0	10.5	10.5	6.5	5.5	6.0	6.0	4.5	5.0
25	18.5	17.5	18.0	12.0	11.0	11.5	5.5	5.0	5.5	6.5	5.0	5.5
26	17.5	16.0	16.5	12.5	12.0	12.5	5.5	5.0	5.0	6.0	5.5	5.5
27	16.5	14.5	15.5	13.0	12.5	13.0	6.0	4.5	5.0	8.0	6.0	7.0
28	16.0	14.5	15.0	12.5	12.0	12.0	6.0	5.5	5.5	7.5	7.0	7.5
29	15.5	14.0	14.5	12.0	11.5	11.5	6.5	6.0	6.0	7.5	6.5	7.0
30	16.0	14.5	15.0	11.5	11.5	11.5	7.0	6.0	6.5	7.0	6.0	6.5
31	15.5	14.5	15.0	---	---	---	7.0	6.5	7.0	7.0	5.5	6.5
MONTH	24.5	14.0	19.3	18.0	8.5	12.6	11.5	4.5	7.7	8.0	1.5	5.3

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	8.0	6.0	7.0	9.5	6.5	8.0	15.5	13.5	14.5	15.5	15.0	15.5
2	9.0	7.0	8.0	6.5	6.0	6.0	16.5	14.5	15.5	15.5	14.5	14.5
3	9.0	8.5	8.5	6.0	5.5	6.0	16.5	15.5	16.0	14.5	14.5	14.5
4	9.0	7.5	8.5	6.5	6.0	6.0	17.0	15.5	16.5	14.5	14.0	14.5
5	9.0	7.5	8.0	6.5	6.0	6.5	17.5	15.0	16.5	15.0	14.5	15.0
6	8.5	7.0	7.5	7.0	6.5	6.5	18.0	16.0	17.0	15.5	15.0	15.0
7	8.5	7.0	7.5	7.0	5.5	6.0	19.0	17.0	18.0	17.0	15.5	16.0
8	7.5	6.0	6.5	5.5	5.0	5.0	20.5	18.5	19.5	17.0	16.5	16.5
9	8.0	6.5	7.0	6.5	5.5	5.5	21.5	19.5	20.5	18.0	16.5	17.0
10	8.0	6.5	7.0	7.5	6.5	7.0	21.0	17.5	20.0	18.5	18.0	18.0
11	7.0	6.0	6.5	9.0	7.5	8.5	17.5	15.0	15.5	18.5	16.5	17.0
12	6.0	5.0	5.5	10.5	9.0	10.0	15.0	14.0	14.5	17.0	16.5	16.5
13	5.5	5.0	5.0	12.5	10.5	11.0	14.0	13.5	14.0	18.0	16.5	17.0
14	5.0	4.0	4.5	12.5	8.0	11.0	14.5	14.0	14.5	18.0	17.0	17.5
15	5.0	4.5	4.5	14.0	9.5	12.5	16.5	14.5	15.5	18.0	17.0	17.5
16	4.5	4.0	4.0	14.0	6.5	10.5	18.5	16.5	17.5	18.5	17.5	18.0
17	6.0	3.5	4.5	11.0	10.0	10.5	19.0	17.5	18.5	18.0	17.5	18.0
18	6.0	4.0	5.0	11.0	10.0	10.5	17.5	13.5	15.5	19.0	17.5	18.5
19	7.5	4.5	6.0	11.5	10.5	11.0	16.5	13.5	14.5	18.5	18.0	18.0
20	8.0	5.5	6.5	12.0	11.5	12.0	14.5	12.5	13.5	18.0	17.5	17.5
21	9.0	6.5	7.5	13.0	12.0	12.5	13.5	13.0	13.0	18.0	17.5	17.5
22	10.5	7.5	9.0	16.0	13.0	14.5	13.0	10.0	11.5	18.0	17.5	18.0
23	11.5	9.0	10.0	16.5	15.5	16.0	13.5	10.0	12.5	18.0	17.5	18.0
24	12.0	9.5	10.5	17.0	15.0	16.0	13.0	12.0	12.0	18.0	17.5	17.5
25	13.5	10.0	11.5	17.0	15.5	16.5	14.5	13.0	14.0	18.0	17.5	18.0
26	12.5	11.5	12.0	18.0	16.5	17.0	15.0	14.5	15.0	18.0	17.0	17.5
27	13.0	12.0	12.5	17.5	15.5	16.5	15.0	14.5	15.0	19.0	18.0	18.5
28	12.5	9.5	11.0	16.5	15.0	15.5	15.0	14.0	14.5	20.5	19.0	20.0
29	---	---	---	15.5	14.0	14.5	15.0	14.0	14.5	20.5	18.5	19.5
30	---	---	---	14.5	13.0	14.0	15.5	14.5	15.0	18.5	18.0	18.0
31	---	---	---	15.0	13.0	14.0	---	---	---	19.0	17.5	18.5
MONTH	13.5	3.5	7.6	18.0	5.0	10.9	21.5	10.0	15.5	20.5	14.0	17.2

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

133

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	19.5	19.0	19.0	21.5	20.5	21.0	29.0	28.0	28.5	30.0	28.5	29.0
2	21.0	19.5	20.0	21.0	20.0	20.5	28.0	26.5	27.0	30.0	28.0	29.0
3	21.5	19.5	20.0	21.5	20.0	20.5	27.0	26.0	26.5	29.5	28.5	29.0
4	21.0	18.5	20.5	22.0	20.5	21.0	26.5	26.0	26.5	30.0	28.0	29.0
5	21.5	20.0	21.0	23.5	22.0	23.0	26.0	25.0	25.5	29.5	27.5	28.5
6	21.5	19.0	21.0	23.5	21.5	22.5	25.5	25.0	25.0	29.0	27.5	28.0
7	22.0	18.5	20.5	22.0	21.0	21.5	26.0	24.5	25.5	28.0	26.0	27.0
8	23.0	20.5	22.0	22.0	21.0	21.5	26.5	25.5	26.0	26.0	24.5	25.0
9	22.5	16.5	19.5	22.0	21.0	21.5	26.5	25.5	26.0	24.5	23.0	23.5
10	20.5	20.0	20.5	22.0	21.0	21.5	27.5	25.5	26.5	23.5	22.5	23.0
11	20.0	19.5	20.0	22.0	21.0	21.5	28.5	26.0	27.5	23.0	22.5	22.5
12	21.5	19.5	20.5	22.0	21.5	21.5	31.0	28.0	29.5	24.0	22.5	23.0
13	22.0	21.0	21.5	22.0	21.5	21.5	31.5	29.5	30.0	25.0	23.0	23.5
14	23.5	22.0	22.5	22.0	21.5	22.0	31.5	29.5	30.5	25.5	23.5	24.5
15	24.5	23.0	23.5	23.0	22.0	22.5	31.5	30.0	30.5	25.0	24.5	24.5
16	24.5	21.0	23.0	22.5	22.0	22.5	31.5	29.5	30.5	24.5	23.5	24.0
17	22.0	21.0	21.5	22.5	22.0	22.5	---	---	---	23.5	23.0	23.5
18	22.0	21.0	21.5	22.5	22.0	22.5	---	---	---	23.5	23.0	23.0
19	21.5	21.0	21.0	22.5	21.5	22.0	32.0	25.0	27.0	23.5	23.0	23.5
20	21.5	21.0	21.0	22.5	22.0	22.0	32.0	30.0	31.0	23.0	21.5	22.5
21	22.0	21.0	21.5	22.5	22.0	22.5	32.0	29.5	30.5	21.5	20.0	21.0
22	22.0	21.5	22.0	23.0	22.5	23.0	31.5	29.5	30.5	20.0	18.0	19.0
23	22.5	21.5	22.0	23.0	22.5	23.0	31.0	29.0	30.0	18.5	17.5	18.0
24	23.0	21.5	22.0	23.0	22.5	23.0	30.5	28.0	29.5	18.0	17.5	17.5
25	23.0	22.0	22.0	23.0	22.5	23.0	30.0	15.0	27.5	18.0	17.5	17.5
26	22.0	21.5	22.0	24.5	23.0	23.5	30.5	15.0	25.0	18.5	17.5	18.0
27	22.5	21.5	22.0	24.5	23.5	24.0	30.5	27.5	29.0	19.0	17.5	18.5
28	22.5	22.0	22.0	26.0	23.5	24.5	31.0	28.0	29.5	20.0	18.5	19.0
29	22.0	20.0	21.0	28.0	25.0	26.5	30.5	28.5	29.5	21.0	20.0	20.5
30	22.0	21.5	22.0	30.5	27.5	29.0	30.5	28.5	29.5	21.5	21.0	21.0
31	---	---	---	30.0	28.5	29.0	30.5	28.5	29.5	---	---	---
MONTH	24.5	16.5	21.3	30.5	20.0	22.8	---	---	---	30.0	17.5	23.2

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

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

135

[illegible]

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

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.4	7.0	7.2	7.4	7.2	7.4	7.4	7.3	7.3	7.4	7.2	7.3
2	7.4	7.1	7.2	7.5	7.4	7.4	7.3	7.0	7.1	7.4	7.3	7.3
3	7.4	7.1	7.4	7.5	7.1	7.5	7.3	7.1	7.2	7.4	7.2	7.3
4	7.3	7.1	7.2	7.2	7.0	7.1	7.4	7.3	7.4	7.5	7.3	7.4
5	7.3	7.1	7.2	7.2	6.7	7.0	7.4	7.3	7.3	7.5	7.3	7.4
6	7.2	6.9	7.1	7.6	7.2	7.5	7.3	7.3	7.3	7.5	7.4	7.4
7	7.2	6.9	7.1	---	---	---	7.4	7.3	7.4	7.4	7.3	7.3
8	7.0	6.9	6.9	---	---	---	7.3	7.2	7.3	7.3	7.0	7.1
9	7.2	7.0	7.1	---	---	---	7.2	7.1	7.2	7.1	7.0	7.1
10	7.0	6.8	6.9	---	---	---	7.3	7.1	7.2	7.1	7.0	7.1
11	7.0	6.9	6.9	7.3	7.2	7.2	7.2	7.1	7.2	7.1	7.0	7.0
12	7.0	6.9	6.9	7.3	7.1	7.2	7.4	7.2	7.3	7.3	7.0	7.1
13	---	---	---	7.2	7.1	7.1	7.4	7.2	7.3	7.2	7.0	7.0
14	---	---	---	7.2	7.1	7.1	7.5	7.3	7.3	7.1	7.0	7.0
15	---	---	---	7.2	7.1	7.2	7.5	7.3	7.4	7.3	7.0	7.1
16	---	---	---	7.3	7.2	7.2	7.6	7.3	7.4	---	---	---
17	---	---	---	7.5	7.2	7.2	7.7	7.4	7.6	---	---	---
18	---	---	---	7.3	7.2	7.2	7.5	7.2	7.4	---	---	---
19	---	---	---	7.3	7.2	7.2	7.5	7.3	7.3	---	---	---
20	---	---	---	7.7	7.3	7.5	7.5	7.3	7.4	---	---	---
21	7.4	7.0	7.3	7.4	7.2	7.2	7.5	7.2	7.3	---	---	---
22	---	---	---	7.6	7.2	7.5	7.5	7.3	7.3	---	---	---
23	---	---	---	7.6	7.2	7.3	7.5	7.3	7.4	---	---	---
24	7.7	7.2	7.5	7.6	7.4	7.6	7.6	7.3	7.4	---	---	---
25	---	---	---	7.6	7.2	7.3	7.6	7.3	7.4	---	---	---
26	---	---	---	7.6	7.3	7.5	7.5	7.2	7.3	---	---	---
27	7.5	7.1	7.4	7.3	7.2	7.3	7.4	7.1	7.2	7.6	7.4	7.5
28	7.5	7.3	7.4	7.2	7.2	7.2	7.6	7.1	7.3	7.8	7.3	7.6
29	7.4	7.0	7.3	7.3	7.2	7.2	7.5	7.3	7.4	---	---	---
30	7.1	6.9	7.0	7.4	7.3	7.4	7.4	7.2	7.3	---	---	---
31	---	---	---	7.4	7.3	7.3	7.4	7.2	7.3	---	---	---
MAX	---	---	---	---	---	---	7.7	7.4	7.6	---	---	---
MIN	---	---	---	---	---	---	7.2	7.0	7.1	---	---	---

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

137

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	9.7	8.1	8.7	8.7	6.6	7.9	---	---	---	12.3	11.4	11.8
2	9.6	8.0	8.7	8.4	7.6	7.9	11.3	9.9	10.5	12.6	11.6	12.0
3	8.8	7.7	8.2	8.6	7.5	7.9	9.9	9.2	9.6	13.0	11.9	12.4
4	8.8	7.5	7.9	7.7	6.0	6.9	9.7	9.2	9.4	13.4	12.4	12.8
5	7.9	7.3	7.5	8.9	6.4	7.8	9.6	9.4	9.5	13.4	12.7	13.0
6	8.4	7.3	7.8	8.8	8.4	8.6	9.5	9.3	9.4	13.4	13.0	13.2
7	7.5	6.0	7.1	9.3	8.8	9.1	9.8	9.4	9.6	13.7	13.0	13.3
8	7.3	5.4	6.3	9.3	8.9	9.1	10.3	9.3	9.8	13.7	12.9	13.2
9	7.4	6.9	7.1	8.9	7.0	8.2	11.0	9.7	10.6	13.7	12.9	13.3
10	7.4	6.9	7.1	8.9	7.7	8.3	11.5	11.0	11.3	13.7	12.9	13.3
11	8.0	7.4	7.6	9.1	8.9	9.0	11.4	11.1	11.2	13.5	12.6	13.0
12	8.1	7.4	7.6	9.1	8.9	9.0	11.4	11.3	11.3	12.6	12.4	12.5
13	7.9	7.1	7.5	8.9	8.6	8.8	11.4	11.3	11.3	12.4	11.3	12.0
14	8.0	7.2	7.5	8.6	8.2	8.4	11.3	11.2	11.2	12.7	11.2	12.0
15	7.5	7.0	7.3	8.3	8.1	8.2	11.4	11.3	11.3	13.2	11.8	12.0
16	7.4	7.0	7.2	8.7	8.2	8.6	11.3	10.3	11.0	13.4	11.9	12.5
17	7.3	6.9	7.1	8.9	8.7	8.8	11.0	10.9	11.0	13.3	11.9	12.4
18	7.3	6.2	6.8	8.9	8.6	8.8	11.0	10.9	11.0	12.6	11.9	12.3
19	7.2	6.1	6.5	8.7	8.4	8.5	11.0	10.9	11.0	12.4	11.5	12.0
20	6.5	6.1	6.3	9.0	8.1	8.7	11.1	10.9	11.0	12.1	11.7	12.0
21	6.5	6.1	6.3	8.5	8.0	8.2	11.2	10.9	11.0	12.5	11.8	12.2
22	6.4	6.1	6.2	9.3	8.0	8.6	11.6	11.2	11.3	12.6	11.8	12.2
23	6.5	5.8	6.1	---	---	---	11.5	11.1	11.3	12.3	11.4	12.0
24	6.6	5.8	6.1	---	---	---	11.7	11.2	11.5	12.7	11.7	12.1
25	---	---	---	---	---	---	11.9	11.3	11.5	12.8	11.8	12.3
26	---	---	---	---	---	---	12.2	11.5	11.8	12.2	11.7	12.0
27	8.2	5.9	6.8	---	---	---	12.4	11.7	12.0	11.8	11.1	11.5
28	8.2	6.8	7.3	---	---	---	12.2	11.7	12.0	11.1	10.8	11.0
29	8.2	7.2	7.5	---	---	---	12.4	11.7	12.0	11.2	10.7	10.9
30	8.1	7.2	7.6	---	---	---	12.5	11.6	12.0	11.8	10.7	11.2
31	8.3	6.6	7.6	---	---	---	11.8	11.4	11.6	12.0	11.1	11.5
MONTH	---	---	---	---	---	---	---	---	---	13.7	10.7	12.3

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

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	12.1	11.4	11.6	11.4	10.1	10.9	11.5	10.0	10.6	8.8	7.5	8.1
2	11.6	10.6	11.2	11.9	11.4	11.7	11.2	9.7	10.3	9.5	8.7	9.2
3	11.2	10.1	10.8	12.1	11.8	12.0	10.9	8.3	9.9	9.8	9.5	9.7
4	11.5	10.2	10.7	12.0	11.8	11.9	11.1	9.1	10.0	10.0	9.3	9.7
5	11.8	10.3	10.9	11.8	11.7	11.7	11.1	9.2	10.0	10.4	9.8	10.2
6	12.0	10.6	11.1	11.8	11.7	11.7	11.1	9.1	9.9	10.2	7.7	9.6
7	12.3	10.7	11.3	12.1	11.5	11.7	10.1	8.9	9.5	9.4	7.9	8.6
8	12.3	10.9	11.5	12.5	12.0	12.2	---	---	---	8.1	7.3	7.7
9	12.5	11.0	11.6	12.5	12.3	12.4	---	---	---	7.6	6.2	6.9
10	12.7	11.1	12.0	12.3	11.8	12.1	---	---	---	6.6	5.6	6.0
11	12.6	11.2	12.0	11.8	11.4	11.5	---	---	---	9.6	6.6	8.8
12	12.4	11.2	11.6	11.4	10.6	11.0	---	---	---	9.7	9.4	9.6
13	12.6	11.1	12.0	10.7	9.0	10.1	---	---	---	9.8	9.5	9.6
14	12.3	11.3	12.0	9.3	8.7	9.0	---	---	---	9.8	9.5	9.7
15	12.7	11.4	12.0	9.3	8.7	9.0	---	---	---	10.2	9.7	9.9
16	12.7	11.6	12.1	10.8	9.1	10.6	---	---	---	10.0	9.5	9.7
17	12.9	11.7	12.3	10.7	10.5	10.6	---	---	---	9.5	8.8	9.2
18	13.1	11.9	12.4	10.5	10.2	10.4	7.9	7.5	7.8	9.5	7.2	8.4
19	13.3	12.1	12.6	---	---	---	8.1	7.1	7.5	8.9	7.5	8.3
20	13.0	11.8	12.3	---	---	---	8.8	8.1	8.5	9.4	8.9	9.3
21	12.6	11.4	11.8	---	---	---	9.2	8.8	8.9	9.4	9.3	9.4
22	12.4	10.9	11.5	10.4	9.6	10.0	10.2	9.2	9.9	9.4	9.3	9.4
23	11.8	10.3	10.9	9.8	9.5	9.7	10.2	9.4	9.7	9.4	9.3	9.3
24	11.9	9.8	10.6	10.0	9.5	9.8	9.8	7.6	9.6	9.3	8.5	9.0
25	11.5	9.3	10.2	10.0	9.2	9.5	9.9	9.6	9.8	9.1	8.7	9.0
26	10.6	8.9	9.6	10.7	8.9	9.5	10.2	9.9	10.1	9.3	8.1	8.6
27	9.5	7.8	8.7	11.4	9.1	10.1	10.3	10.1	10.2	7.9	7.3	7.6
28	10.2	7.7	9.3	10.7	9.6	10.3	10.6	10.3	10.5	7.3	6.9	7.0
29	---	---	---	11.1	9.6	10.2	10.4	8.1	9.2	8.6	7.0	8.0
30	---	---	---	11.4	10.0	10.8	8.1	7.4	7.7	9.1	8.6	9.0
31	---	---	---	11.5	10.0	10.8	---	---	---	9.3	8.2	8.9
MONTH	13.3	7.7	11.3	---	---	---	---	---	---	10.4	5.6	8.8

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

139

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.4	7.5	8.0	8.1	6.6	7.5	6.8	6.1	6.3	6.5	5.4	6.0
2	---	---	---	8.2	8.1	8.2	6.2	4.8	5.6	6.5	5.4	5.8
3	---	---	---	8.2	6.6	7.7	6.6	5.8	6.2	6.3	5.4	5.7
4	---	---	---	6.6	5.7	6.1	6.6	6.4	6.5	6.4	5.3	5.8
5	---	---	---	5.7	4.6	5.0	6.8	6.5	6.6	6.7	5.5	6.0
6	---	---	---	8.1	4.6	6.8	6.9	6.8	6.8	6.8	5.7	6.1
7	---	---	---	8.6	8.1	8.4	6.9	6.8	6.9	6.3	5.5	5.8
8	---	---	---	8.7	8.4	8.5	6.9	6.8	6.8	6.0	1.2	4.6
9	---	---	---	9.1	8.4	8.6	6.9	6.7	6.8	5.8	4.8	5.4
10	---	---	---	8.8	8.5	8.6	6.9	6.4	6.7	6.0	5.8	5.9
11	---	---	---	8.7	8.4	8.6	6.5	6.0	6.3	6.1	5.9	6.0
12	5.9	5.5	5.7	8.4	8.4	8.4	6.6	5.8	6.1	6.1	6.0	6.0
13	7.4	5.9	6.8	8.4	8.4	8.4	6.3	5.5	5.8	6.0	5.8	5.9
14	7.4	7.0	7.3	8.5	8.4	8.4	6.4	5.4	5.8	6.1	5.8	5.9
15	7.1	6.7	7.0	8.4	7.6	8.0	6.3	5.5	5.8	6.2	5.8	6.0
16	8.6	6.6	7.6	8.1	8.0	8.0	6.1	5.5	5.8	6.2	5.8	6.0
17	8.6	8.5	8.5	8.1	7.8	8.0	6.2	5.3	5.7	6.5	4.8	5.5
18	8.6	8.5	8.5	8.1	8.0	8.1	5.9	5.1	5.6	6.3	5.7	6.1
19	8.5	8.4	8.5	8.2	8.1	8.1	6.1	5.0	5.4	6.3	6.3	6.3
20	8.5	8.4	8.4	8.1	7.7	8.0	6.1	5.0	5.4	6.7	6.3	6.5
21	8.5	8.3	8.4	8.1	7.9	8.0	6.1	5.0	5.4	7.1	6.7	6.9
22	8.6	8.3	8.4	8.1	7.0	7.9	6.1	5.0	5.2	7.8	7.1	7.5
23	8.5	7.8	8.3	8.1	8.0	8.0	6.1	5.1	5.4	8.2	7.8	8.0
24	7.9	6.9	7.4	8.0	7.8	8.0	6.6	5.3	5.8	8.3	8.0	8.1
25	7.7	7.3	7.5	8.0	7.9	8.0	6.8	5.5	6.0	8.2	8.0	8.1
26	7.9	7.6	7.8	7.9	6.9	7.5	6.6	5.5	6.0	8.4	7.9	8.2
27	8.0	7.9	8.0	7.5	7.3	7.4	6.7	5.5	6.0	8.3	8.0	8.1
28	8.0	7.9	8.0	7.5	6.7	7.0	6.8	5.5	6.0	8.0	6.9	7.6
29	8.3	5.9	7.5	6.7	6.1	6.4	6.6	5.4	5.9	7.3	7.0	7.1
30	6.5	5.8	6.1	6.9	6.0	6.4	6.5	5.3	5.8	7.3	7.0	7.1
31	---	---	---	6.8	6.0	6.3	6.4	5.3	5.7	---	---	---
MONTH	---	---	---	9.1	4.6	7.7	6.9	4.8	6.0	8.4	1.2	6.5

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.--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)
Nov. 5	1430	5,420	17.07*	May 26	1445	6,700	18.26*
Nov. 20	0900	3,630	13.26*	June 9	1645	8,370	20.49*
Apr. 29	1000	5,540	16.49*	June 23	1945	6,730	17.48
May 7	2115	8,800	20.73	June 29	1215	3,420	13.01*

*in backwater, discharge from peak at auxiliary gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	27	24	43	20	22	11	118	497	38	68	2.2
2	3.8	17	24	16	18	19	9.9	60	110	23	66	2.2
3	3.3	40	22	14	16	71	10	184	172	42	87	2.1
4	3.5	1810	22	12	15	68	17	97	310	22	9.7	1.6
5	3.1	2660	20	11	14	63	12	49	1200	29	6.0	1.4
6	3.5	474	21	20	14	36	10	768	880	26	62	1.5
7	563	96	42	18	13	391	8.1	2200	173	13	29	260
8	699	67	84	14	12	62	9.5	4070	156	11	9.1	14
9	55	339	45	13	12	42	7.1	e200	2930	11	5.5	5.5
10	31	83	28	13	12	34	361	127	e200	9.6	4.8	3.7
11	24	58	21	13	10	28	156	39	e300	7.0	5.8	3.0
12	18	48	20	15	8.0	25	29	30	e100	5.9	5.2	90
13	16	43	19	15	9.0	470	19	26	73	5.6	10	13
14	15	59	18	17	27	278	15	19	50	5.8	8.9	4.9
15	44	45	19	12	29	91	12	16	38	5.5	7.0	12
16	31	38	324	11	17	47	10	15	31	9.7	5.7	321
17	24	36	51	87	13	37	52	220	25	7.0	3.6	29
18	854	34	31	53	15	31	188	48	23	6.0	2.6	8.3
19	166	447	25	119	16	27	91	18	19	5.5	2.3	7.5
20	215	1770	22	58	15	24	286	14	16	151	5.6	9.7
21	62	250	21	30	12	22	35	12	15	21	4.1	8.4
22	69	105	19	35	11	21	513	10	14	411	2.7	25
23	34	57	18	33	11	17	947	8.5	1460	30	3.3	7.1
24	28	49	17	24	10	16	127	479	377	147	2.5	3.8
25	25	41	16	22	9.9	15	126	42	43	23	1.8	5.0
26	21	38	15	50	8.9	15	50	1980	26	276	1.5	15
27	19	37	14	86	497	17	43	924	19	21	1.8	5.5
28	18	31	14	32	38	14	31	130	15	10	1.8	318
29	17	28	14	28	---	12	1850	41	1230	6.8	2.2	34
30	17	26	15	29	---	11	203	119	77	5.2	2.7	54
31	48	---	25	22	---	12	---	301	---	4.6	2.5	---
TOTAL	3135.3	8853	1070	965	902.8	2038	5238.6	12364.5	10579	1389.2	430.7	1268.4
MEAN	101	295	34.5	31.1	32.2	65.7	175	399	353	44.8	13.9	42.3
MAX	854	2660	324	119	497	470	1850	4070	2930	411	87	321
MIN	3.1	17	14	11	8.0	11	7.1	8.5	14	4.6	1.5	1.4
AC-FT	6220	17560	2120	1910	1790	4040	10390	24520	20980	2760	854	2520
CFSM	1.69	4.93	.58	.52	.54	1.10	2.92	6.66	5.89	.75	.23	.71
IN.	1.95	5.50	.66	.60	.56	1.27	3.25	7.68	6.57	.86	.27	.79

c Estimated

ARKANSAS RIVER BASIN

141

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

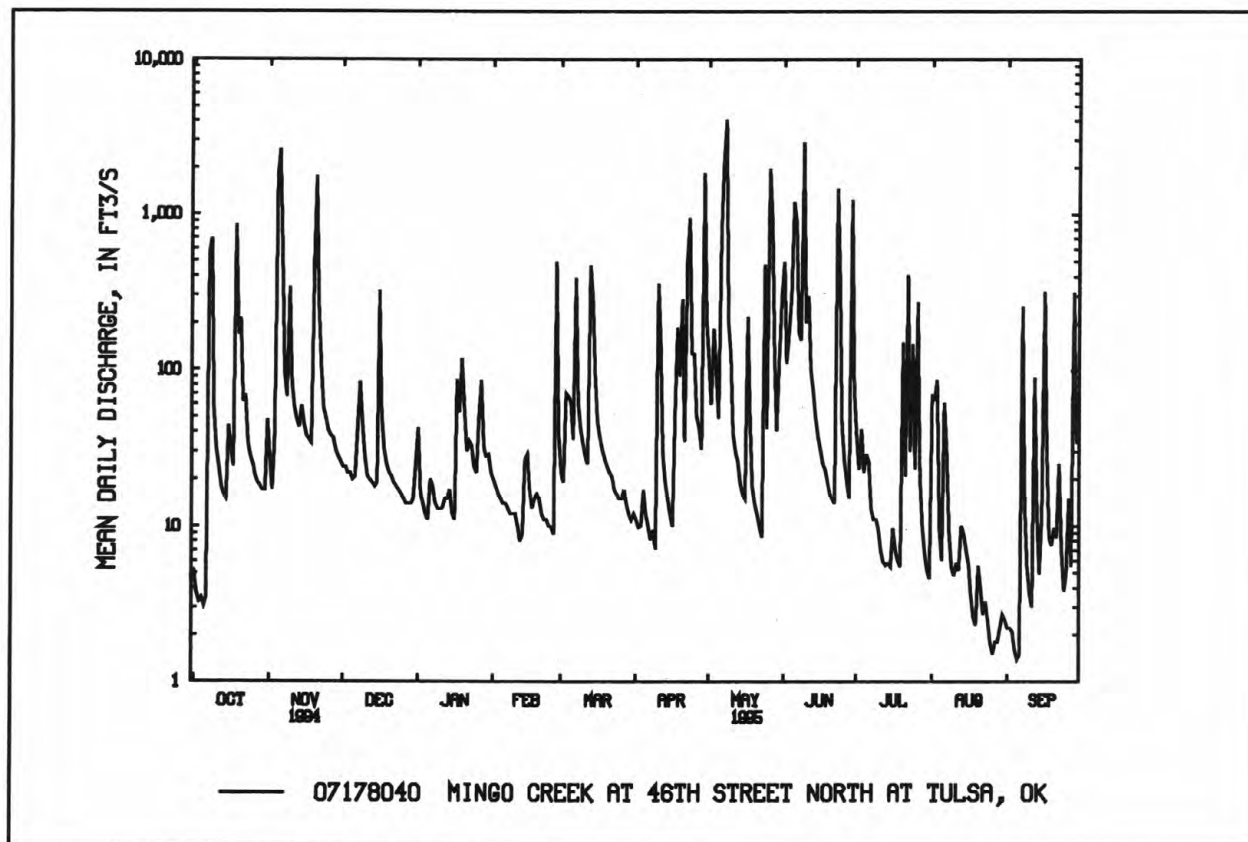
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	38.3	102	109	58.6	60.0	126	137	163	111	52.5	45.2	72.4
MAX	101	295	302	101	128	288	280	399	353	195	166	134
(WY)	1995	1995	1988	1993	1989	1988	1994	1995	1995	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	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1988 - 95
ANNUAL TOTAL	41885.4	48234.5	
ANNUAL MEAN	115	132	89.6
HIGHEST ANNUAL MEAN			132
LOWEST ANNUAL MEAN			43.4
HIGHEST DAILY MEAN	2660	Nov 5	4070
LOWEST DAILY MEAN	2.2	Jul 6	1.4
ANNUAL SEVEN-DAY MINIMUM	3.4	Jun 25	1.9
INSTANTANEOUS PEAK FLOW			8800
INSTANTANEOUS PEAK STAGE		20.73	May 7
ANNUAL RUNOFF (AC-FT)	83080	95670	64890
ANNUAL RUNOFF (CFSM)	1.92	2.21	1.50
ANNUAL RUNOFF (INCHES)	26.01	29.96	20.32
10 PERCENT EXCEEDS	286	292	184
50 PERCENT EXCEEDS	21	22	15
90 PERCENT EXCEEDS	4.8	5.5	2.7

^aIn backwater, discharge computed from peak at auxiliary gage.

^bFrom 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, 878 microsiemens, Jan. 10; minimum, 101 microsiemens, June 23.

pH: Maximum recorded (more than 20 percent missing record), 8.4 units, Oct. 7; minimum recorded, 7.1 units, July 21, Sept. 13.

WATER TEMPERATURE: Maximum, 32.5°C, July 13; minimum, 0.5°C, Jan. 7.

DISSOLVED OXYGEN: Maximum, 14.5 mg/L, Jan. 16; minimum, 2.4 mg/L, Sept. 8.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	520	467	502	604	582	590	706	696	702	714	614	672
2	523	470	515	601	593	597	711	700	704	614	560	581
3	529	475	519	601	299	550	---	---	---	570	560	565
4	529	525	528	466	143	252	---	---	---	592	570	577
5	531	513	528	256	108	183	756	718	725	616	592	608
6	535	481	511	424	233	347	733	713	723	651	608	628
7	536	102	390	499	424	462	---	---	---	717	651	675
8	306	126	204	635	499	562	---	---	---	862	717	806
9	437	306	365	659	320	430	---	---	---	872	859	863
10	442	396	424	548	426	490	---	---	---	878	844	864
11	488	436	457	600	553	580	---	---	---	844	836	840
12	544	488	515	618	593	608	---	---	---	842	776	829
13	589	544	570	651	618	633	---	---	---	822	774	801
14	614	589	600	662	648	655	---	---	---	774	723	748
15	---	---	---	657	623	645	672	659	660	717	682	695
16	---	---	---	670	657	666	787	235	403	732	699	722
17	---	---	---	683	665	670	495	398	444	739	463	564
18	---	---	---	700	683	690	568	498	534	511	447	473
19	---	---	---	703	229	500	623	570	600	572	405	476
20	---	---	---	330	155	242	655	623	640	603	552	575
21	---	---	---	506	330	428	668	649	658	624	603	619
22	---	---	---	589	506	553	666	648	660	635	618	623
23	---	---	---	629	592	615	684	664	675	798	627	725
24	592	582	587	657	621	630	683	677	679	839	798	825
25	632	595	609	675	652	665	679	671	673	830	798	814
26	656	632	640	691	675	684	685	679	681	798	645	761
27	667	656	660	698	691	695	688	682	685	791	500	570
28	692	665	670	711	702	706	691	687	689	591	561	576
29	699	692	694	699	694	697	702	685	692	639	591	616
30	715	699	708	704	699	702	709	699	702	680	639	664
31	719	604	679	---	---	---	731	703	711	682	662	673
MONTH	---	---	---	711	108	558	---	---	---	878	405	678

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

143

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	682	663	673	523	455	491	715	709	711	561	526	541
2	680	665	672	590	523	553	719	713	716	609	545	588
3	698	665	674	771	597	634	729	719	726	633	357	538
4	715	695	701	---	---	---	726	718	720	517	385	456
5	717	714	715	---	---	---	721	713	717	590	517	559
6	725	714	719	876	832	853	756	721	743	618	167	432
7	715	694	701	832	381	505	761	750	757	434	111	304
8	708	699	704	669	572	620	750	740	745	362	135	221
9	743	705	723	791	594	640	740	728	735	524	362	447
10	719	714	717	759	730	746	728	250	552	598	524	570
11	721	705	716	764	739	755	441	254	359	623	597	613
12	713	705	710	748	739	744	572	441	508	642	623	634
13	726	710	718	746	345	528	639	572	606	652	631	641
14	754	711	729	562	350	461	666	639	658	644	623	636
15	778	741	760	647	146	580	670	665	667	639	625	631
16	775	711	739	697	144	651	687	669	680	645	632	640
17	717	708	712	721	697	711	694	433	667	665	281	493
18	715	702	709	719	699	710	462	264	333	478	338	413
19	717	698	712	711	689	699	454	275	408	548	478	516
20	698	644	672	709	689	697	458	239	342	593	548	573
21	644	623	630	707	694	699	577	458	522	612	593	604
22	655	626	642	705	693	699	610	183	467	634	605	615
23	672	655	668	709	702	706	413	193	293	654	631	637
24	687	672	683	755	709	734	567	413	490	701	186	337
25	696	685	693	738	696	713	567	424	477	460	343	414
26	710	695	702	699	693	696	629	507	579	480	115	295
27	726	204	308	714	699	676	653	627	642	364	183	272
28	455	373	419	715	701	706	659	640	647	500	364	442
29	---	---	---	722	715	719	659	128	314	558	500	535
30	---	---	---	722	711	717	527	336	444	596	320	535
31	---	---	---	721	715	718	---	---	---	426	226	344
MONTH	778	204	676	---	---	---	761	128	574	701	111	499

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

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	389	244	322	576	467	531	470	333	371	576	571	573
2	513	379	454	640	576	608	340	232	265	574	565	567
3	538	458	505	654	363	598	270	207	224	569	564	565
4	468	271	369	677	574	648	260	230	246	573	566	567
5	378	159	266	594	574	585	271	260	265	580	573	577
6	398	157	295	605	596	599	333	199	274	580	571	574
7	521	398	465	616	605	611	346	199	280	585	134	319
8	572	478	548	629	616	621	372	346	365	307	263	287
9	478	107	219	648	629	640	388	370	382	335	307	323
10	467	188	354	656	639	650	--	--	--	355	335	345
11	479	240	349	639	625	633	403	391	396	364	355	360
12	518	352	441	625	553	604	409	403	407	561	291	365
13	580	518	555	553	532	539	429	408	414	300	290	294
14	600	580	591	555	543	548	462	429	450	312	300	305
15	620	590	606	567	551	556	515	462	496	387	311	321
16	610	597	603	578	552	566	610	515	556	392	153	242
17	609	598	602	585	554	571	610	597	602	262	196	235
18	609	599	604	602	585	591	599	589	593	289	262	277
19	614	604	608	607	596	600	589	569	575	468	289	310
20	616	611	613	607	247	415	571	501	537	335	301	318
21	618	613	615	305	254	283	501	491	494	405	335	354
22	625	618	622	307	118	206	499	493	495	485	368	428
23	633	101	457	312	223	275	503	497	499	511	485	501
24	417	154	313	320	203	251	507	498	501	511	489	503
25	520	417	476	319	232	277	513	507	510	490	471	484
26	587	520	561	307	138	193	518	513	516	474	426	439
27	611	587	600	303	233	276	528	518	524	449	432	441
28	631	609	617	321	303	314	544	528	539	455	142	312
29	632	108	312	327	318	323	566	544	552	542	375	472
30	467	257	378	331	323	327	576	566	572	584	303	548
31	---	---	---	388	329	348	576	572	573	---	---	---
MONTH	633	101	477	677	118	477	610	199	447	585	134	407

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

145

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

147

[illegible]

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	24.0	22.0	23.0	14.5	13.0	14.0	8.5	7.0	7.5	7.0	4.5	5.5
2	24.0	22.0	23.0	15.5	13.0	14.5	10.0	7.5	8.5	4.5	3.0	4.0
3	24.5	23.0	23.5	19.5	15.5	17.0	11.0	10.0	10.5	3.5	2.5	3.0
4	24.5	23.0	24.0	20.5	16.5	19.0	12.5	11.0	11.5	2.5	1.5	2.0
5	24.0	23.0	23.5	16.5	11.5	13.0	12.0	11.0	11.5	2.0	1.0	1.5
6	24.0	22.5	23.0	15.0	11.5	13.0	11.5	10.5	11.0	2.0	1.0	2.0
7	23.0	19.0	21.5	15.0	13.5	14.0	11.5	9.0	10.0	2.0	.5	1.0
8	19.0	17.5	18.5	17.0	14.0	15.5	9.0	6.5	7.5	2.5	1.0	1.5
9	19.5	18.0	18.5	18.0	13.5	15.5	6.5	6.0	6.5	3.5	1.5	2.5
10	18.0	16.0	17.0	13.5	12.0	12.5	6.5	5.0	5.5	5.5	2.5	4.0
11	17.5	16.0	17.0	12.5	11.5	12.5	5.5	4.0	4.5	7.5	5.0	6.0
12	18.5	16.5	17.5	13.0	10.5	12.0	5.0	3.5	4.5	8.5	7.0	7.5
13	18.5	17.5	18.0	14.5	12.0	13.0	5.0	4.0	4.5	8.0	7.5	8.0
14	18.5	17.0	18.0	15.0	14.0	14.5	6.0	5.0	5.5	8.0	7.0	7.5
15	18.5	17.5	18.0	14.5	12.5	13.5	6.5	6.0	6.5	8.0	6.0	7.0
16	19.0	18.0	18.5	12.5	10.5	12.0	9.5	6.5	8.5	8.5	6.5	7.5
17	20.0	19.0	19.5	12.0	11.0	11.5	9.0	7.5	8.5	10.5	8.0	9.5
18	21.5	20.0	20.5	12.5	11.0	11.5	7.5	5.5	6.5	9.0	4.5	7.0
19	21.5	19.0	20.0	12.5	12.0	12.5	7.5	6.5	7.0	5.0	3.0	4.0
20	21.0	19.0	20.0	12.5	11.5	12.0	9.0	7.0	8.0	6.0	4.5	5.5
21	22.0	21.0	21.5	11.5	10.0	10.5	8.5	8.0	8.0	6.0	3.5	4.5
22	21.0	19.5	20.5	11.5	8.5	10.0	8.5	7.5	8.0	6.0	5.0	5.5
23	19.5	17.5	18.5	9.0	7.5	8.0	7.5	6.0	7.0	6.0	3.5	4.5
24	19.0	17.0	18.0	9.0	7.0	8.0	6.0	5.0	5.5	5.5	3.0	4.5
25	17.0	15.0	16.0	10.5	8.5	9.5	5.0	4.5	4.5	7.0	5.0	6.0
26	15.0	13.5	14.0	11.5	10.0	11.0	5.0	4.0	4.5	7.5	5.5	6.0
27	14.0	12.5	13.0	13.0	11.5	12.5	5.5	4.0	4.5	10.5	7.5	9.0
28	14.5	12.0	13.0	11.5	10.0	10.5	6.5	5.0	5.5	10.0	9.0	9.5
29	15.0	13.0	13.5	10.5	8.0	9.0	7.5	6.0	6.5	9.0	6.0	7.5
30	16.5	14.5	15.5	8.5	7.0	7.5	8.0	6.5	7.0	6.0	4.5	5.0
31	16.5	14.5	15.5	---	---	---	8.0	7.0	7.5	6.0	4.0	5.0
MONTH	24.5	12.0	18.8	20.5	7.0	12.3	12.5	3.5	7.2	10.5	.5	5.3

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

149

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	8.5	5.5	7.0	7.0	3.5	5.0	16.5	12.0	14.5	15.5	14.0	15.0
2	10.5	7.0	8.5	3.5	2.0	2.5	17.0	13.0	15.0	15.5	13.5	14.5
3	10.0	9.0	9.5	3.0	1.0	1.5	16.5	14.5	15.5	15.5	13.5	14.0
4	9.5	7.5	8.5	4.0	2.5	3.5	17.5	14.5	15.5	16.5	14.0	15.0
5	9.0	7.5	8.0	5.5	4.0	5.0	18.5	14.5	16.5	19.5	15.0	17.0
6	8.0	6.5	7.5	8.0	5.5	6.5	19.0	15.5	17.0	18.0	15.5	16.5
7	7.5	6.5	7.0	7.5	3.0	4.0	20.0	16.5	18.5	18.0	17.0	17.5
8	6.5	4.5	5.5	4.5	2.5	3.5	22.0	18.0	20.0	19.5	15.5	17.0
9	7.5	5.0	6.0	8.0	2.0	5.0	22.5	20.0	21.5	19.5	17.5	18.5
10	8.0	6.0	7.0	11.0	4.5	7.5	22.0	15.0	19.0	20.5	18.0	19.5
11	7.5	5.0	6.0	12.0	8.5	10.5	15.0	12.5	14.0	21.0	17.0	19.0
12	5.0	3.5	4.0	13.5	12.0	12.5	16.0	11.5	13.5	21.0	17.5	19.0
13	4.0	3.0	3.5	14.5	13.5	14.0	17.5	14.0	16.0	24.5	20.0	22.0
14	3.5	2.5	3.0	14.5	13.0	13.5	18.5	15.5	17.0	23.5	21.0	22.0
15	4.5	2.5	3.5	16.5	14.5	15.5	20.0	17.0	18.5	24.5	21.5	23.0
16	4.0	3.0	3.5	18.0	14.0	16.0	20.5	19.0	19.5	24.5	23.5	24.0
17	6.0	2.5	4.0	19.0	13.5	16.0	20.5	18.0	19.0	24.0	22.5	23.0
18	7.0	4.0	5.5	18.5	14.5	17.0	19.5	17.0	18.0	23.5	19.5	21.5
19	8.5	5.5	6.5	19.0	16.5	18.0	19.0	15.5	17.0	21.0	17.5	19.5
20	10.0	6.5	8.0	19.5	17.5	18.5	18.0	15.0	16.5	22.0	18.5	20.5
21	11.0	7.5	9.5	19.0	16.5	18.0	20.5	17.0	18.5	23.5	20.5	22.0
22	11.5	9.0	10.5	21.5	18.5	19.5	19.5	10.5	14.5	24.5	21.5	23.0
23	12.5	10.0	11.5	20.5	18.0	19.0	12.0	10.5	11.0	24.0	22.5	23.0
24	12.0	9.5	11.0	19.5	17.5	18.5	13.5	11.0	12.0	22.5	19.5	20.5
25	13.0	10.0	11.5	18.5	17.0	17.5	15.0	12.5	14.0	20.0	18.5	19.0
26	13.0	12.0	12.5	18.0	15.5	17.0	18.5	14.5	16.5	20.0	17.5	18.5
27	14.0	11.5	12.5	16.5	14.5	15.5	18.0	14.0	16.0	23.5	19.0	21.0
28	11.5	7.0	9.5	15.0	13.0	14.0	16.5	13.5	15.0	23.5	21.0	22.0
29	---	---	---	14.0	12.5	13.0	18.5	14.0	16.0	22.5	21.0	22.0
30	---	---	---	13.5	11.0	12.5	18.5	15.5	16.5	21.0	19.0	20.0
31	---	---	---	15.0	11.5	13.0	---	---	---	22.0	19.0	20.5
MONTH	14.0	2.5	7.5	21.5	1.0	12.0	22.5	10.5	16.4	24.5	13.5	19.7

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

151

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	12.5	10.9	11.5	11.9	10.7	11.3
2	---	---	---	8.5	7.1	7.8	12.0	10.2	11.2	12.9	11.2	11.9
3	8.6	6.7	7.0	8.1	6.6	7.3	10.6	9.4	9.9	---	---	---
4	8.3	6.1	6.9	8.3	6.2	7.5	10.7	9.0	9.6	---	---	---
5	7.4	5.8	6.7	9.8	8.6	9.0	10.5	8.7	9.4	---	---	---
6	8.0	5.7	6.9	9.5	8.5	9.1	10.0	8.8	9.3	---	---	---
7	8.8	5.1	6.7	9.3	8.4	8.9	11.1	9.0	9.9	---	---	---
8	9.3	8.1	8.7	8.7	8.0	8.4	10.8	9.1	10.1	---	---	---
9	8.5	7.9	8.2	8.7	7.6	8.3	11.6	10.5	10.9	---	---	---
10	9.1	7.8	8.4	9.5	8.7	9.0	12.2	10.6	11.2	---	---	---
11	9.3	7.9	8.5	8.3	8.9	9.1	13.0	11.2	11.9	---	---	---
12	9.6	7.8	8.6	9.8	9.1	9.6	13.4	11.7	12.4	14.2	10.6	12.3
13	9.5	7.9	8.6	9.4	8.4	9.0	13.4	11.8	12.4	11.9	9.9	11.0
14	9.9	7.7	8.7	8.4	7.8	8.3	12.3	11.1	11.8	13.0	9.9	11.3
15	8.8	7.6	8.0	8.5	7.8	8.2	12.2	10.9	11.4	14.1	10.9	12.3
16	7.8	6.4	7.2	9.5	8.1	8.9	11.0	10.1	10.5	14.5	11.3	12.7
17	7.2	6.0	6.6	9.4	8.6	9.0	11.0	9.9	10.4	12.2	8.9	10.1
18	8.3	5.7	7.0	10.0	8.6	9.3	11.7	10.3	11.1	11.8	8.3	9.1
19	8.0	7.2	7.6	9.4	8.2	9.1	12.1	10.4	11.3	12.5	11.8	12.2
20	8.3	6.3	7.4	9.7	9.0	9.3	12.5	10.7	11.5	12.4	11.2	11.6
21	7.2	6.2	6.8	9.9	9.2	9.6	11.5	10.3	10.9	12.1	10.7	11.4
22	7.1	5.7	6.7	9.9	9.0	9.5	12.0	10.2	10.9	12.5	10.6	11.6
23	7.4	5.8	6.8	11.1	9.9	10.6	11.6	10.3	10.8	14.0	11.7	12.7
24	6.8	5.9	6.4	10.8	10.3	10.5	13.0	10.6	11.7	13.8	11.4	12.6
25	7.2	6.0	6.5	11.0	10.0	10.5	13.6	11.4	12.3	14.1	11.7	12.7
26	7.7	6.6	7.0	10.1	9.4	9.8	13.8	11.8	12.6	12.3	11.3	11.9
27	7.9	7.0	7.4	10.1	8.9	9.5	13.8	11.9	12.7	11.7	9.0	10.0
28	8.2	7.2	7.6	10.7	9.1	9.9	13.3	11.9	12.5	9.3	8.8	9.0
29	8.0	7.1	7.5	11.6	9.9	10.7	13.2	11.4	12.1	11.3	9.0	10.0
30	8.0	6.7	7.3	12.1	10.8	11.3	13.3	10.7	11.9	13.0	11.1	12.0
31	---	---	---	---	---	---	11.6	10.3	11.2	13.0	11.6	12.3
MONTH	---	---	---	---	---	---	13.8	8.7	11.2	---	---	---

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

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	12.6	10.7	11.8	11.4	9.4	10.6	11.4	8.6	9.7	8.6	8.0	8.3
2	12.2	7.0	10.7	12.3	10.0	11.1	11.0	7.6	9.1	9.4	8.2	8.7
3	11.4	9.5	10.5	14.1	11.1	12.7	---	---	---	8.9	8.2	8.5
4	11.9	9.2	10.4	12.9	12.0	12.1	10.7	7.3	8.8	8.9	8.2	8.6
5	12.2	9.7	10.8	12.0	11.0	11.6	11.2	8.8	10.0	9.1	7.9	8.4
6	12.9	10.0	11.3	11.0	9.5	10.3	10.4	7.5	8.7	8.9	7.6	8.1
7	13.1	10.8	11.9	13.0	10.1	12.3	9.5	6.1	7.9	8.4	7.9	8.1
8	13.9	10.9	12.4	13.2	11.9	12.5	9.4	5.8	7.6	8.5	7.3	8.2
9	13.9	11.5	12.6	12.8	10.2	12.0	9.0	4.9	7.3	8.0	7.2	7.5
10	13.7	11.1	12.3	12.5	9.4	11.1	8.4	5.0	6.9	8.2	6.6	7.5
11	13.6	10.6	12.1	12.3	8.2	10.1	8.9	7.4	8.5	8.5	7.5	7.9
12	13.7	11.6	12.8	11.1	8.2	9.5	9.4	6.3	7.9	8.6	7.3	7.9
13	14.4	12.2	13.2	9.6	8.0	8.9	9.1	7.4	8.1	9.2	7.0	7.9
14	13.4	12.2	12.8	9.4	8.9	9.2	8.5	6.1	7.6	8.9	6.7	7.6
15	13.0	10.7	11.7	9.5	7.5	8.8	7.1	5.1	6.2	9.6	7.0	8.1
16	11.4	10.5	10.8	10.4	7.5	8.9	5.8	3.2	4.7	9.2	6.7	7.8
17	11.4	10.1	10.7	11.1	7.6	9.1	6.9	3.7	5.2	7.2	5.6	6.6
18	12.5	10.0	11.1	11.3	7.2	9.1	7.1	5.8	6.6	6.8	5.3	6.0
19	12.9	10.9	11.7	11.0	7.0	8.9	8.3	5.3	6.6	8.6	6.4	7.3
20	13.6	10.1	11.7	10.8	7.1	8.7	8.6	7.1	8.1	9.4	6.6	7.8
21	13.7	10.0	11.8	11.4	7.3	9.0	7.1	5.9	6.6	9.6	6.9	7.8
22	13.2	10.1	11.2	12.0	7.1	9.0	9.8	5.8	7.3	9.2	6.3	7.5
23	11.8	9.6	10.8	13.2	7.3	9.4	10.3	9.2	9.8	7.8	5.6	6.6
24	11.8	8.0	10.1	11.6	7.8	9.3	9.9	9.1	9.4	7.9	6.0	7.2
25	11.9	8.6	10.2	10.0	7.6	8.4	9.4	8.4	8.9	7.4	6.7	7.2
26	10.3	7.9	8.8	9.8	7.5	8.4	8.4	7.7	8.0	---	---	---
27	9.2	8.1	8.9	10.9	7.8	9.2	9.5	7.9	8.6	---	---	---
28	9.5	8.4	8.8	10.2	7.5	8.8	9.9	8.0	8.9	---	---	---
29	---	---	---	11.5	7.8	9.4	8.9	7.7	8.4	---	---	---
30	---	---	---	11.8	8.0	9.9	8.4	7.6	8.1	---	---	---
31	---	---	---	11.7	8.2	9.9	---	---	---	8.5	6.8	7.9
MONTH	14.4	7.0	11.2	14.1	7.0	9.9	---	---	---	---	---	---

153

[illegible]

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)
Nov. 5	1800	13,700	24.41	May 26	1800	14,100	24.80
Nov. 21	0500	12,100	22.84	June 1	2400	10,400	21.16
Mar. 14	1800	9,660	20.27	June 5	0900	13,200	24.00
Apr. 23	1700	9,170	19.64	June 9	2100	17,700	28.06
Apr. 29	1400	11,900	22.66	July 5	1000	13,600	24.34
May 8	0700	19,500	29.50				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	320	186	1900	e250	239	1380	244	4150	8470	5280	352	229
2	318	172	558	e220	236	1260	250	4060	8320	5080	1000	227
3	318	203	264	e215	226	1220	244	4020	4320	5780	1720	225
4	316	5880	257	e210	215	1180	253	5920	8550	10200	1510	223
5	314	11100	246	e225	199	1270	241	4740	11700	12800	983	224
6	309	6690	232	e230	194	1290	240	5500	11300	5360	837	222
7	916	1370	e260	e215	191	2300	240	9810	12000	4200	807	556
8	1660	717	e400	e205	188	1940	230	18600	10500	3920	718	1050
9	674	2190	e630	e200	189	1450	216	17100	11200	3590	685	670
10	466	2550	e650	e200	182	965	920	10500	16100	3510	409	353
11	408	813	e540	e200	175	840	5270	3820	16500	3460	293	277
12	366	528	e500	e200	164	779	1660	3430	12600	3420	275	354
13	340	405	e330	e205	163	1930	1210	3190	2850	3400	269	280
14	328	380	260	e205	181	8930	1030	3050	1080	3380	266	255
15	352	370	e250	e200	212	5200	445	2950	726	2540	257	273
16	346	449	e554	e200	191	3380	321	2890	1180	1880	254	665
17	351	426	e482	e280	186	3290	3790	3100	1450	1860	250	1610
18	1360	331	e378	e240	181	e3000	9520	4490	1390	1870	245	1020
19	835	878	e320	e340	177	e2900	7110	4260	1350	1830	243	490
20	580	8600	e290	e280	178	e2700	4220	3470	1310	1980	241	424
21	594	11700	e275	e255	175	e1650	2930	3420	1290	1830	241	368
22	534	4050	e260	e250	167	779	3720	3330	1270	2260	236	355
23	341	1650	e255	e245	167	712	8600	3280	2510	1870	234	315
24	313	1650	e230	e230	157	388	6640	4110	3200	2000	233	302
25	289	1540	e225	227	158	286	3620	4800	2040	1850	232	307
26	e186	2480	e215	219	174	270	3970	8160	1460	1580	231	324
27	e142	2770	e210	353	819	276	3680	12000	1330	997	230	303
28	e122	2720	e210	255	1430	278	3840	8000	1250	487	229	1110
29	e124	2670	e205	232	---	297	8490	3260	4720	299	228	577
30	e142	2610	e200	240	---	266	10300	3270	7780	271	228	387
31	e195	---	e210	236	---	247	---	4760	---	263	229	---
TOTAL	13859	78078	11796	7262	7114	52653	93444	177440	169746	99047	14165	13975
MEAN	447	2603	381	234	254	1698	3115	5724	5658	3195	457	466
MAX	1660	11700	1900	353	1430	8930	10300	18600	16500	12800	1720	1610
MIN	122	172	200	200	157	247	216	2890	726	263	228	222
AC-FT	27490	154900	23400	14400	14110	104400	185300	352000	336700	196500	28100	27720

e Estimated

ARKANSAS RIVER BASIN

155

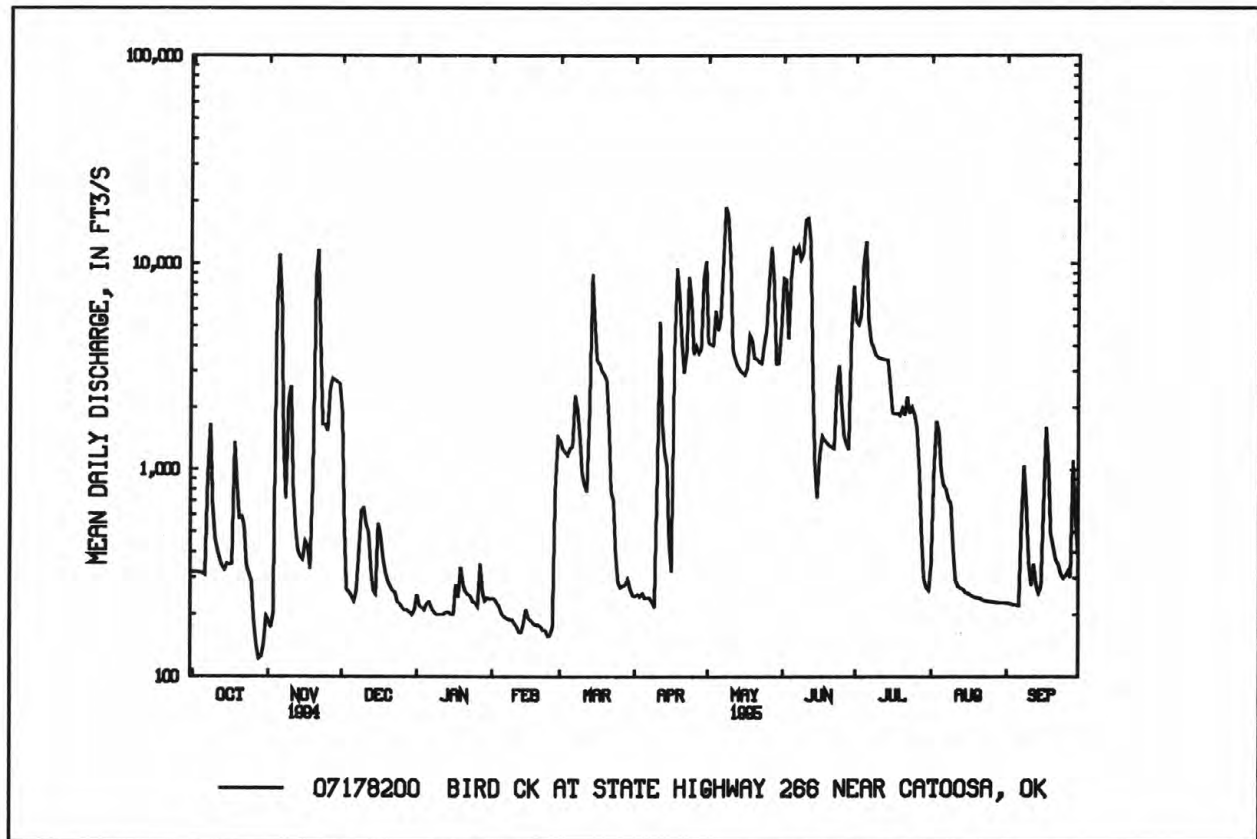
07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	315	840	750	669	772	1817	2260	2621	2416	1081	359	412
MAX	447	2603	1854	2349	1580	6393	3646	5724	5658	3195	649	731
(WY)	1995	1995	1993	1993	1993	1990	1994	1995	1995	1995	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 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1990 - 95

ANNUAL TOTAL	393402	738579	
ANNUAL MEAN	1078	2024	1193
HIGHEST ANNUAL MEAN			2024 1995
LOWEST ANNUAL MEAN			418 1991
HIGHEST DAILY MEAN	18100	Apr 13 18600	May 8 25900 May 11 1993
LOWEST DAILY MEAN	106	Jan 7 122	Oct 28 62 Nov 6 1993
ANNUAL SEVEN-DAY MINIMUM	114	Jan 1 155	Oct 27 73 Oct 22 1992
INSTANTANEOUS PEAK FLOW		19500	May 8 27400 May 11 1993
INSTANTANEOUS PEAK STAGE		29.50	May 8 33.22 May 11 1993
ANNUAL RUNOFF (AC-FT)	780300	1465000	864100
10 PERCENT EXCEEDS	2630	5420	3230
50 PERCENT EXCEEDS	351	528	306
90 PERCENT EXCEEDS	163	202	152



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, 976 microsiemens, Feb. 28; minimum, 84 microsiemens, July 4.

pH: Maximum recorded (more than 20 percent missing record), 8.0 units, Oct. 2, Dec. 31, Jan. 1, 2, 7-11, Feb. 22; minimum recorded, 7.0 units, June 12, July 13, Aug. 11, 19, 20.

WATER TEMPERATURE: Maximum, 30.5°C, Aug. 20, 21; minimum, 3.5°C, Jan. 5.

DISSOLVED OXYGEN: Maximum recorded, 14.3 mg/L, Feb. 22, but may have been higher Feb. 11-21 when probe failed; minimum recorded, 3.3 mg/L, Sept. 8.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	344	314	341	588	546	563	322	304	308	682	647	663
2	340	315	330	617	552	572	444	322	378	650	630	640
3	342	320	336	618	527	577	497	444	469	660	642	651
4	346	319	337	527	171	305	517	480	493	669	647	652
5	347	321	339	218	149	185	532	503	516	708	669	695
6	347	328	342	320	145	228	546	515	528	686	641	658
7	364	115	313	357	239	332	580	546	568	649	637	644
8	337	207	262	406	357	378	575	520	563	649	627	639
9	608	337	428	500	172	333	817	507	586	653	636	644
10	421	382	406	291	157	228	556	460	496	664	649	653
11	387	363	378	391	291	343	470	414	434	681	662	672
12	379	352	369	433	391	406	433	415	426	694	681	687
13	384	350	371	467	433	444	484	429	453	706	694	698
14	369	343	361	502	467	486	527	483	497	709	695	702
15	427	351	371	506	491	500	572	528	543	708	697	703
16	427	363	387	497	476	485	573	360	457	712	702	707
17	387	354	374	492	473	484	626	403	537	725	670	706
18	418	223	322	521	483	501	626	519	553	678	664	672
19	371	272	338	598	340	476	533	512	524	677	603	628
20	464	371	408	449	172	273	566	533	548	704	641	657
21	448	366	401	223	163	184	606	566	586	729	699	711
22	443	397	423	277	181	239	610	592	599	783	729	754
23	430	396	410	296	257	280	612	594	605	798	766	787
24	429	390	412	304	289	296	622	600	607	766	736	749
25	461	413	429	311	303	307	624	607	617	741	720	731
26	485	459	475	309	285	293	626	611	618	721	707	716
27	503	477	485	298	291	295	643	625	632	716	638	672
28	544	481	525	299	294	296	650	634	640	652	640	647
29	574	523	556	300	293	297	658	637	650	694	651	677
30	561	521	545	305	295	299	656	645	651	694	678	685
31	576	514	538	---	---	---	674	652	663	702	693	696
MONTH	608	115	397	618	145	363	817	304	540	798	603	684

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

157

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	722	702	712	562	449	497	568	541	558	291	267	280
2	734	720	726	476	378	411	570	549	557	295	262	280
3	720	705	714	447	372	384	583	570	575	329	276	292
4	710	699	706	535	447	497	617	583	602	306	192	241
5	708	685	699	532	456	485	615	595	607	277	268	272
6	693	676	685	456	399	417	607	586	598	296	252	276
7	684	675	681	508	400	435	596	577	589	269	145	208
8	680	664	672	430	391	410	593	577	588	153	115	133
9	682	667	670	424	385	394	595	565	582	145	117	131
10	707	682	698	445	395	417	582	416	550	222	145	179
11	722	700	713	444	415	425	574	237	312	286	222	265
12	739	722	733	425	406	416	345	302	321	292	286	290
13	751	739	747	535	349	423	346	336	341	298	291	294
14	754	748	750	349	217	262	351	337	343	299	293	295
15	769	741	752	285	230	269	423	351	381	295	291	292
16	789	769	782	296	271	286	465	423	435	293	289	291
17	796	775	782	302	293	298	482	206	310	352	289	303
18	790	778	782	304	300	302	251	143	192	301	210	268
19	791	779	787	304	298	302	263	150	204	298	227	276
20	788	775	781	312	300	303	303	241	272	292	277	281
21	817	782	794	336	312	326	275	239	254	282	279	281
22	814	791	800	385	336	360	300	249	272	283	278	280
23	803	790	796	394	367	379	264	183	221	286	275	281
24	799	753	770	445	381	409	265	183	213	324	279	298
25	774	742	760	491	445	458	295	268	287	318	262	288
26	757	735	747	519	487	496	291	279	285	280	159	239
27	738	332	535	532	499	516	295	288	292	228	172	192
28	976	530	667	547	529	537	291	285	288	224	163	198
29	---	---	---	547	524	539	---	---	---	269	206	245
30	---	---	---	552	529	543	---	---	---	303	264	274
31	---	---	---	567	547	555	---	---	---	292	249	267
MONTH	976	332	730	567	217	411	---	---	---	352	115	258

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

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	255	129	197	222	193	205	444	400	432	447	397	415
2	234	148	203	226	219	223	583	344	407	438	405	415
3	267	210	246	236	130	208	558	301	375	444	394	414
4	210	138	175	130	84	100	394	224	317	441	391	409
5	198	152	171	144	99	110	306	277	289	437	394	412
6	204	126	165	244	144	222	293	270	280	444	400	412
7	153	127	142	243	233	238	312	286	302	419	303	363
8	273	143	185	239	232	235	320	302	312	414	340	374
9	297	125	210	242	239	240	317	302	311	356	315	333
10	127	116	123	246	241	243	352	312	324	363	338	348
11	146	118	130	244	240	242	388	350	364	404	357	370
12	220	134	173	241	237	239	443	388	411	433	384	402
13	330	220	278	252	237	246	443	419	432	414	384	397
14	403	330	369	257	248	252	466	425	440	452	397	417
15	460	403	430	273	252	260	448	420	436	451	394	418
16	464	345	417	263	254	257	458	416	436	423	272	356
17	353	343	347	262	253	258	446	416	430	387	242	299
18	361	345	353	265	255	261	445	408	429	266	245	259
19	345	328	334	262	258	260	443	411	427	282	243	261
20	334	325	330	336	256	273	446	414	428	291	261	279
21	332	322	328	269	262	265	441	407	426	324	277	304
22	329	320	326	278	227	259	438	417	424	353	316	338
23	328	161	295	260	254	257	445	412	429	368	319	350
24	301	214	280	278	250	260	438	404	426	366	328	347
25	303	270	291	262	254	259	437	405	425	381	345	364
26	341	301	321	302	243	276	433	401	422	380	337	358
27	320	291	303	302	290	297	431	402	419	382	342	357
28	327	317	322	353	296	314	426	394	411	365	194	308
29	326	175	264	402	353	367	431	394	409	592	322	414
30	214	147	171	461	402	425	425	396	411	529	370	436
31	---	---	---	461	426	444	417	398	411	---	---	---
MONTH	464	116	263	461	84	258	583	224	393	592	194	364

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

159

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	23.5	22.0	23.0	16.0	15.0	15.5	11.5	11.0	11.5	9.0	6.5	7.5
2	24.0	22.5	23.0	16.0	15.5	15.5	12.0	11.0	11.5	7.0	6.5	6.5
3	23.5	22.5	23.0	18.5	16.0	17.0	12.5	12.0	12.0	7.0	6.0	6.5
4	24.0	22.5	23.5	18.5	17.0	18.0	13.0	12.5	12.5	6.0	4.5	5.0
5	24.0	23.0	23.0	17.0	12.5	14.0	13.0	12.0	12.5	5.0	3.5	4.5
6	23.5	22.0	22.5	13.0	12.0	12.5	12.0	11.5	12.0	5.0	4.5	4.5
7	23.5	19.0	22.0	14.0	13.0	13.5	12.0	10.5	11.5	5.0	4.0	4.5
8	19.5	17.5	18.5	15.5	14.0	14.5	10.5	8.5	10.0	5.0	4.5	5.0
9	19.5	18.5	19.0	16.0	14.5	15.5	8.5	7.5	8.0	6.0	5.0	5.5
10	19.0	17.5	18.0	15.5	14.0	14.5	7.5	6.5	7.0	7.5	6.0	6.5
11	18.5	17.5	18.0	14.0	13.0	13.5	7.5	6.5	7.0	8.0	7.5	7.5
12	19.0	17.0	18.0	13.5	12.5	13.0	7.5	6.5	7.0	8.5	8.0	8.5
13	19.0	18.0	18.5	14.5	13.5	13.5	8.0	7.0	7.5	9.0	8.0	8.5
14	19.0	18.0	18.5	15.0	14.0	14.5	8.5	8.0	8.0	8.5	8.0	8.5
15	19.0	18.0	18.5	14.5	14.0	14.5	8.5	8.0	8.5	8.5	7.5	8.0
16	19.0	18.5	18.5	14.0	13.0	13.5	8.5	7.5	8.0	9.0	8.0	8.5
17	19.5	19.0	19.0	13.5	12.5	13.0	8.5	7.5	8.0	10.0	9.0	9.5
18	20.0	19.5	19.5	14.0	12.5	13.0	8.5	7.5	8.0	9.5	8.0	9.0
19	20.0	19.0	19.5	14.0	12.5	13.5	8.5	7.5	8.0	8.5	6.0	7.0
20	20.0	19.0	19.5	12.5	11.5	12.0	9.0	8.0	8.5	8.0	6.0	7.0
21	21.0	19.5	20.0	12.0	11.0	11.5	9.0	8.5	9.0	8.0	7.0	7.0
22	20.5	19.5	20.0	12.0	10.0	11.0	9.0	8.5	8.5	7.5	6.5	7.0
23	20.5	19.0	19.5	11.0	9.5	10.5	9.0	8.0	8.5	7.5	6.5	7.0
24	20.0	19.0	19.0	11.0	10.5	11.0	8.0	7.5	7.5	7.5	6.5	7.0
25	19.0	17.5	18.5	12.0	11.0	11.5	8.0	7.0	7.5	8.0	7.5	7.5
26	17.5	16.5	17.0	13.0	12.0	12.5	7.5	7.0	7.0	8.0	7.5	8.0
27	16.5	15.5	16.0	13.5	13.0	13.0	8.0	7.0	7.5	10.0	8.0	9.0
28	16.5	15.7	16.1	13.0	12.5	12.5	8.5	7.5	8.0	10.0	9.0	9.5
29	16.8	15.8	16.4	12.5	12.0	12.0	9.0	8.0	8.5	9.0	8.0	8.5
30	17.2	16.5	16.9	12.0	11.5	11.5	9.0	8.5	8.5	8.5	8.0	8.0
31	17.5	16.0	17.0	---	---	---	9.0	8.5	9.0	9.0	7.5	8.0
MONTH	24.0	15.5	19.3	18.5	9.5	13.4	13.0	6.5	8.9	10.0	3.5	7.2

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	9.5	8.5	8.5	9.5	7.0	8.0	15.5	14.0	14.5	15.0	15.0	15.0
2	10.5	9.0	9.5	7.0	6.0	6.5	16.5	14.5	15.5	15.0	14.0	14.5
3	10.5	10.0	10.0	6.5	5.5	6.0	16.5	15.5	16.0	14.0	14.0	14.0
4	10.0	9.0	9.5	6.5	6.0	6.5	16.5	15.0	16.0	14.0	13.5	14.0
5	10.0	9.0	9.5	7.0	6.5	6.5	17.0	15.5	16.0	15.0	14.0	14.5
6	9.5	9.0	9.5	7.5	6.5	7.0	17.5	16.0	17.0	15.0	14.0	14.5
7	9.5	8.5	9.0	7.5	5.5	6.5	18.5	17.0	17.5	17.0	15.0	15.5
8	9.0	8.0	8.5	6.0	5.0	5.5	20.0	18.0	19.0	17.0	16.0	16.5
9	9.0	8.0	8.5	6.5	5.5	6.0	20.5	19.5	20.0	17.5	16.5	17.0
10	9.5	8.5	9.0	8.5	6.5	7.5	20.5	17.0	19.5	18.0	17.5	18.0
11	9.0	7.5	8.5	10.0	7.5	8.5	17.0	14.5	15.5	18.0	16.0	17.0
12	8.0	6.0	7.0	11.0	9.5	10.5	14.5	14.0	14.5	17.0	16.0	16.5
13	7.0	6.0	6.5	13.0	11.0	11.5	15.0	13.5	14.0	17.5	16.0	17.0
14	7.0	6.0	6.5	12.5	12.0	12.5	15.5	14.0	14.5	17.5	16.5	17.0
15	7.0	6.5	6.5	14.0	12.5	13.5	17.0	14.5	15.5	18.0	16.5	17.0
16	7.0	6.0	6.5	14.0	10.5	11.5	18.0	16.5	17.0	19.0	17.5	18.0
17	7.0	6.0	6.5	11.0	10.0	10.5	18.5	17.5	18.0	21.5	18.5	19.5
18	7.5	7.0	7.5	11.0	10.0	10.5	17.5	16.0	16.5	22.0	19.0	20.5
19	8.5	7.5	8.0	12.0	10.5	11.0	17.0	16.0	16.5	22.0	20.5	21.0
20	9.5	8.0	9.0	12.5	11.5	12.0	17.0	16.0	16.0	20.5	19.0	19.5
21	10.0	9.0	9.5	13.0	12.0	12.5	17.0	16.0	16.5	19.5	18.5	19.0
22	13.0	9.5	10.5	16.0	13.0	14.5	16.0	13.0	14.5	19.0	17.5	18.5
23	12.0	10.5	11.5	16.5	15.0	16.0	13.0	12.0	12.5	18.5	17.5	18.0
24	12.5	11.5	12.0	16.5	15.0	15.5	13.0	12.0	12.5	18.5	17.5	18.0
25	12.5	11.5	12.0	16.5	15.5	16.0	14.5	13.0	13.5	19.0	17.0	17.5
26	13.0	12.0	13.0	16.5	16.0	16.0	15.0	14.5	15.0	17.5	16.5	17.0
27	14.0	12.5	13.0	16.5	15.5	16.0	15.0	14.5	15.0	19.0	17.5	18.5
28	12.5	9.5	11.0	16.5	15.0	15.0	---	---	---	20.5	19.0	20.0
29	---	---	---	15.0	14.0	14.5	---	---	---	20.5	19.0	19.5
30	---	---	---	14.5	13.5	14.0	---	---	---	19.0	17.5	18.0
31	---	---	---	14.5	13.5	14.0	---	---	---	18.5	17.0	18.0
MONTH	14.0	6.0	9.2	16.5	5.0	11.0	---	---	---	22.0	13.5	17.4

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

161

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	18.5	17.5	18.0	21.5	20.5	21.0	29.0	27.5	28.5	29.5	28.5	29.0
2	20.0	18.0	19.0	21.0	20.0	20.5	28.0	25.0	27.0	29.0	28.5	29.0
3	20.5	18.5	19.5	21.5	20.5	20.5	27.5	26.5	27.0	29.0	28.5	29.0
4	21.5	19.0	20.5	22.0	20.5	21.5	27.0	26.0	26.5	29.0	28.0	28.5
5	22.0	20.5	21.5	23.5	22.0	23.0	26.5	25.5	26.0	29.0	28.0	28.5
6	22.0	21.0	21.5	23.5	22.0	22.5	26.0	24.5	25.5	28.5	27.5	28.0
7	22.0	20.5	21.0	22.5	21.5	22.0	27.0	25.0	25.5	28.0	25.0	25.5
8	24.0	22.0	23.0	22.0	21.5	22.0	27.0	25.5	26.0	26.0	24.5	25.5
9	23.5	20.0	21.5	22.5	21.5	22.0	27.0	25.5	26.0	25.0	24.0	24.5
10	20.5	20.0	20.5	22.5	21.5	22.0	27.5	25.5	26.0	24.5	22.5	23.5
11	21.0	20.5	20.5	22.5	21.5	22.0	28.0	26.0	27.0	24.5	23.0	23.5
12	22.0	20.5	21.0	22.5	22.0	22.0	29.5	27.0	28.0	24.0	23.0	23.5
13	22.5	21.0	21.5	22.5	22.0	22.5	30.0	28.5	29.0	25.5	23.5	24.5
14	24.0	22.0	23.0	22.5	22.0	22.5	30.0	28.5	29.5	26.0	24.5	25.0
15	25.0	23.0	24.0	24.0	22.5	23.0	30.0	29.0	29.5	26.0	25.0	25.5
16	25.5	21.5	24.0	23.5	22.5	23.0	30.0	28.5	29.5	25.0	23.5	24.5
17	23.0	21.5	22.0	23.5	23.0	23.0	30.0	29.0	29.5	24.5	23.5	24.0
18	22.5	21.5	22.0	24.0	22.5	23.0	30.0	29.0	29.5	24.0	23.5	23.5
19	22.0	21.0	21.5	23.0	22.5	23.0	30.0	29.0	30.0	24.0	23.5	23.5
20	22.5	21.0	21.5	24.0	22.5	23.0	30.5	29.5	30.0	24.0	22.0	22.5
21	22.5	21.0	22.0	24.0	22.5	23.0	30.5	29.0	29.5	22.0	19.5	21.0
22	23.0	21.5	22.0	24.5	23.0	23.5	30.0	29.0	29.5	19.5	18.5	19.0
23	23.0	21.5	22.0	24.0	23.0	23.5	30.0	29.0	29.5	19.0	17.5	18.0
24	22.5	21.5	22.0	24.0	23.0	23.5	29.5	28.0	28.5	19.0	17.0	18.0
25	22.5	21.5	22.0	24.0	23.0	23.5	29.0	27.5	28.5	18.5	17.5	18.0
26	22.5	21.5	22.0	25.0	23.0	24.0	29.0	28.0	28.5	19.0	17.5	18.0
27	22.5	21.0	21.5	25.5	24.0	24.5	29.0	28.0	28.5	20.0	18.0	19.0
28	23.0	21.5	22.0	27.0	24.0	25.0	29.0	28.5	29.0	21.0	19.5	20.0
29	22.0	20.5	21.5	28.0	25.5	26.5	29.5	28.5	29.0	22.5	20.5	21.5
30	22.0	21.0	22.0	29.0	27.0	28.0	29.5	28.5	29.0	23.0	22.0	22.0
31	---	---	---	29.0	28.5	29.0	29.5	28.5	29.0	---	---	---
MONTH	25.5	17.5	21.5	29.0	20.0	23.2	30.5	24.5	28.2	29.5	17.0	23.5

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

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

163

[illegible]

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

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

165

[illegible]

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

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	12.0	10.7	11.3	9.6	8.4	9.1	8.5	7.6	8.0
2	10.9	10.5	10.7	---	---	---	9.5	8.1	8.9	9.1	8.5	8.8
3	10.9	9.9	10.3	---	---	---	9.4	7.7	8.4	9.4	9.0	9.3
4	11.1	9.9	10.5	---	---	---	9.7	8.1	8.9	9.4	9.2	9.3
5	11.1	10.2	10.7	---	---	---	---	---	---	9.7	9.4	9.6
6	11.1	10.4	10.8	---	---	---	---	---	---	9.6	8.6	9.4
7	11.2	10.5	10.9	---	---	---	9.6	8.7	9.0	9.2	7.8	8.4
8	11.8	10.9	11.3	---	---	---	9.8	9.2	9.5	7.9	7.2	7.6
9	11.8	10.9	11.4	---	---	---	10.0	9.3	9.6	7.2	6.1	6.8
10	11.7	10.7	11.2	13.5	11.9	12.7	8.4	6.9	7.5	6.1	5.3	5.5
11	---	---	---	11.9	11.0	11.4	7.4	6.3	6.7	9.0	5.6	8.0
12	---	---	---	11.0	10.5	10.7	6.3	5.9	6.0	9.1	8.9	9.0
13	---	---	---	11.8	9.0	10.1	5.9	5.7	5.8	9.0	8.9	9.0
14	---	---	---	11.8	8.4	9.0	5.8	5.7	5.7	9.3	8.8	9.1
15	---	---	---	9.4	8.5	8.8	5.9	5.7	5.8	9.5	9.2	9.3
16	---	---	---	11.9	9.3	11.0	6.4	5.8	6.0	9.3	9.1	9.2
17	---	---	---	12.1	11.5	11.8	7.0	5.1	5.8	9.1	8.0	8.8
18	---	---	---	11.9	11.2	11.6	7.2	5.8	6.8	9.2	7.6	8.4
19	---	---	---	11.7	11.2	11.4	8.1	6.6	7.2	9.1	8.1	8.6
20	---	---	---	11.5	10.6	11.1	8.8	8.2	8.6	9.5	9.1	9.4
21	---	---	---	10.9	10.1	10.5	9.1	8.7	8.8	9.6	9.4	9.5
22	14.3	10.7	12.5	10.4	9.6	10.0	8.8	8.6	8.7	9.9	9.4	9.6
23	11.6	10.3	10.9	9.6	8.9	9.2	---	---	---	9.9	9.6	9.7
24	12.7	10.0	11.0	9.0	8.6	8.8	---	---	---	9.6	8.0	9.0
25	13.7	10.5	11.6	8.7	8.2	8.5	9.6	9.1	9.4	9.2	8.3	8.6
26	10.8	9.7	10.3	9.0	7.9	8.4	9.8	9.5	9.7	8.8	7.3	8.3
27	10.9	8.0	9.8	9.8	8.1	9.0	10.1	9.6	9.8	7.7	7.1	7.3
28	10.7	8.7	9.8	9.6	8.3	9.1	10.7	10.1	10.5	7.1	6.6	6.7
29	---	---	---	9.7	8.2	9.0	10.2	8.5	9.2	8.3	6.9	7.7
30	---	---	---	9.8	8.4	9.2	8.8	7.6	7.9	9.0	8.3	8.8
31	---	---	---	9.8	8.6	9.3	---	---	---	8.9	8.0	8.5
MONTH	---	---	---	---	---	---	---	---	---	9.9	5.3	8.6

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

167

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.3	7.5	7.9	8.3	6.3	7.7	6.9	6.2	6.5	6.3	5.5	6.0
2	7.7	6.5	7.0	8.5	8.3	8.4	6.5	5.2	5.8	6.4	5.5	5.9
3	8.3	6.7	7.8	8.5	6.7	8.1	6.5	6.0	6.2	6.2	5.4	5.7
4	7.5	6.7	7.0	6.8	6.0	6.3	6.7	6.4	6.6	6.0	5.4	5.7
5	7.1	6.7	6.9	6.0	4.6	5.4	6.9	6.7	6.8	6.2	5.6	5.9
6	7.1	6.4	6.8	7.7	4.6	6.4	7.1	6.7	7.0	6.2	5.5	5.9
7	7.0	6.1	6.5	8.3	7.7	8.1	7.0	6.7	6.9	6.2	4.0	5.5
8	6.1	4.7	5.3	8.4	8.1	8.2	7.1	6.9	7.0	6.2	3.3	5.3
9	7.5	5.0	6.6	8.5	8.1	8.3	7.2	6.9	7.0	6.4	5.6	6.0
10	7.2	6.5	6.8	8.7	8.2	8.4	7.1	6.9	7.0	6.8	6.4	6.6
11	6.8	6.3	6.6	8.6	8.3	8.4	7.0	6.6	6.7	6.7	6.5	6.6
12	6.3	4.8	5.2	8.5	8.3	8.3	6.8	6.3	6.5	6.8	6.0	6.5
13	7.3	5.1	6.4	8.5	8.3	8.4	6.8	6.0	6.4	6.3	6.0	6.2
14	7.5	7.3	7.4	8.6	8.4	8.5	6.6	5.9	6.3	6.4	6.1	6.3
15	7.4	7.3	7.4	8.4	7.8	8.1	6.6	5.9	6.2	6.5	6.1	6.3
16	8.4	7.0	7.5	8.2	7.9	8.1	6.5	5.8	6.2	6.5	5.9	6.3
17	8.5	8.3	8.4	8.2	7.8	8.0	6.5	5.9	6.2	6.7	5.3	6.0
18	8.5	8.3	8.4	8.2	7.9	8.1	6.4	5.8	6.1	6.5	5.9	6.3
19	8.4	8.2	8.3	8.2	7.9	8.1	6.5	5.7	6.1	6.6	6.5	6.6
20	8.4	8.2	8.3	8.0	7.3	7.7	6.5	5.7	6.1	7.0	6.6	6.8
21	8.2	8.0	8.1	8.1	7.6	7.9	6.4	5.6	6.0	7.5	7.0	7.2
22	8.2	8.0	8.1	8.0	6.5	7.5	6.4	5.6	6.0	8.1	7.5	7.8
23	8.1	6.9	7.8	7.9	7.7	7.8	6.4	5.5	6.0	8.4	8.0	8.2
24	7.7	5.1	6.8	7.9	7.5	7.7	6.8	5.7	6.2	8.6	8.1	8.4
25	7.5	7.0	7.3	8.0	7.6	7.8	6.9	5.9	6.4	8.5	8.3	8.4
26	7.8	7.4	7.6	7.8	6.9	7.2	6.9	6.0	6.6	9.0	8.4	8.6
27	7.9	7.7	7.8	7.6	7.1	7.4	6.8	5.8	6.3	8.9	8.2	8.6
28	7.9	7.7	7.8	7.3	6.9	7.1	6.8	5.9	6.4	8.9	7.4	8.0
29	8.2	6.3	7.6	6.9	6.6	6.8	6.7	5.7	6.3	7.5	7.0	7.1
30	6.5	6.1	6.3	6.8	6.3	6.5	6.6	5.7	6.1	7.1	6.8	6.9
31	---	---	---	6.8	6.2	6.5	6.4	5.6	6.1	---	---	---
MONTH	8.5	4.7	7.3	8.7	4.6	7.7	7.2	5.2	6.4	9.0	3.3	6.7

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.--No estimated daily discharges. Records good. Flow regulated to some extent since 1963 by John Redmond Reservoir in Kansas, 190 mi upstream. U.S. Army Corps of Engineers' satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 22	2100	34,400	19.47	May 20	1700	33,700	19.34
May 10	0700	36,000	19.75	June 12	1200	71,000	23.27

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	425	1410	373	1510	392	1700	11300	16200	20900	1120	1180
2	80	1320	1020	360	1140	500	1660	9290	20700	15500	3630	1030
3	81	925	843	345	959	505	1390	6880	22900	15500	10100	744
4	78	3490	740	328	960	431	1220	6950	23300	14100	15700	597
5	73	12800	667	314	945	389	1180	7490	27300	13700	13800	514
6	66	17700	613	308	862	367	1040	10700	31300	14900	8060	430
7	170	8150	584	443	711	524	794	15000	31200	13100	3170	409
8	1290	2850	601	1070	585	518	730	31600	26600	11900	1960	392
9	899	2410	1240	1430	531	540	725	35300	31100	11300	1490	359
10	417	2420	1560	1560	505	552	746	35400	39400	10800	1200	285
11	195	2150	1140	1540	483	542	1100	31500	57100	10400	1020	228
12	141	1320	886	1540	425	537	1630	11500	69500	9610	897	203
13	117	837	733	1550	374	509	1430	3230	60300	8350	825	200
14	102	635	638	1790	341	493	1150	3720	45300	7450	788	202
15	93	539	577	1470	336	509	1140	2700	37500	5850	770	201
16	89	510	574	1040	330	1460	1030	1680	31700	4950	700	209
17	85	576	629	744	314	6760	962	2400	23500	4710	691	203
18	152	549	724	562	313	9350	7170	23900	20000	4740	622	190
19	222	763	806	514	312	10100	6920	31200	18800	4570	3070	195
20	118	19600	754	526	301	9490	6170	33300	18100	4210	5550	229
21	136	30600	658	607	280	8820	4520	33000	17600	4280	6070	233
22	514	33700	581	609	301	7800	3940	28500	17300	4620	6370	208
23	322	33000	522	579	308	5750	6890	21800	17300	4310	6230	402
24	183	19000	493	549	306	3790	7820	19200	18200	4070	5290	694
25	133	3320	482	679	300	2690	5310	20200	17800	4000	4290	674
26	110	2040	468	659	289	1940	4760	19600	20400	3690	3650	676
27	97	1600	445	866	329	1340	4870	29000	21400	3690	2890	684
28	85	1300	426	1070	325	947	4200	32600	19700	2480	2110	684
29	80	2630	400	1740	---	845	8110	33100	17100	1770	1730	667
30	75	2380	380	2370	---	1040	11600	28400	19800	1450	1640	560
31	79	---	370	2100	---	1660	---	17200	---	1230	1430	---
TOTAL	6365	209539	21964	29635	14675	81090	101907	597640	838400	242130	116863	13482
MEAN	205	6985	709	956	524	2616	3397	19280	27950	7811	3770	449
MAX	1290	33700	1560	2370	1510	10100	11600	35400	69500	20900	15700	1180
MIN	66	425	370	308	280	367	725	1680	16200	1230	622	190
AC-FT	12620	415600	43570	58780	29110	160800	202100	1185000	1663000	480300	231800	26740

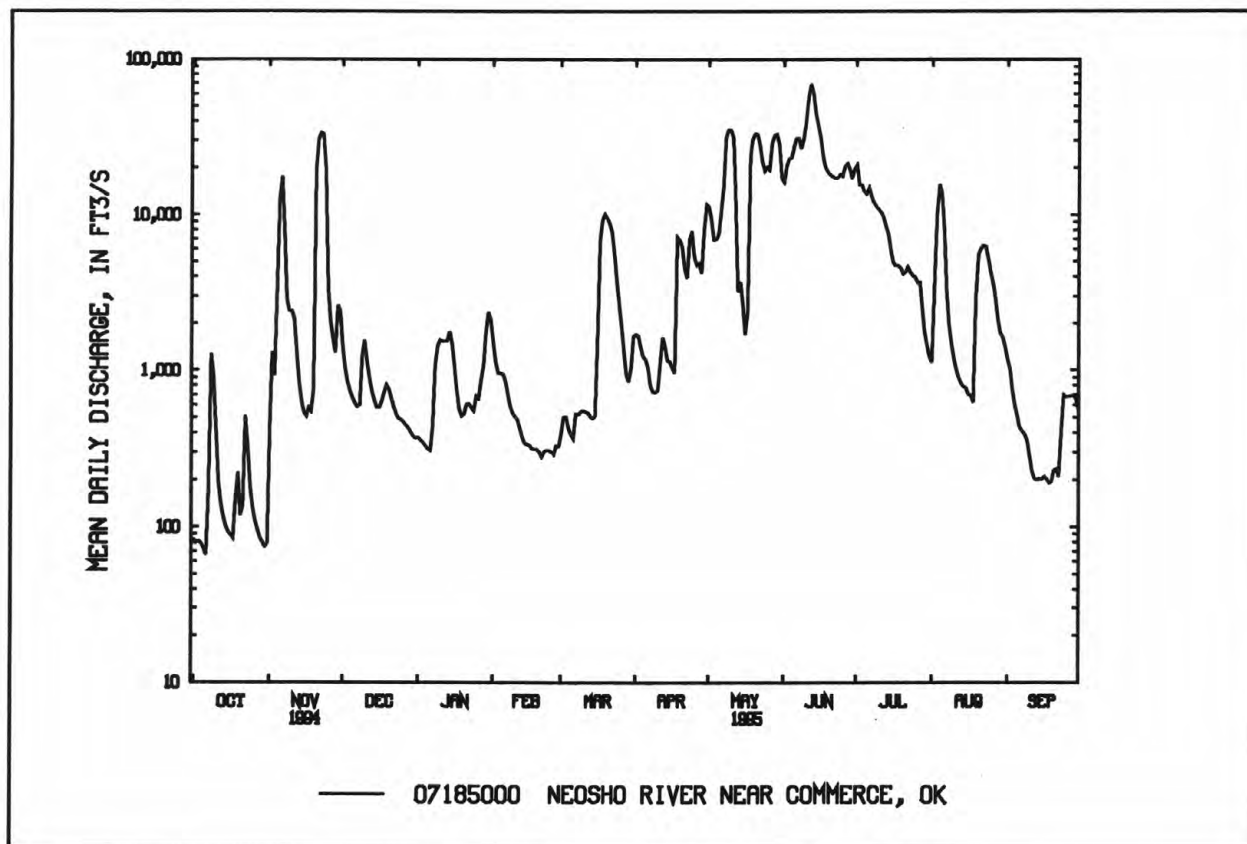
07185000 NEOSHO RIVER NEAR COMMERCE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3277	3190	2119	1900	2505	4370	5624	6088	6718	5108	1750	2794
MAX	33400	19190	17280	10090	13980	21630	23270	29560	27950	53350	11680	16930
(WY)	1987	1986	1993	1973	1985	1973	1945	1961	1995	1951	1993	1951
MIN	.000	1.60	6.33	8.60	24.9	11.9	62.6	395	289	21.1	.000	1.52
(WY)	1957	1940	1940	1957	1954	1956	1981	1956	1980	1954	1954	1953

SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1940 - 95

ANNUAL TOTAL	1306230	2273690	
ANNUAL MEAN	3579	6229	3788
HIGHEST ANNUAL MEAN			11140
LOWEST ANNUAL MEAN			246
HIGHEST DAILY MEAN	101000	Apr 13	69500
LOWEST DAILY MEAN	66	Oct 6	66
ANNUAL SEVEN-DAY MINIMUM	78	Sep 30	90
INSTANTANEOUS PEAK FLOW			71000
INSTANTANEOUS PEAK STAGE			23.27
ANNUAL RUNOFF (AC-FT)	2591000	4510000	2744000
10 PERCENT EXCEEDS	6630	20300	11300
50 PERCENT EXCEEDS	658	1180	911
90 PERCENT EXCEEDS	119	229	57

^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

07185080 NEOSHO RIVER AT MIAMI, OK

LOCATION.--Lat 36°51'53", long 94°52'43", in NE 1/4 SE 1/4 sec.31, T.28 N., R.23 E., Ottawa County, Hydrologic Unit 11070206, near left downstream wingwall of State Highway 125 bridge, on southwest side of Miami, 1.5 mi upstream from Tar Creek, 2.8 mi downstream from Coal Creek and at mile 143.7.

DRAINAGE AREA.--6,001 mi².

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

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 766.33 ft, June 12, 1995; minimum gage height, 740.82 ft, Sept. 7, 1995.

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

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 766.33 ft, June 12; minimum gage height, 740.82 ft, Sept. 7, 1995.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	742.24	741.96	742.11	745.25	744.93	745.05	742.17	741.88	742.04
2	---	---	---	742.42	742.21	742.35	744.93	744.55	744.80	742.18	741.99	742.09
3	---	---	---	742.69	742.07	742.38	744.59	744.19	744.37	742.12	741.87	741.99
4	---	---	---	745.67	742.52	744.20	744.19	743.87	744.06	742.14	741.98	742.04
5	---	---	---	750.64	745.67	747.99	743.89	743.58	743.72	742.22	741.99	742.11
6	---	---	---	750.95	749.43	750.43	743.60	743.23	743.42	742.20	741.98	742.09
7	---	---	---	749.43	747.56	748.39	743.24	742.88	743.04	742.20	742.01	742.10
8	---	---	---	747.56	746.61	747.09	742.88	742.57	742.74	742.26	742.10	742.16
9	---	---	---	747.24	746.61	747.04	742.58	742.47	742.52	742.25	742.15	742.22
10	---	---	---	746.95	746.81	746.85	742.55	742.27	742.42	742.34	742.19	742.24
11	---	---	---	746.88	746.64	746.78	742.36	742.21	742.28	742.45	742.20	742.28
12	---	---	---	746.65	746.18	746.40	742.30	742.16	742.23	742.39	742.19	742.29
13	---	---	---	746.19	745.65	745.96	742.24	742.11	742.18	742.54	742.12	742.28
14	---	---	---	745.65	745.23	745.39	742.24	742.11	742.18	743.28	742.54	742.96
15	---	---	---	745.23	745.01	745.11	742.21	742.11	742.16	743.54	743.28	743.45
16	---	---	---	745.01	744.78	744.89	742.33	742.12	742.22	743.81	743.52	743.68
17	---	---	---	744.78	744.48	744.68	742.33	742.18	742.24	743.77	743.52	743.62
18	---	---	---	744.48	744.15	744.30	742.27	742.10	742.19	743.53	743.21	743.42
19	---	---	---	744.71	743.92	744.09	742.39	742.18	742.29	743.44	743.28	743.36
20	---	---	---	753.68	744.71	750.85	742.32	742.17	742.22	743.32	743.11	743.21
21	---	---	---	755.08	753.67	754.34	742.30	742.05	742.20	743.13	742.93	743.01
22	---	---	---	756.21	755.08	755.71	742.20	742.02	742.10	742.93	742.71	742.81
23	---	---	---	756.36	756.02	756.26	742.18	742.03	742.09	742.72	742.51	742.59
24	---	---	---	756.02	748.51	753.52	742.19	742.00	742.10	742.56	742.28	742.41
25	741.73	741.39	741.57	748.51	746.99	747.44	742.13	742.03	742.09	742.31	742.14	742.22
26	741.72	741.55	741.67	746.99	746.50	746.75	742.16	742.09	742.12	742.29	742.06	742.14
27	741.81	741.66	741.75	746.59	746.00	746.32	742.20	742.07	742.12	742.55	742.20	742.32
28	742.02	741.75	741.86	746.03	745.57	745.77	742.17	742.00	742.10	742.46	742.28	742.36
29	741.98	741.80	741.91	745.67	745.54	745.60	742.13	741.96	742.04	742.83	742.45	742.63
30	742.01	741.88	741.95	745.57	745.17	745.40	742.16	741.97	742.07	742.93	742.83	742.89
31	742.25	741.72	741.96	---	---	---	742.11	741.86	742.04	742.92	742.71	742.83
MONTH	---	---	---	756.36	741.96	747.15	745.25	741.86	742.63	743.81	741.87	742.58

ARKANSAS RIVER BASIN

171

07185080 NEOSHO RIVER AT MIAMI, OK--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	742.71	742.45	742.59	742.03	741.76	741.86	742.36	742.14	742.28	749.13	748.05	748.94
2	742.49	742.17	742.35	742.01	741.87	741.94	742.38	742.21	742.30	748.95	748.09	748.48
3	742.27	742.01	742.16	742.08	741.95	742.02	742.37	742.14	742.26	748.09	747.78	747.90
4	742.37	742.17	742.23	742.13	742.00	742.08	742.24	741.94	742.12	747.84	747.40	747.68
5	742.26	742.12	742.19	742.17	741.90	742.06	742.25	742.04	742.15	747.75	747.26	747.43
6	742.20	742.00	742.14	742.18	741.73	742.05	742.22	742.05	742.14	749.34	747.69	748.18
7	742.18	741.80	742.07	742.10	741.67	741.92	742.27	742.03	742.17	751.63	749.07	749.54
8	742.23	741.95	742.10	742.14	741.89	742.04	742.28	742.03	742.14	---	---	---
9	742.27	742.05	742.15	742.22	742.06	742.14	742.33	742.05	742.20	---	---	---
10	742.14	741.94	742.04	742.33	742.09	742.19	742.42	741.99	742.21	757.50	757.14	757.39
11	742.11	741.77	741.98	742.37	742.09	742.21	742.43	742.16	742.27	757.43	756.24	757.05
12	742.10	741.92	742.02	742.32	742.04	742.20	742.53	742.25	742.44	756.24	750.52	752.92
13	742.12	741.63	742.04	742.25	741.81	742.08	742.48	742.36	742.43	750.52	749.73	750.06
14	742.22	742.04	742.13	742.16	741.83	741.96	742.41	742.29	742.35	749.74	749.29	749.51
15	742.42	741.86	742.08	742.01	741.84	741.93	742.40	742.18	742.29	749.29	748.75	749.02
16	742.03	741.87	741.95	742.79	741.90	742.08	742.40	742.14	742.25	748.75	748.24	748.52
17	742.06	741.98	742.02	744.61	742.79	743.87	742.40	742.04	742.26	748.38	747.91	748.06
18	742.16	742.01	742.06	745.26	744.61	744.95	745.89	742.18	744.50	753.00	748.38	751.50
19	742.11	741.96	742.05	745.48	745.26	745.40	745.63	744.48	744.88	754.61	753.00	753.82
20	742.28	741.89	742.05	745.41	745.13	745.24	745.32	744.53	745.14	755.50	754.61	755.14
21	742.19	741.94	742.08	745.13	744.94	745.04	745.18	744.81	744.97	755.62	755.49	755.57
22	742.34	742.01	742.12	744.94	744.34	744.72	745.44	744.85	745.02	755.49	753.96	754.95
23	742.19	741.87	742.03	744.34	743.43	743.89	747.31	745.44	746.27	753.96	751.67	752.70
24	742.13	741.88	742.04	743.43	742.68	743.01	747.32	746.80	747.06	751.69	751.05	751.32
25	742.31	742.02	742.14	742.68	742.31	742.52	746.83	746.61	746.69	751.37	751.03	751.20
26	742.22	741.93	742.11	742.37	742.15	742.25	746.61	746.30	746.51	752.18	750.48	751.10
27	742.18	741.81	742.00	742.26	742.15	742.21	746.36	746.20	746.28	754.41	752.18	753.35
28	741.99	741.79	741.90	742.23	741.99	742.12	746.22	745.94	746.07	755.60	754.41	755.14
29	---	---	---	742.16	741.99	742.08	748.90	745.94	747.08	755.84	755.60	755.77
30	---	---	---	742.12	741.98	742.07	749.04	747.72	748.46	755.74	754.05	755.17
31	---	---	---	742.29	742.06	742.23	---	---	---	754.05	750.38	751.86
MONTH	742.71	741.63	742.10	745.48	741.67	742.72	749.04	741.94	743.91	---	---	---

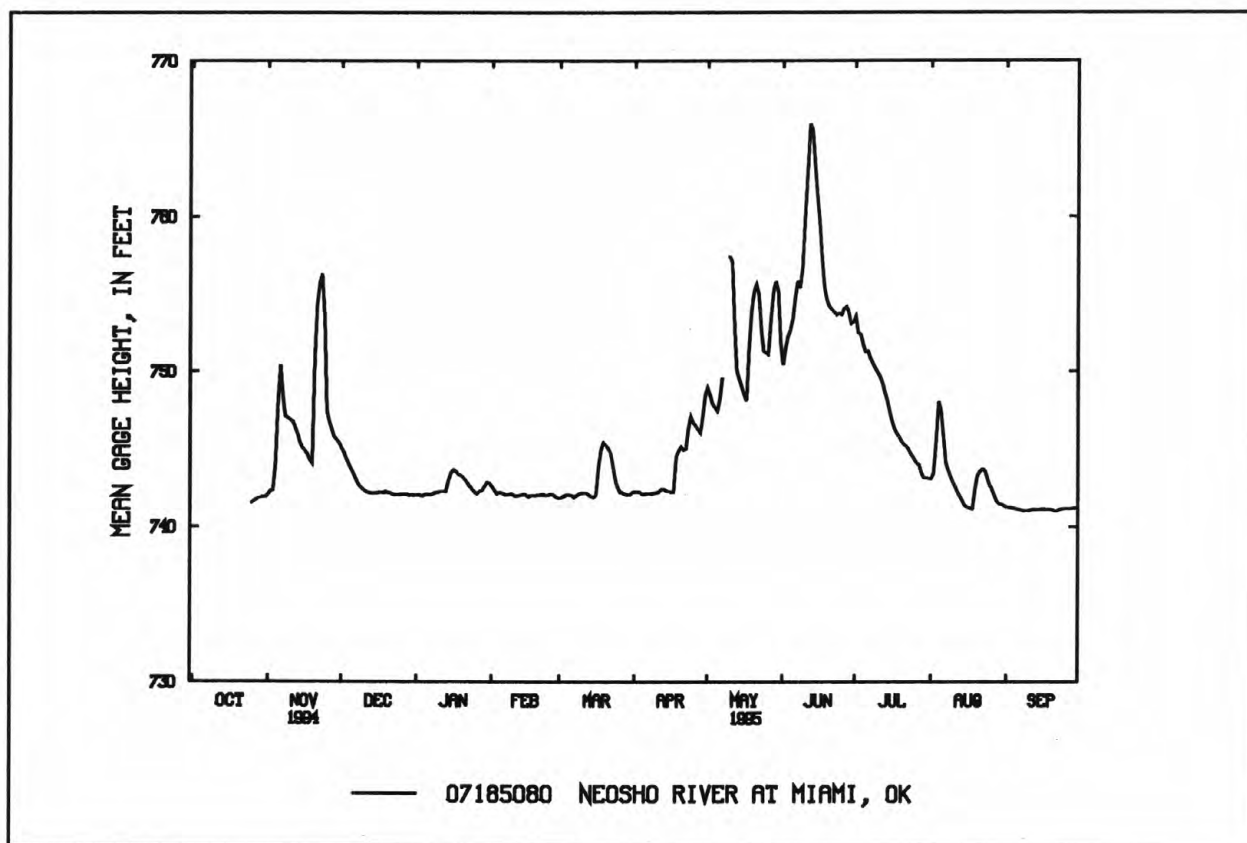
ARKANSAS RIVER BASIN
07185080 NEOSHO RIVER AT MIAMI, OK--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	750.90	750.24	750.41	753.67	753.16	753.54	743.26	743.04	743.12	741.35	741.17	741.26
2	751.82	750.90	751.44	753.16	752.03	752.49	743.71	743.03	743.46	741.30	741.18	741.25
3	752.72	751.82	752.23	752.70	751.97	752.40	747.88	743.62	745.41	741.32	741.16	741.23
4	752.81	752.56	752.67	752.26	751.43	751.81	748.44	747.22	748.03	741.28	741.13	741.21
5	754.16	752.66	753.38	751.43	751.16	751.26	747.80	747.22	747.55	741.24	741.08	741.15
6	755.57	754.09	754.84	751.42	751.09	751.30	747.40	744.61	745.90	741.21	741.05	741.13
7	755.95	755.57	755.81	751.09	750.65	750.86	744.61	743.76	744.15	741.25	740.82	741.08
8	755.80	755.06	755.36	750.65	750.38	750.52	743.78	743.36	743.62	741.10	740.97	741.03
9	757.75	755.33	756.70	750.39	750.07	750.22	743.41	743.00	743.23	741.10	740.97	741.04
10	761.46	757.75	759.90	750.07	749.81	749.94	743.03	742.68	742.86	741.11	740.96	741.04
11	764.92	761.46	762.96	749.81	749.51	749.69	742.70	742.33	742.54	741.17	740.99	741.08
12	766.33	764.92	765.95	749.51	748.94	749.27	742.34	742.00	742.20	741.26	741.00	741.12
13	766.29	764.53	765.56	748.94	748.37	748.63	742.05	741.73	741.92	741.19	741.01	741.11
14	764.53	762.21	763.37	748.37	747.73	748.07	741.74	741.38	741.59	741.16	741.03	741.09
15	762.22	760.56	761.37	747.73	747.06	747.38	741.45	741.15	741.34	741.19	741.01	741.12
16	760.56	758.56	759.64	747.06	746.50	746.77	741.30	741.10	741.23	741.39	741.05	741.17
17	758.56	756.01	757.17	746.50	746.12	746.29	741.26	741.13	741.22	741.17	740.99	741.09
18	756.01	754.91	755.39	746.14	745.89	746.01	741.21	741.09	741.17	741.23	741.05	741.14
19	754.91	754.35	754.59	745.91	745.56	745.75	743.17	741.14	742.42	741.24	740.85	741.10
20	754.35	754.07	754.20	745.59	745.31	745.46	743.46	743.17	743.34	741.25	740.94	741.07
21	754.07	753.91	753.98	745.35	745.16	745.25	743.66	743.46	743.57	741.11	740.89	741.01
22	753.91	753.77	753.85	745.29	745.01	745.17	743.74	743.66	743.71	741.15	740.95	741.06
23	753.77	753.56	753.66	745.05	744.66	744.88	743.73	743.42	743.63	741.21	741.04	741.13
24	753.80	753.66	753.74	744.77	744.45	744.60	743.42	742.90	743.18	741.22	741.10	741.16
25	753.74	753.65	753.67	744.55	744.00	744.36	742.90	742.51	742.70	741.27	741.12	741.17
26	754.20	753.74	754.01	744.53	743.96	744.10	742.51	742.16	742.38	741.23	741.11	741.17
27	754.21	754.09	754.17	744.08	743.73	743.98	742.16	741.78	741.98	741.21	741.12	741.16
28	754.09	753.41	753.82	743.73	743.25	743.48	741.78	741.46	741.61	741.34	741.10	741.18
29	753.41	752.97	753.09	743.28	743.12	743.19	741.51	741.42	741.46	741.33	741.15	741.22
30	753.49	752.97	753.15	743.23	743.11	743.15	741.50	741.42	741.47	741.42	740.99	741.21
31	---	---	---	743.25	743.06	743.16	741.43	741.25	741.37	---	---	---
MONTH	766.33	750.24	756.00	753.67	743.06	747.52	748.44	741.09	743.01	741.42	740.82	741.13

ARKANSAS RIVER BASIN
07185080 NEOSHO RIVER AT MIAMI, OK--Continued

173



ARKANSAS RIVER BASIN
07188000 SPRING RIVER NEAR QUAPAW, OK

LOCATION.--(REVISED) Lat 36°56'04", long 94°44'46", 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.--No estimated daily discharges. 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)
Nov. 5	2400	29,800	19.54	May 18	1000	24,300	17.92
Nov. 20	2400	39,000	22.04	May 28	0500	30,000	19.59
May 2	0600	20,600	16.72	June 11	1900	77,900	29.98
May 8	1700	44,900	23.51				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	310	667	2340	998	4050	1300	925	17600	6900	8950	905	454
2	322	742	2350	1010	3530	1250	907	18600	8710	6260	1450	474
3	329	751	2240	980	3140	1190	894	11800	6910	3550	1660	512
4	330	8380	2120	951	2970	1140	880	9360	5240	2370	4790	491
5	304	22000	2110	924	2710	1120	857	7430	6610	2340	4440	465
6	321	29000	1960	909	2530	1110	848	6250	6800	2140	2720	445
7	463	21000	1880	902	2280	1400	844	11100	5550	1840	1560	432
8	1500	8920	1880	901	2010	3230	840	39800	6530	1820	1570	429
9	2100	10800	1940	887	2090	3340	834	40400	18700	1760	1130	431
10	1850	14900	1870	872	1990	2610	839	28700	49200	1670	889	435
11	1130	9860	1770	868	1890	2320	1230	12800	73800	1600	923	432
12	891	5740	1480	872	1790	2110	2640	6600	63300	1530	871	420
13	730	4580	1400	1370	1690	1940	3080	5190	31400	1470	827	416
14	655	4030	1450	9500	1630	1830	2280	4660	11400	1410	796	416
15	636	3720	1410	11200	1620	1780	1840	4200	8280	1360	772	416
16	606	3460	1460	7690	1600	1670	1610	3880	7060	1320	752	416
17	571	3060	1590	5240	1560	1560	1530	4230	6150	1280	739	416
18	592	2750	1600	3960	1510	1470	7580	21800	5150	1130	684	419
19	1030	3290	1520	3600	1460	1420	7720	20500	4300	1140	684	424
20	1550	30500	1450	3610	1310	1360	7760	9940	3800	1150	677	426
21	1350	36600	1370	3590	1150	1310	6570	5490	3480	1160	656	441
22	1780	28600	1330	3420	1270	1270	4690	6760	3220	1150	638	442
23	1420	13000	1290	3130	1240	1230	6140	5900	2930	1120	605	437
24	1130	6290	1260	2850	1190	1180	9230	7460	3670	1050	527	423
25	1020	4470	1230	2840	1150	1260	7020	10900	4810	1070	533	415
26	903	3950	1200	3110	1140	1090	4740	12700	6650	1160	517	412
27	821	3720	1170	4010	1170	971	4160	26100	6490	1640	509	406
28	739	3740	1150	6180	1210	1020	3690	28300	5550	1180	498	396
29	695	3440	1120	8690	---	1010	9820	18600	3380	1030	486	391
30	654	3000	1080	6790	---	974	16900	9330	7560	968	473	387
31	635	---	891	4790	---	951	---	5660	---	932	460	---
TOTAL	27367	294960	48911	106644	52880	47416	118898	422040	383530	58550	34741	12919
MEAN	883	9832	1578	3440	1889	1530	3963	13610	12780	1889	1121	431
MAX	2100	36600	2350	11200	4050	3340	16900	40400	73800	8950	4790	512
MIN	304	667	891	868	1140	951	834	3880	2930	932	460	387
AC-FT	54280	585100	97010	211500	104900	94050	235800	837100	760700	116100	68910	25620
CFSM	.35	3.92	.63	1.37	.75	.61	1.58	5.42	5.09	.75	.45	.17
IN.	.41	4.37	.72	1.58	.78	.70	1.76	6.25	5.68	.87	.51	.19

ARKANSAS RIVER BASIN

175

07188000 SPRING RIVER NEAR QUAPAW, OK--Continued

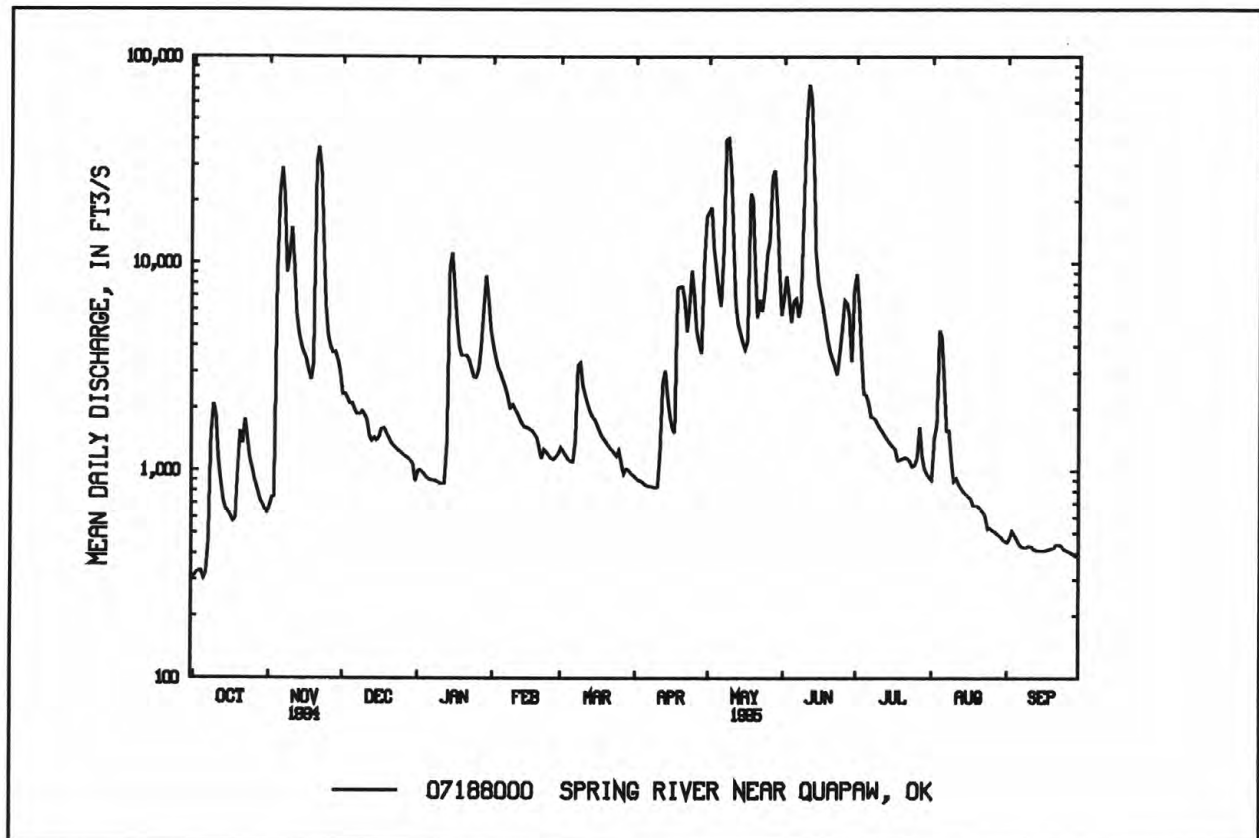
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1650	2363	1756	1563	2095	2938	3429	3650	3055	1780	814	1482
MAX	14880	14810	10720	6495	13300	12050	15100	26940	12780	10140	8622	18390
(WY)	1987	1986	1993	1973	1985	1973	1945	1943	1995	1976	1950	1993
MIN	75.8	111	116	116	129	123	169	481	233	34.3	29.3	76.0
(WY)	1957	1954	1964	1964	1954	1954	1954	1964	1954	1954	1954	1953

SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1940 - 95

ANNUAL TOTAL	1223830	1608856	
ANNUAL MEAN	3353	4408	2212
HIGHEST ANNUAL MEAN			6623 1993
LOWEST ANNUAL MEAN			191 1954
HIGHEST DAILY MEAN	92000	Apr 13 73800	Jun 11 210000 Sep 26 1993
LOWEST DAILY MEAN	304	Oct 5 304	Oct 5 5.8 Jul 8 1954
ANNUAL SEVEN-DAY MINIMUM	317	Sep 29 340	Oct 1 7.3 Sep 12 1954
INSTANTANEOUS PEAK FLOW		77900	Jun 11 230000 Sep 26 1993
INSTANTANEOUS PEAK STAGE		29.98	Jun 11 ^a 46.60 Sep 26 1993
ANNUAL RUNOFF (AC-FT)	2427000	3191000	1602000
ANNUAL RUNOFF (CFSM)	1.34	1.76	.88
ANNUAL RUNOFF (INCHES)	18.14	23.84	11.97
10 PERCENT EXCEEDS	5320	9420	4430
50 PERCENT EXCEEDS	1260	1560	845
90 PERCENT EXCEEDS	445	474	204

^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.--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)
Apr. 21	0100	13,300	13.62	June 11	0300	69,900	24.45
May 9	0300	21,000	17.32				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	153	584	379	1380	608	512	3130	1450	1000	e260	128
2	81	150	547	368	1280	615	500	3200	1310	905	e370	119
3	79	168	519	355	1180	618	486	2860	1250	903	e400	128
4	82	264	494	348	1080	620	471	2930	1340	919	e700	127
5	86	3370	469	e335	996	619	457	2840	1640	851	e550	120
6	87	6360	449	e328	917	623	441	2560	1800	802	e390	e115
7	116	3290	424	e322	853	1770	434	2770	1840	740	e305	e110
8	283	2110	409	316	787	4760	425	9830	1740	687	e295	102
9	590	3890	496	306	736	3200	416	15300	3120	648	e290	e98
10	474	4790	927	296	695	2320	447	6240	23500	604	e285	e95
11	366	2830	936	285	669	1820	2760	4060	35300	567	e240	e90
12	298	1970	799	278	636	1500	5800	3040	9590	536	e200	e86
13	252	1540	696	442	588	1280	3370	2650	6020	502	e190	e83
14	223	1290	627	5880	571	1140	2270	2820	4450	475	e180	e82
15	204	1090	577	5880	581	1020	1700	2650	3630	449	168	e81
16	e195	959	602	3560	576	947	1350	2220	3090	439	160	136
17	e190	828	687	2490	554	870	1390	1960	2730	416	156	177
18	e185	728	695	1910	535	817	2330	1870	2430	401	152	214
19	e185	686	655	1780	522	764	2430	1690	2180	382	151	182
20	195	793	647	1710	509	723	7050	1490	1970	384	156	165
21	220	1440	617	1650	499	680	8240	1370	1820	394	165	157
22	234	1660	582	1610	502	641	4010	1270	1670	e370	167	148
23	266	1460	548	1520	473	607	5110	1170	1500	e350	169	143
24	242	1250	513	1380	453	583	6020	1190	2140	e325	176	135
25	218	1090	490	1310	446	562	4200	1350	2150	e310	168	132
26	196	970	466	1310	445	553	3100	1510	2140	e305	170	131
27	182	877	449	1520	485	597	2470	1960	1680	e370	185	133
28	172	787	435	1860	558	558	2110	2230	1430	e305	155	140
29	164	701	422	1870	---	544	2070	2210	1280	e295	137	139
30	160	633	400	1660	---	546	3000	1860	1150	e280	134	136
31	157	---	387	1510	---	522	---	1630	---	e270	155	---
TOTAL	6466	48127	17548	44768	19506	33027	75369	93860	127340	16184	7379	3832
MEAN	209	1604	566	1444	697	1065	2512	3028	4245	522	238	128
MAX	590	6360	936	5880	1380	4760	8240	15300	35300	1000	700	214
MIN	79	150	387	278	445	522	416	1170	1150	270	134	81
AC-FT	12830	95460	34810	88800	38690	65510	149500	186200	252600	32100	14640	7600
CFSM	.24	1.84	.65	1.66	.80	1.22	2.88	3.47	4.87	.60	.27	.15
IN.	.28	2.05	.75	1.91	.83	1.41	3.22	4.00	5.43	.69	.31	.16

e Estimated

ARKANSAS RIVER BASIN
07189000 ELK RIVER NEAR TIFF CITY, MO--Continued

177

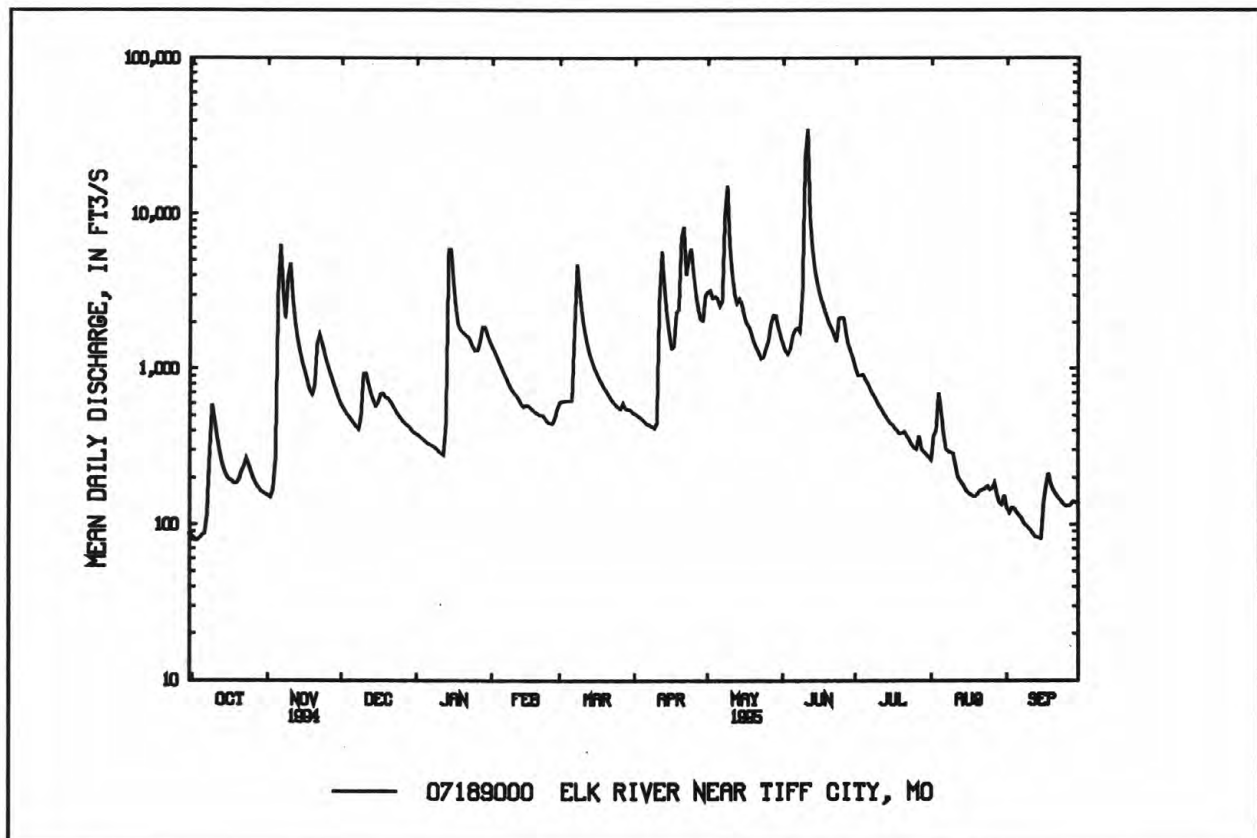
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	432	740	783	691	865	1337	1680	1566	995	484	270	301
MAX	2938	4094	3651	2509	2971	5020	6119	8964	4245	2565	2418	2164
(WY)	1942	1975	1993	1985	1951	1945	1945	1943	1995	1976	1950	1993
MIN	25.7	49.8	58.5	55.9	70.7	75.7	145	227	78.6	14.3	12.0	30.9
(WY)	1957	1964	1964	1964	1954	1956	1956	1964	1954	1954	1954	1953

SUMMARY STATISTICS	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1940 - 95
ANNUAL TOTAL	399311	493406	
ANNUAL MEAN	1094	1352	844
HIGHEST ANNUAL MEAN			1881 1993
LOWEST ANNUAL MEAN			135 1954
HIGHEST DAILY MEAN	23100	Apr 12 35300	Jun 11 68600 Apr 19 1941
LOWEST DAILY MEAN	79	Oct 3 79	Oct 3 5.1 Sep 5 1954
ANNUAL SEVEN-DAY MINIMUM	84	Sep 30 88	Oct 1 5.6 Sep 2 1954
INSTANTANEOUS PEAK FLOW		69900	Jun 11 ^a 137000 Apr 19 1941
INSTANTANEOUS PEAK STAGE		24.45	Jun 11 ^b 28.40 Apr 19 1941
ANNUAL RUNOFF (AC-FT)	792000	978700	611600
ANNUAL RUNOFF (CFSM)	1.25	1.55	.97
ANNUAL RUNOFF (INCHES)	17.03	21.05	13.15
10 PERCENT EXCEEDS	2570	2890	1770
50 PERCENT EXCEEDS	463	597	344
90 PERCENT EXCEEDS	124	152	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 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 tele-meter 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, 2,197,000 acre-ft, June 13, gage height, 754.98 ft; minimum, 1,490,000 acre-ft, Oct. 6, gage height, 740.91.

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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1493000	1537000	1658000	1537000	1547000	1536000	1538000	1760000	1789000	1967000	1580000	1494000
2	1493000	1539000	1643000	1536000	1542000	1537000	1537000	1770000	1796000	1950000	1570000	1494000
3	1494000	1543000	1631000	1537000	1539000	1538000	1539000	1762000	1812000	1936000	1574000	1495000
4	1493000	1573000	1618000	1537000	1540000	1537000	1537000	1749000	1825000	1912000	1595000	1494000
5	1493000	1639000	1603000	1538000	1538000	1539000	1537000	1739000	1848000	1895000	1611000	1493000
6	1493000	1735000	1588000	1537000	1537000	1538000	1538000	1741000	1880000	1888000	1614000	1493000
7	1499000	1763000	1574000	1538000	1537000	1537000	1536000	1759000	1914000	1880000	1604000	1492000
8	1499000	1736000	1561000	1539000	1539000	1539000	1535000	1855000	1957000	1868000	1589000	1491000
9	1497000	1742000	1548000	1537000	1537000	1538000	1539000	1914000	2017000	1859000	1575000	1493000
10	1495000	1742000	1544000	1538000	1538000	1539000	1540000	1954000	2090000	1848000	1561000	1492000
11	1494000	1736000	1541000	1538000	1536000	1539000	1538000	1959000	2144000	1831000	1546000	1493000
12	1497000	1718000	1541000	1538000	1537000	1538000	1547000	1929000	2192000	1811000	1530000	1493000
13	1494000	1695000	1540000	1542000	1538000	1534000	1545000	1896000	2190000	1786000	1518000	1493000
14	1494000	1680000	1539000	1567000	1537000	1532000	1542000	1874000	2178000	1764000	1502000	1495000
15	1494000	1669000	1541000	1592000	1538000	1533000	1541000	1848000	2168000	1742000	1493000	1497000
16	1493000	1656000	1542000	1592000	1537000	1530000	1541000	1822000	2159000	1719000	1493000	1494000
17	1494000	1642000	1542000	1605000	1537000	1531000	1541000	1787000	2137000	1702000	1494000	1495000
18	1499000	1627000	1543000	1598000	1537000	1535000	1564000	1797000	2097000	1687000	1491000	1495000
19	1502000	1619000	1537000	1589000	1537000	1538000	1590000	1819000	2074000	1674000	1494000	1497000
20	1505000	1685000	1541000	1581000	1540000	1543000	1622000	1822000	2062000	1663000	1494000	1495000
21	1511000	1749000	1537000	1574000	1537000	1546000	1647000	1819000	2057000	1651000	1495000	1494000
22	1512000	1784000	1538000	1563000	1538000	1544000	1658000	1815000	2046000	1641000	1497000	1494000
23	1514000	1787000	1537000	1553000	1537000	1541000	1688000	1792000	2034000	1629000	1499000	1495000
24	1519000	1784000	1538000	1545000	1536000	1534000	1717000	1781000	2033000	1619000	1494000	1495000
25	1521000	1756000	1539000	1538000	1538000	1530000	1720000	1768000	2031000	1607000	1493000	1495000
26	1524000	1733000	1540000	1538000	1538000	1534000	1714000	1766000	2024000	1598000	1493000	1495000
27	1526000	1708000	1540000	1540000	1539000	1540000	1707000	1794000	2012000	1592000	1493000	1494000
28	1528000	1693000	1538000	1544000	1534000	1537000	1700000	1816000	1998000	1583000	1492000	1494000
29	1531000	1683000	1538000	1550000	---	1537000	1710000	1813000	1978000	1580000	1494000	1492000
30	1533000	1671000	1538000	1554000	---	1538000	1735000	1805000	1967000	1582000	1494000	1496000
31	1536000	---	1539000	1552000	---	1539000	---	1796000	---	1582000	1492000	---

ARKANSAS RIVER BASIN

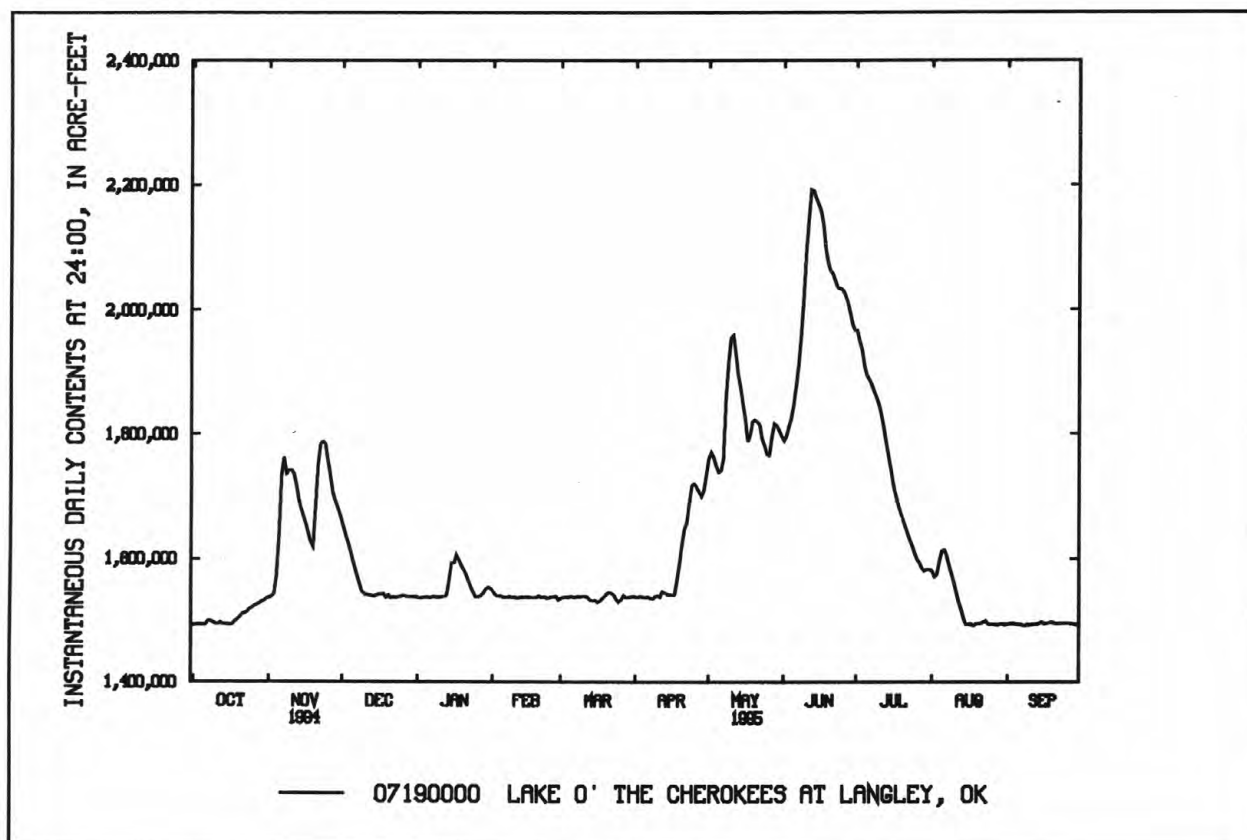
179

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

OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX 1536000	1787000	1658000	1605000	1547000	1546000	1735000	1959000	2192000	1967000	1614000	1497000
MIN 1493000	1537000	1537000	1536000	1534000	1530000	1535000	1739000	1789000	1580000	1491000	1491000
(†) 741.97	744.98	742.05	742.35	741.94	742.05	746.33	747.60	750.94	743.03	740.96	741.04
(††) +44,000	+135,000	-132,000	+13,000	-18,000	+5,000	+196,000	+61,000	+171,000	-385,000	-90,000	+4,000
CAL YR 1994	MAX 2155000	MIN 1489000	(††) -1,000								
WTR YR 1995	MAX 2192000	MIN 1491000	(††) +4,000								

(†) 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	294	375	13300	1870	11700	2390	4240	e29300	e31300	29000	5760	1800
2	141	282	12000	2670	11200	3060	2840	e32600	29600	28700	10500	e1100
3	563	1640	11900	2510	7020	1730	4040	e32600	28300	28400	12100	e1200
4	626	6730	11800	1420	5900	3060	4930	e31800	26900	27300	12200	e1200
5	222	11700	11700	1550	7030	3060	2400	e26700	e26200	23800	12300	e1630
6	295	16700	e11700	2100	6610	5300	2740	e23900	e24300	19900	12100	e700
7	214	26200	e11500	1800	4630	7130	2980	e24600	e25300	18300	11700	e1460
8	7320	32300	e11200	2960	4900	9350	2570	e51500	20000	19000	11600	e950
9	6140	31300	e10000	3820	4990	9620	1770	e68600	38600	19500	11000	e700
10	6140	28400	e7720	3480	4870	6140	5720	e59800	100000	19500	10100	e980
11	1930	22500	e6260	2020	4270	6860	8140	e55100	137000	21600	10500	e470
12	888	22100	e4650	4170	3150	7640	8900	e46600	124000	25000	10200	e770
13	2680	21500	e4420	7520	2930	8140	10900	e30800	111000	26300	8730	e1260
14	1960	16200	3310	11700	3840	5750	9370	e24800	81600	23500	9000	e470
15	1320	12600	3770	11800	5330	4460	7400	e24000	63400	21600	5680	e1290
16	2290	12900	3530	11900	2760	6240	6180	e23000	51800	20600	1920	e6100
17	518	12500	4260	12000	3160	9310	10800	e26000	45600	17700	2060	e640
18	2520	12900	4180	12100	3110	11100	9960	38800	44000	13900	1920	e1380
19	2710	13100	5970	12300	2470	11100	12200	e39700	32800	13500	4060	e1640
20	1640	25200	2340	12200	2400	11500	12500	e43100	23900	13100	7630	e980
21	2620	43600	5280	12400	3870	12000	12800	e43000	19500	12900	6610	e900
22	4830	48700	3300	12400	2020	11900	13000	e42100	21800	12700	7090	e700
23	2620	51200	3980	12100	3780	12000	13000	e41300	22700	12600	6500	e800
24	1530	41300	2100	11200	2850	10600	14800	e39600	17600	12500	9180	e1700
25	741	27700	2460	9940	1660	7650	20200	e39100	16900	12500	4640	e1240
26	77	20800	2810	6400	4680	2000	20900	e39400	24600	11300	4080	e1890
27	21	20000	2740	7420	3880	1150	18800	e43600	29700	10100	4070	1940
28	84	15500	4530	10400	4100	4360	16100	e54200	29400	9310	3790	e1560
29	57	13600	2030	11500	---	4020	19900	e59700	29200	3900	1330	e1100
30	78	13200	2620	11500	---	2680	e26200	e51300	29100	2020	2350	e400
31	395	---	2620	11700	---	2650	---	e37900	---	2650	2610	---
TOTAL	53464	622727	189980	238850	129110	203950	306280	1224500	1306100	532680	223310	38950
MEAN	1725	20760	6128	7705	4611	6579	10210	39500	43540	17180	7204	1298
MAX	7320	51200	13300	12400	11700	12000	26200	68600	137000	29000	12300	6100
MIN	21	282	2030	1420	1660	1150	1770	23000	16900	2020	1330	400
AC-FT106000	1235000	376800	473800	256100	404500	607500	2429000	2591000	1057000	442900	77260	

c Estimated

ARKANSAS RIVER BASIN

181

07190500 NEOSHO RIVER NEAR LANGLEY, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1995, BY WATER YEAR (WY)

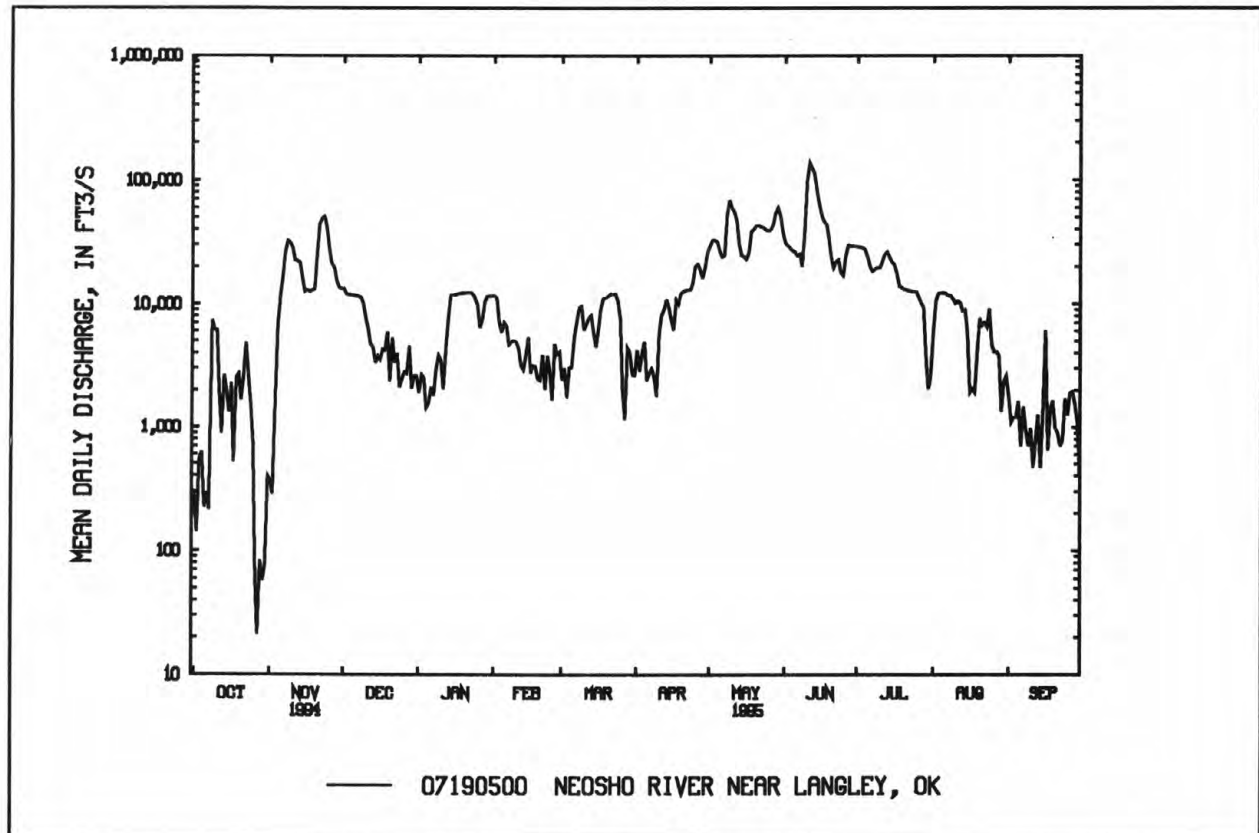
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6170	6840	5618	4855	5944	8479	11390	11990	11260	9155	4453	5258
MAX	51120	38870	35580	21440	23460	33250	50780	77710	43540	67920	20910	30350
(WY)	1987	1986	1993	1993	1949	1973	1945	1943	1995	1951	1950	1993
MIN	37.5	63.0	40.9	144	243	321	38.1	71.4	33.1	26.5	25.6	77.1
(WY)	1981	1957	1981	1954	1981	1967	1971	1940	1940	1940	1940	1953

SUMMARY STATISTICS	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1940 - 95
ANNUAL TOTAL	3617773	5069901	
ANNUAL MEAN	9912	13890	7619
HIGHEST ANNUAL MEAN			21710
LOWEST ANNUAL MEAN			210
HIGHEST DAILY MEAN	125000	Apr 14 137000	Jun 11 287000
LOWEST DAILY MEAN	21	Oct 27 21	Oct 27 ^a 9.0
ANNUAL SEVEN-DAY MINIMUM	155	Oct 26 155	Oct 26 15
INSTANTANEOUS PEAK FLOW		144000	Jun 11 ^b 300000
INSTANTANEOUS PEAK STAGE		35.87	Jun 11 ^c 45.50
ANNUAL RUNOFF (AC-FT)	7176000	10060000	5520000
10 PERCENT EXCEEDS	24400	32400	17000
50 PERCENT EXCEEDS	4490	8730	3880
90 PERCENT EXCEEDS	535	1220	107

^aCaused by closure of Pensacola Dam.

^bFrom computation of outflow from Lake O' the Cherokees.

^cFrom floodmark.



07191000 BIG CABIN CREEK NEAR BIG CABIN, OK

LOCATION.--Lat 36°34'06", long 95°09'07", in NE 1/4, NE 1/4 sec.15, T.24 N., R.20 E., Craig County, Hydrologic Unit 11070209, near 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.--Records fair. Low flow sustained in part by sewage from city of Vinita. U.S. Army Corps of Engineer's satellite teleme-ter 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)
Nov. 21	0300	17,200	35.64	May 8	2000	25,000	40.26
Apr. 18	1500	9,660	29.06	June 5	2000	12,700	32.84
May 1	1800	9,460	28.88	June 10	2100	22,800	39.84

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	17	131	91	e120	100	42	6860	1840	102	10	2.2
2	4.1	21	120	115	e108	81	41	2490	624	64	11	2.2
3	3.8	25	112	102	e104	76	41	1400	1170	84	52	2.0
4	3.4	8260	105	88	e98	112	39	2840	2680	710	51	1.9
5	3.3	13000	99	73	e96	166	40	724	8880	183	67	1.8
6	3.4	10800	95	69	94	156	40	1220	8230	90	35	1.8
7	4.8	1120	99	75	87	1200	40	5190	1330	58	24	2.4
8	1510	504	115	80	80	677	39	19300	1420	43	18	2.2
9	682	5410	215	80	74	352	38	16100	13300	34	15	2.1
10	135	2560	208	82	70	262	203	914	19900	28	14	2.1
11	48	604	144	94	68	197	2260	551	16900	25	14	2.1
12	24	399	113	111	65	157	538	428	1770	23	12	2.3
13	17	305	100	202	61	135	231	358	656	21	8.5	2.2
14	13	263	95	1310	61	194	134	296	422	19	5.6	2.1
15	11	259	82	510	81	245	92	248	324	17	4.0	2.1
16	10	232	e160	244	110	193	176	238	237	16	3.3	20
17	9.2	195	e300	175	103	147	5110	262	180	14	3.1	45
18	821	165	275	158	84	117	6850	1310	145	12	2.9	21
19	1760	1070	185	e155	72	99	1430	625	125	9.4	2.6	13
20	350	12600	153	e152	67	89	6710	333	105	7.8	2.7	10
21	1160	12200	135	e149	63	78	1240	245	90	7.6	2.7	8.8
22	2850	889	122	e134	59	70	704	203	78	7.8	2.6	6.4
23	325	484	112	e130	53	64	7110	180	417	7.7	2.5	5.0
24	118	358	103	e118	50	59	2780	1390	1250	7.0	2.4	4.1
25	63	295	96	e108	49	54	751	987	319	6.5	2.3	3.5
26	40	255	90	e109	46	51	427	2160	151	9.0	2.3	3.3
27	28	237	87	e132	61	50	324	7240	92	69	2.3	3.3
28	23	223	85	e156	103	48	261	3140	71	38	2.2	3.2
29	19	179	84	e153	---	46	3030	744	58	21	1.9	3.1
30	18	148	81	e139	---	45	3760	505	129	15	1.9	2.9
31	16	---	80	e128	---	43	---	5230	---	12	2.1	---
TOTAL	10078.0	73077	3981	5422	2187	5363	44481	83711	82893	1760.8	380.9	184.1
MEAN	325	2436	128	175	78.1	173	1483	2700	2763	56.8	12.3	6.14
MAX	2850	13000	300	1310	120	1200	7110	19300	19900	710	67	45
MIN	3.3	17	80	69	46	43	38	180	58	6.5	1.9	1.8
AC-FT	19990	144900	7900	10750	4340	10640	88230	166000	164400	3490	756	365
CFSM	.72	5.41	.29	.39	.17	.38	3.29	6.00	6.14	.13	.03	.01
IN.	.83	6.04	.33	.45	.18	.44	3.68	6.92	6.85	.15	.03	.02

e Estimated

ARKANSAS RIVER BASIN

183

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

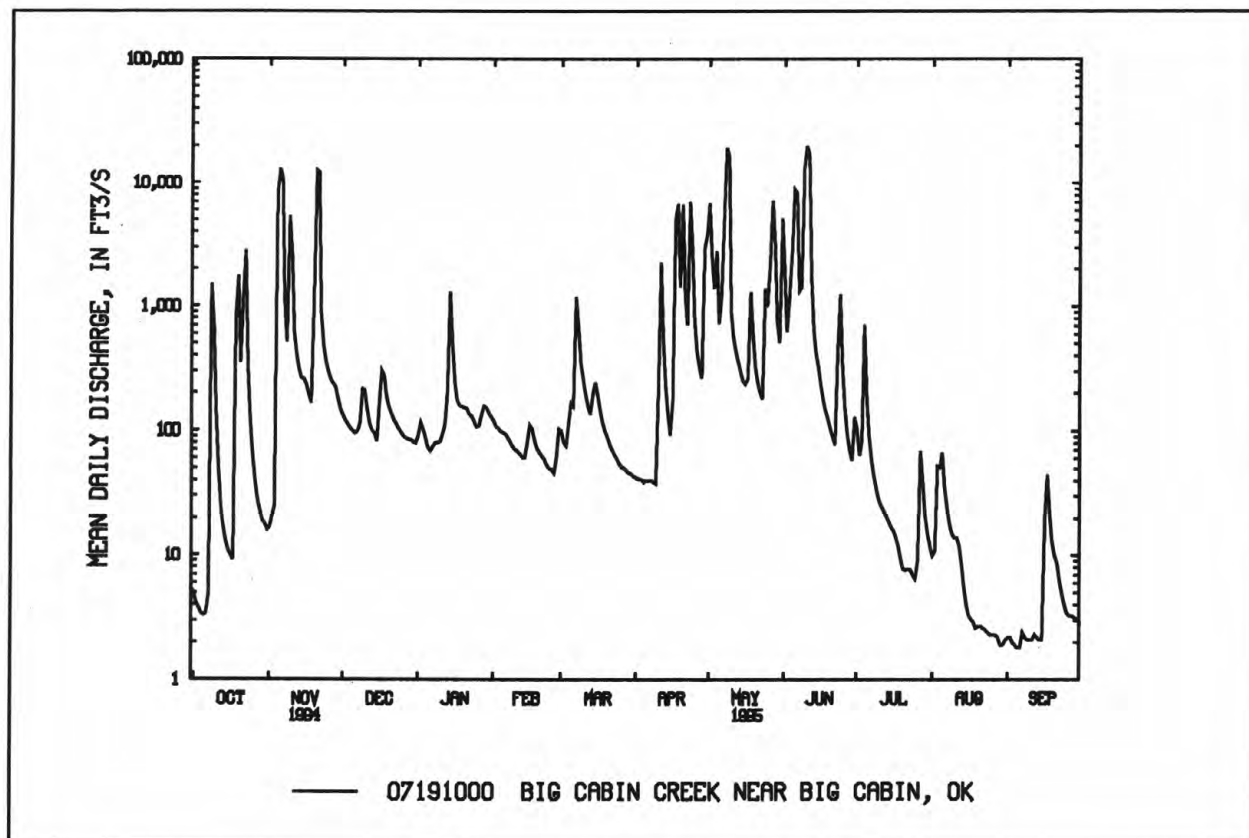
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	267	427	304	224	316	574	505	630	459	220	89.6	220
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 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1948 - 95

ANNUAL TOTAL	199234.6	313518.8	
ANNUAL MEAN	546	859	353
HIGHEST ANNUAL MEAN			1044 1993
LOWEST ANNUAL MEAN			37.9 1956
HIGHEST DAILY MEAN	24300	Apr 12 19900	Jun 10 46300 Oct 3 1959
LOWEST DAILY MEAN	3.3	Oct 5 1.8	Sep 5, 6 .10 Oct 4 1954
ANNUAL SEVEN-DAY MINIMUM	3.8	Aug 13 2.0	Aug 31 .11 Sep 11 1956
INSTANTANEOUS PEAK FLOW		25000	May 8 ^a 52000 Oct 3 1959
INSTANTANEOUS PEAK STAGE		40.26	May 8 46.65 Feb 23 1985
ANNUAL RUNOFF (AC-FT)	395200	621900	255400
ANNUAL RUNOFF (CFSM)	1.21	1.91	.78
ANNUAL RUNOFF (INCHES)	16.47	25.92	10.65
10 PERCENT EXCEEDS	911	1460	518
50 PERCENT EXCEEDS	69	98	33
90 PERCENT EXCEEDS	5.3	3.3	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. No estimated daily discharges. 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)
May 8	1500	4,190	9.93	June 10	1645	9,440	13.00

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	23	65	49	133	97	75	310	166	112	68	30
2	22	23	62	48	130	99	75	258	148	109	67	29
3	22	23	59	47	125	97	72	231	180	121	66	29
4	22	31	57	47	120	95	72	235	238	131	67	28
5	21	735	55	46	115	95	70	225	289	124	68	28
6	20	460	54	45	109	96	70	253	472	117	67	28
7	20	281	52	44	104	354	70	434	429	111	66	27
8	22	212	54	43	100	490	69	2760	335	105	65	26
9	23	824	121	43	97	353	68	1430	408	100	63	26
10	25	427	207	42	95	276	77	721	4520	98	60	26
11	26	280	181	41	95	224	365	523	2170	95	59	27
12	28	220	153	41	91	181	456	414	1060	93	56	27
13	27	178	134	195	90	149	309	346	684	91	53	27
14	26	148	119	1250	89	133	234	397	490	89	52	27
15	26	128	106	686	89	126	177	363	376	87	51	28
16	25	113	99	449	88	118	139	316	312	88	47	30
17	25	101	94	329	86	110	125	275	270	84	45	33
18	24	90	86	263	84	104	121	253	239	81	44	54
19	24	85	79	241	82	100	127	223	216	79	42	61
20	24	88	74	230	81	97	844	197	196	78	40	58
21	24	102	69	224	79	93	583	174	178	79	40	53
22	24	132	66	213	78	92	382	155	162	80	41	48
23	25	130	63	192	76	90	378	140	151	80	40	44
24	25	121	60	168	75	87	394	151	144	80	39	42
25	25	112	59	153	75	85	324	183	138	78	37	40
26	25	103	57	155	74	84	265	217	134	78	36	38
27	24	94	55	172	82	84	216	252	130	77	34	36
28	23	85	54	176	93	82	174	272	123	75	33	36
29	23	77	52	165	---	80	231	248	118	73	32	35
30	23	70	51	149	---	78	348	218	116	71	32	35
31	23	---	51	137	---	76	---	191	---	69	31	---
TOTAL	739	5496	2548	6083	2635	4325	6910	12365	14592	2833	1541	1056
MEAN	23.8	183	82.2	196	94.1	140	230	399	486	91.4	49.7	35.2
MAX	28	824	207	1250	133	490	844	2760	4520	131	68	61
MIN	20	23	51	41	74	76	68	140	116	69	31	26
AC-FT	1470	10900	5050	12070	5230	8580	13710	24530	28940	5620	3060	2090
CFSM	.18	1.38	.62	1.48	.71	1.05	1.73	3.00	3.66	.69	.37	.26
IN.	.21	1.54	.71	1.70	.74	1.21	1.93	3.46	4.08	.79	.43	.30

ARKANSAS RIVER BASIN

185

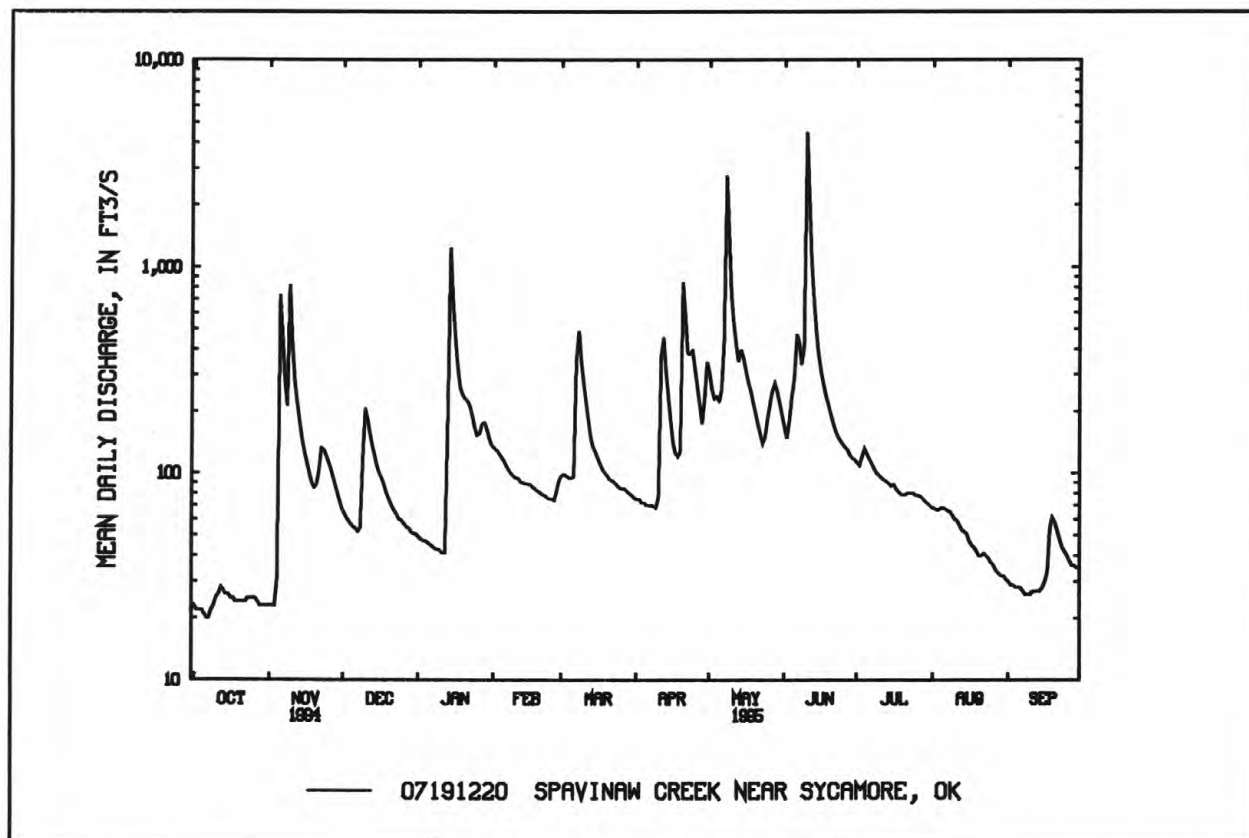
07191220 SPAVINAW CREEK NEAR SYCAMORE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	59.8	120	134	107	119	191	214	154	151	63.1	31.2	53.2
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 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1962 - 95

ANNUAL TOTAL	51556	61123	
ANNUAL MEAN	141	167	116
HIGHEST ANNUAL MEAN			265
LOWEST ANNUAL MEAN			18.0
HIGHEST DAILY MEAN	2620	Apr 11	4520 Jun 10
LOWEST DAILY MEAN	20	Oct 6	20 Oct 6,7
ANNUAL SEVEN-DAY MINIMUM	21	Oct 2	21 Oct 2
INSTANTANEOUS PEAK FLOW			9440 Jun 10
INSTANTANEOUS PEAK STAGE			13.00 Jun 10
INSTANTANEOUS LOW FLOW			20 Oct 6,7
ANNUAL RUNOFF (AC-FT)	102300	121200	84190
ANNUAL RUNOFF (CFSM)	1.06	1.26	.87
ANNUAL RUNOFF (INCHES)	14.42	17.10	11.87
10 PERCENT EXCEEDS	309	339	239
50 PERCENT EXCEEDS	84	89	56
90 PERCENT EXCEEDS	24	27	14



07191300 SPAVINAW LAKE AT SPAVINAW, OK

LOCATION.--Lat 36°22'59", long 95°02'52", in SW 1/4 SE 1/4 sec.15, T.22 N., R.21 E., Mayes County, Hydrologic Unit 11070209, right of intake tower on face of dam on Spavinaw Creek at Spavinaw, and at mile 5.5.

DRAINAGE AREA.--386 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, 38,000 acre-ft, June 11, elevation 682.95 ft; minimum, 28,800 acre-ft, Oct. 31, elevation 678.92 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30300	28900	30800	30700	31000	30700	30800	31400	31100	30800	30700	30800
2	30300	28900	30800	30700	31000	30800	30700	31300	31000	30800	30700	30800
3	30200	29100	30800	30700	30900	30800	30800	31300	31100	30900	30700	30800
4	30100	29700	30800	30700	30900	30800	30700	31200	31500	30900	30700	30800
5	30000	31400	30800	30700	30900	30800	30700	31200	31600	30900	30700	30700
6	29900	32400	30800	30700	30900	30900	30700	31300	31500	30900	30700	30600
7	30000	31700	30700	30700	30900	31300	30700	31500	31500	30800	30700	30500
8	30200	31300	30800	30700	30900	31700	30700	36400	31400	30800	30700	30400
9	30200	32700	30800	30700	30800	31500	30700	32800	31700	30800	30600	30300
10	30100	32100	30800	30700	30800	31300	31000	32100	37700	30800	30600	30200
11	30000	31600	30900	30700	30800	31200	31500	31700	33200	30800	30600	30100
12	29900	31300	30900	30700	30800	31100	31700	31500	32500	30800	30500	30000
13	29800	31100	30900	31000	30800	31000	31400	31300	32000	30800	30500	30000
14	29800	31000	30900	32900	30800	31000	31200	31200	31600	30700	30400	30100
15	29700	31000	30900	32200	30800	31000	31100	31200	31400	30700	30300	30200
16	29600	30900	30900	31700	30800	30900	31100	31100	31300	30700	30300	30600
17	29600	30900	30900	31400	30800	30900	31000	31200	31200	30700	30200	30600
18	29800	30900	30800	31300	30800	30900	31100	31100	31100	30700	30200	30600
19	29800	30900	30800	31200	30800	30900	31500	31000	31000	30700	30200	30600
20	29900	31000	30800	31100	30800	30900	32900	31000	31000	30700	30200	30600
21	29800	31000	30800	31100	30800	30900	32200	31000	31000	30700	30100	30400
22	29700	31000	30800	31100	30800	30800	31800	31000	31000	30700	30200	30300
23	29600	31000	30800	31100	30700	30800	31900	31000	31100	30700	30200	30200
24	29600	31000	30800	31100	30700	30800	31800	31000	31000	30700	30200	30100
25	29400	30900	30800	31000	30700	30800	31600	31000	31000	30700	30300	30000
26	29300	30900	30800	31000	30800	30800	31300	31100	31000	30800	30300	30100
27	29200	30900	30800	31000	30800	30800	31200	31400	30900	30700	30400	30200
28	29100	30900	30700	31000	30800	30800	31100	31400	30900	30700	30400	30300
29	29000	30800	30700	31000	---	30800	31300	31300	30900	30700	30500	30300
30	28900	30800	30700	31000	---	30800	31500	31200	30800	30700	30700	30300
31	28900	---	30700	31000	---	30800	---	31100	---	30700	30800	---

ARKANSAS RIVER BASIN

187

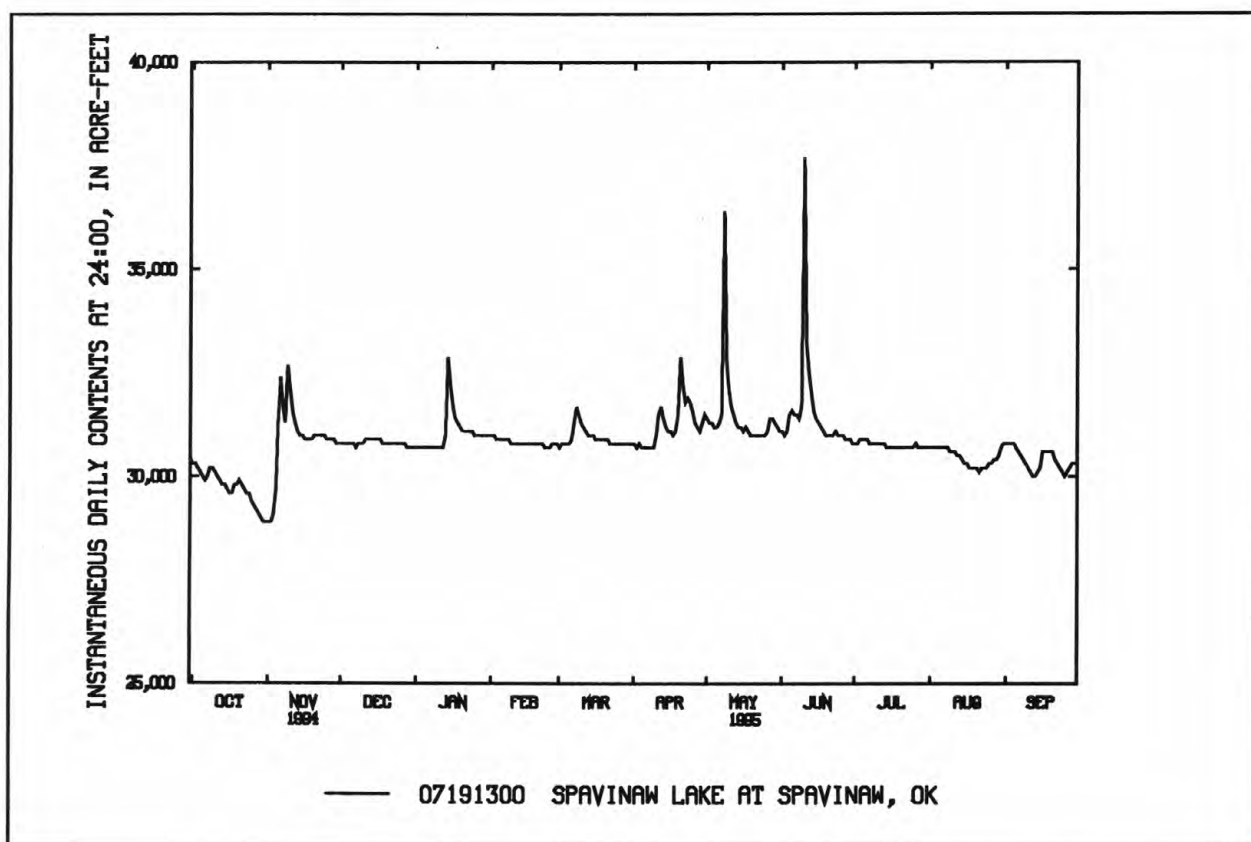
07191300 SPAVINAW LAKE AT SPAVINAW, OK--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	30300	32700	30900	32900	31000	31700	32900	36400	37700	30900	30800	30800
MIN	28900	28900	30700	30700	30700	30700	30700	31000	30800	30700	30100	30000
(†)	678.93	680.22	680.15	680.36	680.18	680.16	680.71	680.49	680.23	680.07	680.16	679.85
(††)	-1,500	+1,900	-100	+300	-200	0	+700	-400	-300	-100	+100	-500

CAL YR 1994 MAX 37900 MIN 28900 (††) -100
WTR YR 1995 MAX 37700 MIN 28900 (††) -100

(†) 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 gates, 200,300 acre-ft at elevation 619.0 ft, power pool, and 48,630 acre-ft at elevation 599.0 ft, top of spillway crest. Figures given herein represent total contents. Reservoir was designed for flood control and power development. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 443,600 acre-ft, Oct. 4, 1986 and June 15, 1995, elevation, 635.95 ft; minimum since power pool first filled, 153,200 acre-ft, Mar. 24, 1988, elevation, 614.31 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 443,600 acre-ft, June 15, elevation, 635.95 ft; minimum, 188,800 acre-ft, Nov. 19, elevation, 617.92 ft.

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

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

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	201600	208400	202600	204500	212900	203400	204700	251600	265900	330500	205600	207500
2	201700	209200	204200	203000	210700	202300	203000	254200	267200	327400	205800	207600
3	201700	212600	203700	203000	209000	202100	203200	251600	272000	325300	205100	208100
4	201600	222900	204400	203000	206900	203400	202800	241300	285200	324000	202400	209200
5	199800	236200	204300	203400	204700	202700	202500	236200	308800	312700	205500	208800
6	202100	250200	206200	203400	202700	203600	203700	239200	312800	305800	203700	208100
7	199900	249600	203000	203200	201700	202000	204200	253100	310900	298600	204100	206700
8	203000	244200	203900	202800	204900	209200	204900	314600	320000	289900	203500	203200
9	200500	247900	203100	203100	204100	212400	203200	350000	350700	284600	204300	204100
10	201600	241600	203400	203900	203200	208800	203200	340200	388300	279000	204900	204100
11	201800	230500	202800	205200	204100	208000	202300	337200	423700	271700	205300	204600
12	201500	223000	203100	204700	204900	204800	202600	334600	435700	266200	205200	205100
13	201300	223200	203000	202400	204200	201200	204300	324600	435700	258100	205900	208600
14	200400	217700	203200	207500	203200	209200	202800	310000	440500	249900	207800	206800
15	201400	214300	203100	205900	200600	211200	204600	292700	435800	250200	207300	202400
16	201200	212600	205600	204100	201800	201600	204500	284700	395600	243500	204400	199100
17	201100	207300	203200	202500	203900	197800	210500	277400	365200	239200	210200	201000
18	202700	196400	204900	203600	204200	200200	211100	271700	352400	234300	211500	201400
19	201600	200800	202300	205100	202800	199300	210600	269900	349300	226700	205700	204300
20	201800	224700	204200	206800	203800	205600	223400	267300	345100	218500	211300	203200
21	203200	248000	201400	212300	203600	203600	219900	265900	337900	214500	208400	203500
22	203200	243500	204600	211700	203200	206200	217600	261500	335800	210600	208300	203500
23	202800	251600	203300	216200	203700	207100	219100	257200	347900	203700	208900	203700
24	201000	256000	203800	215600	202100	204900	227700	248100	356400	206000	206000	205900
25	202200	237300	203000	217300	203200	200600	228500	233100	364600	205100	206600	205600
26	202300	224900	203800	215500	202300	201100	225300	235700	364300	204400	207400	205600
27	204500	222900	202700	211000	203300	200500	224000	248200	363100	205700	207300	207300
28	205700	216700	203300	206500	202800	202000	221700	256500	354600	205300	209500	203200
29	207700	213200	203300	201500	---	203600	226700	259200	339600	205500	208900	205200
30	209900	207200	204700	209400	---	203500	240300	264200	331600	207000	209500	203200
31	209200	---	203600	211300	---	202500	---	266900	---	206600	210400	---

ARKANSAS RIVER BASIN

189

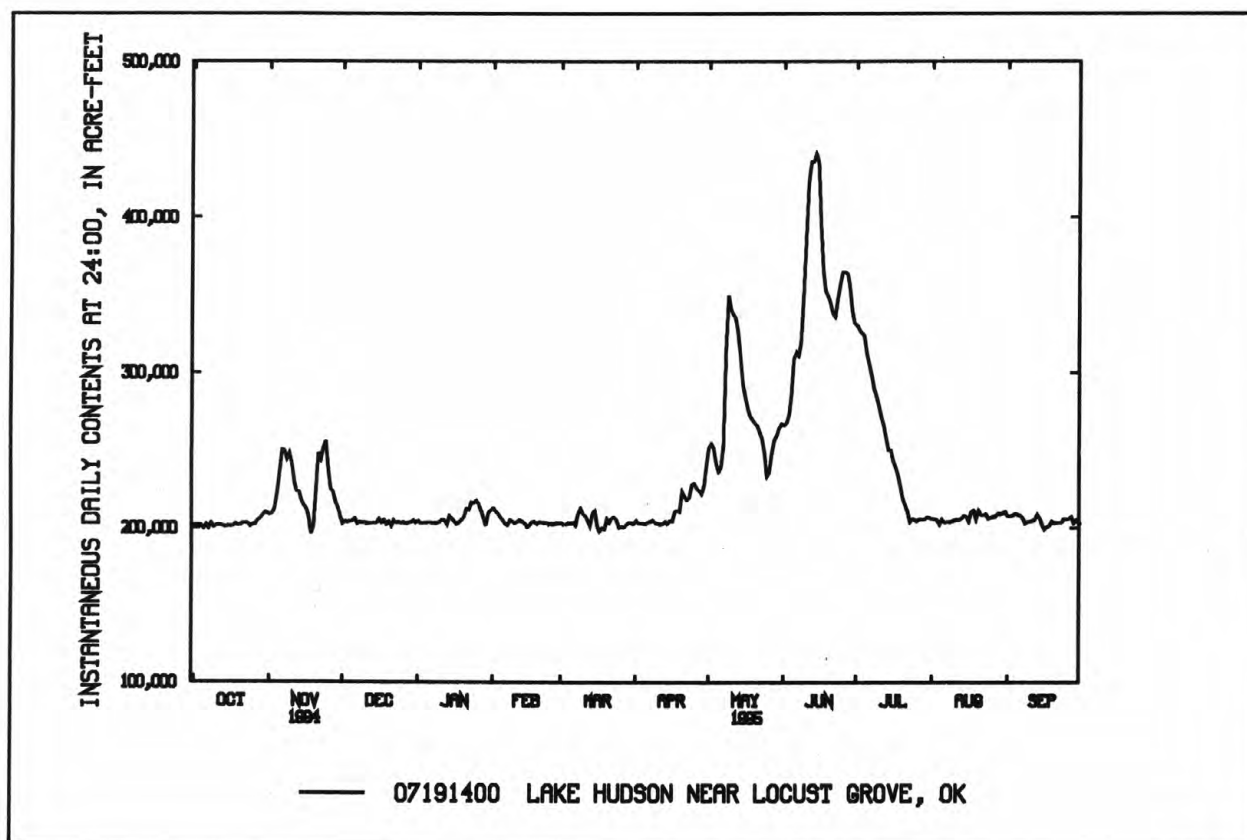
07191400 LAKE HUDSON NEAR LOCUST GROVE, OK--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	209900	256000	206200	217300	212900	212400	240300	350000	440500	330500	211500	209200
MIN	199800	196400	201400	201500	200600	197800	202300	233100	265900	203700	202400	199100
(†)	+6,200	-2,000	-3,600	+7,700	-8,500	-300	+37,300	+26,600	+64,700	-125,000	+3,800	-7,200
(††)	619.81	619.62	619.30	620.00	619.23	619.20	622.48	624.61	629.27	619.57	619.91	619.26

WTR YR 1995 MAX 440500 MIN 196400 (††) +200

(†) ELEVATION, IN FEET, AT END OF MONTH

(††) CHANGE IN CONTENTS, IN ACRE-FEET



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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	191	e350	14900	1310	11300	3640	3370	27900	33800	e31000	3670	3050
2	242	e220	10500	3250	12300	3420	3220	33300	28900	e31100	8330	545
3	491	e220	12100	2690	8190	1780	4190	33900	25900	e30500	11600	267
4	191	e16600	11300	1250	7440	2540	4990	37600	25400	e30600	12300	237
5	190	e25000	11900	1320	8250	3530	2550	30700	28400	e30500	9670	2530
6	189	e24800	10900	1960	7200	5770	2020	25100	36400	e25900	12200	1020
7	196	e27700	12000	1740	6390	10700	2250	25200	e28600	e23200	11500	1050
8	6500	e32700	11900	2850	2650	8610	2960	48400	e20600	e23000	9800	1720
9	9990	e31900	9550	3840	5400	9530	1310	80300	e40100	e22400	9860	228
10	e4750	e32600	8190	2940	5790	9850	8330	e70700	102000	e22400	8840	218
11	e1650	e26400	6600	1340	4120	8280	12100	e58500	154000	e22600	9340	222
12	e1350	e24400	4930	4960	2470	10200	10400	e49900	e126000	e23000	9130	222
13	e3050	e21000	4890	10100	3780	10800	12000	e36700	e117000	e26000	7550	217
14	e1350	e18600	3370	13300	4060	2200	11000	e32000	e83000	e23300	8190	215
15	e220	e15400	3510	17100	6890	4280	6750	e31700	e67800	20000	5850	2320
16	e2250	e14800	4320	15500	2710	10500	7680	e26700	e76900	20600	3940	6110
17	e650	e14000	6030	15000	2040	12000	16900	29600	e58300	18400	310	1410
18	e2850	e17800	3950	12800	2430	9630	16900	38900	e47500	14900	1070	211
19	e5050	e12800	7140	12400	3360	11200	15800	39400	e34000	16500	3870	211
20	e2870	e26400	2060	12700	1760	8410	20100	40100	e23600	16400	5580	211
21	e2650	e42000	5840	11700	2880	12700	21600	39300	e23600	14200	6290	214
22	e8850	e49500	1680	13800	2420	10500	17000	39500	e23300	14400	6380	214
23	e3750	48900	4640	10600	3840	11000	23400	38700	e20200	14100	5010	212
24	e3550	e39100	1890	12400	3620	11200	17900	40400	e19800	10600	9680	213
25	e250	e32600	3430	10000	881	9180	21600	41100	e20800	12300	6120	887
26	e230	e25000	2510	8630	4830	3010	22700	37600	e30400	11600	2800	1110
27	e220	e21000	3360	10800	4740	1540	20300	40000	e34400	10100	3640	537
28	e200	19300	4080	14100	4070	3020	17500	48300	e37200	9690	2340	3560
29	e200	14600	1950	14400	---	2770	22900	52700	e38300	4630	686	503
30	e200	16100	2120	9890	---	2180	25100	46300	e34500	1180	324	227
31	e1350	---	3650	8440	---	3040	---	39500	---	2430	2150	---
TOTAL	65670	691790	195190	263110	135811	217010	374820	1260000	1440700	577530	198020	29891
MEAN	2118	23060	6296	8487	4850	7000	12490	40650	48020	18630	6388	996
MAX	9990	49500	14900	17100	12300	12700	25100	80300	154000	31100	12300	6110
MIN	189	220	1680	1250	881	1540	1310	25100	19800	1180	310	211
AC-FT	130300	1372000	387200	521900	269400	430400	743500	2499000	2858000	1146000	392800	59290

e Estimated

ARKANSAS RIVER BASIN

191

07191500 NEOSHO RIVER NEAR CHOUTEAU, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6011	9296	8564	6895	7680	12260	14220	12060	13610	8823	4572	4838
MAX	59840	40780	40400	23350	23640	39260	46000	40650	48020	28710	15140	28460
(WY)	1987	1986	1993	1973	1985	1973	1973	1995	1995	1976	1993	1993
MIN	169	83.3	87.5	189	79.4	75.8	160	122	735	1067	603	591
(WY)	1964	1964	1964	1981	1964	1964	1971	1964	1972	1991	1991	1983

SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1964 - 95

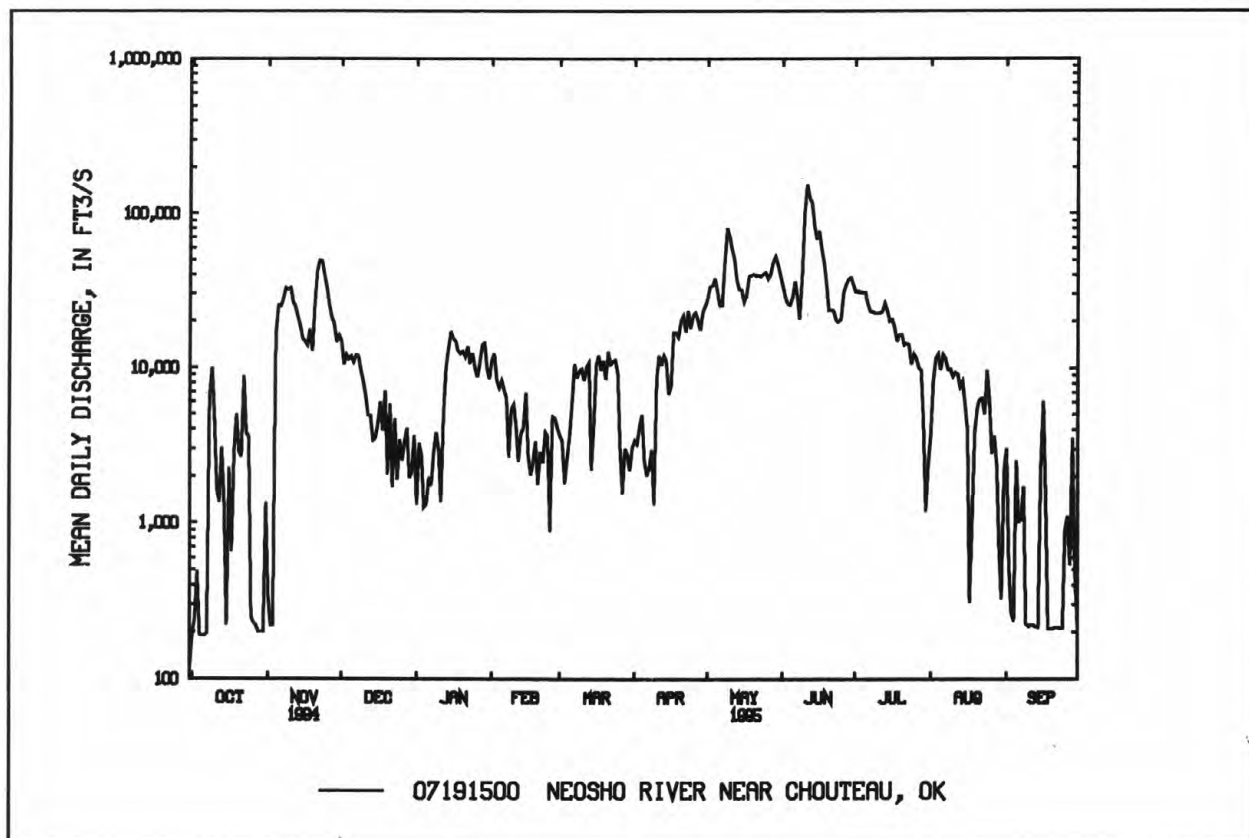
ANNUAL TOTAL	3740672	5449542	
ANNUAL MEAN	10250	14930	^a 9064
HIGHEST ANNUAL MEAN			22240 1993
LOWEST ANNUAL MEAN			1924 1981
HIGHEST DAILY MEAN	110000	Apr 14 154000	Jun 11 154000
LOWEST DAILY MEAN	98	Sep 27 189	Oct 6 ^b 12
ANNUAL SEVEN-DAY MINIMUM	230	Sep 30 212	Sep 18 45
INSTANTANEOUS PEAK FLOW		164000	Jun 11 ^c 164000
INSTANTANEOUS PEAK STAGE		36.29	Jun 11 ^d 36.29
ANNUAL RUNOFF (AC-FT)	7420000	10810000	6567000
10 PERCENT EXCEEDS	26200	36900	22400
50 PERCENT EXCEEDS	4640	9550	4880
90 PERCENT EXCEEDS	200	523	172

^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.



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.--No estimated daily discharges. 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. 5	1100	7,210	11.37	Apr. 20	2000	14,200	16.79
Jan. 14	1200	12,200	15.48	May 8	2400	18,900	19.24
Mar. 7	1800	6,740	10.96	June 11	0500	14,500	16.96

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	123	154	379	323	915	527	446	4290	706	500	297	160
2	121	153	357	317	848	481	420	2830	675	471	299	170
3	114	173	342	305	787	461	400	1910	1060	477	291	164
4	113	830	332	296	713	448	387	2060	1580	531	291	154
5	118	6090	315	287	656	447	371	1580	2130	566	280	149
6	118	4220	308	288	609	447	361	1730	2170	577	271	150
7	122	1730	301	297	579	4090	349	3460	1550	472	258	155
8	188	1150	460	293	547	2940	337	10200	1190	435	254	161
9	351	1150	3360	283	523	1770	327	9850	2440	408	247	166
10	222	1790	2060	285	510	1370	344	3520	4340	384	240	165
11	182	1110	1320	285	488	1120	1620	2370	10500	375	234	155
12	172	857	1010	287	461	956	2040	1820	3440	365	228	159
13	163	693	836	2170	446	843	1140	1540	2210	352	221	168
14	160	739	706	10200	453	775	853	2100	1690	342	212	163
15	156	2050	621	4130	500	754	691	1530	1400	335	212	163
16	155	1260	586	2590	528	684	582	1170	1190	325	216	213
17	161	888	587	1780	509	618	526	1040	1040	322	209	377
18	161	717	526	1490	472	563	756	1060	925	346	203	255
19	162	619	479	2880	448	530	783	927	829	330	197	212
20	180	700	458	2460	429	514	7750	824	770	345	196	211
21	219	1360	459	2020	418	490	4380	746	712	366	187	200
22	221	1040	447	1680	408	471	2190	687	662	347	184	188
23	196	820	423	1440	397	453	1900	650	624	365	185	183
24	182	692	402	1260	384	431	1890	760	1070	480	178	181
25	173	596	385	1280	369	414	1430	1620	762	527	179	176
26	172	543	366	1300	361	784	1180	1390	628	533	178	183
27	167	514	351	1350	485	856	1030	1150	572	571	179	183
28	161	473	343	1290	647	663	887	1110	534	432	168	181
29	159	435	336	1120	---	563	1160	896	523	372	165	180
30	156	404	331	1050	---	514	2340	768	538	334	165	183
31	150	---	325	983	---	479	---	736	---	306	163	---
TOTAL	5198	33950	19511	46019	14890	26456	38870	66324	48460	12891	6787	5508
MEAN	168	1132	629	1484	532	853	1296	2139	1615	416	219	184
MAX	351	6090	3360	10200	915	4090	7750	10200	10500	577	299	377
MIN	113	153	301	283	361	414	327	650	523	306	163	149
AC-FT	10310	67340	38700	91280	29530	52480	77100	131600	96120	25570	13460	10930
CFSM	.26	1.78	.99	2.34	.84	1.34	2.04	3.37	2.54	.65	.34	.29
IN.	.30	1.99	1.14	2.70	.87	1.55	2.28	3.89	2.84	.76	.40	.32

ARKANSAS RIVER BASIN

193

07195500 ILLINOIS RIVER NEAR WATTS, OK—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1995, BY WATER YEAR (WY)

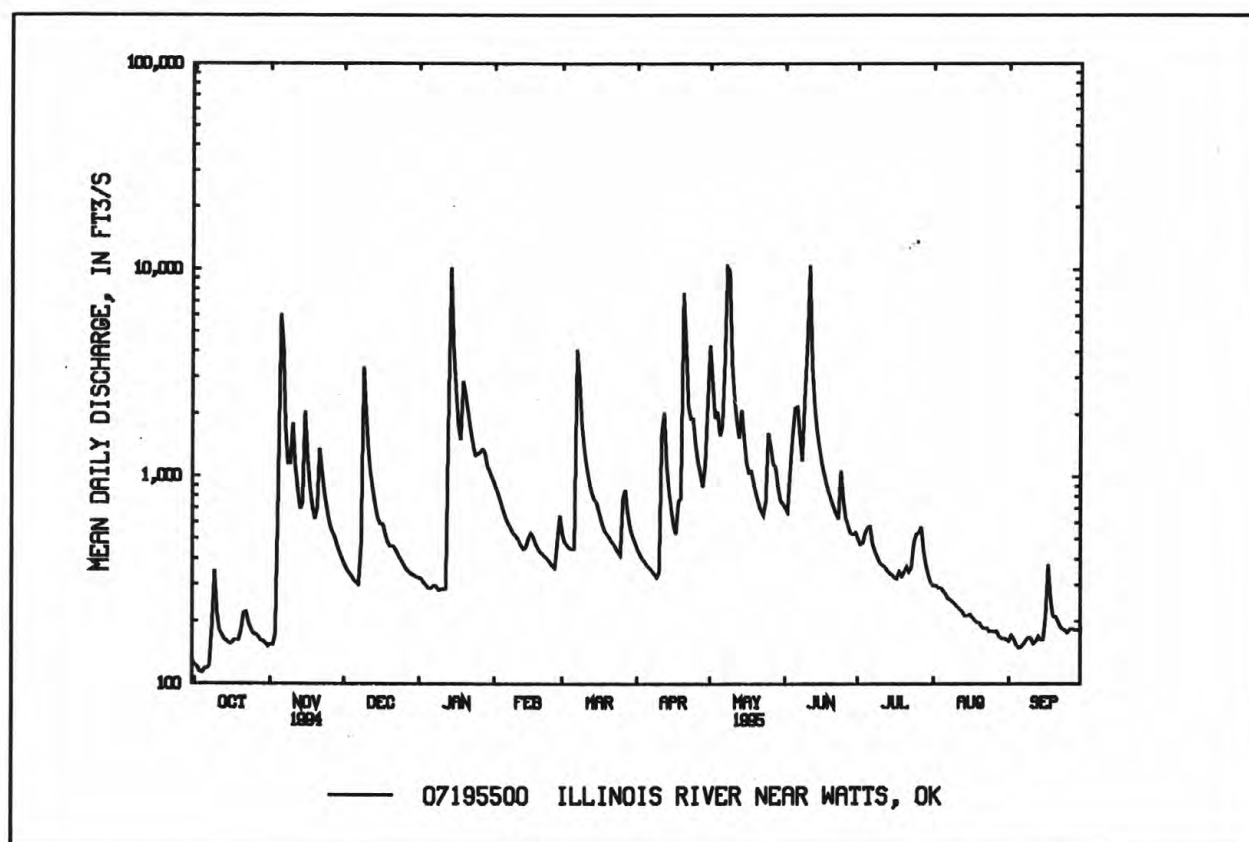
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	377	668	692	558	677	988	1051	1032	672	351	240	288
MAX	2734	3087	2786	1658	1818	2934	3347	4286	3225	1807	1172	1393
(WY)	1987	1974	1988	1969	1975	1973	1957	1961	1974	1958	1961	1986
MIN	20.9	65.6	60.4	61.4	75.1	114	176	144	113	50.7	33.2	14.9
(WY)	1957	1964	1956	1956	1964	1956	1963	1977	1963	1964	1956	1956

SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1956 - 95

ANNUAL TOTAL	246182	324864	
ANNUAL MEAN	674	890	632
HIGHEST ANNUAL MEAN			1247
LOWEST ANNUAL MEAN			151
HIGHEST DAILY MEAN	6090	Nov 5	10500
LOWEST DAILY MEAN	113	Oct 4	113
ANNUAL SEVEN-DAY MINIMUM	118	Oct 1	118
INSTANTANEOUS PEAK FLOW			18900
INSTANTANEOUS PEAK STAGE			19.24
INSTANTANEOUS LOW FLOW			108
ANNUAL RUNOFF (AC-FT)	488300	644400	458000
ANNUAL RUNOFF (CFSM)	1.06	1.40	1.00
ANNUAL RUNOFF (INCHES)	14.42	19.03	13.53
10 PERCENT EXCEEDS	1450	1900	1270
50 PERCENT EXCEEDS	392	477	292
90 PERCENT EXCEEDS	152	167	93

^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 July 1995 (discontinued)

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 1994 TO SEPTEMBER 1995

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)
OCT											
27...	1100	8.00	14.0	751	1028	1028	169	2.08	329	10.1	8.1
27...	1101	18.0	14.0	751	1028	1028	169	2.08	329	10.1	8.1
27...	1102	28.0	14.0	751	1028	1028	169	2.08	329	10.1	8.1
27...	1103	38.0	14.0	751	1028	1028	169	2.08	329	10.0	8.1
27...	1104	48.0	14.0	751	1028	1028	169	2.08	329	10.1	8.1
27...	1105	58.0	14.0	751	1028	1028	169	2.08	329	10.1	8.1
27...	1106	68.0	14.0	751	1028	1028	169	2.08	329	10.1	8.1
27...	1107	78.0	14.0	751	1028	1028	169	2.08	329	10.1	8.1
27...	1108	88.0	14.0	751	1028	1028	169	2.08	329	10.1	8.1
27...	1109	98.0	14.0	751	1028	1028	169	2.08	329	10.0	8.1
27...	1110	108	14.0	751	1028	1028	169	2.08	329	10.0	8.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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												
27...	1200	1028	80020	169	329	8.1	16.0	14.0	--	751	10.1	100
DEC												
20...	1700	1028	80020	449	275	8.0	7.0	10.0	3.3	748	10.8	98
FEB												
16...	1600	1028	80020	531	288	8.1	5.0	7.5	--	755	12.5	105
MAY												
09...	1000	1028	80020	10200	144	7.8	19.0	16.0	41	740	8.8	92
JUN												
28...	1700	1028	80020	519	265	7.9	30.0	22.5	13	750	8.6	101
JUL												
31...	1430	1028	80020	292	288	7.9	28.5	27.5	--	750	8.0	103

ARKANSAS RIVER BASIN
07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

195

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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)	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- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)
OCT												
27...	--	--	--	--	--	--	--	--	--	129	0	106
DEC												
20...	--	120	12	43	1.9	7.0	11	0.3	2.3	126	0	103
FEB												
16...	--	--	--	--	--	--	--	--	--	114	0	94
MAY												
09...	1.6	62	12	22	1.6	2.8	8	0.2	3.3	60	0	49
JUN												
28...	--	110	0	42	1.8	6.8	11	0.3	2.8	137	0	112
JUL												
31...	--	--	--	--	--	--	--	--	--	125	0	103

DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00613)
OCT												
27...	--	--	--	--	--	--	--	--	1.40	--	--	<0.010
DEC												
20...	10	9.6	<0.10	6.7	160	154	0.22	194	2.60	--	--	<0.010
FEB												
16...	--	--	--	--	--	--	--	--	3.00	--	--	<0.010
MAY												
09...	5.5	3.1	<0.10	7.6	94	82	0.13	2590	1.18	1.18	5.2	0.020
JUN												
28...	6.8	8.6	<0.10	6.7	157	154	0.21	220	2.50	--	--	<0.010
JUL												
31...	--	--	--	--	--	--	--	--	2.19	2.19	9.7	0.010

[illegible]

ARKANSAS RIVER BASIN
07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

197

WATER-QUALITY DATA (ORGANICS), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	PCB, TOTAL (UG/L) (39516)	PCNS UNFILT RECOVER (UG/L) (39250)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L) (39350)	CHLOR- PYRIFOS TOTAL RECOVER (UG/L) (38932)	2,4-D, TOTAL (UG/L) (39730)	P, P' - DDD UNFILT RECOVER (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	P, P' - DDT UNFILT RECOVER (UG/L) (39370)	DEF TOTAL (UG/L) (39040)	DI - AZINON, TOTAL (UG/L) (39570)
MAY											
09...	<0.100	<0.100	<0.010	<0.100	<0.010	0.030	<0.010	<0.010	<0.010	<0.010	0.010
JUN											
28...	<0.100	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	DI - ELDRIN TOTAL (UG/L) (39380)	DISUL- FOTON UNFILT RECOVER (UG/L) (39011)	2, 4-DP TOTAL (UG/L) (82183)	ENDO- SULFAN, I TOTAL (UG/L) (39388)	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	FONOFOS (DY- FONATE) WATER TOT.REC (UG/L) (82614)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)
MAY											
09...	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
JUN											
28...	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

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)
MAY										
09...	<0.010	<0.010	<0.010	<0.010	<0.100	<0.010	<0.010	<0.010	<1.00	<0.010
JUN										
28...	<0.010	<0.010	<0.010	<0.010	<0.100	<0.010	<0.010	<0.010	<1.00	<0.010

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 July 1995 (discontinued).

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 1994 TO SEPTEMBER 1995

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 1994											
07...	0902	2.00	12.5	753	1028	1028	11	5.11	398	9.8	8.2
07...	0904	4.00	12.5	753	1028	1028	11	5.11	399	9.8	8.2
07...	0906	6.00	12.5	753	1028	1028	11	5.11	399	9.8	8.2
07...	0908	8.00	12.5	753	1028	1028	11	5.11	399	9.8	8.2
07...	0910	10.0	12.5	753	1028	1028	11	5.11	399	9.8	8.2
07...	0912	12.0	12.5	753	1028	1028	11	5.11	399	9.8	8.2
07...	0914	14.0	12.5	753	1028	1028	11	5.11	399	9.8	8.2
07...	0916	16.0	12.5	753	1028	1028	11	5.11	399	9.8	8.2
JUN 1995											
29...	1640	3.00	22.0	750	1028	1028	20	5.16	329	8.9	7.9
29...	1641	6.00	22.0	750	1028	1028	20	5.16	330	8.9	7.9
29...	1642	9.00	22.0	750	1028	1028	20	5.16	332	9.1	7.9
29...	1643	12.0	22.0	750	1028	1028	20	5.16	332	9.1	7.9
29...	1644	15.0	22.0	750	1028	1028	20	5.16	332	9.0	7.9
29...	1645	18.0	22.0	750	1028	1028	20	5.16	332	9.1	7.9
29...	1646	21.0	22.0	750	1028	1028	20	5.16	332	9.1	7.9
29...	1647	24.0	22.0	750	1028	1028	20	5.16	332	9.1	7.9
29...	1648	27.0	22.0	750	1028	1028	20	5.16	332	9.1	7.9
29...	1649	30.0	22.0	750	1028	1028	20	5.16	332	9.1	7.9
29...	1650	33.0	22.0	750	1028	1028	20	5.16	332	9.1	7.9
29...	1651	36.0	22.0	750	1028	1028	20	5.16	332	9.1	7.9
29...	1652	39.0	22.0	750	1028	1028	20	5.16	332	9.1	7.9

ARKANSAS RIVER BASIN
07195865 SAGER CREEK NEAR WEST SILOAM SPRINGS, OK--Continued

199

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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 FIELD (STAND- ARD UNITS)	TEMPER- ATURE AIR (DEG C)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	BARO- METRIC PRES- (MM HG)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
		(00027)	(00028)	(00061)	(00095)	(00400)	(00020)	(00010)	(00076)	(00025)	(00300)
OCT 1994											
27...	1430	1028	80020	5.3	523	8.0	17.5	14.5	--	750	10.3
NOV											
05...	1730	1028	80020	271	140	7.6	10.0	15.5	32	741	8.7
DEC											
07...	0945	1028	80020	11	399	8.2	6.0	12.5	0.40	753	9.8
FEB 1995											
16...	1020	1028	80020	22	387	8.2	3.5	8.0	--	753	11.8
MAY											
08...	1930	1028	80020	283	150	7.6	19.5	17.0	15	740	8.1
JUL											
31...	1230	1028	80020	11	375	7.9	29.0	25.5	--	750	9.2

DATE	NITRO- GEN DIS- SOLVED (MG/L AS N)	HARD- NESS TOTAL (MG/L AS CaCO3)	HARD- NESS NONCARB DISSOLV FLD. (MG/L AS CaCO3)	CALCIUM DIS- ASSOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3)	ALKA- LITY WAT DIS TOT IT FIELD (MG/L AS CaCO3)
	(00602)	(00900)	(00904)	(00915)	(00925)	(00930)	(00932)	(00931)	(00935)	(00453)	(00452)	(39086)
OCT 1994												
27...	--	--	--	--	--	--	--	--	--	113	0	92
NOV												
05...	2.0	51	13	18	1.5	3.7	12	0.2	5.3	47	0	38
DEC												
07...	2.9	130	44	49	2.5	22	25	0.8	7.8	--	--	*102
FEB 1995												
16...	5.7	--	--	--	--	--	--	--	--	100	0	82
MAY												
08...	1.6	63	10	22	1.9	3.8	11	0.2	4.1	64	0	53
JUL												
31...	--	--	--	--	--	--	--	--	--	123	0	101

* ALKALINITY, LAB (CaCO₃)

ARKANSAS RIVER BASIN
07195865 SAGER CREEK NEAR WEST SILOAM SPRINGS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE				SOLIDS, SOLIDS,		SOLIDS, SOLIDS,		NITRO- GEN, NITRATE (MG/L AS N) (00620)	NITRO- GEN, NITRATE (MG/L AS N) (00618)	NITRO- GEN, NITRATE (MG/L AS N) (00618)	NITRO- GEN, NITRATE (MG/L AS N) (00613)
	SULFATE	CHLO-	FLUO-	SILICA,	RESIDUE	SUM OF	SOLIDS,				
	DIS-	RIDE,	RIDE,	DIS-	AT 180	CONSTI-	DIS-				
	SOLVED	DIS-	DIS-	SOLVED	DEG. C	TUENTS,	SOLVED				
	(MG/L	(MG/L	(MG/L	(MG/L	DIS-	DIS-	(TONS	(TONS	TOTAL	SOLVED	SOLVED
	AS SO4)	AS CL)	AS F)	AS	SOLVED	SOLVED	PER	PER	(MG/L	(MG/L	(MG/L
	(00945)	(00940)	(00950)	AS	(MG/L)	(MG/L)	AC-FT)	DAY)	AS N)	AS N)	AS N)
				AS	(00955)	(00955)	(00955)	(00955)	(00955)	(00955)	(00955)

OCT 1994

27... -- -- -- -- -- -- -- -- 9.20 -- -- <0.010

NOV

05... 5.9 5.7 <0.10 7.0 98 79 0.13 71.7 1.39 1.39 6.2 0.010

DEC

07... 12 35 <0.10 7.0 224 202 0.30 6.53 2.68 2.68 12 0.020

FEB 1995

16... -- -- -- -- -- -- -- -- 5.50 -- -- <0.010

MAY

08... 4.5 4.2 <0.10 7.8 103 86 0.14 78.7 0.910 -- -- <0.010

JUL

31... -- -- -- -- -- -- -- -- 4.89 4.89 22 0.010

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, AMMONIA DIS- SOLVED (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- TOTAL (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)

OCT 1994

27... -- 9.20 9.20 <0.015 -- -- -- <0.20 <0.20 -- 0.860

NOV

05... 0.03 1.40 1.40 0.050 0.06 0.75 0.55 0.80 0.60 2.2 0.680

DEC

07... 0.07 2.70 2.70 0.100 0.13 -- 0.10 <0.20 0.20 -- 0.530

FEB 1995

16... -- 5.50 5.50 <0.015 -- 0.30 -- 0.30 0.20 5.8 0.430

MAY

08... -- 0.910 0.910 0.070 0.09 1.2 0.63 1.3 0.70 2.2 0.700

JUL

31... 0.03 4.90 4.90 0.020 0.03 0.18 -- 0.20 <0.20 5.1 0.520

[illegible]

OCT 1994											
27...	0.840	0.880	2.7	--	--	--	--	--	--	--	--
NOV											
05...	0.610	0.610	1.9	1	37	<0.5	20	<1.0	<5	<3	<10
DEC											
07...	0.540	0.550	1.7	1	51	<0.5	60	<1.0	<5	<3	<10
FEB 1995											
16...	0.410	0.390	1.2	--	--	--	--	--	--	--	--
MAY											
08...	0.570	0.540	1.7	2	46	<0.5	10	<1.0	<5	<3	<10
JUL											
31...	0.580	0.570	1.7	--	--	--	--	--	--	--	--

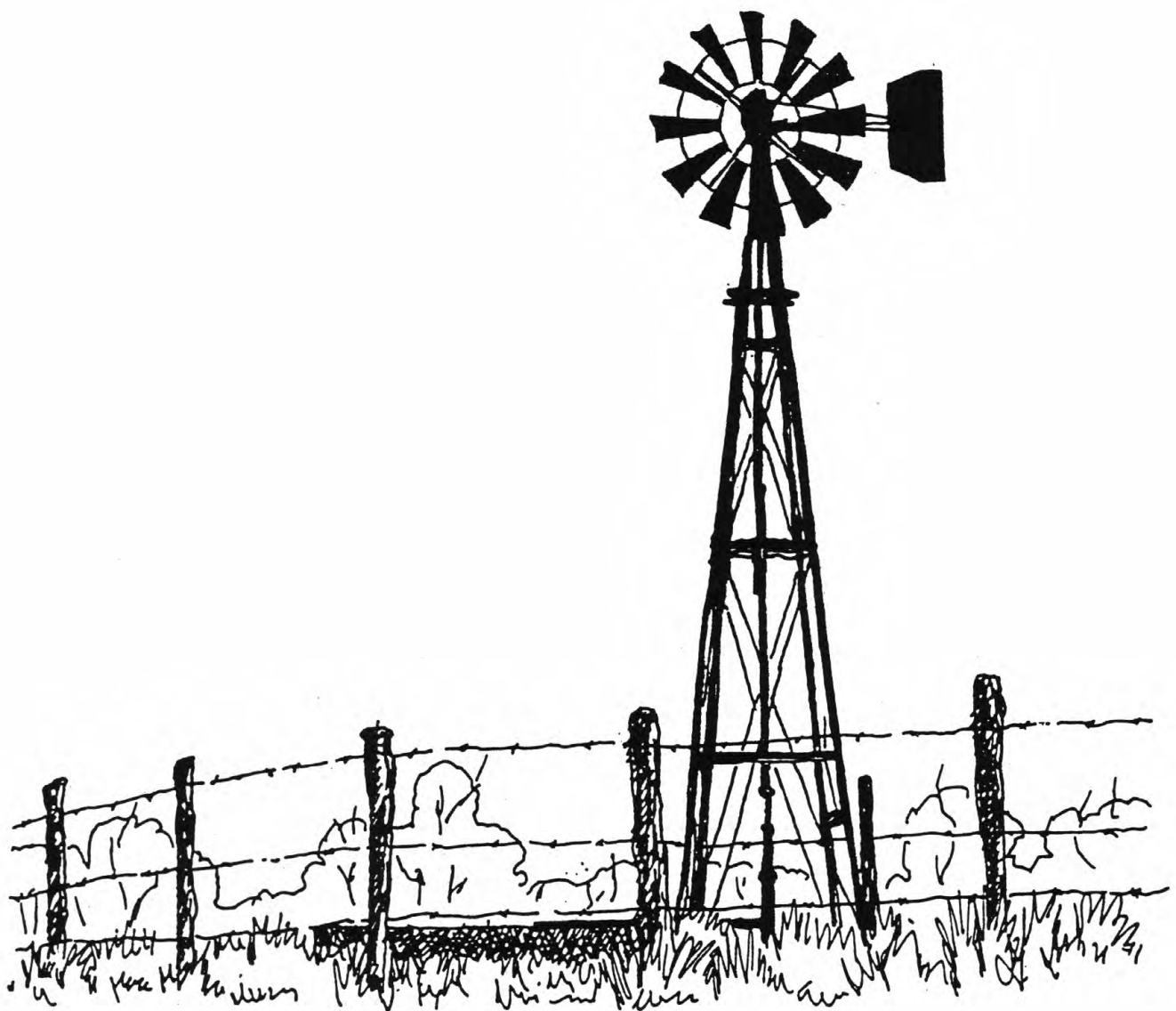
DATE				MANGA -	MOLYB -			STRON -			VANA -
	IRON,	LEAD,	LITHIUM	NESE,	MERCURY	DENUM,	NICKEL,	SILVER,	TIUM,	DIUM,	ZINC,
	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-
	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED
	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L
	AS FE)	AS PB)	AS LI)	AS MN)	AS HG)	AS MO)	AS NI)	AS AG)	AS SR)	AS V)	AS ZN)
	(01046)	(01049)	(01130)	(01056)	(71890)	(01060)	(01065)	(01075)	(01080)	(01085)	(01090)

[illegible]

ARKANSAS RIVER BASIN
07195865 SAGER CREEK NEAR WEST SILOAM SPRINGS, OK--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	PCNS		CHLOR-DANE, TECH-		CHLOR-PYRIFOS		P,P'-DDD		P,P'-DDT		DI-AZINON,	
	PCB,	UNFILT	ALDRIN,	NICAL	TOTAL	2,4-D,	UNFILT	DDE,	UNFILT	DEF	AZINON,	
	TOTAL	RECOVER	TOTAL	TOTAL	RECOVER	TOTAL	RECOVER	TOTAL	RECOVER	TOTAL	TOTAL	
	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	
	(39516)	(39250)	(39330)	(39350)	(38932)	(39730)	(39360)	(39365)	(39370)	(39040)	(39570)	
MAY												
08...	<0.100	<0.100	<0.010	<0.100	<0.010	0.060	<0.010	<0.010	<0.010	<0.010	<0.010	
DATE	DISUL-FOTON		ENDO-SULFAN, I		ENDRIN WATER		FONOFOS (DY-FONATE) WATER		HEPTA-CHLOR EPOXIDE		MALA-THION,	
	DI-ELDRIN	UNFILT	2, 4-DP	TOTAL	UNFLTRD	ETHION,	TOT.REC	HEPTA-CHLOR,	TOTAL	LINDANE	TOTAL	
	TOTAL	RECOVER	TOTAL	TOTAL	REC	TOTAL	(UG/L)	TOTAL	TOTAL	TOTAL	TOTAL	
	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	
	(39380)	(39011)	(82183)	(39388)	(39390)	(39398)	(82614)	(39410)	(39420)	(39340)	(39530)	
MAY												
08...	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	
DATE	METH-OXY-CHLOR,		METHYL-PARA-THION,		PARA-THION,		PER-THANE		TOX-APHENE,		TOTAL TRI-THION	
	TOTAL	TOTAL	MIREX,	TOTAL	TOTAL	TOTAL	PHORATE	SILVEX,	2,4,5-T	TOTAL	TOTAL	
	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	
	(39480)	(39600)	(39755)	(39540)	(39034)	(39023)	(39760)	(39740)	(39400)	(39786)		
MAY												
08...	<0.010	<0.010	<0.010	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<1.00	<0.010	



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. 5	0800	3,180	8.74	May 8	1030	3,360	8.82

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	25	88	72	165	85	67	369	203	118	68	29
2	29	24	84	68	158	84	64	298	208	112	66	29
3	27	32	80	67	150	84	63	273	335	131	66	29
4	28	604	78	65	140	81	63	318	589	137	65	28
5	29	2300	76	63	133	84	61	265	519	141	63	26
6	27	872	75	63	127	85	60	346	838	124	61	27
7	29	472	74	62	124	520	58	554	482	114	60	28
8	47	333	181	60	117	405	57	2200	377	106	58	30
9	46	613	480	59	114	294	55	1040	693	100	56	30
10	39	438	331	60	113	234	74	619	850	96	54	30
11	34	306	242	61	110	198	403	468	875	93	52	28
12	32	238	202	62	103	174	328	376	645	90	50	31
13	31	199	173	418	101	158	228	314	494	87	49	33
14	30	181	153	1470	103	148	179	272	401	84	49	33
15	30	166	137	665	110	137	148	237	341	80	49	33
16	29	148	129	453	104	126	127	212	296	76	48	51
17	27	134	120	350	93	118	114	206	262	77	47	66
18	28	123	108	302	89	113	120	197	231	75	46	49
19	30	124	101	338	86	106	114	176	211	71	48	42
20	36	152	97	330	85	105	619	162	197	77	53	44
21	40	244	95	310	84	101	449	149	182	79	47	49
22	40	204	91	272	83	91	313	139	169	79	42	42
23	35	177	87	240	81	87	319	130	162	78	38	37
24	32	155	82	215	79	82	314	165	156	75	36	35
25	32	140	80	209	77	79	264	170	149	77	34	33
26	30	127	78	207	75	84	226	165	142	90	33	36
27	32	119	77	213	91	90	200	272	136	86	33	35
28	30	110	76	207	91	87	174	360	129	77	31	34
29	27	102	74	193	---	77	367	246	128	70	31	36
30	26	94	73	185	---	69	480	208	125	67	30	33
31	25	---	73	174	---	70	---	194	---	66	30	---
TOTAL	988	8956	3895	7513	2986	4256	6108	11100	10525	2833	1493	1066
MEAN	31.9	299	126	242	107	137	204	358	351	91.4	48.2	35.5
MAX	47	2300	480	1470	165	520	619	2200	875	141	68	66
MIN	25	24	73	59	75	69	55	130	125	66	30	26
AC-FT	1960	17760	7730	14900	5920	8440	12120	22020	20880	5620	2960	2110
CFSM	.29	2.71	1.14	2.20	.97	1.25	1.85	3.26	3.19	.83	.44	.32
IN.	.33	3.03	1.32	2.54	1.01	1.44	2.07	3.75	3.56	.96	.50	.36

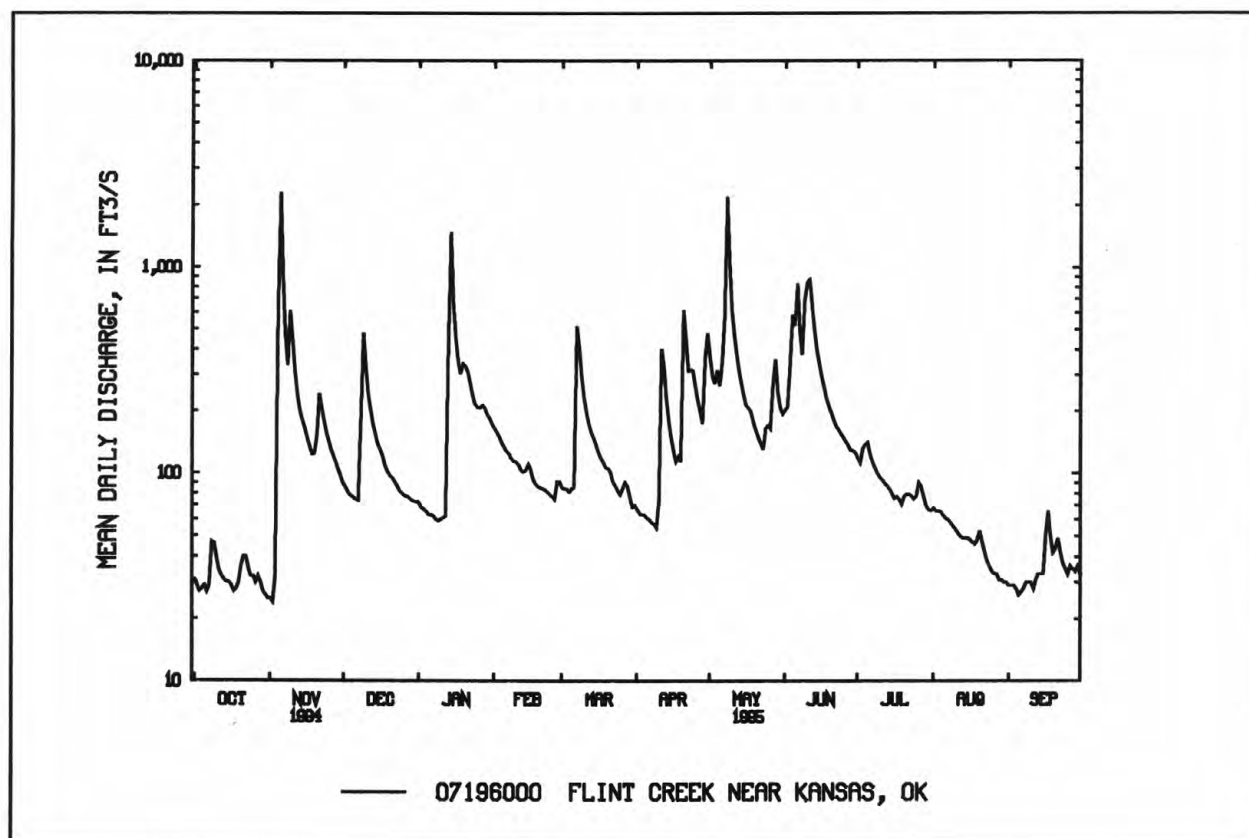
07196000 FLINT CREEK NEAR KANSAS, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	78.8	141	136	110	118	181	194	195	149	62.0	46.6	62.9
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 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1956 - 95

ANNUAL TOTAL	49559	61719	
ANNUAL MEAN	136	169	123
HIGHEST ANNUAL MEAN		296	1974
LOWEST ANNUAL MEAN		22.3	1956
HIGHEST DAILY MEAN	2300	Nov 5	2300 Nov 5 14500 Nov 24 1973
LOWEST DAILY MEAN	24	Nov 2	24 Nov 2 .60 Oct 11 1956
ANNUAL SEVEN-DAY MINIMUM	27	Aug 13	27 Oct 27 .66 Oct 7 1956
INSTANTANEOUS PEAK FLOW		3360	May 8 ^a 44400 Jun 8 1974
INSTANTANEOUS PEAK STAGE		8.82	May 8 19.42 Jun 8 1974
ANNUAL RUNOFF (AC-FT)	98300	122400	89360
ANNUAL RUNOFF (CFSM)	1.23	1.54	1.12
ANNUAL RUNOFF (INCHES)	16.76	20.87	15.24
10 PERCENT EXCEEDS	277	363	249
50 PERCENT EXCEEDS	73	93	56
90 PERCENT EXCEEDS	30	31	17

^aBased on indirect 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 July 1995 (discontinued).

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 1994 TO SEPTEMBER 1995

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 1994											
07...	1321	4.00	12.5	753	1028	1028	73	6.42	251	10.7	8.4
07...	1322	8.00	12.5	753	1028	1028	73	6.42	251	10.7	8.4
07...	1323	12.0	12.5	753	1028	1028	73	6.44	251	10.7	8.4
07...	1324	16.0	12.5	753	1028	1028	73	6.42	251	10.7	8.4
07...	1325	20.0	12.5	753	1028	1028	73	6.42	251	10.7	8.4
07...	1326	24.0	12.5	753	1028	1028	73	6.42	251	10.7	8.4
07...	1327	28.0	12.5	753	1028	1028	73	6.42	251	10.7	8.4
07...	1328	32.0	12.5	753	1028	1028	73	6.42	251	10.6	8.4
07...	1329	36.0	12.5	753	1028	1028	73	6.42	251	10.6	8.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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 1994										
27...	1600	1028	80020	31	320	8.3	15.0	17.0	750	11.6
NOV										
05...	1430	1028	80020	2710	132	7.3	10.0	15.5	740	9.3
DEC										
07...	1345	1028	80020	73	251	8.4	7.0	12.5	753	10.7
FEB 1995										
16...	1350	1028	80020	99	251	8.2	5.0	8.0	750	12.7
MAY										
08...	1700	1028	80020	2630	134	7.7	22.5	16.0	740	8.6
JUN										
29...	1430	1028	80020	126	240	7.8	25.0	22.0	750	8.8
JUL										
31...	1100	1028	80020	67	266	7.8	29.0	26.0	752	8.4

ARKANSAS RIVER BASIN
07196000 FLINT CREEK NEAR KANSAS, OK--Continued

207

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	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, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
OCT 1994										
27...	122	--	104	0	85	2.00	<0.010	2.00	2.00	<0.015
NOV										
05...	96	2.0	44	0	36	1.60	<0.010	1.60	1.60	0.020
DEC										
07...	102	--	89	0	73	1.50	<0.010	1.50	1.50	<0.015
FEB 1995										
16...	109	--	91	0	74	2.90	<0.010	2.90	2.90	<0.015
MAY										
08...	90	1.7	57	0	47	1.20	<0.010	1.20	1.20	0.040
JUN										
29...	102	--	97	0	80	1.90	<0.010	1.90	1.90	0.020
JUL										
31...	105	--	104	0	86	1.70	<0.010	1.70	1.70	0.020
DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)
OCT 1994										
27...	--	--	--	<0.20	<0.20	--	0.090	0.100	0.090	0.28
NOV										
05...	0.03	0.48	0.38	0.50	0.40	2.1	0.350	0.320	0.310	0.95
DEC										
07...	--	--	--	<0.20	<0.20	--	0.090	0.080	0.080	0.25
FEB 1995										
16...	--	--	--	<0.20	<0.20	--	0.100	0.070	0.080	0.25
MAY										
08...	0.05	1.2	0.46	1.2	0.50	2.4	0.460	0.270	0.260	0.80
JUN										
29...	0.03	--	--	<0.20	<0.20	--	0.090	0.080	0.080	0.25
JUL										
31...	0.03	--	--	<0.20	<0.20	--	0.090	0.080	0.100	0.31

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. 6	0800	13,500	12.34	May 10	0100	20,500	14.71
Jan. 15	1000	15,200	12.99	June 12	0800	15,400	13.04
Apr. 21	1900	12,800	12.07				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	222	297	820	615	1250	781	659	3270	1330	803	510	210
2	214	288	772	594	1170	755	625	5260	1280	763	493	206
3	210	290	731	580	1100	721	601	3380	1220	748	474	204
4	211	607	698	564	1030	705	579	2640	1910	793	460	207
5	206	5570	672	549	961	689	559	2570	2780	1020	454	203
6	198	12100	646	543	912	680	539	2190	3450	865	444	191
7	211	5750	625	533	857	1200	530	3460	3180	851	431	198
8	294	3000	640	528	815	5600	518	8690	2340	765	414	196
9	345	2410	1290	524	783	3660	503	16700	2400	708	398	195
10	449	2850	3830	516	753	2460	538	12200	4820	668	385	196
11	481	2710	2680	509	725	1910	998	4730	7730	631	369	200
12	391	2000	1960	505	706	1570	2460	3240	11700	607	354	211
13	428	1640	1630	838	678	1360	2410	2520	4510	584	345	214
14	499	1450	1430	7020	666	1270	1660	2090	3040	563	333	210
15	477	1450	1280	13100	666	1150	1300	2530	2350	542	320	219
16	464	2270	1180	5530	673	1070	1090	1920	1960	529	308	267
17	449	1750	1100	3520	692	994	947	1590	1680	516	305	274
18	412	1430	1050	2540	695	922	875	1470	1470	506	301	364
19	354	1280	972	2420	667	856	939	1390	1330	505	308	417
20	345	1260	904	3590	641	811	1560	1270	1220	524	314	342
21	346	1460	859	3100	619	773	9280	1170	1120	516	294	307
22	365	1930	831	2660	609	745	4930	1080	1050	624	282	297
23	392	1710	809	2230	589	707	2940	1010	1010	567	269	280
24	393	1490	781	1900	574	678	2680	1000	977	553	257	265
25	367	1340	747	1680	560	659	2400	1070	1200	601	249	257
26	347	1220	717	1620	547	646	1910	1750	1060	793	241	255
27	331	1120	687	1630	635	787	1600	1760	921	767	237	250
28	324	1030	663	1640	670	915	1390	1930	851	756	235	250
29	319	953	650	1570	---	821	1350	1830	915	669	230	253
30	312	880	635	1430	---	745	2380	1520	846	594	221	249
31	306	---	620	1330	---	696	---	1370	---	544	216	---
TOTAL	10662	63535	32909	65908	21243	37336	50750	98600	71650	20475	10451	7387
MEAN	344	2118	1062	2126	759	1204	1692	3181	2388	660	337	246
MAX	499	12100	3830	13100	1250	5600	9280	16700	11700	1020	510	417
MIN	198	288	620	505	547	646	503	1000	846	505	216	191
AC-FT	21150	126000	65270	130700	42140	74060	100700	195600	142100	40610	20730	14650
CFSM	.36	2.21	1.11	2.22	.79	1.26	1.76	3.32	2.49	.69	.35	.26
IN.	.41	2.46	1.28	2.56	.82	1.45	1.97	3.82	2.78	.79	.41	.29

ARKANSAS RIVER BASIN

209

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

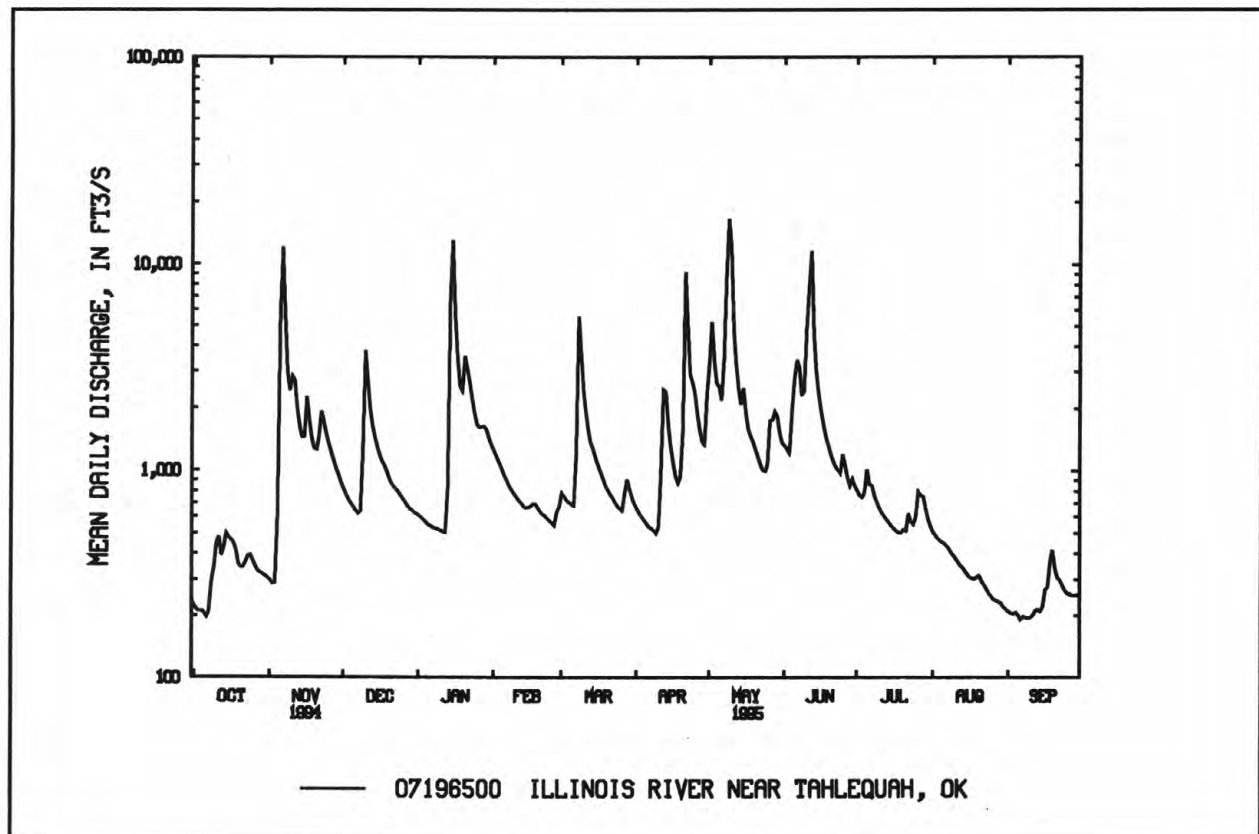
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	549	919	915	837	1107	1451	1608	1702	1026	481	359	360
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 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1936 - 95

ANNUAL TOTAL	391031	490906	
ANNUAL MEAN	1071	1345	941
HIGHEST ANNUAL MEAN			1980
LOWEST ANNUAL MEAN			193
HIGHEST DAILY MEAN	12100	Nov 6	16700
LOWEST DAILY MEAN	180	Sep 14	191
ANNUAL SEVEN-DAY MINIMUM	199	Sep 9	197
INSTANTANEOUS PEAK FLOW			20500
INSTANTANEOUS PEAK STAGE			14.71
ANNUAL RUNOFF (AC-FT)	775600	973700	681900
ANNUAL RUNOFF (CFSM)	1.12	1.40	.98
ANNUAL RUNOFF (INCHES)	15.17	19.04	13.33
10 PERCENT EXCEEDS	2290	2680	1940
50 PERCENT EXCEEDS	625	755	414
90 PERCENT EXCEEDS	251	262	115

^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 August 1995 (discontinued).

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 1994 TO SEPTEMBER 1995

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	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 1994												
26...	1400	1028	80020	345	287	8.1	12.5	16.0	--	762	11.0	112
NOV												
07...	1145	1028	80020	5050	181	7.7	19.0	16.0	48	761	8.3	84
30...	1400	1028	80020	875	242	8.1	14.0	10.0	--	764	11.8	104
DEC												
20...	1230	1028	80020	902	241	8.0	15.0	10.0	1.8	756	10.9	97
JAN 1995												
25...	1400	1028	80020	1650	208	8.0	11.5	7.0	--	762	11.8	97
FEB												
24...	1420	1028	80020	572	237	8.9	15.5	12.5	--	768	14.8	138
MAR												
28...	1345	1028	80020	891	243	8.4	13.0	14.5	--	762	12.0	118
APR												
12...	1220	1028	80020	2610	219	8.0	16.0	14.5	15	760	8.8	87
MAY												
16...	0845	1028	80020	1960	190	7.5	21.0	20.5	--	750	7.7	87
JUN												
27...	1430	1028	80020	915	217	8.6	29.5	24.0	2.3	758	11.1	133
JUL												
27...	1400	1028	80020	761	246	8.2	32.5	27.5	--	754	9.3	119
AUG												
24...	1430	1028	80020	259	264	8.1	31.5	30.0	--	762	10.0	133

ARKANSAS RIVER BASIN
07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

211

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	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 TOTAL UREASE (COL / 100 ML) (31633)	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 SODIUM PERCENT (00932)	(00931)
OCT 1994											
26...	--	120	--	150	110	15	42	2.0	11	17	0.5
NOV											
07...	2.0	920	1600	7700	75	18	27	1.7	4.6	11	0.2
30...	--	K9	K14	K4	100	12	37	1.9	6.4	12	0.3
DEC											
20...	--	31	K14	21	100	31	37	1.8	6.2	12	0.3
JAN 1995											
25...	--	21	K15	23	92	21	34	1.8	5.1	10	0.2
FEB											
24...	--	52	21	46	100	19	38	1.8	6.9	12	0.3
MAR											
28...	--	--	--	--	100	18	38	1.8	7.0	13	0.3
APR											
12...	2.0	1200	500	1800	92	7	34	1.7	5.9	12	0.3
MAY											
16...	--	230	630	320	79	10	29	1.6	4.2	10	0.2
JUN											
27...	--	41	210	43	92	15	34	1.7	5.5	11	0.2
JUL											
27...	--	160	230	170	100	20	38	1.8	7.1	13	0.3
AUG											
24...	--	270	530	270	100	2	38	1.9	8.3	14	0.4
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD 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)
OCT 1994											
26...	3.4	120	0	99	11	13	<0.10	7.7	158	153	0.21
NOV											
07...	3.4	69	0	57	8.7	6.0	<0.10	9.4	113	103	0.15
30...	2.6	107	0	87	8.7	8.3	<0.10	7.6	140	134	0.19
DEC											
20...	2.3	84	0	69	9.9	8.4	<0.10	6.6	136	124	0.18
JAN 1995											
25...	2.3	87	0	71	9.1	6.7	<0.10	7.7	121	121	0.16
FEB											
24...	2.3	90	6	83	8.6	9.4	<0.10	1.4	131	126	0.18
MAR											
28...	2.8	99	2	84	8.8	8.9	<0.10	3.1	134	129	0.18
APR											
12...	2.8	104	0	85	7.6	8.1	0.10	6.1	126	125	0.17
MAY											
16...	3.0	84	0	69	6.6	5.0	<0.10	8.2	115	108	0.16
JUN											
27...	2.7	92	1	78	6.5	6.6	<0.10	5.7	130	116	0.18
JUL											
27...	2.7	100	0	82	7.9	9.0	<0.10	9.8	146	131	0.20
AUG											
24...	3.1	123	0	101	8.7	12	0.10	9.7	153	146	0.21

ARKANSAS RIVER BASIN
07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	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)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)
OCT 1994											
26...	147	0.810	--	--	<0.010	--	0.810	0.810	<0.015	--	--
NOV											
07...	1540	1.80	--	--	<0.010	--	1.80	1.80	<0.015	--	0.50
30...	331	2.00	--	--	<0.010	--	2.00	2.00	<0.015	--	--
DEC											
20...	331	2.19	2.19	9.7	0.010	0.03	2.20	2.20	<0.015	--	--
JAN 1995											
25...	539	2.50	--	--	<0.010	--	2.50	2.50	<0.015	--	--
FEB											
24...	202	1.59	1.59	7.0	0.010	0.03	1.60	1.60	<0.015	--	--
MAR											
28...	322	1.79	1.79	7.9	0.010	0.03	1.80	1.80	<0.015	--	0.20
APR											
12...	888	1.69	1.69	7.5	0.010	0.03	1.70	1.70	0.040	0.05	0.36
MAY											
16...	609	1.90	--	--	<0.010	--	1.90	1.90	<0.015	--	0.30
JUN											
27...	321	1.58	1.58	7.0	0.020	0.07	1.60	1.60	0.040	0.05	0.16
JUL											
27...	300	1.30	--	--	<0.010	--	1.30	1.30	<0.015	--	--
AUG											
24...	107	0.660	--	--	<0.010	--	0.660	0.660	0.020	0.03	--
DATE	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)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)
OCT 1994											
26...	--	<0.20	<0.20	--	0.080	0.070	0.070	0.21	6	<1	<1
NOV											
07...	--	0.50	0.20	2.3	0.230	0.150	0.140	0.43	120	<1	<1
30...	--	<0.20	<0.20	--	0.070	0.060	0.070	0.21	--	--	--
DEC											
20...	--	<0.20	<0.20	--	0.070	0.060	0.070	0.21	7	<1	<1
JAN 1995											
25...	--	<0.20	<0.20	--	0.070	0.050	0.060	0.18	--	--	--
FEB											
24...	--	<0.20	<0.20	--	0.040	0.030	0.030	0.09	7	<1	<1
MAR											
28...	--	0.20	<0.20	2.0	0.060	0.060	0.060	0.18	--	--	--
APR											
12...	0.26	0.40	0.30	2.1	0.140	0.100	0.110	0.34	30	<1	<1
MAY											
16...	--	0.30	<0.20	2.2	0.120	0.110	0.110	0.34	--	--	--
JUN											
27...	--	0.20	<0.20	1.8	0.060	0.060	0.050	0.15	10	<1	<1
JUL											
27...	--	<0.20	<0.20	--	0.070	0.060	0.080	0.25	--	--	--
AUG											
24...	--	<0.20	<0.20	--	0.080	0.060	0.070	0.21	6	<1	<1

ARKANSAS RIVER BASIN
07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

213

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	BARIUM, DIS- SOLVED (UG/L AS BA) (01	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) 005)	BORON, DIS- SOLVED (UG/L AS B) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01020)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01025)	COBALT, DIS- SOLVED (UG/L AS CO) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01040)	LEAD, DIS- SOLVED (UG/L AS PB) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01130)
(01056)											
OCT 1994											
26...	51	<1	--	<1.0	<1	<1	<1	6	<1	--	6
NOV											
07...	40	<1	20	<1.0	<1	<1	1	85	<1	<4	9
30...	--	--	--	--	--	--	--	11	--	--	3
DEC											
20...	42	<1	10	<1.0	1	<1	2	11	<1	<4	2
JAN 1995											
25...	--	--	--	--	--	--	--	18	--	--	3
FEB											
24...	35	<1	--	<1.0	1	<1	<1	10	<1	--	2
MAR											
28...	--	--	--	--	--	--	--	15	--	--	4
APR											
12...	40	<1	--	<1.0	3	<1	1	37	<1	--	6
MAY											
16...	--	--	--	--	--	--	--	76	--	--	6
JUN											
27...	45	<1	20	<1.0	<1	<1	2	10	<1	<4	2
JUL											
27...	--	--	--	--	--	--	--	4	--	--	4
AUG											
24...	48	<1	--	<1.0	<1	<1	1	<3	<1	--	6

DATE	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)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)
OCT 1994											
26...	--	<1	2	<1	<1.0	--	--	3	<1.0	1.0	0.20
NOV											
07...	<0.1	<1	1	<1	<1.0	37	<6	3	<1.0	3.5	1.4
30...	--	--	--	--	--	--	--	--	--	0.90	0.20
DEC											
20...	<0.1	<1	3	<1	<1.0	45	<6	3	<1.0	1.0	0.10
JAN 1995											
25...	--	--	--	--	--	--	--	--	--	1.5	0.30
FEB											
24...	--	<1	1	<1	<1.0	--	--	2	<1.0	1.3	0.20
MAR											
28...	--	--	--	--	--	--	--	--	--	1.6	0.50
APR											
12...	<0.1	<1	2	<1	<1.0	--	--	3	<1.0	2.6	0.90
MAY											
16...	--	--	--	--	--	--	--	--	--	2.1	0.60
JUN											
27...	<0.1	<1	7	<1	<1.0	46	<6	1	<1.0	1.3	0.40
JUL											
27...	--	--	--	--	--	--	--	--	--	2.1	0.20
AUG											
24...	--	<1	1	<2	<1.0	--	--	<1	<1.0	0.90	0.30

ARKANSAS RIVER BASIN
07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

			CHLOR- DANE, TECH- NICAL	CHLOR- PYRIFOS	P,P'- DDD		P,P'- DDT			
DATE	PCB, TOTAL (UG/L) (39516)	PCNS UNFILT RECOVER (UG/L) (39250)	ALDRIN, TOTAL (UG/L) (39330)	TOTAL (UG/L) (39350)	TOTAL RECOVER (UG/L) (38932)	2,4-D, TOTAL (UG/L) (39730)	UNFILT RECOVER (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	UNFILT RECOVER (UG/L) (39370)	DEF TOTAL (UG/L) (39040)
MAY 1995										
16...	--	--	--	--	--	--	--	--	--	--
JUN										
27...	<0.100	<0.100	<0.010	<0.100	<0.020	<0.010	<0.010	<0.010	<0.010	<0.020
JUL										
27...	<0.100	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
DATE	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DI- ELDRIN TOTAL (UG/L) (39380)	DISUL- FOTON UNFILT RECOVER (UG/L) (39011)	2, 4-DP TOTAL (UG/L) (82183)	ENDO- SULFAN, I TOTAL (UG/L) (39388)	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	
MAY 1995										
16...	0.017	--	<0.001	--	--	--	--	--	--	--
JUN										
27...	<0.002	<0.020	<0.001	<0.010	<0.020	<0.010	<0.010	<0.010		<0.020
JUL										
27...	--	<0.010	--	<0.010	<0.010	<0.010	<0.010	<0.010		<0.010
DATE	FONOFOS (DY- FONATE) WATER WHOLE TOT.REC (UG/L) (82614)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE DIS- SOLVED (UG/L) (39341)	LINDANE TOTAL (UG/L) (39340)	MALA- THON, DIS- SOLVED (UG/L) (39532)	MALA- THON, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METHYL PARA- THON, TOTAL (UG/L) (39600)	
MAY 1995										
16...	--	--	--	<0.004	--	<0.005	--	--	--	--
JUN										
27...	<0.020	<0.010	<0.010	<0.004	<0.010	<0.005	<0.020	<0.010		<0.020
JUL										
27...	<0.010	<0.010	<0.010	--	<0.010	--	<0.010	<0.010		<0.010
DATE	MIREX, TOTAL (UG/L) (39755)	PARA- THON, DIS- SOLVED (UG/L) (39542)	PARA- THON, 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- THON (UG/L) (39786)	
MAY 1995										
16...	--	<0.004	--	--	--	--	--	--	--	--
JUN										
27...	<0.010	<0.004	<0.020	<0.100	<0.020	<0.010	<0.010	<1.00		<0.020
JUL										
27...	<0.010	--	<0.010	<0.100	<0.010	<0.010	<0.010	<1.00		<0.010



Old gage, Council Creek at Stillwater, Oklahoma

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.--Records fair.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1930 reached a stage of about 20.8 ft at present site and datum; information supplied by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
May 8	0900	915	7.68	Jun. 10	unknown	2,560	9.60

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.70	19	10	37	15	20	157	e41	17	19	e3.8
2	1.1	.73	17	9.9	35	16	20	127	e37	17	17	e3.7
3	1.0	1.1	16	9.5	31	16	20	105	e49	16	15	e3.5
4	1.1	20	15	9.1	29	16	19	91	e65	17	14	e3.4
5	1.2	220	14	9.0	26	16	18	79	e82	22	12	e3.2
6	1.1	148	13	9.0	24	18	18	91	e101	18	11	e3.3
7	1.3	89	12	8.8	23	147	18	107	e95	16	11	e3.5
8	7.6	67	19	8.5	22	116	18	538	e89	15	9.6	e3.5
9	5.4	81	53	8.4	20	89	18	211	e99	14	8.8	e3.5
10	5.4	76	61	8.1	19	73	23	128	e780	13	8.3	e3.4
11	4.4	63	59	8.1	18	62	52	94	e280	12	8.1	e3.3
12	3.6	54	51	8.1	17	54	54	75	98	12	7.6	e3.6
13	3.2	47	44	71	17	49	54	64	79	11	7.4	e3.7
14	2.7	44	39	261	16	45	52	55	63	11	7.3	e3.7
15	2.5	40	35	145	16	40	47	48	53	10	6.6	e3.9
16	2.5	37	31	106	15	36	42	44	45	10	6.3	e4.2
17	2.2	35	27	85	15	34	38	41	40	10	6.1	e4.4
18	1.9	32	25	76	16	32	45	e39	35	10	5.7	e4.9
19	1.6	30	22	77	15	30	44	e37	32	9.3	5.2	e7.5
20	1.5	33	21	76	14	29	127	e36	30	12	5.1	e7.2
21	1.3	47	20	73	13	27	105	e34	27	11	5.0	e6.5
22	1.3	45	18	70	13	25	82	e32	26	18	4.8	e6.0
23	.93	41	16	66	12	24	73	e30	27	14	4.5	e5.5
24	.91	38	15	60	12	23	64	e38	24	16	4.4	e5.0
25	.93	35	14	56	11	23	57	e45	23	15	4.5	e4.8
26	.76	32	13	53	11	25	52	e54	21	71	4.6	e4.5
27	.70	29	13	51	15	23	47	e62	20	55	e4.5	e4.2
28	.70	26	12	49	14	22	43	e69	19	46	e4.4	e3.9
29	.71	23	11	46	---	22	55	e59	20	35	e4.2	e3.8
30	.67	21	11	43	---	21	62	e52	19	27	e3.9	e3.5
31	.73	---	11	39	---	20	---	e46	---	23	e3.8	---
TOTAL	62.04	1455.53	747	1609.5	526	1188	1387	2688	2419	603.3	239.7	128.9
MEAN	2.00	48.5	24.1	51.9	18.8	38.3	46.2	86.7	80.6	19.5	7.73	4.30
MAX	7.6	220	61	261	37	147	127	538	780	71	19	7.5
MIN	.67	.70	11	8.1	11	15	18	30	19	9.3	3.8	3.2
AC-FT	123	2890	1480	3190	1040	2360	2750	5330	4800	1200	475	256

ARKANSAS RIVER BASIN

217

07196973 PEACHEATER CREEK AT CHRISTIE, OK--Continued

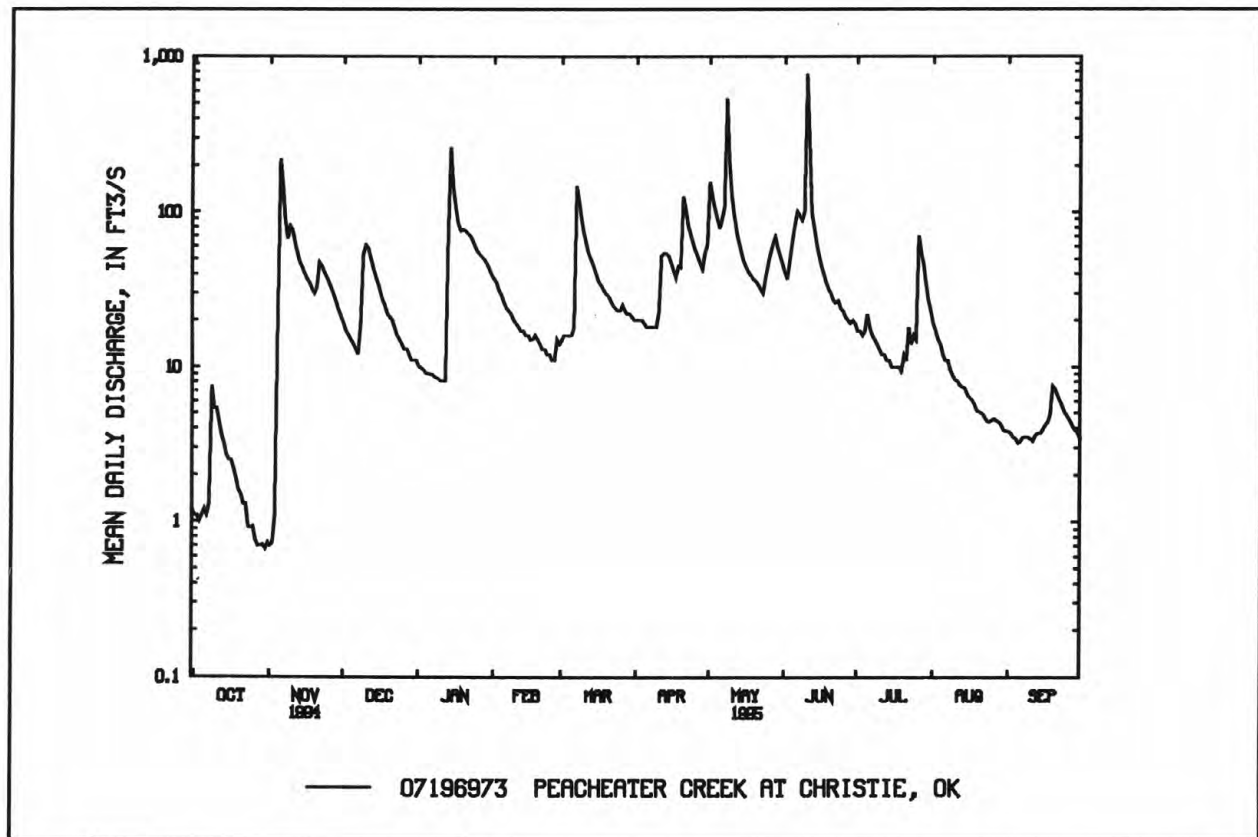
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.3	50.9	53.0	41.4	36.1	51.3	51.3	70.4	46.0	14.0	6.40	11.6
MAX	35.1	68.6	103	58.3	63.1	65.4	65.5	105	80.6	19.5	7.73	28.1
(WY)	1994	1994	1993	1993	1993	1994	1993	1993	1995	1995	1995	1993
MIN	2.00	35.6	24.1	14.0	18.8	38.3	42.2	19.7	6.68	9.88	4.34	2.41
(WY)	1995	1993	1995	1994	1995	1995	1994	1994	1994	1994	1993	1994

SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1993 - 95

ANNUAL TOTAL	8138.37	13053.97	
ANNUAL MEAN	22.3	35.8	37.1
HIGHEST ANNUAL MEAN			48.2 1993
LOWEST ANNUAL MEAN			27.4 1994
HIGHEST DAILY MEAN	220	Nov 5	780 Jun 10 1995
LOWEST DAILY MEAN	.67	Oct 30	.67 Oct 30 1994
ANNUAL SEVEN-DAY MINIMUM	.71	Oct 27	.71 Oct 27 1994
INSTANTANEOUS PEAK FLOW			2560 Jun 10 1995
INSTANTANEOUS PEAK STAGE			9.60 Jun 10 1995
ANNUAL RUNOFF (AC-FT)	16140	25890	26890
10 PERCENT EXCEEDS	54	76	79
50 PERCENT EXCEEDS	13	20	19
90 PERCENT EXCEEDS	1.8	3.5	3.4

^aFrom high water mark.



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)
Jan. 14	0800	10,200	14.05	May 8	1600	18,800	17.62
Apr. 20	1300	7,250	12.41				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	48	228	163	486	292	268	2100	449	213	194	53
2	40	47	212	157	459	279	253	1670	413	199	178	53
3	39	51	197	150	427	273	236	1160	370	196	164	51
4	40	160	186	144	395	264	228	1010	393	201	152	49
5	41	3420	178	140	364	258	216	817	509	272	141	47
6	40	3060	168	137	341	254	205	829	701	247	135	45
7	42	1450	161	136	318	2020	197	2040	611	214	128	48
8	66	929	243	137	296	1870	188	9760	525	193	121	47
9	84	784	2020	133	279	1200	186	4740	2710	177	114	47
10	79	980	1480	129	268	890	202	2310	2140	162	107	48
11	71	727	979	128	257	717	920	1440	3040	149	102	47
12	66	575	767	128	244	608	1280	1060	1690	138	98	49
13	63	471	647	938	233	533	798	839	1140	128	94	51
14	60	515	546	7350	225	504	639	717	859	120	92	53
15	59	1670	466	3090	228	490	534	630	708	118	88	54
16	58	980	412	1850	234	466	459	552	592	118	86	69
17	56	702	378	1270	236	433	404	494	500	113	84	79
18	56	558	336	1010	221	404	459	467	435	111	81	77
19	55	464	299	1870	213	374	502	417	387	110	79	75
20	54	432	278	1590	203	346	3340	372	344	120	78	75
21	54	715	264	1310	197	321	2060	337	309	125	76	71
22	54	680	252	1100	190	300	1220	310	284	167	72	69
23	54	571	237	946	184	283	1030	286	264	255	69	65
24	53	490	222	816	179	269	957	328	469	245	66	62
25	52	432	211	744	173	256	771	1030	363	235	64	63
26	50	384	200	708	168	322	653	719	279	491	63	64
27	49	345	190	685	205	443	562	841	247	596	61	64
28	48	305	180	655	296	392	482	797	226	412	60	64
29	47	273	176	604	---	344	511	643	226	319	58	64
30	48	248	169	553	---	310	813	542	234	266	56	62
31	48	---	165	515	---	286	---	489	---	224	54	---
TOTAL	1668	22466	12447	29286	7519	16001	20573	39746	21417	6634	3015	1765
MEAN	53.8	749	402	945	269	516	686	1282	714	214	97.3	58.8
MAX	84	3420	2020	7350	486	2020	3340	9760	3040	596	194	79
MIN	39	47	161	128	168	254	186	286	226	110	54	45
AC-FT	3310	44560	24690	58090	14910	31740	40810	78840	42480	13160	5980	3500
CFSM	.18	2.44	1.31	3.08	.87	1.68	2.23	4.18	2.33	.70	.32	.19
IN.	.20	2.72	1.51	3.55	.91	1.94	2.49	4.82	2.60	.80	.37	.21

ARKANSAS RIVER BASIN

219

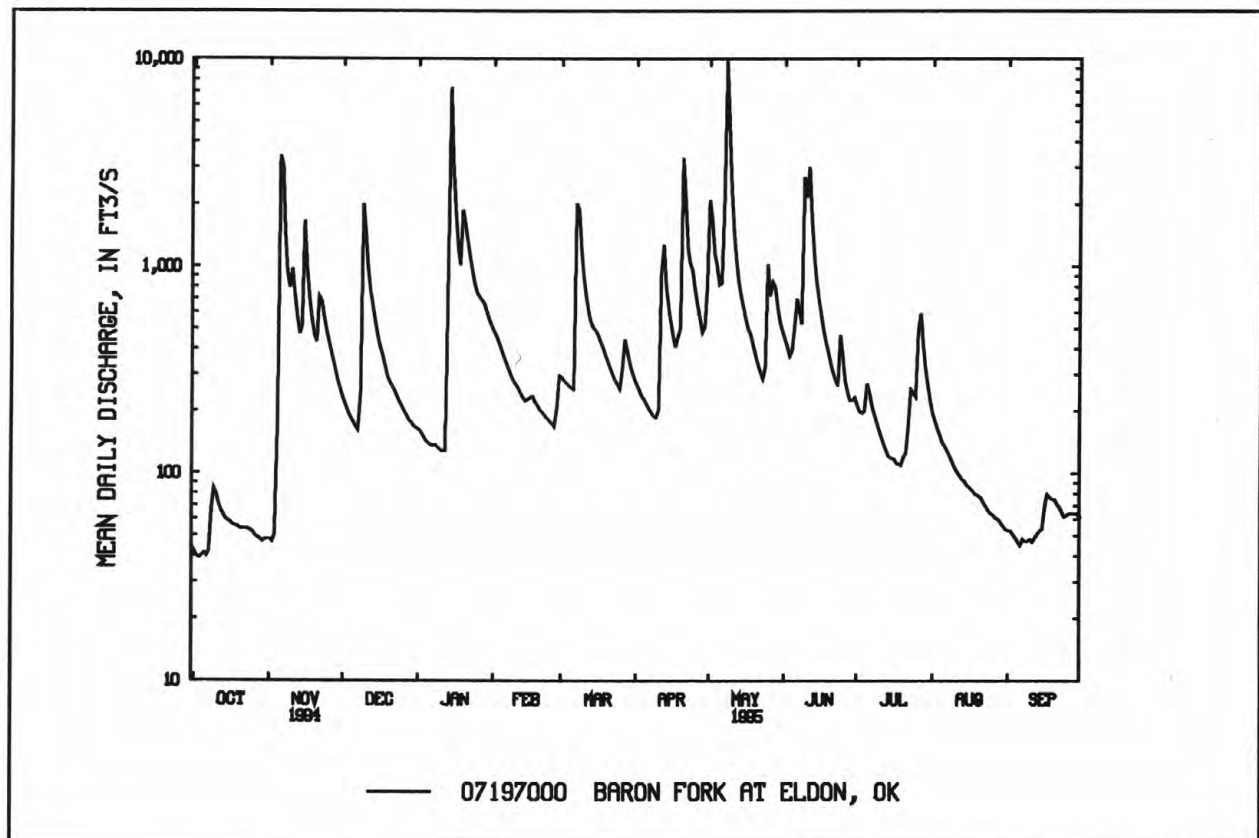
07197000 BARON FORK AT ELDON, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	179	320	320	291	384	538	586	665	330	148	75.6	114
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	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1949 - 95
ANNUAL TOTAL	119689	182537	
ANNUAL MEAN	328	500	329
HIGHEST ANNUAL MEAN			734
LOWEST ANNUAL MEAN			55.7
HIGHEST DAILY MEAN	3420	Nov 5	34300
LOWEST DAILY MEAN	39	Oct 3	1.8
ANNUAL SEVEN-DAY MINIMUM	41	Oct 1	1.8
INSTANTANEOUS PEAK FLOW		18800	50600
INSTANTANEOUS PEAK STAGE		17.62	25.91
ANNUAL RUNOFF (AC-FT)	237400	362100	238200
ANNUAL RUNOFF (CFSM)	1.07	1.63	1.07
ANNUAL RUNOFF (INCHES)	14.50	22.12	14.55
10 PERCENT EXCEEDS	775	1030	716
50 PERCENT EXCEEDS	153	256	121
90 PERCENT EXCEEDS	53	54	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 July 1995 (discontinued).

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

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (000009)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY 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 1994											
06...	1514	5.00	14.0	752	1028	1028	170	4.76	199	10.7	7.7
06...	1516	10.0	14.0	752	1028	1028	170	4.76	199	10.7	7.7
06...	1518	15.0	14.0	752	1028	1028	170	4.76	199	10.7	7.7
06...	1520	20.0	14.0	752	1028	1028	170	4.76	199	10.8	7.7
06...	1522	25.0	14.0	752	1028	1028	170	4.76	199	10.8	7.7
06...	1524	30.0	14.0	752	1028	1028	170	4.76	199	10.8	7.7
06...	1526	35.0	14.0	752	1028	1028	170	4.76	199	10.7	7.7
06...	1528	40.0	14.0	752	1028	1028	170	4.76	199	10.7	7.7
06...	1530	45.0	14.0	752	1028	1028	170	4.76	199	10.8	7.7
06...	1532	50.0	14.0	752	1028	1028	170	4.76	199	10.8	7.7
06...	1534	55.0	14.0	752	1028	1028	170	4.76	199	10.7	7.7
06...	1536	60.0	14.0	752	1028	1028	170	4.76	199	10.7	7.7
06...	1538	65.0	14.0	752	1028	1028	170	4.76	199	10.6	7.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, CUBIC FEET PER SECOND (00061)	SPE- CIFIC 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 1994												
27...	0830	1028	80020	48	209	7.7	0.5	15.0	--	759	8.9	89
DEC												
06...	1600	1028	80020	170	199	7.7	19.0	14.0	0.40	752	10.7	105
FEB 1995												
15...	1600	1028	80020	233	183	8.0	6.0	8.5	--	754	12.8	111
MAY												
08...	1430	1028	80020	17800	*101	7.5	21.5	15.5	310	745	8.5	87
15...	1530	1028	80020	624	167	7.9	29.5	20.0	--	754	8.7	97
JUN												
29...	1130	1028	80020	247	177	7.6	19.5	21.0	1.3	757	7.1	80
JUL												
27...	1100	1028	80020	599	188	7.6	30.0	24.0	--	754	7.7	93

*SPECIFIC CONDUCTANCE, LAB (µs/cm)

	NITRO- GEN DIS- SOLVED	COLI- FORM, FECAL, UM-MF (MG/L AS N) (00602)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER ML) (31673)	E. COLI WATER TOTAL (COL / ML) (31633)	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 SODIUM NA) PERCENT (00930)(00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
OCT 1994											
27...	--	--	--	--	--	--	--	--	--	--	--
DEC											
06...	--	--	--	--	92	24	34	1.6	2.9	6	0.1 1.9
FEB 1995											
15...	--	--	--	--	--	--	--	--	--	--	--
MAY											
08...	0.93 --	--	--	--	42	4	15	1.1	1.4	6	0.1 2.6
15...	-- 37	37	97	37	76	11	28	1.4	2.4	6	0.1 1.8
JUN											
29...	--	--	--	--	81	13	30	1.4	2.4	6	0.1 1.9
JUL											
27...	--	--	--	--	--	--	--	--	--	--	--

	BICAR- ONATE DIS IT FIELD	CAR- ONATE DIS IT FIELD	ALKA- LITY WAT DIS TOT IT FIELD	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF SOLIDS, CONSTITUENTS, SOLVED PER AC-FT DIS- SOLVED (TONS) (70301)(70303)	SOLIDS, DIS- SOLVED (TONS) PER DAY (70302)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)
OCT 1994											
27...	102	0	84	--	--	--	--	--	--	--	0.450
DEC											
06...	82	0	67	6.5	4.9	<0.10	7.2	116	129	0.16	53.2 6.60
FEB 1995											
15...	81	0	66	--	--	--	--	--	--	--	1.60
MAY											
08...	46	0	37	3.6	1.6	<0.10	8.0	70	59	0.09	3360 0.430
15...	79	0	65	5.1	3.1	<0.10	8.0	99	95	0.13	167 1.50
JUN											
29...	82	0	68	4.0	3.5	<0.10	7.0	104	95	0.14	69.4 0.990
JUL											
27...	86	0	70	--	--	--	--	--	--	--	1.10

[illegible]

ARKANSAS RIVER BASIN
07197000 BARON FORK AT ELDON, OK--Continued

223

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)
MAY 1995										
15...	<0.009	E0.012	<0.013	<0.046	<0.005	<0.004	<0.008	<0.008	<0.005	<0.012
DATE	ALPHA BHC DIS- SOLVED (UG/L) (34253)	LINDANE DIS- SOLVED (UG/L) (39341)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METO- LACHLOR WATER FLTRD 0.7 U DISSOLV (UG/L) (39415)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)
MAY 1995										
15...	<0.007	<0.011	<0.014	<0.009	<0.007	<0.022	<0.018	<0.011	<0.009	<0.016
DATE	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TERBUTH YLAZINE SURROGT WAT FLT 0.7 U GF, REC (UG/L) (91064)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	P,P' DDE DISSOLV (UG/L) (34653)
MAY 1995										
15...	<0.008	<0.030	34.7	<0.008	E0.008	<0.038	<0.008	<0.013	<0.013	<0.010
DATE	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC (UG/L) (91065)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)
MAY 1995										
15...	34.9	<0.006	<0.060	<0.013	<0.008	35.3	<0.039	<0.035	<0.012	<0.010
DATE	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	
MAY 1995										
15...	<0.009	<0.016	<0.008	<0.015	<0.006	E0.010	<0.012	<0.008	<0.012	

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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	303	553	2140	1030	2040	206	2330	4230	5100	2140	1760	293
2	340	66	2080	1220	2060	1520	2550	4140	4160	2100	2450	302
3	1130	297	940	1680	2120	3990	2340	4090	2400	1890	1780	320
4	1290	238	932	980	1010	2500	1050	4030	1740	1950	2390	297
5	660	412	2050	1070	1020	2520	261	4040	191	1920	1790	206
6	1290	91	2090	1270	2610	1360	1180	2850	1920	2230	1760	186
7	460	2420	2050	64	3730	3190	1470	123	1550	4690	1990	177
8	82	4230	2110	44	3720	4030	90	759	989	6060	2280	165
9	33	4230	2210	563	3740	3970	58	1280	99	5960	806	160
10	633	4130	2840	506	3770	4080	1250	3770	131	6920	1440	220
11	36	4080	3860	454	3750	4130	2420	3650	136	8940	1770	154
12	1010	4110	3840	541	3750	4030	2750	3660	88	9450	844	150
13	30	4100	3830	783	3790	4060	3980	3580	107	9450	692	133
14	731	4470	3820	948	3830	4190	3970	3580	104	8450	204	199
15	94	4260	3820	738	3860	4140	3960	4130	108	7520	930	329
16	24	4110	3830	698	3860	4170	3960	5080	98	7520	1460	228
17	182	3940	3830	4490	3460	2370	2840	5120	100	6700	909	121
18	31	3660	3830	7820	2080	83	1570	5730	103	5080	1450	121
19	76	4090	3830	7830	2390	1770	2720	7140	1730	4440	1450	330
20	25	4170	3500	7560	2110	3550	2870	7080	1860	4210	1450	379
21	100	4180	2110	7570	146	2550	2770	7050	1860	3730	1030	367
22	85	4130	2020	7550	177	2780	4160	7000	1810	1500	881	362
23	21	3830	2100	7540	177	2320	4180	8310	1690	1180	1010	117
24	113	2160	2130	7530	175	2500	4120	9410	2010	1020	634	199
25	838	2050	2090	7530	177	2480	4060	8040	1790	1090	697	342
26	677	960	2120	6140	170	2710	4020	5980	1820	1760	661	428
27	839	937	2120	4210	174	2570	4090	4940	1860	1700	662	497
28	30	2100	1190	2500	190	2480	3970	6760	1820	1580	590	429
29	21	2180	1260	3030	---	2230	3960	6100	1890	1740	497	384
30	154	2190	1120	2870	---	2230	4050	4990	1720	1770	256	148
31	24	---	1220	2340	---	2220	---	5040	---	1720	236	---
TOTAL	11362	82374	76912	99099	60086	86929	82999	151682	40984	126410	36759	7743
MEAN	367	2746	2481	3197	2146	2804	2767	4893	1366	4078	1186	258
MAX	1290	4470	3860	7830	3860	4190	4180	9410	5100	9450	2450	497
MIN	21	66	932	44	146	83	58	123	88	1020	204	117
AC-FT	22540	163400	152600	196600	119200	172400	164600	300900	81290	250700	72910	15360

ARKANSAS RIVER BASIN

225

07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1995, BY WATER YEAR (WY)

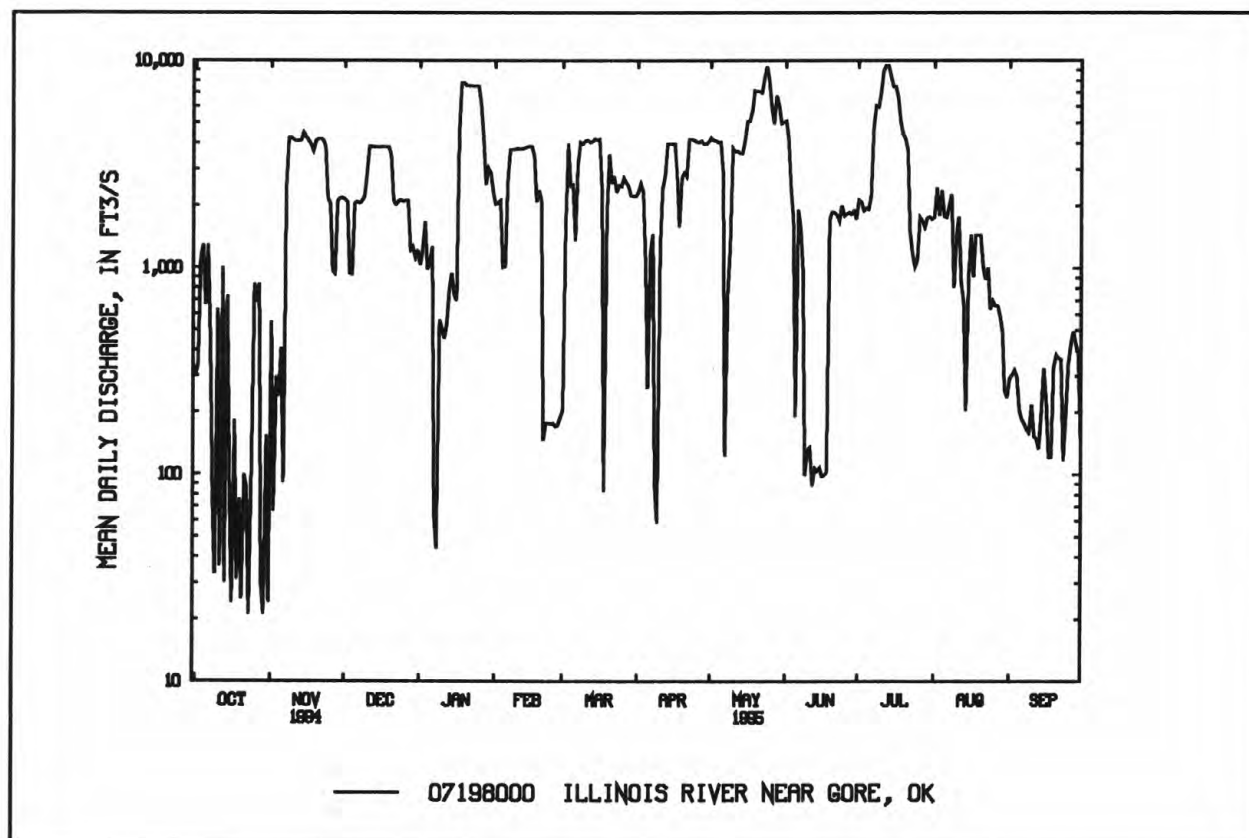
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	815	1269	1712	1648	1659	2002	2696	2372	1811	1305	864	669
MAX	8165	4538	9652	5869	5740	5323	8340	10940	7177	8046	2358	2174
(WY)	1987	1992	1974	1988	1969	1994	1990	1990	1957	1957	1961	1993
MIN	74.4	56.0	55.5	27.7	57.1	60.9	70.0	105	141	84.9	81.4	80.7
(WY)	1981	1984	1981	1965	1981	1981	1980	1981	1963	1988	1963	1963

SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1954 - 95

ANNUAL TOTAL	634061	863339	
ANNUAL MEAN	1737	2365	1567
HIGHEST ANNUAL MEAN			3199
LOWEST ANNUAL MEAN			280
HIGHEST DAILY MEAN	8860	Mar 15	9450 Jul 12
LOWEST DAILY MEAN	18	Jul 24	21 Oct 23
ANNUAL SEVEN-DAY MINIMUM	64	Oct 18	64 Oct 18
INSTANTANEOUS PEAK FLOW			9550 May 24
INSTANTANEOUS PEAK STAGE			15.27 May 24
ANNUAL RUNOFF (AC-FT)	1258000	1712000	1136000
10 PERCENT EXCEEDS	4170	4960	3710
50 PERCENT EXCEEDS	1050	1950	946
90 PERCENT EXCEEDS	57	132	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.--October 1947 to September 1948, December 1951 to March 1952, October 1953 to August 1995 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1947 to September 1948, October 1953 to September 1963.

WATER TEMPERATURE: October 1947 to September 1948, October 1953 to September 1963, October 1992 to current year.

INSTRUMENTATION.--Water-temperature recorder since Oct. 1992 provides continuous recordings.

REMARKS.--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 22.0°C, Aug. 14, 31, Sept. 17; minimum 5.0°C, Jan. 8.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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)
AUG											
16...	0827	10.0	20.0	753	1028	1028	1480	9.89	208	4.2	7.2
16...	0834	20.0	19.0	753	1028	1028	1480	9.89	197	4.5	7.3
16...	0838	30.0	19.0	753	1028	1028	1480	9.89	196	4.6	7.3
16...	0842	40.0	19.0	753	1028	1028	1480	9.89	201	4.6	7.3
16...	0846	50.0	19.0	753	1028	1028	1480	9.89	195	4.6	7.3
16...	0850	60.0	19.0	753	1028	1028	1480	9.89	196	4.6	7.3
16...	0854	70.0	19.0	753	1028	1028	1480	9.89	195	4.6	7.3
16...	0858	80.0	19.0	753	1028	1028	1480	9.89	196	4.6	7.4
16...	0902	90.0	19.0	753	1028	1028	1480	9.89	211	4.6	7.4
16...	0906	100	19.5	753	1028	1028	1480	9.89	203	4.6	7.4
16...	0910	110	19.5	753	1028	1028	1480	9.89	202	4.6	7.4
16...	0914	120	19.5	753	1028	1028	1480	9.89	196	4.6	7.4
16...	0920	130	19.5	753	1028	1028	1480	9.89	196	4.6	7.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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										
18...	1040	1028	80020	25	287	7.7	22.5	16.5	1.2	752
DEC										
07...	1645	1028	80020	3800	191	8.0	8.5	13.5	--	760
FEB										
13...	1630	1028	80020	3790	199	8.1	2.5	7.5	1.3	760
APR										
04...	0900	1028	80020	1690	192	8.0	14.5	8.5	--	758
MAY										
10...	1000	1028	80020	3760	195	7.7	18.0	12.0	1.5	752
JUN										
21...	1330	1028	80020	3020	191	7.5	31.0	17.5	--	755

ARKANSAS RIVER BASIN
07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

227

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	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 PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)
OCT 18...	6.7	70	0.85	110	19	39	2.3	16	24	0.7
DEC 07...	8.4	81	--	--	--	--	--	--	--	--
FEB 13...	11.2	94	--	79	4	29	1.6	4.5	11	0.2
APR 04...	10.8	93	--	--	--	--	--	--	--	--
MAY 10...	7.8	74	1.3	84	10	31	1.6	4.5	10	0.2
JUN 21...	5.1	54	--	--	--	--	--	--	--	--

DATE	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)	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)
OCT 18...	2.5	107	0	88	7.0	29	<0.10	158	151	0.21
DEC 07...	--	82	0	67	--	--	--	--	--	--
FEB 13...	2.4	92	0	75	7.2	6.2	<0.10	104	99	0.14
APR 04...	--	91	0	74	--	--	--	--	--	--
MAY 10...	2.2	90	0	74	7.0	6.1	<0.10	108	102	0.15
JUN 21...	--	75	0	61	--	--	--	--	--	--

ARKANSAS RIVER BASIN
07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	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 18...	10.7	0.520	0.520	2.3	0.030	0.10	0.550	0.550	0.160	0.21
DEC 07...	--	0.360	0.360	1.6	0.010	0.03	0.370	0.370	<0.015	--
FEB 13...	1060	0.590	--	--	<0.010	--	0.590	0.590	<0.015	--
APR 04...	--	0.840	0.840	3.7	0.020	0.07	0.860	0.860	<0.015	--
MAY 10...	1100	1.09	1.09	4.8	0.010	0.03	1.10	1.10	0.020	0.03
JUN 21...	--	0.990	0.990	4.4	0.010	0.03	1.00	1.00	0.050	0.06

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)
OCT 18...	0.24	0.14	0.40	0.30	0.95	0.030	0.030	0.020	0.06
DEC 07...	--	--	<0.20	<0.20	--	0.020	0.030	0.020	0.06
FEB 13...	--	--	<0.20	<0.20	--	<0.010	<0.010	<0.010	--
APR 04...	--	--	<0.20	<0.20	--	<0.010	<0.010	<0.010	--
MAY 10...	0.28	0.18	0.30	0.20	1.4	0.020	0.010	0.020	0.06
JUN 21...	--	--	<0.20	<0.20	--	0.040	0.040	0.050	0.15

ARKANSAS RIVER BASIN
07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

229

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	18.0	15.0	16.0	14.0	9.0	12.0	14.0	12.5	13.5	11.0	8.0	10.0
2	20.0	15.0	16.5	14.5	11.5	13.0	14.0	12.5	13.5	11.0	8.0	10.0
3	16.5	20.5	15.5	15.0	14.5	14.5	14.0	13.0	13.5	10.5	9.0	10.0
4	17.5	15.0	16.0	16.0	14.5	15.0	14.0	13.0	13.5	10.5	8.0	9.5
5	---	---	---	15.5	15.0	15.0	14.0	13.0	13.5	10.0	7.5	9.0
6	---	---	---	15.0	14.5	14.5	14.0	13.0	13.5	10.0	8.0	9.5
7	17.0	15.0	16.0	15.0	13.5	14.5	14.0	13.0	13.5	10.0	7.0	8.5
8	16.0	14.5	15.5	15.0	15.0	15.0	13.5	12.5	13.0	8.5	5.0	7.0
9	17.5	13.0	15.5	15.5	15.0	15.0	13.5	11.5	12.5	10.0	5.5	8.0
10	17.0	12.0	14.0	15.5	15.0	15.5	13.0	11.5	12.5	11.0	8.5	9.5
11	17.0	13.0	15.0	15.5	15.0	15.5	12.5	12.5	12.5	11.0	8.5	10.0
12	15.5	13.5	14.5	15.5	15.0	15.5	12.5	12.5	12.5	10.5	9.5	10.0
13	16.0	14.5	15.5	15.5	15.0	15.5	12.5	12.0	12.0	10.5	8.5	9.5
14	15.5	14.0	14.5	15.5	15.5	15.5	12.0	12.0	12.0	10.0	8.0	9.5
15	16.0	14.5	15.0	15.5	15.5	15.5	12.0	12.0	12.0	10.0	9.0	9.5
16	17.5	15.0	16.5	15.5	15.0	15.5	12.0	12.0	12.0	10.0	8.5	9.5
17	17.5	15.5	16.5	15.5	15.0	15.5	12.0	12.0	12.0	9.5	8.5	9.0
18	17.5	15.5	17.0	15.5	15.0	15.5	12.0	11.5	12.0	9.0	8.5	9.0
19	18.0	16.0	16.5	15.5	15.5	15.5	12.0	11.5	11.5	9.0	8.5	8.5
20	18.5	15.5	17.0	15.5	15.0	15.5	13.0	11.5	11.5	9.0	8.5	8.5
21	17.5	15.5	16.5	15.5	15.0	15.0	13.0	11.5	12.0	8.5	8.5	8.5
22	17.5	15.5	16.0	15.0	15.0	15.0	12.5	11.0	11.5	8.5	8.5	8.5
23	18.0	13.5	15.5	15.0	14.5	15.0	12.5	10.5	11.5	8.5	8.0	8.5
24	17.0	14.0	15.0	15.0	13.5	14.5	12.0	10.0	11.0	8.5	8.0	8.5
25	16.0	13.5	15.0	14.5	14.0	14.5	11.5	10.0	11.0	8.5	8.0	8.5
26	15.0	12.5	14.5	14.5	14.0	14.5	11.5	9.5	11.0	10.0	8.0	8.5
27	15.0	11.5	14.0	15.0	14.5	14.5	11.5	9.5	10.5	10.5	8.0	9.0
28	15.5	11.0	13.0	14.5	12.5	14.0	11.5	10.5	11.0	10.5	8.5	9.0
29	16.5	10.5	13.5	14.5	13.5	14.0	11.5	10.0	10.5	10.0	8.0	8.5
30	14.5	12.0	14.0	14.0	13.0	14.0	11.5	9.5	10.5	10.0	8.0	8.5
31	14.5	11.0	13.0	---	---	---	11.0	10.0	10.5	10.0	7.5	8.5
MONTH	---	---	---	16.0	9.0	14.8	14.0	9.5	12.0	11.0	5.0	9.0

ARKANSAS RIVER BASIN
07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	9.5	7.5	8.5	9.5	7.0	8.5	10.0	8.5	9.0	10.5	10.5	10.5
2	9.5	8.0	8.5	9.5	6.0	7.5	10.0	8.0	9.0	11.0	10.5	10.5
3	9.5	8.0	8.5	7.5	7.5	7.5	10.0	8.0	9.0	11.0	10.5	10.5
4	9.5	7.0	8.5	9.0	7.0	8.0	10.0	8.5	9.0	11.0	10.5	11.0
5	9.5	7.0	8.5	9.0	7.5	8.0	10.5	8.5	9.5	11.0	10.5	11.0
6	9.0	7.0	8.0	9.0	7.5	8.5	10.5	9.0	9.5	12.5	11.0	11.5
7	8.0	7.5	8.0	9.0	7.0	7.5	11.0	8.5	10.0	13.5	12.0	12.0
8	8.0	7.5	7.5	7.5	7.0	7.0	13.5	10.0	12.0	14.5	13.0	13.5
9	8.0	7.5	7.5	7.5	7.0	7.0	17.0	13.5	15.0	14.5	12.0	13.0
10	8.0	7.5	7.5	8.0	7.0	7.0	16.5	10.0	13.0	12.0	11.5	12.0
11	8.0	7.5	7.5	7.5	7.0	7.5	11.5	9.5	10.5	12.0	11.5	12.0
12	7.5	7.0	7.5	7.5	7.0	7.5	11.5	9.0	9.5	12.0	11.5	12.0
13	7.5	7.0	7.0	7.5	7.0	7.5	9.5	9.0	9.0	12.0	11.5	12.0
14	7.0	7.0	7.0	8.0	7.5	7.5	9.5	9.0	9.0	12.5	12.0	12.0
15	7.0	7.0	7.0	8.0	7.5	8.0	9.0	9.0	9.0	13.0	12.0	12.5
16	7.0	7.0	7.0	8.0	8.0	8.0	9.5	9.0	9.0	13.0	12.5	13.0
17	10.0	7.0	7.5	10.5	7.5	9.0	11.5	9.0	9.5	13.0	13.0	13.0
18	10.0	7.0	8.0	11.5	9.5	10.5	11.5	9.5	10.5	13.5	13.0	13.0
19	9.0	7.0	8.0	12.5	8.5	10.5	11.5	9.0	10.0	14.0	13.5	13.5
20	9.0	7.0	8.0	11.0	8.0	9.0	11.5	9.5	10.5	14.0	13.5	14.0
21	9.0	7.0	8.5	10.5	8.0	9.0	11.5	9.5	10.0	14.0	14.0	14.0
22	9.0	8.0	8.5	10.0	8.0	9.0	10.0	9.5	10.0	14.5	14.0	14.0
23	9.5	8.5	9.0	10.0	8.0	9.0	10.5	10.0	10.0	14.5	14.0	14.5
24	9.5	8.0	9.0	10.0	8.0	8.5	10.0	9.5	10.0	15.0	14.5	14.5
25	9.5	8.0	9.0	10.0	8.0	9.0	10.0	9.5	10.0	15.0	14.0	14.5
26	9.0	8.5	9.0	10.0	8.5	9.0	10.0	9.5	9.5	14.5	14.0	14.5
27	11.0	8.5	9.5	10.0	8.0	9.0	10.0	9.5	10.0	14.5	14.5	14.5
28	10.5	8.5	9.5	10.0	8.0	9.0	10.5	10.0	10.0	15.0	14.5	15.0
29	---	---	---	10.0	8.5	9.0	10.5	10.0	10.0	15.0	14.5	15.0
30	---	---	---	10.0	8.5	9.0	10.5	10.0	10.0	15.0	14.5	15.0
31	---	---	---	10.0	9.0	9.5	---	---	---	15.0	15.0	15.0
MONTH	11.0	7.0	8.1	12.5	6.0	8.4	17.0	8.0	10.0	15.0	10.5	13.0

ARKANSAS RIVER BASIN
07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

231

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	15.5	15.0	15.0	16.5	16.0	16.0	18.0	17.5	17.5	20.5	19.5	20.0
2	15.0	14.5	15.0	16.5	16.0	16.0	18.0	17.5	18.0	20.0	19.5	19.5
3	15.5	14.5	15.0	16.5	16.0	16.0	18.0	17.5	18.0	20.0	19.0	19.5
4	16.0	14.5	15.0	16.5	16.0	16.5	18.5	17.5	18.0	20.5	19.0	19.5
5	17.0	15.0	15.5	16.5	16.0	16.5	18.0	17.5	18.0	21.5	19.5	20.0
6	16.0	15.0	15.5	16.5	16.0	16.5	18.0	18.0	18.0	21.0	19.5	20.0
7	16.0	15.0	15.5	16.5	16.0	16.5	18.5	18.0	18.0	21.0	19.5	20.0
8	16.5	15.0	15.5	17.0	16.5	16.5	19.0	18.0	18.0	20.0	19.0	19.0
9	17.0	15.5	16.0	17.0	16.5	16.5	18.5	18.0	18.0	19.0	18.0	18.5
10	18.5	16.5	17.5	17.0	16.5	17.0	18.5	18.0	18.0	20.0	17.5	18.5
11	17.0	16.0	16.5	17.5	17.0	17.0	18.5	18.0	18.5	19.5	18.5	19.0
12	16.5	16.0	16.0	17.5	17.0	17.5	18.5	18.0	18.0	19.5	18.5	19.0
13	19.5	16.0	16.5	17.5	17.5	17.5	18.5	18.0	18.0	20.5	18.5	19.5
14	19.5	16.5	17.0	17.5	17.0	17.5	22.0	18.0	19.5	21.5	19.0	20.0
15	20.5	17.0	17.5	17.5	17.5	17.5	19.5	18.5	19.0	---	---	---
16	20.0	17.5	18.0	18.0	17.5	17.5	19.0	18.5	18.5	19.5	19.0	19.0
17	20.0	17.5	18.0	17.5	17.0	17.5	20.5	18.0	19.0	22.0	19.0	20.0
18	20.5	17.5	18.0	17.5	17.0	17.5	19.5	19.0	19.0	21.5	19.5	20.0
19	18.5	16.0	17.5	17.5	17.5	17.5	19.0	18.5	18.5	20.0	18.5	19.0
20	17.0	16.0	16.5	17.5	17.0	17.5	19.0	18.5	19.0	19.0	18.0	18.5
21	16.5	16.0	16.5	17.5	17.5	17.5	20.5	18.0	19.0	19.0	18.0	18.5
22	16.5	16.0	16.0	18.0	16.5	17.5	19.5	18.5	19.0	18.0	16.0	17.5
23	17.0	16.0	16.5	19.0	17.5	18.0	20.5	18.5	19.0	18.0	15.5	17.0
24	16.5	16.0	16.0	19.5	17.5	18.0	19.5	18.5	19.0	18.0	16.0	17.0
25	16.5	16.0	16.0	18.0	17.5	18.0	19.5	18.5	19.0	18.0	16.5	17.5
26	16.0	16.0	16.0	17.5	17.0	17.5	19.5	18.5	19.0	18.0	17.0	18.0
27	16.0	15.5	16.0	18.0	17.5	17.5	20.5	18.5	19.0	19.0	17.5	18.0
28	16.5	16.0	16.0	18.5	17.5	17.5	20.5	19.0	19.5	18.5	18.0	18.5
29	16.5	16.0	16.0	18.0	17.5	17.5	21.5	19.0	20.0	19.0	18.0	18.5
30	16.5	16.0	16.0	18.0	17.5	17.5	21.5	19.5	20.5	20.5	18.0	19.0
31	---	---	---	18.0	17.5	17.5	22.0	19.5	20.5	---	---	---
MONTH	20.5	14.5	16.3	19.5	16.0	17.2	22.0	17.5	18.7	---	---	---

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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e6.0	173	e170	155	263	163	304	333	e450	e300	800	e55
2	e6.2	143	e170	155	245	164	294	343	e380	e270	1430	e54
3	e6.1	119	e168	156	234	178	326	338	3310	e230	11000	e53
4	e12	94	e162	159	219	200	345	328	12800	e190	5820	e56
5	e10	89	e170	159	203	236	303	304	15100	e160	1670	e57
6	20	91	e170	148	196	268	288	494	8170	e146	e1000	66
7	21	84	e172	148	186	339	278	568	3500	137	e800	54
8	26	79	e166	152	175	381	266	820	2480	e120	e600	59
9	28	75	158	165	167	370	249	661	7040	e108	e500	60
10	23	86	155	200	170	394	250	582	3890	97	e450	65
11	22	84	145	236	161	399	242	513	3240	e89	e400	71
12	21	77	142	267	159	390	e220	454	2260	e80	e350	89
13	21	73	145	233	159	764	e200	400	e1500	e70	e300	493
14	22	111	148	213	163	1090	187	347	e1000	e62	e250	224
15	29	85	149	206	171	762	179	301	e800	e54	e220	187
16	36	73	153	197	157	362	177	273	e600	e46	e180	645
17	862	72	147	195	155	294	195	263	e500	e40	e165	380
18	594	72	145	184	163	267	309	286	e430	e35	155	173
19	236	1240	144	175	194	270	377	303	e360	e33	e140	516
20	158	7570	141	176	189	251	355	290	e310	e31	e120	324
21	115	3530	138	172	183	232	337	293	257	e29	e90	963
22	97	1080	135	198	181	213	343	297	e230	e28	e80	1320
23	86	676	135	230	175	198	380	272	e210	e90	e76	583
24	541	e550	137	218	166	188	409	304	e190	284	e72	e400
25	274	e400	136	240	161	199	423	404	e170	e230	e70	e350
26	137	e300	135	254	166	365	414	581	e160	e190	e68	e280
27	94	e240	139	295	170	523	387	2250	e150	e168	e60	e245
28	84	e210	141	307	169	349	353	1770	e140	e140	e58	e220
29	79	e190	146	308	---	315	323	e1000	e226	e110	e56	e200
30	74	e175	147	300	---	306	303	e700	e400	e90	e54	e190
31	73	---	148	280	---	296	---	e560	---	79	e54	---
TOTAL	3813.3	17841	4657	6481	5100	10726	9016	16632	70253	3736	27088	8432
MEAN	123	595	150	209	182	346	301	537	2342	121	874	281
MAX	862	7570	172	308	263	1090	423	2250	15100	300	11000	1320
MIN	6.0	72	135	148	155	163	177	263	140	28	54	53
AC-FT	7560	35390	9240	12860	10120	21280	17880	32990	139300	7410	53730	16720

e Estimated

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	200	217	157	208	224	424	333	815	562	114	140	156
MAX	2412	1525	651	1162	462	1907	1005	4188	2342	500	1036	1170
(WY)	1987	1975	1988	1988	1975	1973	1973	1987	1995	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

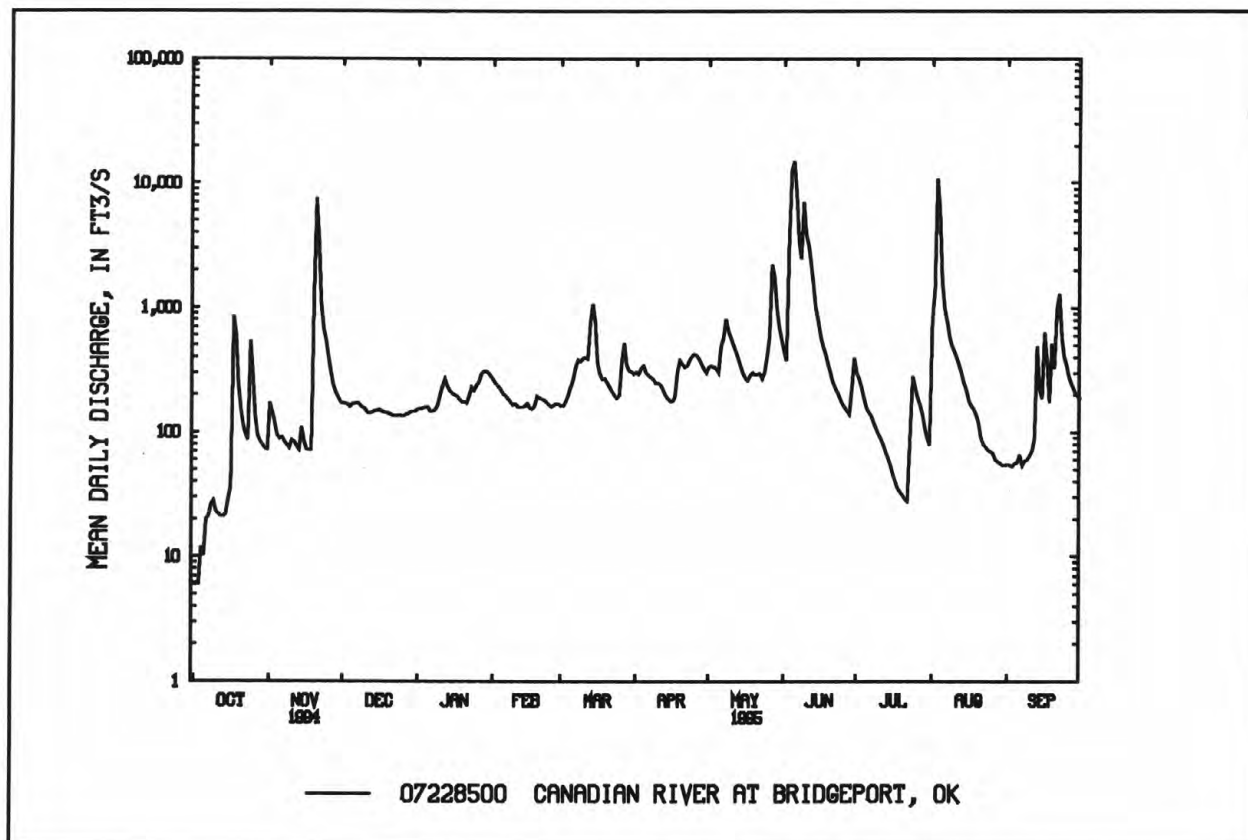
SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1970 - 95

ANNUAL TOTAL	67412.6	183775.3	
ANNUAL MEAN	185	503	^a 296
HIGHEST ANNUAL MEAN			1018 1987
LOWEST ANNUAL MEAN			70.2 1981
HIGHEST DAILY MEAN	7570	Nov 20 15100	Jun 5 42100 May 29 1987
LOWEST DAILY MEAN	4.1	Aug 30 6.0	Oct 1 .00 at times
ANNUAL SEVEN-DAY MINIMUM	4.5	Aug 24 12	Oct 1 .00 Aug 3 1970
INSTANTANEOUS PEAK FLOW		19900	Jun 4 ^b 86100 May 17 1982
INSTANTANEOUS PEAK STAGE		14.72	Jun 4 ^c 17.55 May 17 1982
ANNUAL RUNOFF (AC-FT)	133700	364500	214500
10 PERCENT EXCEEDS	293	667	465
50 PERCENT EXCEEDS	137	195	99
90 PERCENT EXCEEDS	7.8	60	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.

REVISIONS.--Instantaneous peak stage for the water year 1994 has been revised to 7.37 ft, Apr. 11

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	84	384	302	e382	346	396	720	1090	583	79	48
2	31	95	384	300	368	350	390	681	888	518	1550	48
3	30	95	420	297	352	350	411	650	579	498	2790	45
4	46	159	401	325	348	350	419	629	15700	416	7980	42
5	42	1140	383	331	345	350	412	590	24600	346	5840	39
6	37	950	403	324	344	365	434	1430	19900	294	2590	34
7	200	658	408	335	345	402	418	4260	9620	250	1630	33
8	310	529	e402	326	346	427	388	7900	3480	211	1180	32
9	117	382	e400	334	354	449	367	3180	5820	182	997	31
10	70	388	391	339	356	528	442	1730	18900	e158	1030	29
11	59	434	e378	341	355	533	465	648	7660	e133	971	149
12	54	360	343	341	344	551	379	519	4160	e114	844	275
13	50	440	301	330	343	1350	366	492	2490	e99	765	173
14	49	399	298	335	354	2680	356	454	2010	e90	667	116
15	51	377	293	359	350	1920	342	455	e1600	e82	523	403
16	59	361	296	385	367	1080	353	476	e1230	e74	387	865
17	69	441	294	351	371	608	535	463	e1080	69	349	921
18	101	430	296	354	352	490	1170	391	e960	60	294	1370
19	1190	633	318	338	352	432	654	410	e880	55	225	848
20	414	8420	292	347	354	393	617	417	821	131	191	954
21	276	13200	289	350	353	405	576	432	803	346	156	1070
22	210	5520	302	372	350	409	728	424	780	303	138	1730
23	159	2000	303	376	351	391	1800	491	744	303	122	2070
24	123	767	306	380	344	382	927	1280	797	544	105	1090
25	96	541	308	368	346	406	721	641	747	e440	98	1060
26	506	483	311	427	351	383	755	13500	649	e345	92	858
27	188	398	313	580	343	374	728	14000	575	e370	84	697
28	170	392	312	436	343	532	863	5920	495	281	76	647
29	127	386	306	e422	---	501	826	3070	499	166	67	525
30	105	377	309	e409	---	420	773	2240	711	113	58	447
31	95	---	314	e395	---	398	---	1390	---	86	51	---
TOTAL	5063	40839	10458	11209	9863	18555	18011	69883	130268	7660	31929	16649
MEAN	163	1361	337	362	352	599	600	2254	4342	247	1030	555
MAX	1190	13200	420	580	382	2680	1800	14000	24600	583	7980	2070
MIN	29	84	289	297	343	346	342	391	495	55	51	29
AC-FT	10040	81000	20740	22230	19560	36800	35720	138600	258400	15190	63330	33020

e Estimated

ARKANSAS RIVER BASIN

235

07229200 CANADIAN RIVER AT PURCELL, OK--Continued

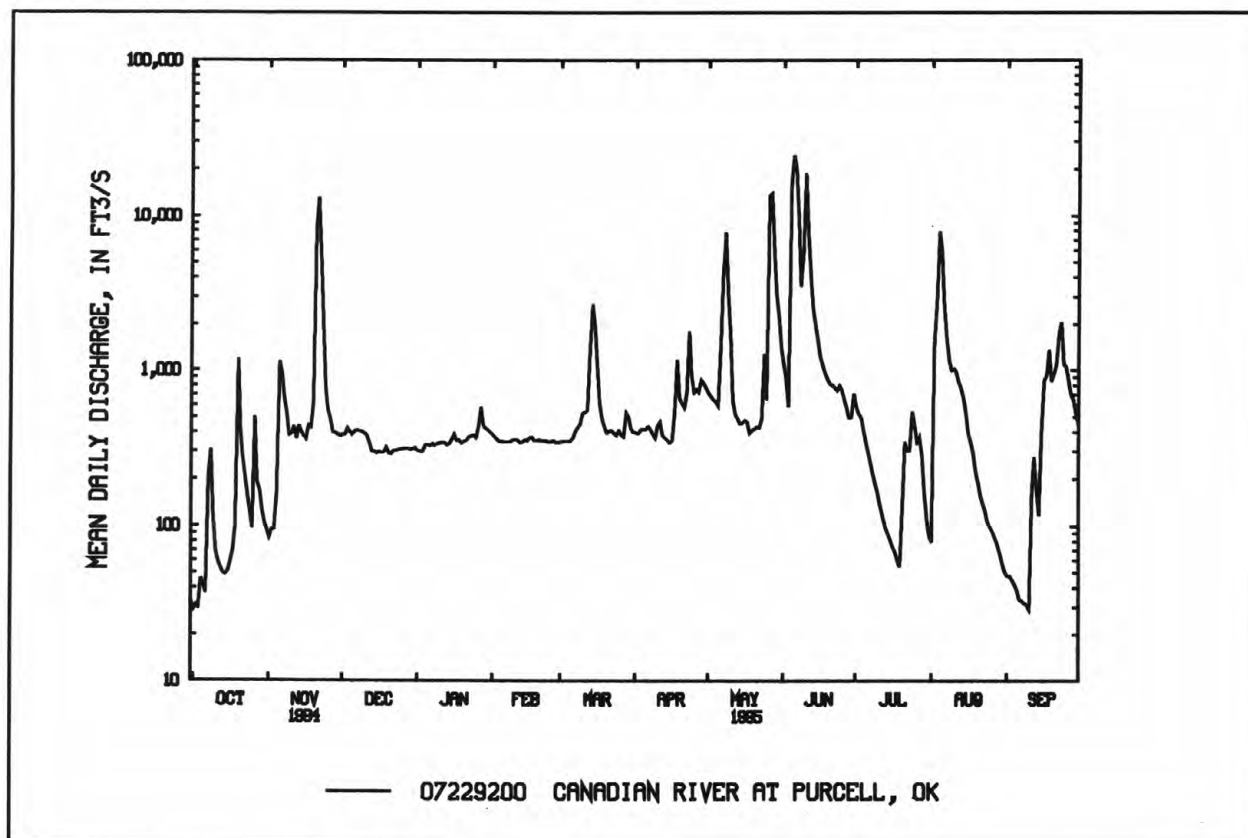
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	709	551	671	592	592	938	731	2279	1457	336	246	397
MAX	7083	2648	2602	2055	1865	2638	2219	7717	5863	1216	1030	993
(WY)	1987	1987	1992	1987	1987	1990	1990	1993	1989	1987	1995	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	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1980 - 95
ANNUAL TOTAL	159029	370387	
ANNUAL MEAN	436	1015	793
HIGHEST ANNUAL MEAN			2287
LOWEST ANNUAL MEAN			117
HIGHEST DAILY MEAN	13200	Nov 21	24600
LOWEST DAILY MEAN	12	at times	29
ANNUAL SEVEN-DAY MINIMUM	12	Aug 10	34
INSTANTANEOUS PEAK FLOW			30700
INSTANTANEOUS PEAK STAGE			11.88
ANNUAL RUNOFF (AC-FT)	315400	734700	574600
10 PERCENT EXCEEDS	700		1480
50 PERCENT EXCEEDS	271		384
90 PERCENT EXCEEDS	35		85

^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, 13,600 acre-ft below elevation 997.0 ft, sill of gated outlet. Figures given herein represent total contents. Reservoir is used for flood control, irrigation (inactive), and municipal water supplies diverted to Del City, Midwest City, and Norman. U.S. Army Corps of Engineers satellite telemeter at station.

COOPERATION.--Elevations and data on diversions furnished by Central Oklahoma Master Conservancy District.

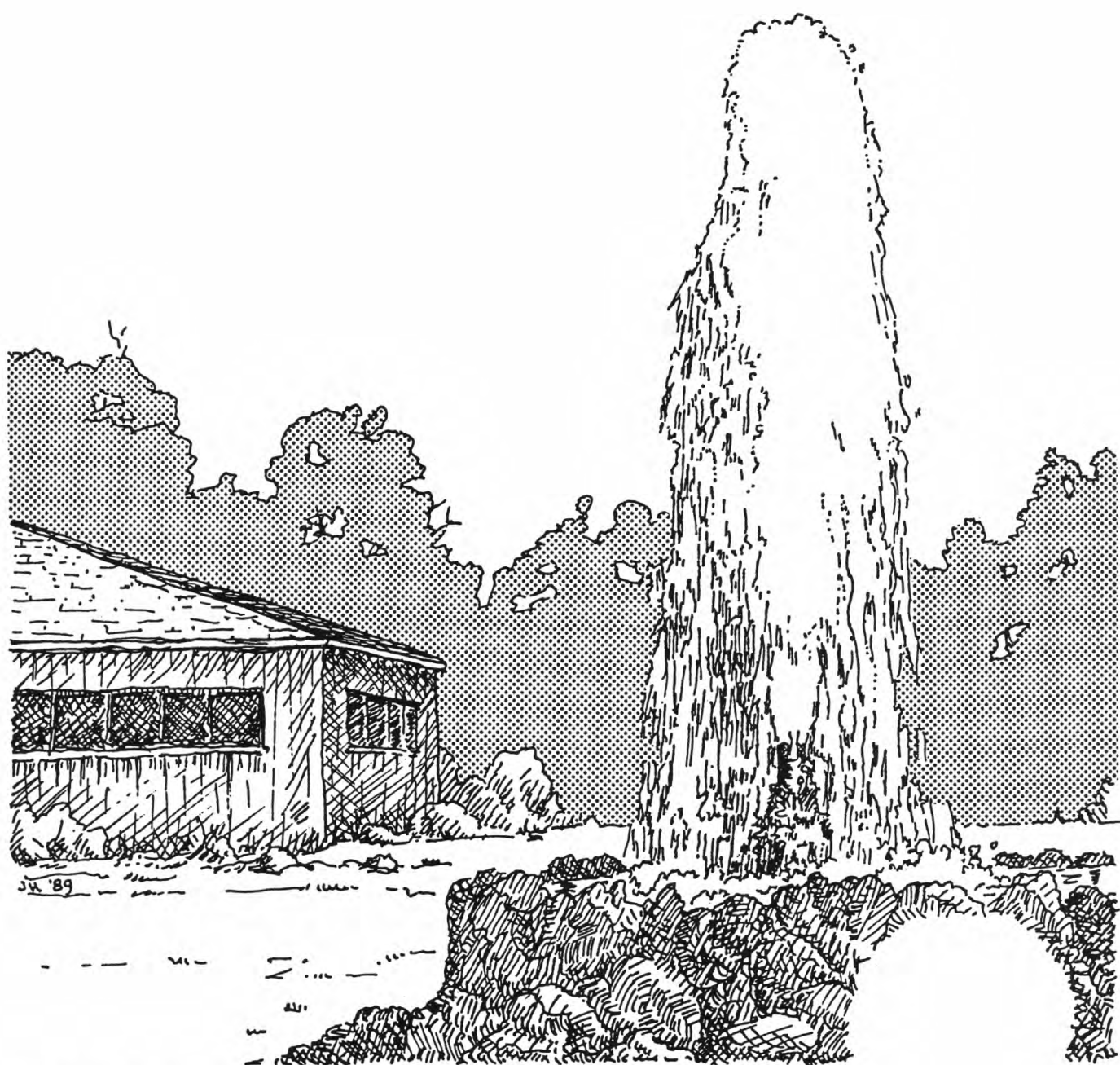
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 187,400 acre-ft, May 5, 1990, elevation, 1,048.38 ft; minimum since conservation pool first reached, 15,370 acre-ft, Nov. 30, 1965, elevation, 1,011.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 175,100 acre-ft, June 12, elevation, 1,046.90 ft; minimum, 107,900 acre-ft, Oct. 7 elevation, 1,037.02 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

Date	*Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Diversions (acre-feet)
Sept. 30	1037.13	108,500	-	-
Oct. 31	1037.13	108,500	0	1,504
Nov. 30	1038.54	116,800	+8,300	1,294
Dec. 31	1038.79	118,300	+1,500	1,208
CAL YR 94	-	-	+1,300	
Jan. 31	1039.07	120,000	+1,700	1,299
Feb. 28	1038.95	119,200	-800	1,192
Mar. 31	1039.13	120,300	+1,100	1,330
Apr. 30	1039.39	121,900	+1,600	1,353
May 31	1044.61	157,300	+35,400	1,472
June 30	1041.20	133,400	-23,900	1,669
July 31	1038.79	118,300	-15,100	1,997
Aug. 31	1038.37	109,900	-8,400	1,974
Sept. 30	1038.50	116,500	+6,600	1,502
WTR YR 95	-	-	+8,000	

*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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.81	.69	.70	.62	108	.66	.87	268	780	579	1.0	.71
2	.79	.70	.71	.70	.79	.68	.87	266	792	538	.94	.69
3	.82	.69	.70	.70	.71	.66	.93	266	506	231	.91	.69
4	.91	.97	.70	.70	.71	.70	.91	202	72	416	.87	.71
5	.73	1.2	.70	.70	.72	.65	1.0	63	1.5	416	.87	.69
6	.52	.71	.72	.67	.73	.67	.91	.92	1.7	416	.87	.69
7	1.7	.70	.70	.68	.71	.64	.61	1.5	167	416	.87	.69
8	.73	.70	.80	.70	.70	.63	.61	1.0	373	415	.81	.69
9	.71	.76	.71	.70	.70	.65	.63	152	365	415	.69	.69
10	.70	.70	.70	.70	.70	.63	.68	318	.95	345	.69	.69
11	.70	.70	.70	.70	.70	.65	.61	380	.89	142	.69	.79
12	.69	.70	.70	.70	.70	.68	171	403	164	.93	.69	1.3
13	.69	.70	.70	.67	.70	1.3	278	403	379	.89	.69	1.1
14	.70	.67	.70	.70	.70	.81	62	404	569	.88	.69	.96
15	.70	.63	.70	.70	.70	156	.61	404	739	.87	.69	.82
16	.70	.70	.71	.71	.73	362	.61	404	890	.87	.72	1.2
17	.70	.70	.70	.72	.70	406	.87	403	948	.87	.69	.74
18	.72	.70	.70	.71	.70	404	.67	444	944	.87	.69	.81
19	.67	.94	.71	.68	.70	401	.62	476	939	.87	.69	.85
20	.72	.86	.70	.70	.70	401	104	475	1020	.87	.69	.69
21	.71	.78	.70	.70	.70	400	168	474	1080	.88	.69	.74
22	.67	.77	.71	.74	.70	401	70	428	1070	.91	.69	.69
23	.62	.77	.70	.70	.70	367	.66	315	1170	.88	.69	.69
24	.62	.79	.75	.68	.70	162	149	1.4	1220	1.1	.70	.69
25	.66	.79	.70	.70	.67	.74	269	149	1200	.85	.69	.79
26	.65	.79	.70	.77	.67	.69	269	98	1190	.86	.71	.69
27	.67	.76	.70	.70	.69	.75	268	2.9	1180	.87	.74	.70
28	.70	.70	.70	.66	.66	.86	267	2.3	1160	.87	.75	.69
29	.69	.70	.70	.68	---	.87	267	2.4	1090	.87	.78	.66
30	.66	.70	.70	110	---	.87	266	215	628	.87	.74	.66
31	.70	---	.68	176	---	.87	---	495	---	.87	.69	---
TOTAL	22.76	22.67	21.90	306.19	126.99	3475.66	2620.67	7917.42	20640.04	4346.75	23.32	23.20
MEAN	.73	.76	.71	9.88	4.54	112	87.4	255	688	140	.75	.77
MAX	1.7	1.2	.80	176	108	406	278	495	1220	579	1.0	1.3
MIN	.52	.63	.68	.62	.66	.63	.61	.92	.89	.85	.69	.66
AC-FT	45	45	43	607	252	6890	5200	15700	40940	8620	46	46

07230000 LITTLE RIVER BELOW LAKE THUNDERBIRD NEAR NORMAN, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	33.4	46.1	38.7	40.8	40.9	89.1	87.9	124	147	32.0	15.2	5.90
MAX	489	626	431	438	324	548	625	936	688	323	266	96.5
(WY)	1987	1984	1993	1985	1993	1985	1985	1990	1995	1989	1992	1989
MIN	.16	.18	.16	.17	.18	.18	.25	.20	.21	.19	.22	.20
(WY)	1966	1967	1966	1966	1967	1966	1966	1966	1967	1967	1967	1966

SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1966 - 95

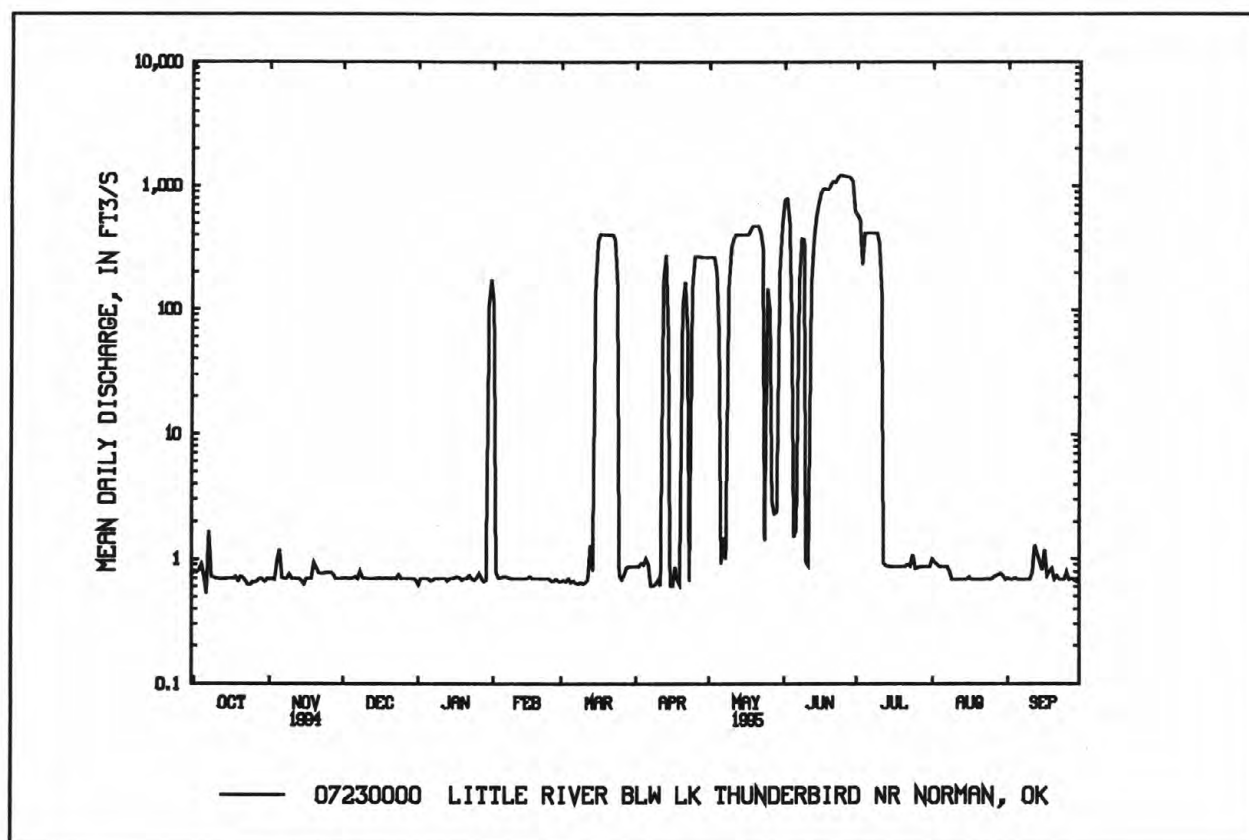
ANNUAL TOTAL	9278.30	39547.57	^a 58.4	
ANNUAL MEAN	25.4	108	251	1985
HIGHEST ANNUAL MEAN			.22	1966
LOWEST ANNUAL MEAN			1280	May 14 1990
HIGHEST DAILY MEAN	809	May 5	1220	Jun 24
LOWEST DAILY MEAN	.52	Oct 6	.52	Oct 6
ANNUAL SEVEN-DAY MINIMUM	.66	Oct 22	.65	Mar 5
INSTANTANEOUS PEAK FLOW			1250	Jun 23
INSTANTANEOUS PEAK STAGE			7.43	Jun 23
INSTANTANEOUS LOW FLOW			.52	Oct 6
ANNUAL RUNOFF (AC-FT)	18400	78440	42310	
10 PERCENT EXCEEDS	1.1	404	242	
50 PERCENT EXCEEDS	.83	.72	.61	
90 PERCENT EXCEEDS	.70	.67	.30	

^aPrior to regulation, water years 1953-64, 58.9 ft³/s.

^bNo flow at times in 1954-56, 1964.

^cMaximum discharge for period of record 34,600 ft³/s May 25, 1957, from rating curve extended above 15,000 ft³/s.

^dFrom high-water mark. Maximum gage height for period of record 28.85 ft May 25, 1957, from high-water mark.



07230500 LITTLE RIVER NEAR TECUMSEH, OK

LOCATION.--Lat 35°10'21", long 96°55'54", NE 1/4 NE 1/4 sec.13, T.8 N., R.3 E., Pottawatomie County, Hydrologic Unit 11090203, on downstream side of center pier of bridge on U.S. Highway 177, 1.5 mi downstream from Dance Creek, 5.0 mi south of Tecumseh, and at mile 77.2.

DRAINAGE AREA.--456 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 poor. Flow regulated or diverted since 1965 by Lake Thunderbird, 19.2 mi upstream (station 07229900). U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1932 reached a stage of 25.58 ft, from floodmark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	e6.0	e31	e22	157	e35	e47	362	1120	946	e12	e12
2	5.0	e5.8	e30	e21	87	e34	e42	351	1880	1030	56	e11
3	4.9	e5.6	e29	e21	37	e52	e39	345	1880	1220	68	e9.4
4	5.0	130	e29	e21	e31	65	e37	309	1910	869	e28	e8.9
5	5.1	838	e28	e21	e27	88	e34	171	4690	753	e22	e8.5
6	4.7	220	e40	e20	e25	83	33	622	2970	716	e19	e8.2
7	94	99	e64	e20	e23	404	e32	1200	1120	702	e18	e57
8	159	50	e52	e20	e22	186	e30	3360	1090	687	e17	e34
9	30	e37	49	e20	e21	117	e29	818	1380	679	e16	e17
10	e19	e54	39	e19	e20	98	28	751	1030	620	e14	e13
11	e16	e47	35	e19	e19	89	64	812	936	e350	e14	e12
12	e13	e42	31	e19	e19	81	106	875	612	e220	e14	120
13	e11	e37	28	e20	24	2300	568	856	835	e130	e14	44
14	e9.9	e34	e25	e20	53	794	285	843	1150	e76	13	e20
15	e9.2	e32	e23	e19	59	506	113	808	1330	e62	e13	e14
16	e8.7	e30	30	e19	62	682	75	786	1290	e52	e12	216
17	e8.2	e29	36	e21	72	759	180	780	1220	e44	e12	85
18	13	e28	34	e25	66	715	966	802	1160	e35	e12	e40
19	16	135	31	e31	59	690	268	919	1230	e28	e11	e32
20	e14	525	28	e30	52	672	204	902	1270	e25	e11	e28
21	e12	177	e26	e25	e50	654	236	898	1260	e22	e11	e26
22	e16	78	e25	e25	e47	657	245	827	1180	e20	e10	e24
23	e14	58	e24	e24	e44	637	289	739	1180	e18	e10	e23
24	e12	e50	e24	e23	e42	422	223	1800	e1220	e16	e10	e22
25	e11	e45	e23	50	e40	260	406	512	e1220	85	e10	e29
26	e10	e42	e23	123	e39	e150	404	3300	e1220	e49	e9.8	e25
27	e9.2	e38	e23	177	e37	e88	391	4750	1220	e34	e9.6	e22
28	e8.2	e35	e22	78	e36	e72	374	1320	1200	e26	e9.4	e20
29	e7.5	e34	e21	48	---	e62	375	671	1200	e20	e10	e19
30	e6.8	e32	e22	44	---	e56	366	499	1040	e17	e11	e18
31	e6.4	---	e21	150	---	e51	---	1140	---	e14	e12	---
TOTAL	563.8	2973.4	946	1195	1270	11559	6489	33128	42043	9565	508.8	1018.0
MEAN	18.2	99.1	30.5	38.5	45.4	373	216	1069	1401	309	16.4	33.9
MAX	159	838	64	177	157	2300	966	4750	4690	1220	68	216
MIN	4.7	5.6	21	19	19	34	28	171	612	14	9.4	8.2
AC-FT	1120	5900	1880	2370	2520	22930	12870	65710	83390	18970	1010	2020

e Estimated

ARKANSAS RIVER BASIN

241

07230500 LITTLE RIVER NEAR TECUMSEH, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

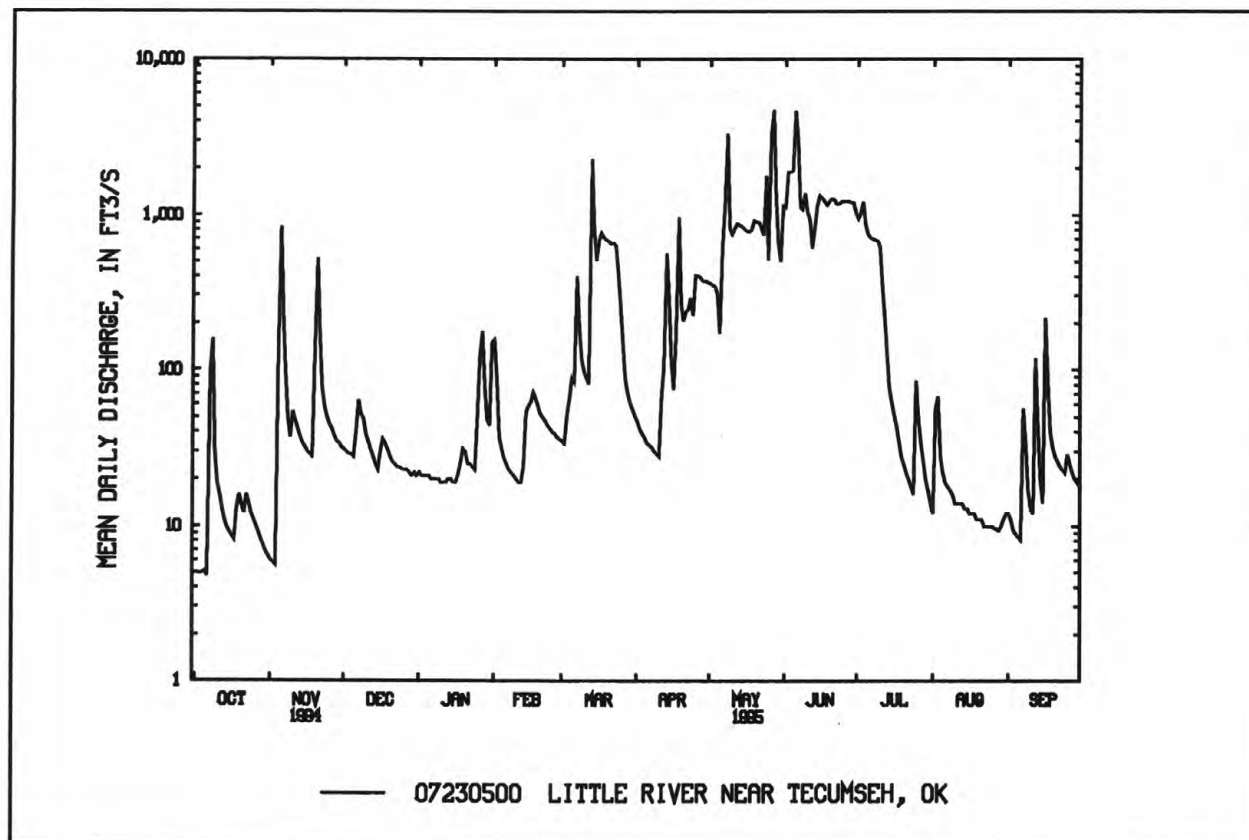
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	117	109	105	94.2	120	210	243	359	296	69.1	37.4	56.2
MAX	898	628	851	844	783	1086	1265	1687	1401	505	493	477
(WY)	1984	1984	1993	1985	1985	1990	1990	1990	1995	1989	1992	1970
MIN	.009	2.27	2.12	2.74	2.45	4.49	5.55	9.25	5.53	1.38	.000	.22
(WY)	1979	1981	1979	1981	1967	1966	1981	1981	1972	1967	1972	1980

SUMMARY STATISTICS	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1966 - 95
ANNUAL TOTAL	30157.6	111259.0	
ANNUAL MEAN	82.6	305	^a 151
HIGHEST ANNUAL MEAN			511
LOWEST ANNUAL MEAN			9.34
HIGHEST DAILY MEAN	1330	Mar 8	4750 May 27
LOWEST DAILY MEAN	4.5	Aug 16	4.7 Oct 6
ANNUAL SEVEN-DAY MINIMUM	4.7	Aug 24	6.6 Oct 28
INSTANTANEOUS PEAK FLOW			5570 May 27
INSTANTANEOUS PEAK STAGE			16.32 May 27
ANNUAL RUNOFF (AC-FT)	59820	220700	^b 14000
10 PERCENT EXCEEDS	195	1030	^c 19.24
50 PERCENT EXCEEDS	25	39	509
90 PERCENT EXCEEDS	5.4	11	17
			1.5

^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 fair. Flow regulated by Lake Thunderbird (station 07229900) 72.3 mi upstream since March 1965.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e7.3	25	112	69	295	81	118	509	2280	996	49	e17
2	e7.0	25	103	66	291	80	116	458	2550	789	84	e15
3	e6.5	110	99	63	215	80	138	430	2960	2050	95	e14
4	e6.0	1030	100	61	146	82	129	409	3320	1660	124	e12
5	e6.5	4450	96	53	127	98	123	385	6900	929	83	e10
6	e5.0	3290	90	61	116	109	119	1110	6450	714	49	e9.8
7	11	1330	89	71	112	270	112	3320	5950	620	42	130
8	196	656	110	67	103	446	105	7250	3860	567	40	78
9	223	569	421	66	96	222	98	7850	2200	535	39	39
10	79	443	264	63	98	159	1280	5040	2020	517	37	19
11	41	310	180	63	93	128	1100	2130	2790	482	30	e13
12	28	240	145	62	83	111	390	1330	1940	308	22	80
13	21	193	126	60	79	2070	241	1150	1120	162	20	175
14	16	205	119	60	79	3840	387	1020	1020	87	19	112
15	16	243	114	57	82	3350	324	941	1090	68	19	180
16	17	168	129	55	89	1470	181	866	1170	61	19	391
17	19	139	130	54	100	1050	289	825	1200	58	21	355
18	23	124	127	60	106	900	4240	781	1210	55	20	155
19	33	303	106	85	105	778	2050	757	1160	50	19	86
20	24	3820	94	87	91	693	1920	800	1140	97	19	82
21	28	2780	87	73	86	641	996	779	1150	73	20	76
22	72	1020	81	77	88	599	803	759	1170	56	18	63
23	33	584	76	109	80	563	1380	712	1150	50	17	57
24	297	388	74	147	77	531	891	1990	1160	276	e16	56
25	289	271	72	289	69	415	595	2500	1200	515	e15	54
26	75	215	69	706	69	261	626	2530	1200	202	e13	60
27	43	192	69	1710	70	201	609	4380	1190	104	e12	87
28	33	165	68	801	83	170	555	5500	1170	67	e11	82
29	28	141	69	466	---	144	516	4850	1170	50	e12	62
30	25	124	69	321	---	132	530	2550	1160	41	e15	50
31	24	---	69	255	---	124	---	1830	---	41	e16	---
TOTAL	1732.3	23553	3557	6237	3128	19798	20961	65741	64050	12280	1015	2619.8
MEAN	55.9	785	115	201	112	639	699	2121	2135	396	32.7	87.3
MAX	297	4450	421	1710	295	3840	4240	7850	6900	2050	124	391
MIN	5.0	25	68	53	69	80	98	385	1020	41	11	9.8
AC-FT	3440	46720	7060	12370	6200	39270	41580	130400	127000	24360	2010	5200

e Estimated

07231000 LITTLE RIVER NEAR SASAKWA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	271	326	287	215	338	527	605	891	670	130	71.4	133
MAX	2523	1705	2095	1307	1852	2618	3591	2762	2135	684	904	753
(WY)	1971	1993	1993	1985	1993	1990	1990	1990	1995	1989	1992	1970
MIN	.000	.009	.30	1.69	1.80	7.39	17.2	30.7	11.2	2.00	.004	.005
(WY)	1979	1981	1979	1967	1967	1967	1981	1981	1966	1967	1980	1980

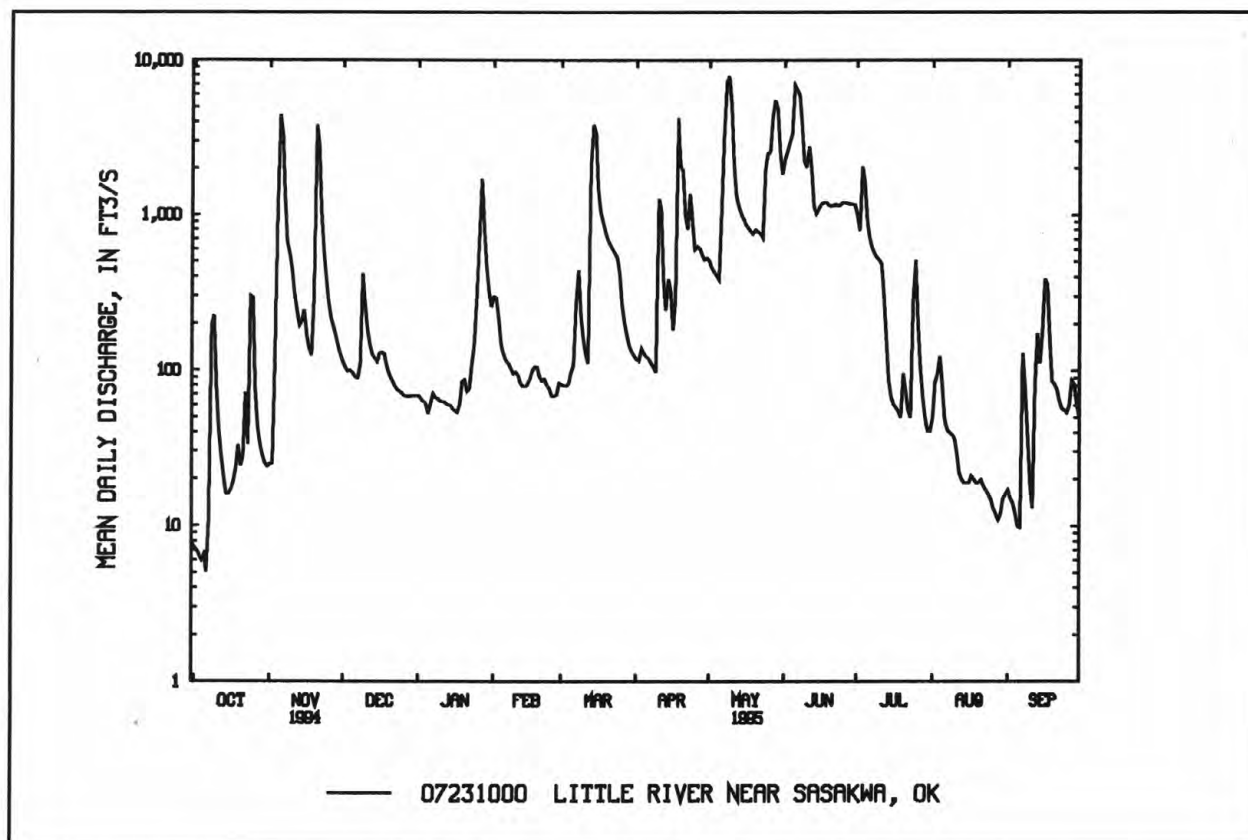
SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1966 - 95

ANNUAL TOTAL	90276.3	224672.1	
ANNUAL MEAN	247	616	^a 372
HIGHEST ANNUAL MEAN			996 1993
LOWEST ANNUAL MEAN			19.0 1981
HIGHEST DAILY MEAN	4450 Nov 5	7850 May 9	15600 May 1 1985
LOWEST DAILY MEAN	4.4 Aug 26	5.0 Oct 6	.00 Nov 23 1965
ANNUAL SEVEN-DAY MINIMUM	4.4 Aug 25	7.0 Oct 1	.00 Nov 23 1965
INSTANTANEOUS PEAK FLOW		8200 May 9	^b 18500 May 1 1985
INSTANTANEOUS PEAK STAGE		23.41 May 9	^c 31.73 May 1 1985
ANNUAL RUNOFF (AC-FT)	179100	445600	269200
10 PERCENT EXCEEDS	617	1760	1010
50 PERCENT EXCEEDS	73	124	51
90 PERCENT EXCEEDS	9.6	20	.98

^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 fair. Occasional slight regulation by dams in New Mexico and Texas since 1964; Lake Thunderbird (station 07229900) since March 1965. U.S. Army Corps of Engineers' satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 25,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 21	1100	30,900	8.90	May 27	1145	66,600	11.64
Apr. 10	2200	31,700	9.09	June 5	1830	86,800	12.90
Apr. 18	1200	34,100	9.23	June 10	2230	49,300	10.39
May 8	0400	92,100	13.24				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e240	348	906	724	1160	649	e1120	e2000	6870	2770	272	168
2	e230	316	886	741	1140	670	e1050	e1850	7440	2670	333	159
3	e222	312	833	736	1080	707	e1000	e1760	10600	6170	1890	144
4	e215	1240	841	729	910	747	e960	e1700	7570	5010	6560	129
5	e210	13700	817	717	843	828	900	e1650	70900	3170	12500	113
6	e207	10100	770	684	862	913	e860	e1620	48500	2110	6810	96
7	e203	3860	712	745	847	2330	e840	17300	31600	1650	3800	457
8	e195	1870	854	793	872	2220	e800	63000	15000	1390	2370	555
9	1160	1400	3030	772	878	1770	e765	25600	7640	1230	1800	278
10	918	1770	2110	771	856	1520	6840	13900	21500	1110	1450	154
11	421	1260	1060	760	833	1310	9170	7500	31800	1020	1240	123
12	235	921	879	757	805	1140	2190	4640	13200	825	1060	389
13	e220	732	866	776	778	14400	1080	3800	8860	539	902	561
14	e210	1440	815	782	768	15700	790	3360	6280	315	772	759
15	e197	1740	767	753	802	e7700	826	3490	6020	229	656	1000
16	e190	1420	1020	771	880	e5800	734	3000	5960	201	580	4830
17	180	782	1140	818	942	e4800	721	2620	5580	166	547	4360
18	e170	516	951	926	1010	e4000	16400	2440	4640	166	478	2540
19	e167	451	854	1250	1010	e3500	e7000	2230	4160	149	421	2370
20	e160	11000	805	1180	950	e3050	e9000	2050	3700	245	390	2570
21	1250	19600	739	1030	846	e2700	e4650	1960	3290	851	373	1960
22	1000	12500	722	989	780	e2400	e4100	1870	3170	488	385	2870
23	807	5130	723	1090	715	e2170	e6600	1820	2940	258	351	2720
24	727	2910	763	1320	651	e1990	e5200	6140	2750	411	301	3780
25	2020	1990	754	2130	637	e1800	e4200	9800	2760	2420	270	2440
26	833	1540	711	4790	678	e1670	e3300	4730	2710	1900	256	1900
27	455	1390	690	7360	678	e1550	e2800	46800	2670	674	231	1600
28	727	1320	678	2400	656	e1430	e2600	23400	2570	645	214	1600
29	592	1110	703	1430	---	e1330	e2300	15800	2770	548	202	1340
30	419	974	722	1080	---	e1250	e2120	8640	2620	355	192	1160
31	385	---	727	1210	---	e1200	---	7590	---	298	180	---
TOTAL	15165	103642	28848	41014	23867	93244	100916	294060	346070	39983	47786	43125
MEAN	489	3455	931	1323	852	3008	3364	9486	11540	1290	1541	1437
MAX	2020	19600	3030	7360	1160	15700	16400	63000	70900	6170	12500	4830
MIN	160	312	678	684	637	649	721	1620	2570	149	180	96
AC-FT	30080	205600	57220	81350	47340	184900	200200	583300	686400	79310	94780	85540

c Estimated

ARKANSAS RIVER BASIN

245

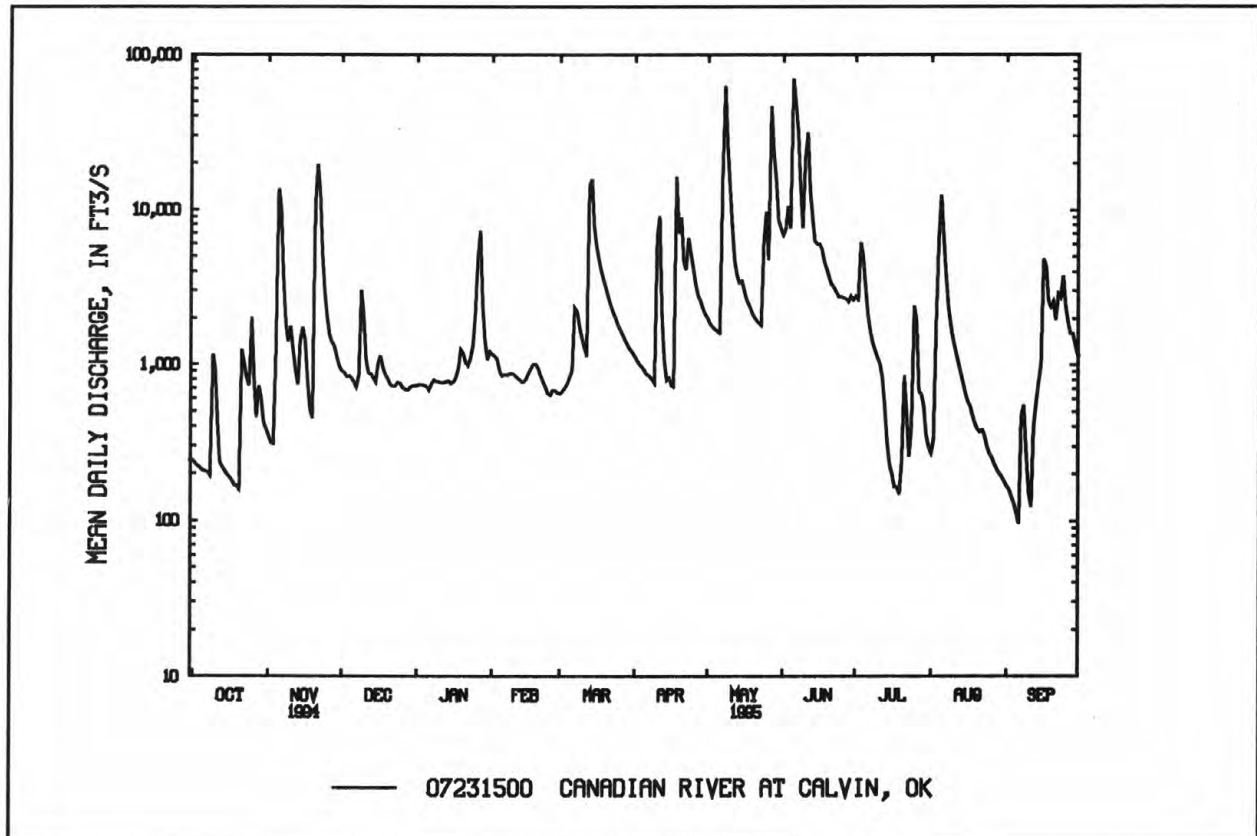
07231500 CANADIAN RIVER AT CALVIN, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1677	1154	1023	832	1228	1810	2481	4554	3381	1369	803	1219
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	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1906 - 95
ANNUAL TOTAL	427985	1177720	
ANNUAL MEAN	1173	3227	1798
HIGHEST ANNUAL MEAN			5513
LOWEST ANNUAL MEAN			184
HIGHEST DAILY MEAN	19600	Nov 21	140000
LOWEST DAILY MEAN	70	Sep 1	.00
ANNUAL SEVEN-DAY MINIMUM	73	Aug 27	.00
INSTANTANEOUS PEAK FLOW		92100	May 8
INSTANTANEOUS PEAK STAGE		13.24	May 8
ANNUAL RUNOFF (AC-FT)	848900	2336000	1303000
10 PERCENT EXCEEDS	2040	7140	4060
50 PERCENT EXCEEDS	639	1060	373
90 PERCENT EXCEEDS	190	252	24

^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 September 1995 (discontinued).

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 1994 TO SEPTEMBER 1995

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											
20...	1340	25.0	29.0	750	1028	1028	3700	4.79	1050	7.8	8.3
20...	1345	50.0	29.0	750	1028	1028	3700	4.79	953	7.9	8.3
20...	1350	75.0	28.5	750	1028	1028	3700	4.79	934	7.7	8.4
20...	1355	100	28.5	750	1028	1028	3700	4.79	932	7.7	8.4
20...	1400	125	29.0	750	1028	1028	3700	4.79	933	7.8	8.4
20...	1405	150	29.0	750	1028	1028	3700	4.79	876	7.9	8.4
20...	1410	175	29.0	750	1028	1028	3700	4.79	885	7.8	8.4
20...	1415	200	28.5	750	1028	1028	3700	4.79	849	7.8	8.4
20...	1420	225	28.5	750	1028	1028	3700	4.79	780	7.8	8.4
20...	1425	250	29.0	750	1028	1028	3700	4.79	768	7.8	8.3
20...	1430	275	29.0	750	1028	1028	3700	4.79	764	7.7	8.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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											
17...	1540	1028	80020	180	737	8.8	20.5	21.5	33	745	10.8
DEC											
06...	1310	1028	80020	761	1120	*8.6	17.0	13.0	44	745	10.3
APR											
04...	1400	1028	80020	E960	1180	8.5	21.0	17.0	27	752	12.1
JUN											
20...	1240	1028	80020	3700	**865	8.2	32.0	27.5	200	750	7.8
AUG											
15...	1215	1028	80020	658	1320	8.4	29.5	28.5	50	743	7.1

E Estimated discharge

* Filtered pH <8.3 units for alkalinity titration; therefore, no carbonate value.

** SPECIFIC CONDUCTANCE, LAB (µs/cm)

ARKANSAS RIVER BASIN
07231500 CANADIAN RIVER AT CALVIN, OK--Continued

247

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
OCT 17...	125	140	51	200	33	41	23	75	45	2	4.6
DEC 06...	100	230	130	420	180	110	34	83	30	2	4.6
APR 04...	127	270	1000	350	160	83	34	100	38	2	3.9
JUN 20...	100	K75	120	290	81	72	26	65	33	2	4.4
AUG 15...	94	K30	K120	440	300	110	39	100	33	2	6.3

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 17...	174	13	165	58	98	0.30	5.2	409	404	0.56	199
DEC 06...	292	0	239	170	110	0.40	13	708	674	0.96	1450
APR 04...	211	10	189	180	150	0.40	7.8	702	673	0.95	--
JUN 20...	252	0	207	110	82	0.50	12	536	498	0.73	5350
AUG 15...	170	0	139	310	130	0.50	14	864	795	1.18	1530

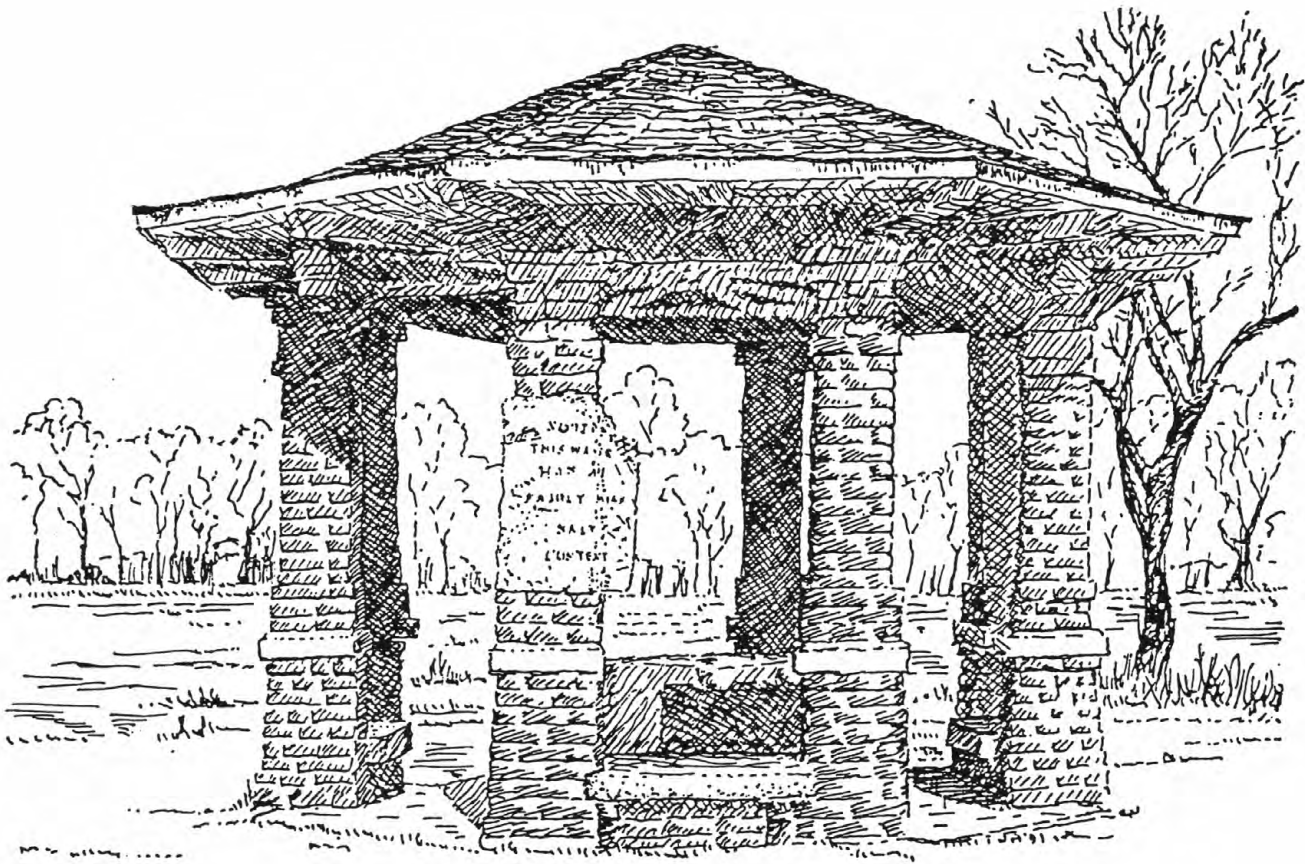
DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (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 17...	--	--	--	<0.010	--	--	<0.050	<0.015	--	0.70	0.70
DEC 06...	0.790	0.790	3.5	0.050	0.16	0.840	0.840	0.080	0.10	0.42	0.50
APR 04...	--	--	--	<0.010	--	--	<0.050	<0.015	--	0.80	0.80
JUN 20...	0.230	--	--	<0.010	--	0.230	0.230	<0.015	--	0.40	0.40
AUG 15...	--	--	--	<0.010	--	--	<0.050	0.020	0.03	0.68	0.70

ARKANSAS RIVER BASIN
07231500 CANADIAN RIVER AT CALVIN, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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 17...	0.70	0.110	<0.010	<0.010	--	80	180	<3	45	6
DEC 06...	1.3	0.140	0.080	0.080	0.25	<10	330	<3	<3	19
APR 04...	0.80	0.130	<0.010	<0.010	--	--	--	--	--	--
JUN 20...	0.63	0.090	0.080	0.060	0.18	20	270	<3	5	13
AUG 15...	0.70	0.180	0.050	0.050	0.15	10	380	<3	<3	19

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- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 17...	3	<10	2	<1	<1.0	480	<6	66	32	89
DEC 06...	8	<10	<1	<1	<1.0	950	7	204	419	91
APR 04...	--	--	--	--	--	--	--	114	--	97
JUN 20...	<1	10	<1	<1	<1.0	690	14	575	5740	86
AUG 15...	<1	<10	1	<1	<1.0	1300	16	212	377	81



Pavilion at Mineral Wells Park, Guthrie, 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.--15 years, 0.69 ft³/s, 500 acre-ft/yr.

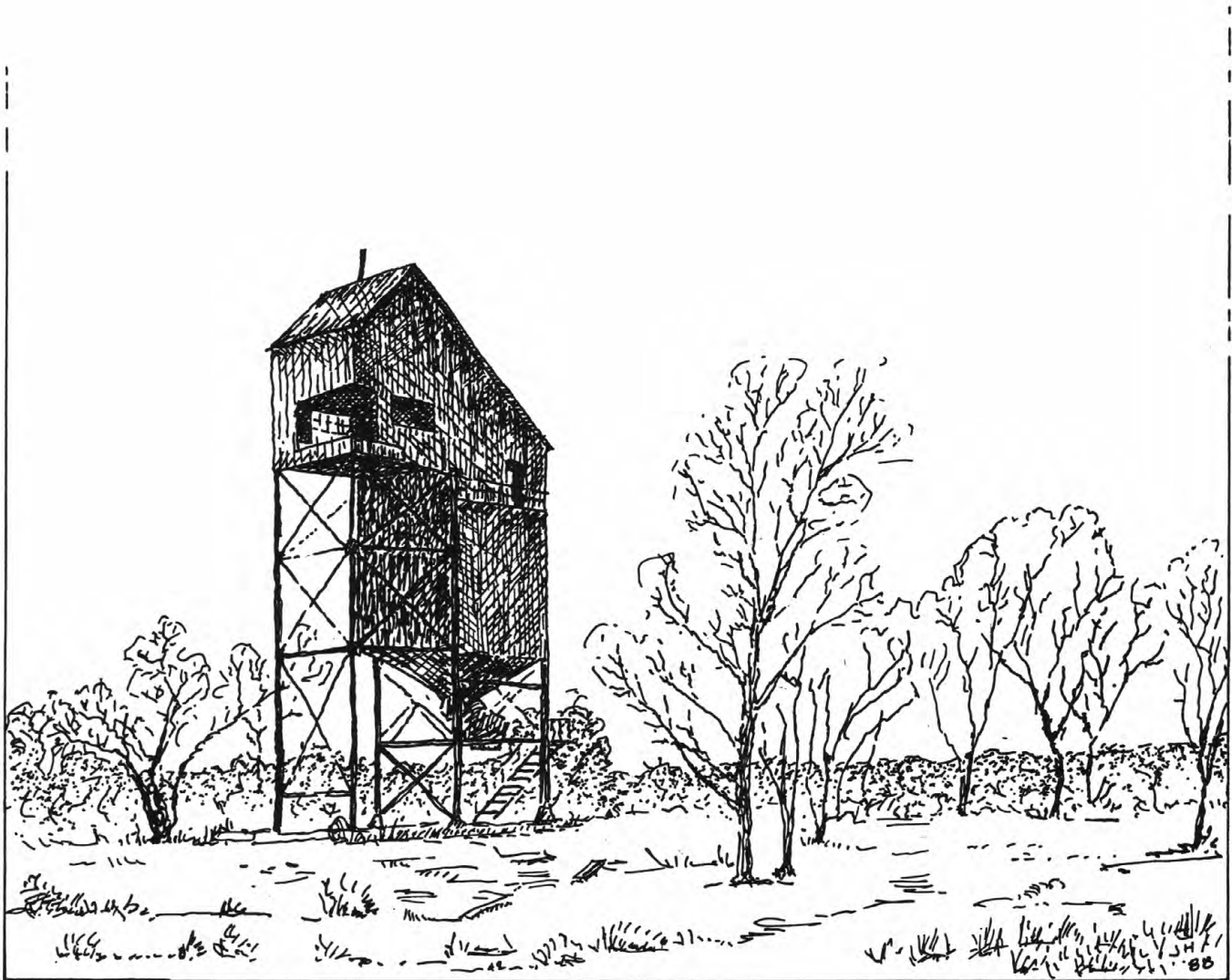
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,160 ft³/s, Aug. 13, 1981, gage height, 10.96 ft. on the basis of step-backwater measurement at gage site; no flow most days.

EXTREMES FOR CURRENT YEAR.--No flow all year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

CAL YR 1994 TOTAL 776.00 MEAN 2.13 MAX 492 MIN .00 AC-FT 1540
WTR YR 1995 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00



Ore loader in the Tar Creek area

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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

[illegible]

ARKANSAS RIVER BASIN

253

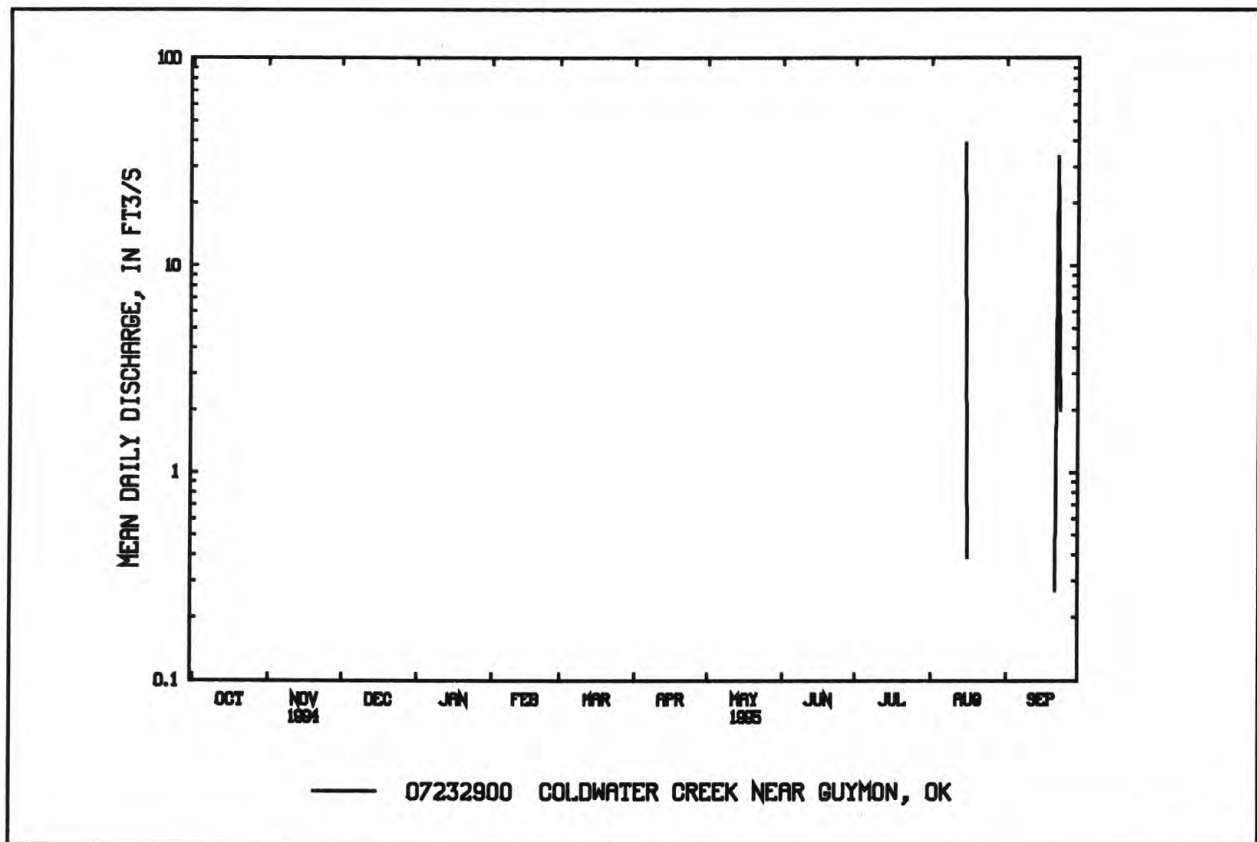
07232900 COLDWATER CREEK NEAR GUYMON, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.40	.000	.000	.000	.000	.000	3.51	10.5	5.88	.021	.96	2.08
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 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1981 - 95

ANNUAL TOTAL	134.70	75.66	
ANNUAL MEAN	.37	.21	2.04
HIGHEST ANNUAL MEAN			8.37 1982
LOWEST ANNUAL MEAN			.000 1983
HIGHEST DAILY MEAN	106	May 12 39	Aug 15 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			170 Aug 15 5800 Jun 20 1982
INSTANTANEOUS PEAK STAGE		10.48	Aug 15 14.34 Jun 20 1982
ANNUAL RUNOFF (AC-FT)	267	150	1480
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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.25	.36	.46	.55	.85	e1.3	e1.2	3.1	.90	.14	.00
2	.01	.23	.40	.46	.53	.86	e1.3	e1.3	3.0	1.3	.12	.00
3	.04	.22	.35	.46	.52	.94	e1.2	e1.4	3.5	1.3	.16	.00
4	.04	.24	.34	.46	.53	1.1	e1.2	e1.3	3.6	1.1	.16	.00
5	.14	.18	.37	.46	.52	1.1	e1.1	e1.3	3.6	1.1	.15	.00
6	.16	.16	.44	.46	.52	1.2	e1.1	e1.4	3.2	.90	.13	.00
7	.08	.16	.42	.50	e.56	1.2	e1.1	4.2	2.8	.66	.09	.00
8	.03	.14	.40	.49	e.60	1.2	e1.1	7.3	2.6	.52	.04	.00
9	.03	.14	.41	.50	e.62	1.1	e1.0	4.5	2.6	.38	.01	.00
10	.04	.17	.41	.51	e.60	e1.0	e1.1	3.3	2.3	.18	.00	.00
11	.03	.17	.41	.53	e.63	e1.1	e1.1	2.8	2.4	.12	.00	.00
12	.03	.17	.41	.53	e.66	e1.0	e1.2	2.5	2.2	.08	.00	.00
13	.08	.18	.43	.52	e.68	e1.0	e1.1	1.8	2.0	.04	.00	.00
14	.06	.16	.41	.52	e.70	e1.1	e1.2	1.4	1.7	.02	.00	.00
15	.08	.19	.45	.52	e.70	e1.3	e1.2	1.3	1.5	.30	.00	.00
16	.09	.25	.45	.53	e.71	e1.2	e1.3	1.4	1.3	.68	.00	.00
17	.18	.33	.46	.46	e.70	e1.2	e1.2	1.7	1.2	.56	.00	.00
18	.12	.28	.46	.45	e.72	e1.3	e1.3	1.6	e1.1	.94	.00	.00
19	.12	.57	.46	.47	e.70	e1.3	e1.3	1.3	e1.0	1.4	.00	.00
20	.15	.48	.46	.46	e.72	e1.4	e1.2	1.7	e.96	1.0	.00	.00
21	.15	.34	.44	.48	e.73	e1.4	e1.3	2.5	e.92	.94	.00	.00
22	.13	.24	.46	.47	e.74	e1.4	e1.2	1.5	e.90	.90	.00	.00
23	.15	.36	.43	.54	e.76	e1.3	e1.4	1.2	e.80	.64	.00	.01
24	.17	.39	.45	.52	e.78	e1.3	e1.3	1.2	e.45	.54	.00	.02
25	.17	.36	.46	.55	e.77	e1.3	e1.3	1.1	.28	.35	.00	.05
26	.23	.40	.47	.53	e.80	e1.3	e1.3	1.8	.19	.26	.00	.05
27	.23	.42	.46	.52	e.83	e1.3	e1.2	1.8	.29	.21	.00	.06
28	.24	.41	.48	.52	e.84	e1.3	e1.2	1.4	.40	.11	.00	.09
29	.23	.35	.46	.53	---	e1.4	e1.2	2.0	.69	.06	.00	.13
30	.21	.35	.46	.53	---	e1.4	e1.1	3.1	.88	.03	.00	.08
31	.34	---	.48	.54	---	e1.4	---	4.0	---	.02	.00	---
TOTAL	3.78	8.29	13.35	15.48	18.72	37.25	36.1	66.3	51.46	17.54	1.00	0.49
MEAN	.12	.28	.43	.50	.67	1.20	1.20	2.14	1.72	.57	.032	.016
MAX	.34	.57	.48	.55	.84	1.4	1.4	7.3	3.6	1.4	.16	.13
MIN	.01	.14	.34	.45	.52	.85	1.0	1.1	.19	.02	.00	.00
AC-FT	7.5	16	26	31	37	74	72	132	102	35	2.0	1.0

c Estimated

ARKANSAS RIVER BASIN

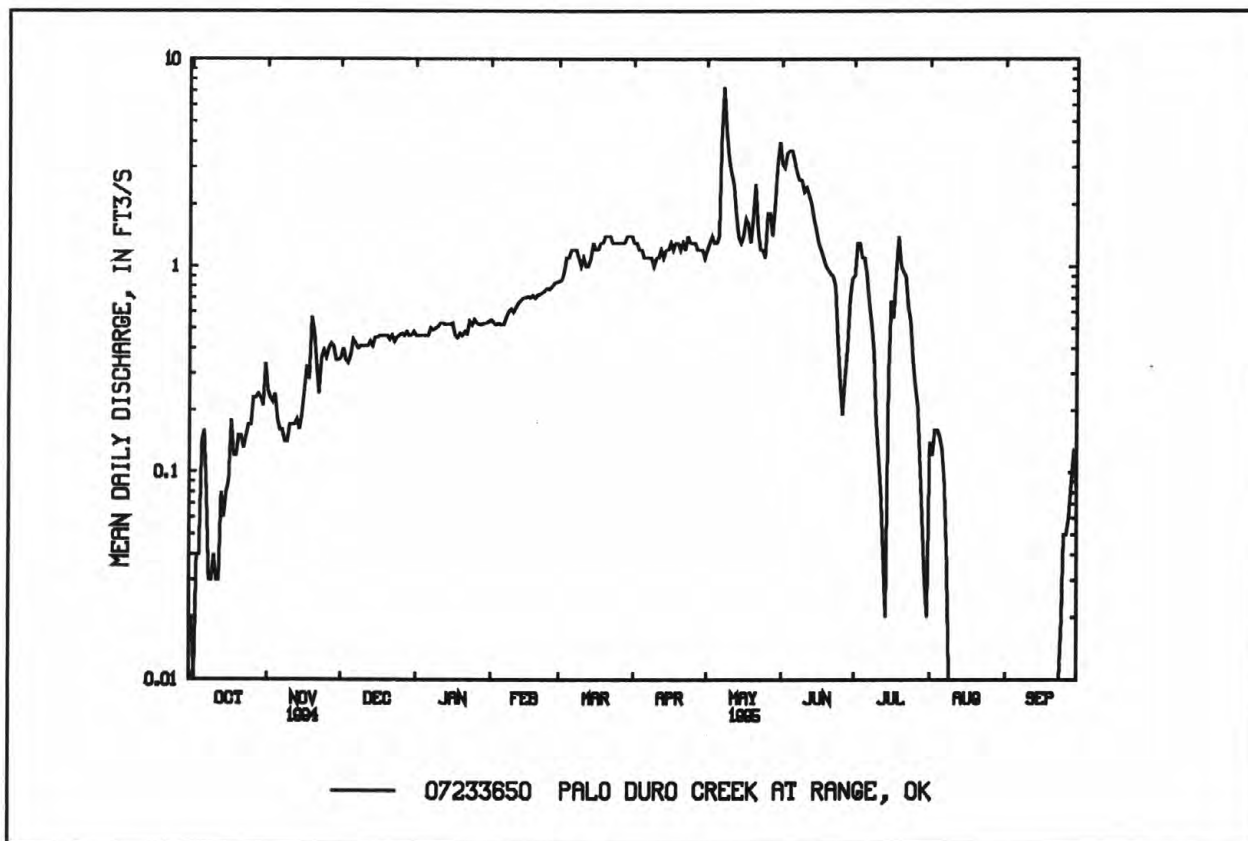
255

07233650 PALO DURO CREEK AT RANGE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.38	.86	.96	1.21	1.33	1.52	1.50	1.54	1.18	.39	.25	.19
MAX	.63	1.35	1.18	1.50	1.67	1.86	1.74	2.14	1.72	.84	.35	.53
(WY)	1994	1994	1994	1992	1993	1994	1994	1995	1995	1992	1992	1994
MIN	.12	.28	.43	.50	.67	1.20	1.20	1.20	.63	.000	.032	.016
(WY)	1995	1995	1995	1995	1995	1995	1995	1993	1993	1994	1995	1995

SUMMARY STATISTICS	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1992 - 95
ANNUAL TOTAL	320.19	269.76	
ANNUAL MEAN	.88	.74	.94
HIGHEST ANNUAL MEAN			1.07 1994
LOWEST ANNUAL MEAN			.74 1995
HIGHEST DAILY MEAN	2.3 Mar 30	7.3 May 8	7.3 May 8 1995
LOWEST DAILY MEAN	.00 at times	.00 at times	.00 at times
ANNUAL SEVEN-DAY MINIMUM	.00 Jun 23	.00 Aug 10	.00 Jun 23 1994
INSTANTANEOUS PEAK FLOW		9.1 May 7	71 Aug 12 1993
INSTANTANEOUS PEAK STAGE		8.96 May 7	10.00 Aug 12 1993
ANNUAL RUNOFF (AC-FT)	635	535	681
10 PERCENT EXCEEDS	1.8	1.4	1.7
50 PERCENT EXCEEDS	.62	.48	1.1
90 PERCENT EXCEEDS	.00	.00	.03



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.

PERIOD OF RECORD.--March 1904 to December 1905 (gage heights only), October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as Beaver Creek at Beaver 1904-5, and October 1937 to September 1970 as North Canadian River at Beaver.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,368.16 ft, sea level (levels by U.S. Army Corps of Engineers). Mar. 29, 1904 to Dec. 31, 1905, nonrecording gage at same vicinity at different datum. Mar. 1, 1938 to Sept. 30, 1946, water-stage recorder at present site at datum 3.0 ft higher.

REMARKS.--Records fair. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.04	.16	.19	1.9	e1.6	6.1	7.5	19	32	.49	.10
2	.01	.04	.17	.20	2.0	e1.5	6.1	7.4	18	19	.55	.08
3	.01	.03	.17	.20	2.0	e1.4	6.1	8.5	22	15	.57	.07
4	.01	.04	.17	.20	2.0	e2.0	5.9	7.6	30	20	.41	.07
5	.02	.04	.17	.21	2.1	e2.5	6.0	7.6	89	13	.35	.07
6	.02	.05	.20	.23	2.2	e4.0	5.9	8.4	55	9.8	.32	.06
7	.01	.05	.19	.22	2.0	e3.5	5.9	43	35	7.9	.32	.06
8	.01	.05	.18	.23	1.9	e3.0	5.9	519	29	6.9	.30	.07
9	.01	.05	.19	.23	2.2	e4.5	5.7	204	25	6.1	.26	.08
10	.02	.06	.20	.23	2.2	5.1	5.6	85	23	5.2	.25	.08
11	.02	.06	.20	.22	2.2	4.4	5.5	57	21	4.3	.25	.08
12	.02	.06	.20	.20	e1.3	4.2	5.3	45	19	3.4	.24	.09
13	.01	.07	.18	.20	e1.0	3.9	5.1	37	18	2.8	.22	.07
14	.02	.07	.19	.20	e1.2	4.6	5.4	31	17	2.4	.23	.07
15	.03	.07	.19	.20	e2.5	5.1	5.1	27	16	2.3	.26	.09
16	.03	.07	.20	.25	e2.4	5.2	5.4	25	15	3.2	.23	.09
17	.04	.07	.22	.32	2.5	5.2	5.6	25	14	3.0	.21	.08
18	.03	.08	.22	.35	2.6	5.3	6.0	25	13	4.0	.19	.13
19	.04	.12	.22	.42	2.6	5.4	5.9	25	11	4.9	.20	.15
20	.04	.15	.21	e.45	2.8	5.1	7.2	23	9.8	3.7	.21	.13
21	.04	.11	.21	e.50	3.0	5.2	6.6	22	8.7	3.8	.19	.33
22	.04	.11	.22	e.45	3.0	5.0	6.8	20	8.0	3.3	.17	.19
23	.04	.11	.20	e.40	2.8	4.0	8.4	19	7.2	2.9	.16	.17
24	.04	.11	.20	e.70	2.7	4.3	7.8	18	9.7	3.0	.15	.18
25	.04	.09	.20	1.1	2.9	5.8	7.7	18	8.5	2.5	.13	.18
26	.04	.08	.20	1.3	3.3	5.8	7.7	23	9.3	2.0	.13	.17
27	.05	.09	.20	1.5	3.4	4.5	7.5	26	7.8	1.5	.10	.17
28	.05	.10	.20	1.4	3.1	4.2	7.5	23	6.5	1.0	.09	.20
29	.03	.14	.18	1.4	---	5.5	7.6	21	11	.76	.08	.18
30	.05	.15	.19	1.4	---	5.7	7.3	20	19	.62	.09	.15
31	.05	---	.22	1.6	---	6.2	---	19	---	.48	.18	---
TOTAL	0.88	2.36	6.05	16.70	65.8	133.7	190.6	1447.0	594.5	190.76	7.53	3.64
MEAN	.028	.079	.20	.54	2.35	4.31	6.35	46.7	19.8	6.15	.24	.12
MAX	.05	.15	.22	1.6	3.4	6.2	8.4	519	89	32	.57	.33
MIN	.01	.03	.16	.19	1.0	1.4	5.1	7.4	6.5	.48	.08	.06
AC-FT	1.7	4.7	12	33	131	265	378	2870	1180	378	15	7.2

e Estimated

ARKANSAS RIVER BASIN
07234000 BEAVER RIVER AT BEAVER, OK--Continued

257

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1995, BY WATER YEAR (WY)

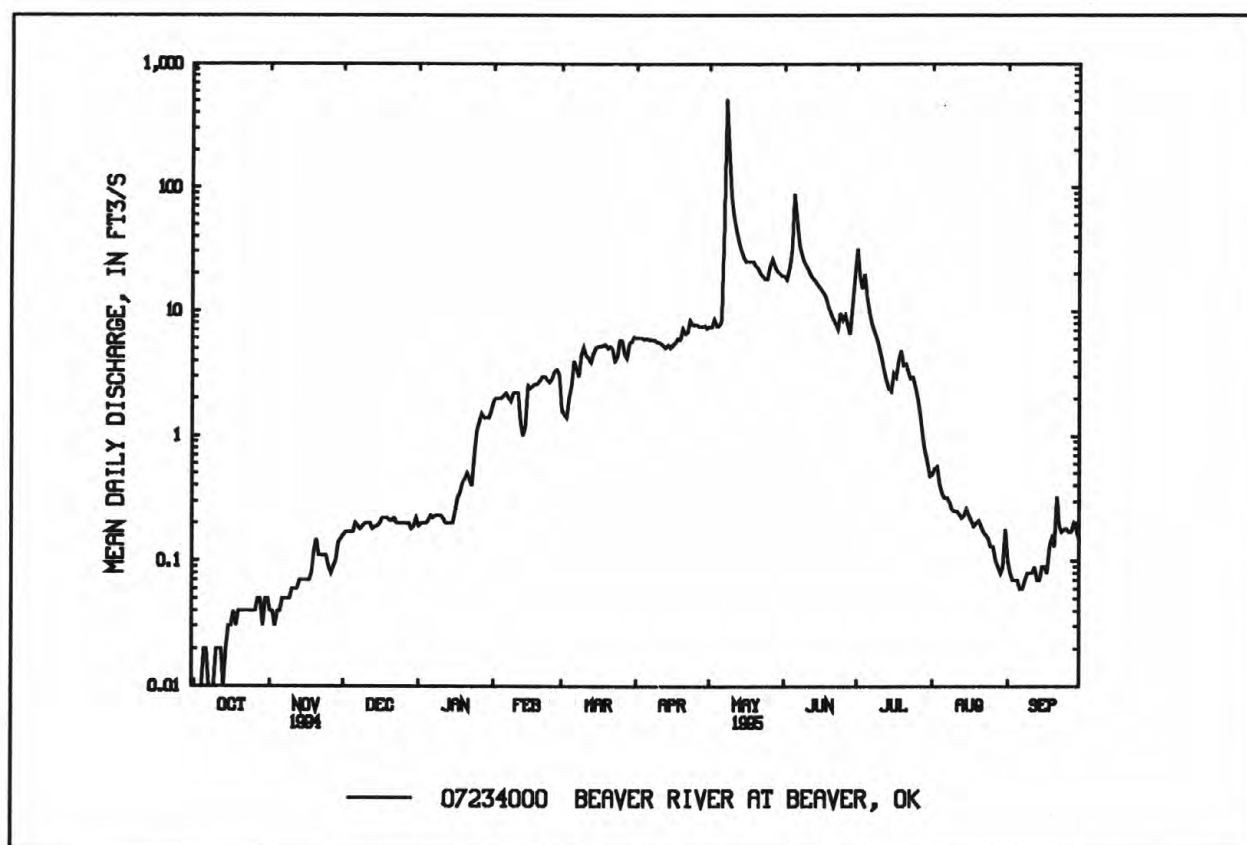
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.05	1.92	2.33	3.52	5.90	10.1	16.1	58.2	71.0	17.4	4.17	12.4
MAX	130	11.6	13.7	17.2	21.4	27.6	83.8	295	362	79.4	25.9	78.5
(WY)	1986	1988	1988	1988	1993	1993	1990	1989	1989	1979	1982	1981
MIN	.000	.000	.000	.040	.11	.11	.029	.093	.000	.000	.000	.000
(WY)	1980	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981	1980

SUMMARY STATISTICS	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1979 - 95
ANNUAL TOTAL	932.90	2659.52	
ANNUAL MEAN	2.56	7.29	^a 17.7
HIGHEST ANNUAL MEAN			64.0 1989
LOWEST ANNUAL MEAN			2.25 1984
HIGHEST DAILY MEAN	128 Jun 12	519 May 8	3880 May 31 1980
LOWEST DAILY MEAN	.00 Aug 27	.01 Oct 1-4, 7-9, 13	.00 at times
ANNUAL SEVEN-DAY MINIMUM	.01 Aug 24	.01 Oct 1	.00 Oct 1 1978
INSTANTANEOUS PEAK FLOW		644 May 8	^b 5510 Jun 10 1983
INSTANTANEOUS PEAK STAGE		6.76 May 8	^c 10.50 Jun 10 1983
ANNUAL RUNOFF (AC-FT)	1850	5280	12800
10 PERCENT EXCEEDS	5.4	19	27
50 PERCENT EXCEEDS	.20	1.1	.59
90 PERCENT EXCEEDS	.02	.05	.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.



07237500 NORTH CANADIAN RIVER AT WOODWARD, OK

LOCATION.--Lat 36°26'12", long 99°16'41", SW 1/4 SW 1/4 sec.30, T.23 N., R.19 W., Woodward County, Hydrologic Unit 11100301, on downstream side of pier of bridge on State Highway 412 (formerly State Highway 15), 275 ft downstream from The Atchison, Topeka and Santa Fe Railway Co. bridge, 6.0 mi east of Woodward, 7.2 mi upstream from Indian Creek, 27.5 mi downstream from Wolf Creek, and at mile 460.2.

DRAINAGE AREA.--11,589 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	6.2	5.6	17	18	21	93	88	91	79	27	6.0
2	2.0	4.8	5.5	15	19	e16	93	88	101	78	30	5.6
3	1.8	4.3	5.1	14	18	18	92	90	121	75	35	5.5
4	2.0	4.8	4.9	e12	18	24	92	90	117	68	29	5.1
5	6.1	4.8	4.2	e12	19	22	92	85	125	63	27	5.0
6	4.3	4.3	6.8	13	18	23	92	61	123	65	25	4.8
7	2.5	4.3	8.6	e10	18	e21	92	64	120	140	23	4.7
8	2.5	4.3	6.8	13	17	e20	63	84	119	160	20	4.9
9	2.3	4.0	6.3	13	18	27	48	61	273	90	19	4.9
10	2.2	3.7	5.7	13	18	25	43	55	162	69	18	5.3
11	2.2	3.8	5.5	13	18	46	40	50	150	59	31	5.2
12	2.4	4.8	5.2	14	17	52	38	45	146	52	43	5.2
13	1.8	5.4	4.8	14	15	55	36	43	146	47	48	4.8
14	2.4	4.8	5.6	e14	17	60	34	39	143	43	50	4.6
15	3.0	4.3	5.7	e15	18	64	32	38	155	62	50	5.1
16	3.1	3.5	5.3	e14	18	63	32	44	232	51	33	6.1
17	3.1	4.0	5.7	15	18	66	32	96	264	41	23	5.5
18	2.8	4.4	5.8	15	20	69	33	93	269	40	18	6.1
19	2.4	14	6.1	14	19	69	31	87	269	42	15	11
20	2.7	21	7.5	15	20	69	35	89	252	45	14	7.0
21	3.2	10	8.4	14	19	72	32	93	152	38	13	7.0
22	2.5	7.6	10	15	19	79	34	91	120	35	12	6.8
23	2.5	7.6	12	14	32	77	51	92	108	33	12	6.5
24	2.9	8.0	14	14	43	68	38	101	145	40	11	6.5
25	2.6	7.5	13	14	46	54	36	69	104	33	9.8	7.1
26	2.9	7.1	12	15	30	49	67	71	95	31	9.4	6.7
27	2.9	6.2	12	16	24	60	82	92	90	29	8.9	6.4
28	2.7	5.7	12	17	20	77	83	77	86	27	8.2	6.8
29	3.0	5.2	13	17	---	61	84	81	107	26	7.5	11
30	3.3	5.5	15	16	---	88	87	69	87	25	7.0	7.5
31	21	---	20	17	---	91	---	65	---	24	6.5	---
TOTAL	102.6	185.9	258.1	444	594	1606	1737	2291	4472	1710	683.3	184.7
MEAN	3.31	6.20	8.33	14.3	21.2	51.8	57.9	73.9	149	55.2	22.0	6.16
MAX	21	21	20	17	46	91	93	101	273	160	50	11
MIN	1.5	3.5	4.2	10	15	16	31	38	86	24	6.5	4.6
AC-FT	204	369	512	881	1180	3190	3450	4540	8870	3390	1360	366

e Estimated

ARKANSAS RIVER BASIN

259

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1995, BY WATER YEAR (WY)

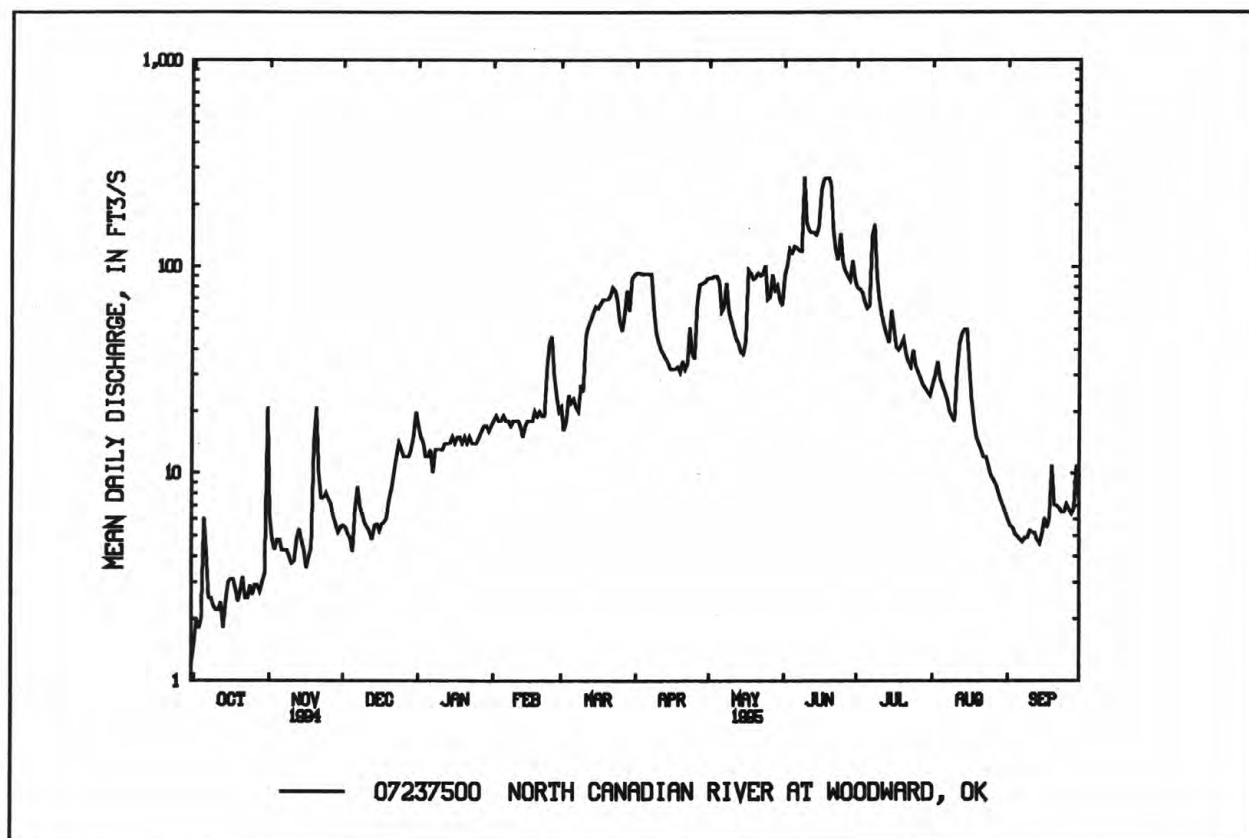
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	49.8	44.8	45.4	64.7	77.9	125	135	234	206	86.3	35.9	26.6
MAX	377	173	125	200	174	404	382	900	814	328	207	158
(WY)	1986	1986	1986	1988	1987	1987	1988	1979	1989	1989	1989	1989
MIN	2.33	5.75	8.33	11.0	12.6	47.8	34.7	32.0	16.1	4.24	1.73	.95
(WY)	1992	1985	1995	1981	1981	1992	1981	1992	1981	1981	1991	1984

SUMMARY STATISTICS	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1979 - 95
ANNUAL TOTAL	10710.0	14268.6	
ANNUAL MEAN	29.3	39.1	^a 94.3
HIGHEST ANNUAL MEAN			228
LOWEST ANNUAL MEAN			16.9
HIGHEST DAILY MEAN	188	Apr 28	273
LOWEST DAILY MEAN	1.2	Sep 30	1.5
ANNUAL SEVEN-DAY MINIMUM	1.6	Sep 16	2.3
INSTANTANEOUS PEAK FLOW			505
INSTANTANEOUS PEAK STAGE			6.40
ANNUAL RUNOFF (AC-FT)	21240	28300	68330
10 PERCENT EXCEEDS	63	92	208
50 PERCENT EXCEEDS	14	19	52
90 PERCENT EXCEEDS	2.3	4.3	5.3

^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 September 1995 (discontinued).

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 1994 TO SEPTEMBER 1995

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)
MAY 1995											
24...	1209	3.00	16.0	719	1028	1028	107	3.56	1630	8.1	8.2
24...	1213	8.00	16.0	719	1028	1028	107	3.56	1630	8.1	8.2
24...	1215	13.0	16.0	719	1028	1028	107	3.56	1630	8.1	8.2
24...	1219	18.0	16.0	719	1028	1028	107	3.56	1630	8.1	8.2
24...	1222	23.0	16.0	719	1028	1028	107	3.56	1630	8.1	8.2
24...	1224	28.0	16.0	719	1028	1028	107	3.56	1630	8.1	8.2
24...	1227	33.0	16.0	719	1028	1028	107	3.56	1630	8.1	8.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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)
NOV 1994											
07...	1300	1028	80020	4.2	2880	8.5	20.0	15.0	1.3	718	14.0
FEB 1995											
07...	1400	1028	80020	18	2200	8.4	9.0	10.5	1.2	725	15.3
MAR											
28...	1000	1028	80020	82	1020	8.0	6.5	10.0	20	724	10.0
MAY											
24...	1300	1028	80020	107	1630	8.2	11.0	16.0	17	719	8.1
AUG											
14...	1130	1028	80020	50	1360	8.3	30.0	27.0	9.0	716	8.4

ARKANSAS RIVER BASIN
07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	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 PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
NOV 1994											
07...	149	51	31	800	550	230	55	380	51	6	7.5
FEB 1995											
07...	145	K5	K4	620	400	170	46	240	46	4	5.3
MAR											
28...	94	310	2100	280	140	74	23	88	40	2	6.6
MAY											
24...	88	1800	2700	370	180	94	32	180	51	4	5.1
AUG											
14...	113	250	570	310	150	76	30	150	50	4	5.7
DATE	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	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 1994											
07...	287	13	257	620	470	0.70	30	2050	1960	2.79	23.1
FEB 1995											
07...	252	7	219	420	340	0.70	21	1440	1380	1.96	69.2
MAR											
28...	171	0	140	180	120	0.50	14	638	592	0.87	141
MAY											
24...	224	0	184	200	270	0.80	14	964	907	1.31	278
AUG											
14...	188	5	162	190	210	0.70	20	816	782	1.11	111
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 1994											
07...	1.65	1.65	7.3	0.250	0.82	1.90	1.90	0.450	0.58	0.65	1.1
FEB 1995											
07...	1.04	1.04	4.6	0.060	0.20	1.10	1.10	0.220	0.28	0.48	0.70
MAR											
28...	0.180	0.180	0.80	0.020	0.07	0.200	0.200	0.110	0.14	0.79	0.90
MAY											
24...	0.130	0.130	0.58	0.020	0.07	0.150	0.150	0.080	0.10	0.22	0.30
AUG											
14...	0.100	0.100	0.44	0.010	0.03	0.110	0.110	<0.015	--	0.60	0.60

ARKANSAS RIVER BASIN
07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued
WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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 ORTH, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTH, 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 1994										
07...	3.0	0.480	0.450	0.380	1.2	<10	100	<1	50	50
FEB 1995										
07...	1.8	0.190	0.160	0.180	0.55	<10	100	<1	30	60
MAR										
28...	1.1	0.110	0.050	0.040	0.12	10	100	<3	18	24
MAY										
24...	0.45	0.020	0.040	0.030	0.09	--	--	--	--	--
AUG										
14...	0.71	0.080	0.030	0.030	0.09	<10	140	<3	4	47
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 1994										
07...	90	68	3	<2	<1.0	1500	20	232	2.6	52
FEB 1995										
07...	80	77	<1	<1	<1.0	1500	10	238	11	26
MAR										
28...	11	20	1	<1	<1.0	750	6	171	38	53
MAY										
24...	--	--	--	--	--	--	--	829	239	17
AUG										
14...	15	20	<1	<1	<1.0	1000	7	151	21	84



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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	29	26	38	50	50	120	107	128	170	111	25
2	.15	18	27	42	49	e45	120	108	121	153	320	24
3	.36	18	27	43	49	51	118	110	1030	145	382	23
4	.59	16	28	e27	47	51	116	110	1080	136	285	22
5	4.5	16	27	e29	46	55	114	109	651	124	223	21
6	3.2	15	28	40	46	63	114	133	575	115	143	20
7	2.1	15	29	e34	46	e60	113	129	381	109	111	19
8	1.9	15	31	46	45	e61	112	197	290	138	96	19
9	1.8	15	34	48	46	67	99	177	3170	173	86	21
10	1.8	14	33	46	46	67	83	144	2940	139	76	22
11	1.9	15	32	45	46	65	77	110	1650	114	68	22
12	1.8	16	31	43	45	68	73	97	651	102	63	24
13	2.0	16	31	42	43	81	71	90	486	93	66	24
14	2.2	16	31	41	45	102	69	81	405	87	68	21
15	2.5	16	31	41	49	109	67	75	342	82	69	22
16	3.3	16	31	41	48	114	65	73	305	88	71	26
17	66	16	32	40	48	109	72	78	343	139	65	26
18	12	17	32	40	48	103	87	87	387	103	55	25
19	8.4	20	32	39	48	100	83	114	387	102	51	27
20	7.3	87	32	39	49	97	81	101	381	106	48	28
21	7.8	60	32	39	48	94	80	103	364	93	45	37
22	6.6	54	32	43	48	93	82	104	258	88	42	37
23	6.2	41	32	42	47	93	105	102	211	78	40	36
24	5.8	36	32	44	47	94	116	116	336	77	38	35
25	5.8	33	32	46	56	129	103	129	333	93	37	36
26	5.8	32	33	49	63	245	87	143	254	89	35	35
27	6.0	31	34	52	59	120	86	772	201	72	34	33
28	6.4	29	34	51	53	102	99	287	174	63	32	34
29	6.7	28	34	51	---	115	104	182	165	58	30	42
30	7.6	27	34	50	---	103	103	149	209	55	28	46
31	40	---	36	50	---	116	---	135	---	52	27	---
TOTAL	228.66	777	970	1321	1360	2822	2819	4452	18208	3236	2845	832
MEAN	7.38	25.9	31.3	42.6	48.6	91.0	94.0	144	607	104	91.8	27.7
MAX	66	87	36	52	63	245	120	772	3170	173	382	46
MIN	.15	14	26	27	43	45	65	73	121	52	27	19
AC-FT	454	1540	1920	2620	2700	5600	5590	8830	36120	6420	5640	1650

e Estimated

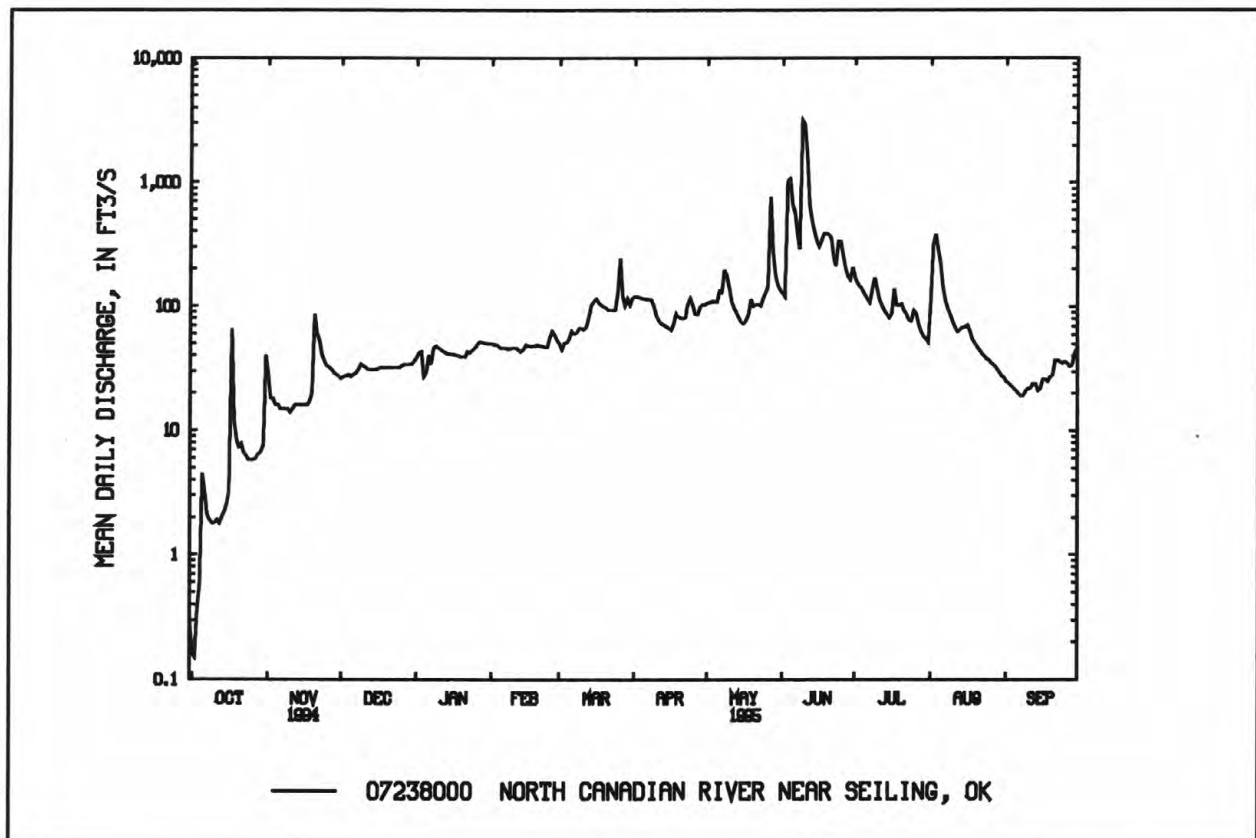
07238000 NORTH CANADIAN RIVER NEAR SEILING, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	74.2	82.1	77.7	98.7	121	184	186	357	304	123	52.6	41.0
MAX	430	324	179	263	300	567	511	984	982	380	271	244
(WY)	1986	1987	1986	1988	1987	1987	1988	1979	1989	1989	1989	1989
MIN	2.73	10.6	24.5	30.5	36.7	78.5	57.3	44.8	18.8	8.13	1.23	.074
(WY)	1992	1985	1979	1981	1981	1981	1981	1981	1981	1991	1984	1984

SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1979 - 95

ANNUAL TOTAL			18185.22		39870.66
ANNUAL MEAN	49.8		109		^a 142
HIGHEST ANNUAL MEAN					299 1987
LOWEST ANNUAL MEAN					29.4 1981
HIGHEST DAILY MEAN	635	May 26	3170	Jun 9	3170 Jun 9 1995
LOWEST DAILY MEAN	.15	Oct 2	.15	Oct 2	.00 at times
ANNUAL SEVEN-DAY MINIMUM	.41	Sep 28	1.6	Oct 1	.00 Sep 16 1980
INSTANTANEOUS PEAK FLOW			4150	Jun 9	^b 6360 May 27 1980
INSTANTANEOUS PEAK STAGE			13.80	Jun 9	^c 13.80 Jun 9 1995
ANNUAL RUNOFF (AC-FT)	36070		79080		102700
10 PERCENT EXCEEDS	104		175		306
50 PERCENT EXCEEDS	34		50		79
90 PERCENT EXCEEDS	1.7		16		9.0

^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.

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.

REVISED RECORDS.--The instantaneous peak flow has been revised to 6,180 ft³/s, Oct. 3, 1986. The highest daily mean has been revised to 5,170 ft³/s, Oct. 3, 1986.

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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	56	48	46	26	23	53	47	73	75	95	61
2	86	43	48	44	25	21	51	47	62	74	1000	59
3	73	40	48	43	23	27	53	47	654	76	4020	56
4	65	38	48	e39	22	28	54	50	1260	77	2840	55
5	67	38	45	e33	22	29	51	50	1730	74	862	55
6	66	38	45	e43	21	30	50	141	1520	63	454	54
7	59	38	46	46	20	32	48	108	556	64	309	53
8	55	37	45	47	20	33	47	157	337	64	255	50
9	50	92	44	45	20	31	44	98	1490	60	205	50
10	47	39	44	44	21	29	46	71	1220	59	170	52
11	46	38	43	43	20	29	45	64	1000	56	151	53
12	45	38	44	43	20	31	44	60	443	53	136	86
13	44	39	45	42	19	86	44	57	303	53	122	60
14	42	37	45	41	22	506	43	52	221	50	111	54
15	43	36	45	41	22	240	43	49	179	50	106	75
16	43	35	44	40	22	119	43	49	152	51	116	150
17	159	36	43	41	20	81	70	51	134	52	98	73
18	101	37	45	40	20	65	87	50	123	51	90	85
19	55	108	46	38	19	57	61	48	115	51	85	246
20	47	982	46	37	19	52	56	47	109	51	81	283
21	43	363	45	36	18	50	52	47	104	70	78	646
22	42	138	46	39	18	51	51	47	97	81	75	374
23	41	96	46	37	18	49	64	45	94	52	71	297
24	40	77	47	33	19	48	62	67	128	145	68	216
25	39	69	47	33	21	53	55	79	112	63	70	371
26	40	63	47	34	24	57	50	68	98	53	72	372
27	41	59	47	35	24	52	46	190	93	50	70	364
28	42	54	46	31	23	49	43	126	86	48	68	362
29	42	51	46	29	---	52	43	70	82	46	65	357
30	42	49	46	27	---	53	43	63	77	45	63	239
31	48	---	47	26	---	54	---	143	---	46	61	---
TOTAL	1763	2864	1417	1196	588	2117	1542	2288	12652	1903	12067	5308
MEAN	56.9	95.5	45.7	38.6	21.0	68.3	51.4	73.8	422	61.4	389	177
MAX	159	982	48	47	26	506	87	190	1730	145	4020	646
MIN	39	35	43	26	18	21	43	45	62	45	61	50
AC-FT	3500	5680	2810	2370	1170	4200	3060	4540	25100	3770	23930	10530

e Estimated

ARKANSAS RIVER BASIN

267

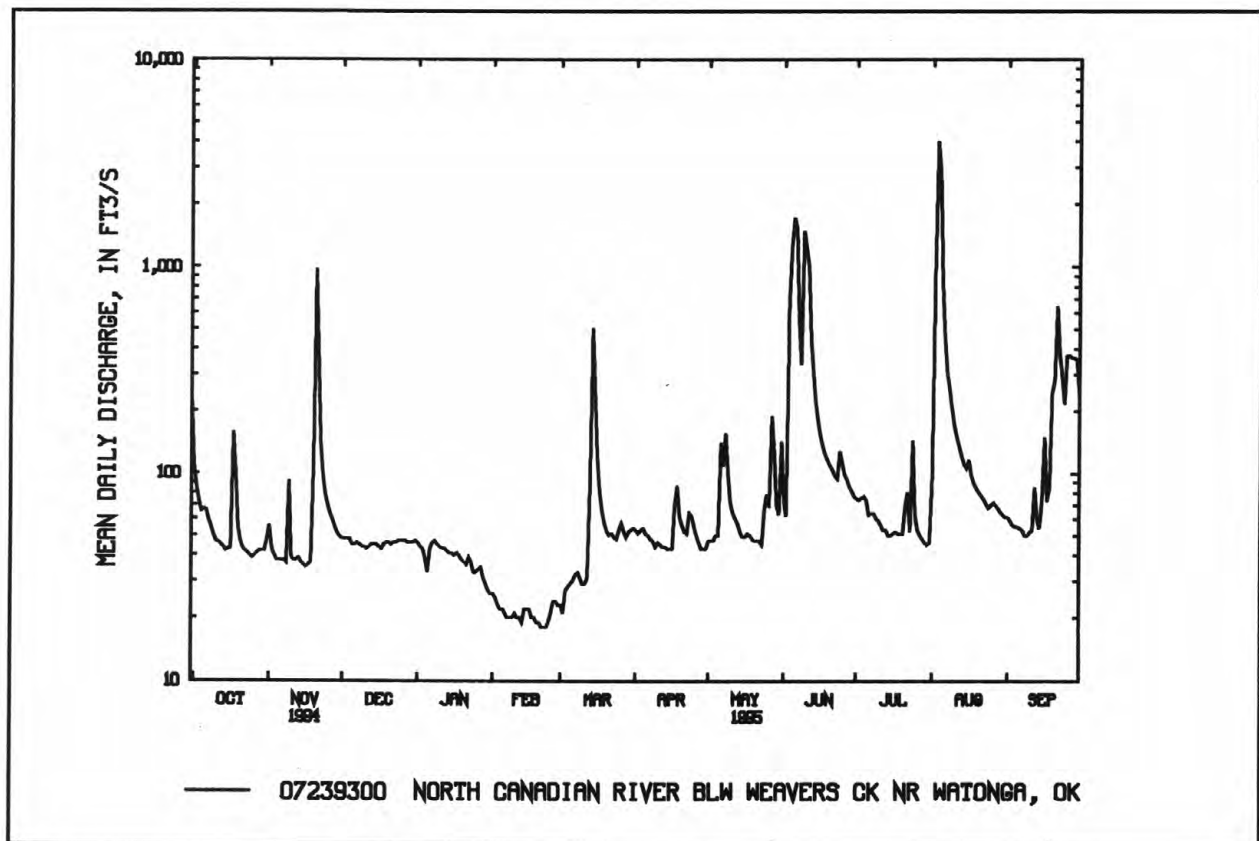
07239300 NORTH CANADIAN RIVER BELOW WEAVERS CREEK NEAR WATONGA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	86.3	94.2	91.3	111	173	182	239	229	317	192	185	154
MAX	527	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

SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1984 - 95

ANNUAL TOTAL	44992	45705	
ANNUAL MEAN	123	125	171
HIGHEST ANNUAL MEAN			436 1987
LOWEST ANNUAL MEAN			32.1 1985
HIGHEST DAILY MEAN	982	Nov 20 4020	Aug 3 5170 Oct 3 1986
LOWEST DAILY MEAN	25	Jan 7 18	Feb 21-23 5.0 Sep 26 1985
ANNUAL SEVEN-DAY MINIMUM	29	Jan 14 19	Feb 18 5.5 Sep 14 1985
INSTANTANEOUS PEAK FLOW		5160	Aug 3 6180 Oct 3 1986
INSTANTANEOUS PEAK STAGE		18.26	Aug 3 19.24 Oct 3 1986
ANNUAL RUNOFF (AC-FT)	89240	90660	123800
10 PERCENT EXCEEDS	176	196	563
50 PERCENT EXCEEDS	48	51	46
90 PERCENT EXCEEDS	37	29	16



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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	325	57	135	82	64	45	99	76	210	136	82	114
2	174	58	127	82	63	45	98	75	142	130	208	112
3	134	59	122	82	62	47	95	76	115	126	e1700	109
4	112	59	116	80	58	48	92	76	1530	125	2270	106
5	104	59	108	78	57	51	92	76	3250	126	2600	103
6	101	59	104	78	55	55	90	81	e2850	119	3180	101
7	98	57	101	77	54	57	88	238	e2550	108	1620	97
8	95	57	99	82	54	56	84	375	1920	104	712	95
9	89	54	100	79	54	55	83	355	4600	101	539	95
10	81	74	98	80	53	55	82	179	e4360	94	437	95
11	78	72	96	79	52	54	82	131	e3400	91	342	95
12	73	61	93	77	52	55	82	109	e1700	88	289	103
13	70	60	92	77	52	540	82	96	e1100	80	263	174
14	68	59	92	74	50	1050	81	93	771	74	240	138
15	67	59	91	74	50	969	79	85	501	71	222	114
16	67	59	89	74	50	478	78	80	379	70	221	182
17	67	57	86	73	51	253	79	79	290	70	234	409
18	383	57	84	70	50	192	85	77	245	66	207	495
19	184	125	85	70	50	164	110	77	214	65	188	526
20	105	2800	85	70	50	144	99	75	184	63	178	e775
21	80	2700	85	67	50	128	91	74	159	62	163	e660
22	72	1230	83	68	48	115	89	74	156	66	156	e920
23	66	577	81	69	48	108	100	71	144	158	150	e760
24	65	361	80	70	46	103	114	71	142	914	141	627
25	63	253	81	70	45	99	110	75	171	759	136	e440
26	60	212	81	71	45	98	96	105	169	243	131	480
27	59	187	81	74	45	105	89	253	158	145	129	518
28	59	170	81	76	45	105	84	492	151	105	129	485
29	57	157	81	75	---	104	80	241	141	90	128	462
30	57	145	81	70	---	101	78	149	140	82	124	435
31	57	---	82	66	---	101	---	124	---	79	119	---
TOTAL	3170	9994	2900	2314	1453	5580	2691	4238	31842	4610	17238	9825
MEAN	102	333	93.5	74.6	51.9	180	89.7	137	1061	149	556	327
MAX	383	2800	135	82	64	1050	114	492	4600	914	3180	920
MIN	57	54	80	66	45	45	78	71	115	62	82	95
AC-FT	6290	19820	5750	4590	2880	11070	5340	8410	63160	9140	34190	19490

e Estimated

ARKANSAS RIVER BASIN

269

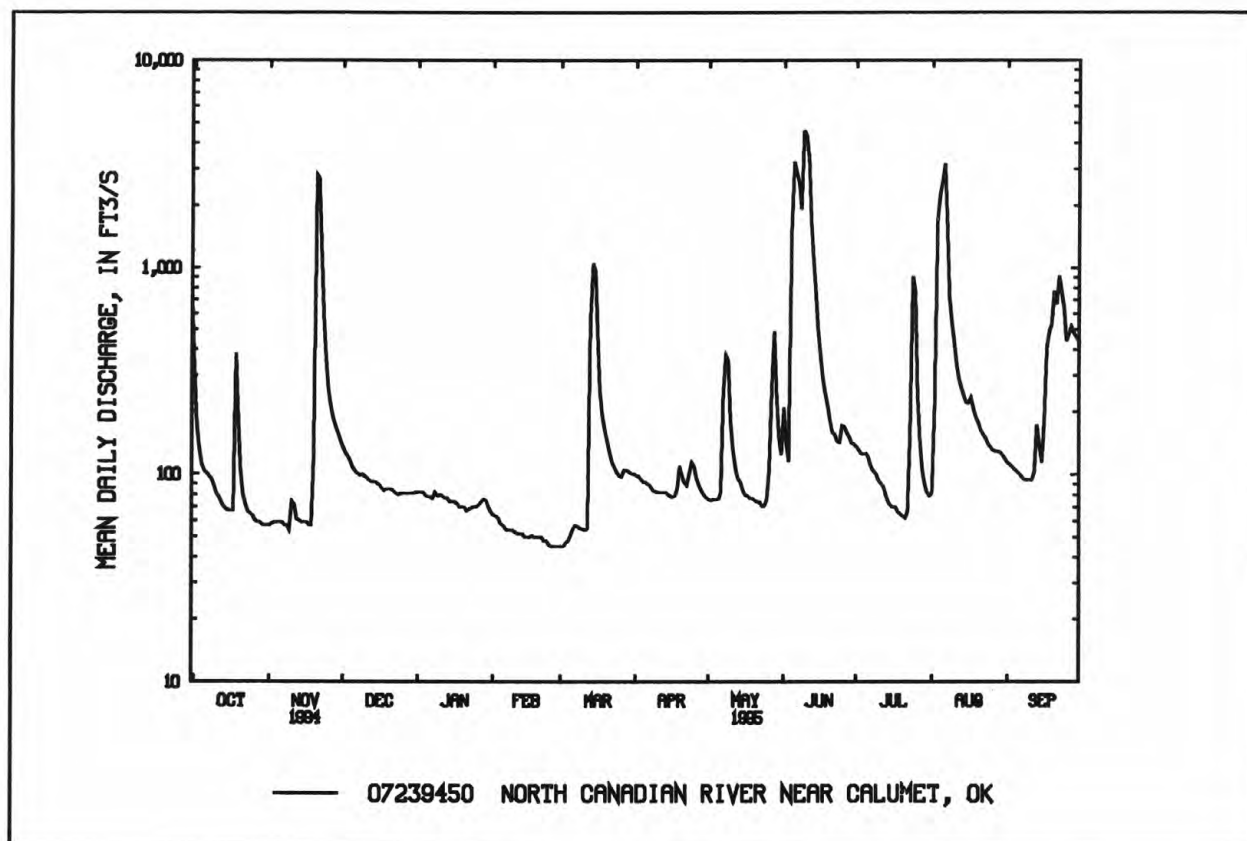
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	65.9	110	105	108	193	195	230	503	556	214	213	209
MAX	155	333	213	275	600	716	703	1878	1061	860	556	535
(WY)	1990	1995	1993	1990	1994	1990	1990	1993	1995	1989	1995	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 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1989 - 95

ANNUAL TOTAL	72424	95855	
ANNUAL MEAN	198	263	225
HIGHEST ANNUAL MEAN			359 1993
LOWEST ANNUAL MEAN			85.3 1992
HIGHEST DAILY MEAN	2800	Nov 20	4600 Jun 9 8430 May 10 1993
LOWEST DAILY MEAN	29	Aug 30	45 Feb 25-Mar 2 14 Aug 10-13 1991
ANNUAL SEVEN-DAY MINIMUM	32	Aug 9	45 Feb 24 15 Aug 8 1991
INSTANTANEOUS PEAK FLOW			7450 Jun 10 9310 May 10 1993
INSTANTANEOUS PEAK STAGE			19.60 May 10 1993
INSTANTANEOUS LOW FLOW			15 Aug 8 1991
ANNUAL RUNOFF (AC-FT)	143700	190100	162900
10 PERCENT EXCEEDS	631	493	657
50 PERCENT EXCEEDS	81	93	80
90 PERCENT EXCEEDS	36	57	29



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, 2,040 microsiemens, Oct. 2, 1994; minimum, 153 microsiemens, Mar. 11, 1990.

pH: Maximum, 9.4 units, Sept. 25, 1989; minimum, 6.9 units, Sept. 16, 1995.

WATER TEMPERATURE: Maximum, 39.0°C, July 2, 1990; minimum, 0.0°C, 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, 2,040 microsiemens, Oct. 2; minimum, 182 microsiemens, Nov. 20.

pH: Maximum, 8.9 units, Apr. 20; minimum, 6.9 units, Sept. 16.

WATER TEMPERATURE: Maximum 33.5°C, July 11; minimum, 0.0°C, several days in winter months.

DISSOLVED OXYGEN: Maximum recorded (more than 20 percent missing record), 14.8 mg/L, Feb. 19; minimum recorded, 3.6 mg/L, Aug. 6.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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) (00400)
SEP											
26...	1245	10.0	17.0	730	1028	1028	532	7.89	1310	8.4	8.2
26...	1248	15.0	17.0	730	1028	1028	532	7.89	1310	8.4	8.2
26...	1253	20.0	17.0	730	1028	1028	532	7.89	1310	8.5	8.2
26...	1255	25.0	17.0	730	1028	1028	532	7.89	1310	8.4	8.2
26...	1258	30.0	17.0	730	1028	1028	532	7.89	1310	8.3	8.2
26...	1302	35.0	17.0	730	1028	1028	532	7.89	1310	8.4	8.2
26...	1305	40.0	17.0	730	1028	1028	532	7.89	1310	8.4	8.2
26...	1308	45.0	17.0	730	1028	1028	532	7.89	1310	8.6	8.2
26...	1312	50.0	17.0	730	1028	1028	532	7.89	1310	8.4	8.2
26...	1315	55.0	17.0	730	1028	1028	532	7.89	1310	8.4	8.2
26...	1318	60.0	17.0	730	1028	1028	532	7.89	1310	8.4	8.2
26...	1323	65.0	17.0	730	1028	1028	532	7.89	1310	8.6	8.2
26...	1325	70.0	17.0	730	1028	1028	532	7.89	1310	8.4	8.2
26...	1328	75.0	17.0	730	1028	1028	532	7.89	1310	8.3	8.2
26...	1332	80.0	17.0	730	1028	1028	532	7.89	1310	8.3	8.2

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

271

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	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- IDITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT											
04...	0940	1028	80020	111	1990	8.2	20.0	22.0	5.3	735	8.1
NOV											
08...	1040	1028	80020	57	1730	8.3	20.0	16.0	2.1	728	10.7
DEC											
21...	1100	1028	80020	85	1740	8.5	6.5	7.0	2.3	735	11.4
JAN											
11...	1030	1028	80020	78	1680	8.5	13.0	6.0	1.9	725	11.8
FEB											
08...	1030	1028	80020	54	1640	8.5	3.5	5.0	1.2	742	13.0
MAR											
14...	1015	1028	80020	778	637	7.7	13.0	12.5	250	733	7.2
APR											
25...	1100	1028	80020	111	1350	8.6	18.0	14.0	22	734	11.6
MAY											
16...	1050	1028	80020	79	1580	8.3	25.5	24.0	26	725	9.8
JUN											
20...	1045	1028	80020	243	1440	8.1	27.5	24.5	24	727	8.4
JUL											
25...	1130	1028	80020	725	456	7.8	31.0	27.0	460	732	4.7
AUG											
09...	1215	1028	80020	548	935	8.1	31.5	28.5	52	730	7.4
22...	1315	1028	80020	156	1480	8.4	31.0	30.5	8.5	735	9.7

DATE	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, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL AS CACO3 (MG/L 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											
04...	96	--	2.6	49	290	--	--	--	--	--	--
NOV											
08...	114	--	1.2	35	230	490	290	110	52	170	43
DEC											
21...	98	0.52	2.7	25	77	--	--	--	--	--	--
JAN											
11...	100	3.5	0.4	K7	25	--	--	--	--	--	--
FEB											
08...	105	0.36	2.0	K22	44	--	--	--	--	--	--
MAR											
14...	70	2.3	15	K37000	K24000	--	--	--	--	--	--
APR											
25...	118	--	3.9	390	310	--	--	--	--	--	--
MAY											
16...	123	--	6.0	230	800	480	220	110	49	150	40
JUN											
20...	106	--	4.0	42	95	--	--	--	--	--	--
JUL											
25...	62	1.3	8.3	3300	910	--	--	--	--	--	--
AUG											
09...	100	--	2.9	320	600	320	100	82	27	78	34
22...	136	--	7.7	24	280	--	--	--	--	--	--

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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)
OCT 04...	--	--	163	0	134	--	--	--	--	--
NOV 08...	3	6.7	245	0	201	360	220	0.70	11	1130
DEC 21...	--	--	317	*0	260	--	--	--	--	--
JAN 11...	--	--	308	5	260	--	--	--	--	--
FEB 08...	--	4.6	329	10	286	300	170	0.80	--	1040
MAR 14...	--	--	140	0	115	--	--	--	--	--
APR 25...	--	--	305	13	272	--	--	--	--	--
MAY 16...	3	6.1	285	12	254	320	170	0.80	8.3	1030
JUN 20...	--	--	336	**9	290	--	--	--	--	--
JUL 25...	--	--	103	0	84	--	--	--	--	--
AUG 09...	2	6.7	260	0	213	160	72	0.50	20	602
22...	--	--	286	12	255	--	--	--	--	--
DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NITRATE 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 04...	--	--	--	55	--	--	--	<0.010	--	--
NOV 08...	1050	1.54	174	<1	--	--	--	<0.010	--	--
DEC 21...	--	--	--	10	0.100	0.100	0.44	0.020	0.07	0.120
JAN 11...	--	--	--	6	2.27	2.27	10	0.130	0.43	2.40
FEB 08...	--	--	--	1	0.040	0.040	0.18	0.020	0.07	0.060
MAR 14...	--	--	--	374	0.520	0.520	2.3	0.060	0.20	0.580
APR 25...	--	--	--	72	--	--	--	<0.010	--	--
MAY 16...	968	1.40	220	105	--	--	--	<0.010	--	--
JUN 20...	--	--	--	55	--	--	--	<0.010	--	--
JUL 25...	--	--	--	776	0.570	0.570	2.5	0.060	0.20	0.630
AUG 09...	575	0.82	891	156	--	--	--	0.010	0.03	--
22...	--	--	--	38	--	--	--	<0.010	--	--

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

** pH of filtered alkalinity sample >8.3; therefore carbonate value available

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

273

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC 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 ORTHOSOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHOSOLVED (MG/L AS PO4) (00660)
OCT 04...	<0.050	2.60	0.020	3.3	0.03	0.38	0.40	0.030	<0.010	--
NOV 08...	<0.050	--	<0.015	--	--	--	0.30	0.040	0.030	0.09
DEC 21...	0.120	--	<0.015	--	--	--	0.40	0.070	0.070	0.21
JAN 11...	2.40	--	0.670	--	0.86	0.43	1.1	0.440	0.420	1.3
FEB 08...	0.060	--	<0.015	--	--	--	0.30	0.040	0.040	0.12
MAR 14...	0.580	--	0.690	--	0.89	1.0	1.7	0.220	0.180	0.55
APR 25...	<0.050	--	<0.015	--	--	--	0.50	0.060	0.040	0.12
MAY 16...	<0.050	--	<0.015	--	--	--	0.50	0.060	0.030	0.09
JUN 20...	<0.050	--	0.020	--	0.03	0.38	0.40	0.060	0.050	0.15
JUL 25...	0.630	--	0.090	--	0.12	0.61	0.70	0.140	0.150	0.46
AUG 09...	<0.050	--	<0.015	--	--	--	0.40	0.150	0.160	0.49
22...	<0.050	--	<0.015	--	--	--	0.40	0.030	0.030	0.09

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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)
NOV 08...	4	150	0.9	<1.0	<5	<3	<10	<3	<10	46
FEB 08...	2	--	--	--	--	--	--	--	--	--
MAY 16...	4	120	<0.5	1.0	<5	<3	<10	4	<10	47
AUG 09...	5	180	<0.5	2.0	<5	<3	<10	6	30	20

DATE	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)
NOV 08...	12	--	<10	<10	<1	<1.0	1300	<6	<3
FEB 08...	--	--	--	--	<1	--	--	--	--
MAY 16...	8	<0.1	10	<10	<1	<1.0	1200	7	<3
AUG 09...	<1	<0.1	10	10	<1	<1.0	640	10	<3

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	BROM- ACIL WATER WHLREC (UG/L) (30234)	BUTA- CHLOR WATER WHLREC (UG/L) (30235)	BUTYL- ATE WATER WHLREC (UG/L) (30236)	CARBOX- IN WATER WHOLE RECOV- ERABLE (UG/L) (30245)	CYCLO- ATE WATER WHOLE RECOV- ERABLE (UG/L) (30254)	DIPHEN- AMID WATER WHOLE RECOV- ERABLE (UG/L) (30255)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39516)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39251)	HEXAZI- NONE WATER WHOLE RECOV- ERABLE (UG/L) (30264)	
	NOV											
	08...	<0.20	<0.10	<0.10	<0.20	<0.10	<0.10	<0.1	<1	<0.10	<1.0	<0.20
	FEB											
08...	<0.20	<0.10	<0.10	<0.20	<0.10	<0.10	<0.1	<1	<0.10	<1.0	<0.20	
MAY												
16...	<0.20	<0.10	<0.10	<0.20	<0.10	<0.10	<0.1	<1	<0.10	<1.0	<0.20	
AUG												
09...	<0.20	<0.10	<0.10	<0.20	<0.10	<0.10	<0.1	1	<0.10	<1.0	<0.20	
DATE	METOLA- CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	METRI- BUZIN WATER WHOLE TOT.REC (UG/L) (82611)	FONOFOS (DY- FONATE) WATER WHOLE TOT.REC (UG/L) (82614)	PROPA- CHLOR WATER WHOLE RECOV. (UG/L) (30295)	TER- BACIL WATER WHOLE RECOV. (UG/L) (30311)	VER- NOLATE WATER WHOLE RECOV. (UG/L) (30324)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39330)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	AME- TRYNE TOTAL (UG/L) (82184)	ATRA- ZINE WATER UNFLTRD REC (UG/L) (39630)	
	NOV											
	08...	<0.20	<0.10	<0.01	<0.10	<0.20	<0.10	<0.10	<0.001	<0.1	<0.10	<0.1
	FEB											
08...	<0.20	<0.10	<0.01	<0.10	<0.20	<0.10	<0.10	<0.001	<0.1	<0.10	<0.1	
MAY												
16...	<0.20	<0.10	<0.01	<0.10	<0.20	<0.10	<0.10	<0.001	<0.1	<0.10	<0.1	
AUG												
09...	<0.20	<0.10	<0.01	<0.10	<0.20	<0.10	<0.10	<0.001	<0.1	<0.10	<0.1	
DATE	DEETHYL ATRA- ZINE, WATER, WHOLE, TOTAL (UG/L) (75981)	DE-ISO PROPYL ATRAZIN WATER, WHOLE, TOTAL (UG/L) (75980)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39350)	CHLOR- PYRIFOS TOTAL RECOVER (UG/L) (38932)	CYAN- AZINE TOTAL (UG/L) (81757)	2,4-D, TOTAL (UG/L) (39730)	DDD, TOTAL (UG/L) (39360)	DDD, TOTAL (UG/L) (39360)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39368)	
	NOV											
	08...	<0.20	<0.20	<0.1	<1.0	<0.01	<0.20	<0.01	<0.001	<0.1	<0.001	<0.1
	FEB											
08...	<0.20	<0.20	<0.1	<1.0	<0.01	<0.20	<0.01	<0.001	<0.1	<0.001	<0.1	
MAY												
16...	<0.20	<0.20	<0.1	<1.0	<0.01	<0.20	0.08	<0.001	<0.1	<0.001	<0.1	
AUG												
09...	<0.20	<0.20	<0.1	<1.0	<0.01	<0.20	0.08	<0.001	<0.1	<0.001	<0.1	

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

275

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	DDT, TOTAL (UG/L) (39370)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)	DEF TOTAL (UG/L) (39040)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	DI- SYSTON TOTAL (UG/L) (39011)	2, 4-DP TOTAL (UG/L) (82183)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)
NOV 08...	<0.001	<0.1	<0.01	<0.01	<0.001	<0.4	<0.01	<0.01	<0.001	<0.1
FEB 08...	<0.001	<0.1	<0.01	<0.01	<0.001	<0.4	<0.01	<0.01	<0.001	<0.1
MAY 16...	<0.001	<0.1	<0.01	<0.01	<0.001	<0.4	<0.01	<0.01	<0.001	<0.1
AUG 09...	<0.001	<0.1	<0.01	<0.01	<0.001	<0.1	<0.01	<0.01	<0.001	<0.1
DATE	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)	LINDANE TOTAL (UG/L) (39340)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	MALA- THION, TOTAL (UG/L) (39530)
NOV 08...	<0.001	<0.1	<0.01	<0.001	<0.1	<0.001	<0.1	<0.001	<0.1	<0.01
FEB 08...	<0.001	<0.1	<0.01	<0.001	<0.1	<0.001	<0.1	<0.001	<0.1	<0.01
MAY 16...	<0.001	<0.1	<0.01	<0.001	<0.1	<0.001	<0.1	<0.001	<0.1	<0.01
AUG 09...	<0.001	<0.1	<0.01	<0.001	<0.1	<0.001	<0.1	<0.001	<0.1	<0.01
DATE	METH- CHLOR, TOTAL (UG/L) (39480)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG) (39481)	METHYL PARA- THION, TOTAL (UG/L) (39600)	MIREX, TOTAL (UG/L) (39755)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)	PARA- THION, TOTAL (UG/L) (39540)	PER- THANE TOTAL (UG/L) (39034)	PER- THANE IN BOT- TOM MA- TERIAL (UG/KG) (81886)	PHORATE TOTAL (UG/L) (39023)	PROME- TONE TOTAL (UG/L) (39056)
NOV 08...	<0.01	<4.0	<0.01	<0.01	<0.1	<0.01	<0.1	<1.00	<0.01	<0.20
FEB 08...	<0.01	<0.4	<0.01	<0.01	<0.1	<0.01	<0.1	<1.00	<0.01	<0.20
MAY 16...	<0.01	<0.4	<0.01	<0.01	<0.1	<0.01	<0.1	<1.00	<0.01	<0.20
AUG 09...	<0.01	<0.8	<0.01	<0.01	<0.1	<0.01	<0.1	<1.00	<0.01	<0.20

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued
PESTICIDE ANALYSES, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	PROME- TRYNE TOTAL (UG/L) (39057)	PRO- PAZINE TOTAL (UG/L) (39024)	SILVEX, TOTAL (UG/L) (39760)	SIMA- ZINE TOTAL (UG/L) (39055)	SIME- TRYNE TOTAL (UG/L) (39054)	2,4,5-T TOTAL (UG/L) (39740)	TOX- APHENE, TOTAL (UG/L) (39400)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	TOTAL TRI- THION (UG/L) (39786)
NOV 08...	<0.10	<0.10	<0.01	<0.10	<0.10	<0.01	<1	<10	<0.10	<0.01
FEB 08...	<0.10	<0.10	<0.01	<0.10	<0.10	<0.01	<1	<10	<0.10	<0.01
MAY 16...	<0.10	<0.10	<0.01	<0.10	<0.10	<0.01	<1	<10	<0.10	<0.01
AUG 09...	<0.10	<0.10	<0.01	<0.10	<0.10	<0.01	<1	<10	<0.10	<0.01

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	2030	1980	2020	1760	1730	1740	---	---	---	1710	1690	1700
2	2040	1980	2010	1760	1720	1740	---	---	---	1710	1690	1700
3	1990	1970	1980	1730	1680	1710	---	---	---	1690	1680	1680
4	2010	1990	2000	1740	1590	1660	---	---	---	1700	1680	1690
5	2000	1960	1980	1640	1320	1420	---	---	---	1710	1690	1700
6	1990	1960	1970	1660	1420	1570	---	---	---	1710	1700	1700
7	1960	1850	1900	1690	1660	1680	---	---	---	1740	1650	1710
8	1850	1820	1830	1730	1690	1710	1730	1720	1720	1750	1690	1720
9	1860	1840	1850	1730	1690	1690	1720	1710	1710	1720	1690	1700
10	1880	1850	1870	1770	1690	1750	1730	1710	1720	1730	1660	1690
11	1930	1880	1910	1770	889	1210	1740	1730	1730	1680	1650	1670
12	1940	1930	1930	1500	883	1100	1760	1730	1740	1680	1670	1670
13	1940	1930	1930	1740	1500	1670	1760	1750	1760	1680	1660	1670
14	1930	1910	1920	1790	1740	1770	1750	1740	1750	1680	1660	1670
15	1910	1870	1880	1790	1740	1760	1750	1730	1740	1680	1670	1680
16	1870	1850	1860	1740	1600	1670	1740	1720	1730	1680	1660	1670
17	1850	1780	1820	1780	1650	1730	1730	1710	1730	1670	1660	1670
18	1820	373	758	1800	1780	1800	1730	1720	1720	1690	1670	1680
19	1140	416	702	1800	703	1540	1730	1720	1720	1700	1670	1690
20	1150	863	1030	790	182	324	1730	1720	1730	1690	1660	1680
21	1130	962	1020	247	185	215	1740	1720	1730	1690	1670	1680
22	1550	1110	1330	379	244	295	1740	1720	1730	1670	1570	1610
23	1740	1550	1670	646	379	505	1740	1720	1730	1620	1600	1610
24	1810	1740	1780	1020	646	812	1730	1720	1730	1620	1570	1600
25	1840	1790	1820	1230	1020	1140	1740	1720	1730	1580	1510	1550
26	1860	1840	1850	1390	1230	1300	1730	1710	1730	1540	1500	1520
27	1880	1860	1870	---	---	---	1730	1710	1720	1510	1490	1500
28	1890	1880	1880	---	---	---	1730	1710	1720	1510	1490	1500
29	1880	1870	1880	---	---	---	1720	1700	1710	1520	1490	1500
30	1870	1850	1870	---	---	---	1710	1700	1710	1530	1500	1510
31	1850	1750	1780	---	---	---	1700	1680	1690	1550	1530	1540
MONTH	2040	373	1740	---	---	---	---	---	---	1750	1490	1640

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

277

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1570	1540	1560	1650	1610	1630	1570	1550	1560	1620	1580	1610
2	1580	1540	1560	1620	1570	1600	1580	1570	1580	1600	1570	1590
3	1600	1570	1590	1580	1580	1580	1580	1550	1560	1570	1550	1560
4	1610	1580	1600	1590	1580	1590	1600	1550	1580	1570	1520	1550
5	1620	1590	1610	1600	1550	1580	1600	1570	1590	1560	1500	1530
6	1630	1590	1610	1550	1470	1510	1590	1560	1570	1530	1440	1480
7	1630	1600	1620	1460	1430	1450	1620	1570	1590	1480	610	1240
8	1650	1620	1640	1450	1420	1440	1650	1620	1640	727	458	536
9	1640	1590	1620	1460	1430	1450	1650	1640	1650	---	---	---
10	1640	1610	1630	1470	1440	1450	1650	1610	1630	---	---	---
11	1650	1620	1650	1460	1420	1450	1640	1610	1620	1120	1000	1040
12	1660	1650	1660	1480	1270	1460	1630	1560	1600	1400	1120	1270
13	1660	1650	1660	1270	493	752	1610	1570	1600	---	---	---
14	1650	1640	1650	637	493	585	1620	1600	1610	---	---	---
15	1650	1630	1640	620	415	476	1640	1620	1640	1590	1570	1580
16	1650	1630	1650	908	498	559	1650	1570	1640	1600	1570	1590
17	1650	1600	1630	727	573	640	1620	1510	1570	1600	1570	1580
18	1620	1560	1590	952	727	838	1530	1500	1520	1580	1540	1570
19	1590	1560	1580	1140	952	1050	1500	1080	1360	1580	1520	1560
20	1600	1560	1580	1310	1140	1230	1260	1080	1200	1590	1560	1570
21	1600	1560	1580	1400	1310	1360	1290	1190	1240	1580	1550	1570
22	1590	1570	1580	1450	1400	1420	1300	1260	1280	1570	1540	1560
23	1610	1580	1590	1520	1450	1490	1370	1300	1340	1540	1510	1530
24	1610	1590	1600	1570	1520	1550	1420	1360	1390	1510	1420	1450
25	1620	1600	1610	1600	1570	1590	1360	1320	1340	1440	1380	1420
26	1620	1600	1610	1640	1600	1620	1430	1360	1400	1390	1250	1320
27	1600	1590	1600	1650	1540	1600	1500	1430	1470	1250	744	992
28	1620	1590	1600	1540	1480	1520	1590	1500	1550	786	573	653
29	---	---	---	1510	1470	1480	1640	1590	1620	810	673	714
30	---	---	---	1550	1510	1540	1650	1620	1640	800	703	771
31	---	---	---	1550	1540	1540	---	---	---	1010	800	891
MONTH	1660	1540	1610	1650	415	1320	1650	1080	1520	---	---	---

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	1130	781	1010	1570	1510	1530	1520	1310	1450	1520	1500	1510
2	927	715	777	1550	1510	1530	1310	751	1130	1530	1500	1510
3	1050	927	1000	1540	1490	1520	771	312	480	1510	1490	1500
4	---	---	---	1500	1470	1490	312	280	295	1500	1480	1490
5	---	---	---	1510	1470	1490	324	273	294	1500	1480	1490
6	255	218	236	1540	1490	1520	---	---	---	1510	1480	1490
7	335	242	292	1560	1520	1540	---	---	---	1520	1470	1490
8	552	328	444	1580	1520	1550	---	---	---	1520	1460	1500
9	593	237	383	1580	1530	1550	---	---	---	1520	1470	1500
10	268	210	230	1580	1530	1550	---	---	---	1510	1440	1490
11	316	239	276	---	---	---	1260	1130	1200	1490	1440	1480
12	476	316	370	---	---	---	1340	1260	1300	1490	1320	1360
13	715	458	595	---	---	---	1410	1320	1350	1350	889	1110
14	---	---	---	1570	1510	1550	1420	1370	1390	1150	929	1040
15	---	---	---	1560	1530	1550	1440	1420	1420	1300	1150	1250
16	---	---	---	1540	1460	1510	1460	1430	1440	1280	462	937
17	---	---	---	1530	1480	1520	1440	1210	1320	513	453	475
18	---	---	---	1500	1470	1480	1370	1280	1330	723	463	585
19	---	---	---	1480	1440	1460	1440	1370	1420	806	661	751
20	---	---	---	1480	1400	1460	1480	1430	1450	742	540	614
21	---	---	---	1490	1430	1470	1490	1450	1470	1010	742	885
22	---	---	---	1480	1410	1450	1490	1460	1480	798	518	563
23	---	---	---	1450	696	1070	1490	1470	1480	832	587	679
24	---	---	---	700	277	464	1500	1470	1490	1080	832	977
25	---	---	---	596	338	446	1520	1490	1500	1180	1080	1120
26	---	---	---	837	510	662	1520	1500	1510	1310	1170	1270
27	---	---	---	1060	837	915	1510	1490	1500	1320	1290	1310
28	1510	1360	1450	1300	1060	1200	1520	1490	1500	1360	1320	1350
29	1540	1510	1520	1410	1300	1360	1520	1480	1500	1390	1360	1380
30	1520	1480	1510	1470	1410	1450	1520	1470	1500	1410	1380	1400
31	---	---	---	1520	1470	1500	1520	1500	1510	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	1530	453	1180

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

279

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.2	8.1	8.1	8.4	8.3	8.4	8.1	8.0	8.1	8.3	8.2	8.3
2	8.2	8.0	8.0	8.5	8.3	8.4	---	---	---	8.3	8.3	8.3
3	---	---	---	8.3	8.2	8.3	---	---	---	8.3	8.2	8.3
4	---	---	---	8.5	8.3	8.4	---	---	---	8.4	8.3	8.3
5	---	---	---	8.4	8.3	8.4	---	---	---	8.4	8.0	8.3
6	---	---	---	8.4	8.3	8.4	---	---	---	8.3	8.3	8.3
7	---	---	---	8.4	8.4	8.4	---	---	---	8.3	8.0	8.3
8	---	---	---	8.4	8.3	8.3	8.4	8.2	8.4	8.3	8.2	8.3
9	---	---	---	8.5	8.3	8.5	8.4	8.3	8.4	8.5	8.2	8.2
10	---	---	---	8.6	8.4	8.5	8.4	8.3	8.4	8.5	8.4	8.4
11	---	---	---	8.5	8.1	8.2	8.4	8.4	8.4	8.5	8.4	8.4
12	8.5	8.3	8.4	8.3	8.1	8.2	8.5	8.4	8.5	8.6	8.5	8.5
13	8.3	8.1	8.2	8.4	8.2	8.3	8.5	8.4	8.4	8.6	8.5	8.5
14	8.2	8.1	8.2	8.5	8.3	8.4	8.4	8.3	8.4	8.6	8.5	8.5
15	8.1	8.1	8.1	8.6	8.5	8.6	8.4	8.3	8.4	8.5	8.4	8.5
16	8.1	7.8	7.9	8.6	8.5	8.6	8.4	8.3	8.4	8.6	8.4	8.5
17	7.8	7.6	7.6	8.6	8.5	8.5	8.4	8.4	8.4	8.5	8.4	8.5
18	8.0	7.6	7.8	8.6	8.5	8.5	8.5	8.4	8.5	8.6	8.4	8.5
19	8.2	8.0	8.0	8.5	7.9	8.4	8.5	8.4	8.4	8.5	8.4	8.5
20	8.5	8.1	8.2	8.2	7.9	8.1	8.5	8.3	8.4	8.5	8.4	8.4
21	8.4	8.1	8.2	8.2	8.0	8.1	8.6	8.4	8.5	8.5	8.4	8.5
22	8.6	8.1	8.3	8.1	8.0	8.0	8.6	8.5	8.5	8.5	8.4	8.5
23	8.6	8.5	8.6	8.1	8.0	8.0	8.5	8.5	8.5	8.5	8.4	8.5
24	8.7	8.4	8.6	8.1	8.1	8.1	8.5	8.4	8.5	8.5	8.4	8.5
25	8.7	8.6	8.6	8.1	8.1	8.1	8.5	8.4	8.4	8.4	8.3	8.4
26	8.6	8.5	8.5	8.1	8.0	8.1	8.4	8.4	8.4	8.5	8.4	8.4
27	8.5	8.5	8.5	8.1	8.0	8.1	8.4	8.3	8.4	8.5	8.3	8.4
28	8.5	8.4	8.5	8.2	8.1	8.1	8.3	8.2	8.3	8.7	8.5	8.6
29	8.5	8.4	8.5	8.2	8.1	8.2	8.3	8.2	8.2	8.7	8.6	8.7
30	8.5	8.4	8.4	8.1	8.0	8.1	8.3	8.2	8.2	8.7	8.6	8.6
31	8.5	8.3	8.4	---	---	---	8.3	8.2	8.2	8.6	8.6	8.6
MAX	---	---	---	8.6	8.5	8.6	---	---	---	8.7	8.6	8.7
MIN	---	---	---	8.1	7.9	8.0	---	---	---	8.3	8.0	8.2

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

281

PII, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	8.4	8.1	8.2	8.4	8.2	8.3	8.5	8.3	8.4
2	---	---	---	8.3	8.1	8.1	8.2	7.7	8.1	8.5	8.2	8.4
3	---	---	---	8.3	8.0	8.1	7.7	7.4	7.6	8.5	8.2	8.3
4	---	---	---	8.1	8.0	8.0	7.6	7.4	7.6	8.5	8.2	8.4
5	---	---	---	8.1	7.9	8.0	7.4	7.4	7.4	8.5	8.2	8.4
6	7.8	7.5	7.7	8.0	7.9	8.0	7.5	7.3	7.4	8.5	8.2	8.3
7	7.6	7.5	7.5	8.3	7.9	8.0	7.8	7.5	7.6	8.5	8.1	8.3
8	7.7	7.5	7.6	8.4	8.2	8.3	7.9	7.7	7.8	8.5	8.3	8.4
9	7.8	7.5	7.6	8.4	8.2	8.3	8.2	7.9	8.0	8.5	8.4	8.4
10	7.6	7.5	7.5	8.4	8.1	8.2	8.4	8.0	8.2	8.6	8.4	8.5
11	7.6	7.6	7.6	8.3	8.2	8.2	8.5	8.2	8.3	8.5	8.4	8.4
12	7.7	7.6	7.6	8.3	8.1	8.2	8.5	8.2	8.3	8.5	8.3	8.4
13	7.8	7.6	7.7	8.3	8.1	8.2	8.4	8.1	8.2	8.3	7.8	8.0
14	7.8	7.6	7.7	8.3	8.1	8.2	8.3	8.0	8.2	7.8	7.6	7.7
15	8.0	7.8	7.8	8.2	8.0	8.1	8.3	8.1	8.2	7.6	7.1	7.4
16	8.2	7.9	8.0	8.1	7.9	8.0	8.5	8.1	8.3	7.5	6.9	7.1
17	8.3	8.0	8.1	8.1	7.9	8.0	8.5	8.1	8.3	7.6	7.5	7.6
18	8.4	8.1	8.2	8.2	7.9	8.0	8.6	8.2	8.4	7.9	7.6	7.8
19	8.3	8.0	8.1	8.1	8.0	8.0	8.4	8.1	8.1	7.9	7.7	7.9
20	8.2	7.9	8.1	8.2	8.0	8.0	8.4	8.1	8.1	7.9	7.7	7.7
21	8.2	8.0	8.1	8.2	7.9	8.0	8.4	8.0	8.2	8.4	7.9	8.0
22	8.2	8.0	8.1	8.1	7.8	7.9	8.4	8.1	8.2	8.0	7.8	7.9
23	8.2	8.0	8.1	8.0	7.4	7.7	8.4	8.1	8.3	8.1	8.0	8.1
24	8.2	8.1	8.2	7.7	7.4	7.6	8.4	8.2	8.3	8.2	8.1	8.2
25	8.3	8.1	8.2	7.7	7.6	7.6	8.4	8.2	8.3	8.3	8.2	8.2
26	8.3	8.0	8.1	8.2	7.7	7.9	8.4	8.1	8.2	8.3	8.2	8.3
27	8.1	7.9	8.0	8.7	8.1	8.4	8.4	8.1	8.2	8.3	8.2	8.3
28	8.0	7.8	7.9	8.6	8.3	8.5	8.4	8.1	8.3	8.3	8.1	8.3
29	8.3	7.9	8.1	8.6	8.3	8.5	8.4	8.2	8.3	8.4	8.1	8.2
30	8.3	8.1	8.2	8.5	8.3	8.4	8.5	8.2	8.3	8.3	8.2	8.2
31	---	---	---	8.5	8.3	8.4	8.5	8.3	8.4	---	---	---
MAX	---	---	---	8.7	8.3	8.5	8.6	8.3	8.4	8.6	8.4	8.5
MIN	---	---	---	7.7	7.4	7.6	7.4	7.3	7.4	7.5	6.9	7.1

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	23.0	20.0	21.5	15.0	10.5	12.5	9.5	6.5	8.0	6.0	3.0	4.5
2	24.0	20.5	22.5	16.0	11.0	13.5	10.0	7.5	8.5	4.5	2.0	3.5
3	25.5	21.0	23.0	21.0	15.0	17.5	12.5	10.0	11.5	---	---	---
4	26.0	22.0	24.0	17.0	12.0	14.5	15.0	12.0	13.5	3.0	.0	1.0
5	25.0	22.0	23.5	14.5	10.0	12.0	13.0	9.0	10.5	1.0	.0	.5
6	24.0	20.5	22.5	15.5	9.5	12.0	9.0	8.5	9.0	3.5	.5	2.0
7	22.0	17.5	19.5	16.0	10.5	13.0	9.0	6.5	7.5	3.0	.0	1.5
8	20.0	16.0	17.5	18.0	13.0	15.5	7.0	5.5	6.5	5.0	.5	2.5
9	19.5	14.5	16.5	16.0	10.5	12.5	6.5	4.0	5.0	6.5	2.0	4.0
10	19.5	14.0	16.5	12.0	8.0	10.0	6.5	4.0	5.0	8.0	4.0	5.5
11	---	---	---	13.0	9.0	10.5	4.5	3.0	4.0	9.5	5.0	7.0
12	---	---	---	12.0	9.5	10.5	5.0	2.0	3.5	9.0	7.0	8.0
13	---	---	---	14.5	11.0	13.0	5.0	4.0	4.5	10.0	7.0	8.0
14	---	---	---	14.0	11.0	12.5	7.0	5.0	6.0	9.5	5.5	7.0
15	---	---	---	12.5	8.5	10.5	7.0	6.0	6.5	9.0	5.0	7.0
16	---	---	---	12.0	6.5	9.0	9.5	7.0	8.0	9.5	6.5	8.0
17	---	---	---	13.0	8.5	10.5	9.0	5.5	7.0	10.0	7.0	8.5
18	---	---	---	12.5	7.5	10.0	9.0	5.5	7.0	7.0	5.0	6.5
19	22.0	18.5	20.0	12.0	11.0	11.5	10.0	6.0	7.5	7.5	4.0	5.5
20	22.5	19.0	20.5	13.0	11.5	12.5	10.5	8.0	9.0	8.0	3.5	5.5
21	23.5	19.5	21.0	11.5	9.0	9.5	9.0	6.5	7.5	6.5	4.5	5.5
22	22.5	17.0	19.5	9.0	7.5	8.5	8.0	5.5	6.5	5.0	1.0	3.5
23	21.5	17.0	19.0	7.5	6.5	7.0	7.5	4.5	6.0	5.5	1.0	3.0
24	20.5	17.5	19.0	8.5	7.0	7.5	7.0	5.0	6.0	7.0	2.0	4.0
25	18.0	14.5	16.0	9.0	8.0	8.5	7.0	3.0	5.0	9.0	4.5	6.5
26	16.0	11.5	14.0	11.5	9.0	10.5	7.5	3.5	5.5	8.5	6.0	7.0
27	16.0	11.0	13.0	12.5	10.0	11.5	8.5	4.5	6.5	11.5	7.5	9.5
28	17.0	12.0	14.0	10.5	8.0	9.0	8.5	7.0	8.0	9.5	6.0	8.0
29	14.5	12.5	13.5	9.5	7.0	8.0	8.5	7.5	8.0	6.0	4.0	4.5
30	16.5	14.0	15.0	9.0	6.0	7.5	8.5	6.5	7.5	7.5	2.5	5.0
31	15.5	12.0	14.0	---	---	---	9.0	6.0	8.0	8.5	4.0	6.0
MONTH	---	---	---	21.0	6.0	11.0	15.0	2.0	7.2	---	---	---

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

283

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	11.0	5.0	8.0	4.0	.0	2.0	18.0	10.0	13.5	20.0	14.5	17.0
2	13.0	7.5	10.0	1.0	.0	.5	19.5	12.5	15.5	17.0	13.5	15.0
3	12.0	8.5	10.0	5.5	.0	2.5	16.0	14.5	15.0	15.5	13.5	14.5
4	11.0	6.0	8.5	4.5	3.5	4.0	20.0	13.0	16.0	22.0	13.5	17.5
5	11.0	6.5	8.5	6.0	4.5	5.5	21.0	14.0	17.0	19.0	16.0	17.5
6	11.5	6.5	8.5	9.0	5.5	6.5	21.5	15.0	18.0	20.0	15.5	17.0
7	10.5	6.5	8.5	6.5	1.0	3.5	23.5	16.0	19.5	19.5	18.0	18.5
8	9.0	4.0	6.5	7.5	.0	3.5	25.0	17.5	21.0	20.0	17.0	18.5
9	10.5	4.5	7.0	10.5	2.5	6.0	21.0	16.5	18.5	22.0	17.0	19.5
10	10.5	6.0	8.0	13.0	5.0	8.5	16.5	10.5	13.5	21.5	18.0	20.0
11	7.0	3.5	5.5	13.5	8.0	10.5	15.0	7.5	11.0	23.5	17.5	20.5
12	3.5	1.5	2.0	14.5	11.0	13.0	18.5	10.0	14.0	22.0	18.5	20.5
13	2.5	1.0	1.5	13.5	12.0	12.5	21.0	12.5	16.5	28.0	20.5	23.5
14	3.5	2.0	2.5	13.0	12.0	12.5	21.0	15.0	17.5	26.5	20.5	23.5
15	6.5	3.5	5.0	15.0	12.5	13.5	21.0	15.5	18.0	27.0	20.5	23.5
16	5.0	2.5	3.5	17.0	14.0	15.5	22.5	18.5	20.0	25.0	23.0	24.0
17	8.5	1.0	4.5	18.5	15.0	17.0	20.0	16.0	17.0	27.0	22.0	24.0
18	10.0	3.5	6.5	20.0	15.0	17.5	21.0	13.5	17.0	23.0	18.0	20.5
19	12.5	5.5	9.0	20.5	16.0	18.0	18.0	14.5	16.0	26.0	16.5	21.0
20	14.5	7.0	10.5	20.0	15.5	17.5	21.5	14.0	17.5	26.5	19.5	22.5
21	15.0	8.5	11.5	20.5	14.5	17.5	21.5	15.0	18.0	28.0	20.5	24.0
22	15.0	9.0	12.0	22.0	17.0	19.0	16.5	10.5	12.5	28.5	21.5	24.5
23	16.0	10.0	13.0	21.0	15.5	18.0	14.0	9.5	11.5	23.5	20.0	22.0
24	15.0	9.0	12.0	21.0	15.0	17.5	16.5	10.5	13.5	20.0	16.5	17.5
25	17.0	9.0	12.5	17.5	16.5	17.0	19.5	12.5	15.5	16.5	15.5	16.0
26	18.0	13.0	15.0	20.0	15.0	17.0	19.5	14.0	16.5	21.5	16.0	18.0
27	15.0	10.0	13.0	18.0	12.5	15.0	18.5	12.0	15.0	22.5	19.0	20.5
28	10.0	4.0	7.0	14.5	10.0	12.0	18.5	14.0	16.0	23.5	19.5	21.5
29	---	---	---	11.0	9.5	10.0	22.0	15.5	18.0	22.5	20.0	21.0
30	---	---	---	11.0	8.0	9.5	19.0	16.0	17.5	21.5	19.0	20.0
31	---	---	---	14.5	8.5	11.5	---	---	---	25.5	19.0	22.0
MONTH	18.0	1.0	8.2	22.0	.0	11.5	25.0	7.5	16.2	28.5	13.5	20.2

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	24.5	22.0	23.5	27.0	21.5	24.0	27.0	23.0	25.0	31.5	25.0	28.0
2	26.5	22.0	24.5	26.5	22.5	24.5	24.5	23.0	23.5	30.5	25.5	28.0
3	25.0	22.0	23.5	28.0	23.0	25.5	24.5	23.5	24.0	28.5	25.0	26.5
4	22.5	19.0	20.0	29.0	24.0	26.5	25.5	24.0	24.5	29.5	23.5	26.5
5	19.5	18.0	18.5	29.5	23.5	26.5	28.0	25.5	27.0	30.0	24.0	27.0
6	23.5	19.5	21.5	30.5	24.5	27.5	29.5	27.5	28.5	29.5	24.0	26.5
7	27.0	23.5	25.0	30.5	25.0	28.0	30.0	28.0	29.0	28.0	23.5	25.5
8	28.0	27.0	27.0	31.5	25.5	28.0	30.0	27.5	29.0	24.0	20.5	22.5
9	27.5	20.0	22.5	32.5	25.5	28.5	29.5	27.5	28.5	24.0	19.5	21.5
10	20.5	19.5	20.0	33.0	26.5	29.5	29.0	26.0	27.5	24.5	20.5	22.0
11	21.0	19.0	19.5	33.5	27.0	30.0	29.5	26.0	27.5	23.0	21.0	22.0
12	22.5	19.5	21.0	33.0	26.5	29.5	30.0	26.5	28.0	26.5	20.5	23.0
13	24.5	22.0	23.0	32.5	27.0	29.5	30.0	26.5	28.0	27.0	23.0	24.5
14	25.5	22.5	24.0	31.0	26.0	28.5	30.0	26.5	28.5	27.0	23.5	25.5
15	26.0	23.0	24.5	31.0	26.0	28.0	29.0	26.5	27.5	25.5	22.5	24.0
16	26.5	23.0	25.0	32.0	25.5	28.5	28.5	25.5	27.0	22.5	22.0	22.0
17	26.5	23.5	25.0	29.5	26.0	28.0	29.5	25.5	27.5	23.0	22.0	22.5
18	26.0	23.5	24.5	31.0	25.5	28.0	30.0	25.5	27.5	23.0	22.5	23.0
19	26.5	23.5	25.0	29.0	26.0	27.5	31.0	26.0	28.5	22.5	20.5	22.0
20	27.5	24.0	25.5	30.5	25.0	27.5	32.0	27.0	29.5	20.5	18.5	19.5
21	27.5	24.5	26.0	32.5	25.5	28.5	32.0	27.5	29.5	18.5	13.0	16.0
22	27.5	24.5	26.0	32.5	26.0	29.0	31.0	26.5	29.0	13.0	11.0	11.5
23	26.5	24.5	25.5	30.0	26.5	28.5	30.5	26.0	28.0	15.5	12.0	13.5
24	26.5	23.0	25.0	27.5	21.5	24.0	30.0	25.0	27.5	15.5	14.5	15.5
25	26.5	22.0	24.5	30.0	25.5	27.5	30.0	24.0	27.0	16.0	15.5	15.5
26	27.5	23.0	25.0	31.0	26.5	28.5	30.5	25.5	28.0	18.0	15.0	16.5
27	28.5	24.0	26.5	32.0	27.0	29.5	30.0	26.0	28.5	19.5	17.5	18.5
28	29.0	24.5	27.0	33.0	27.0	30.0	31.0	26.5	28.5	22.5	19.0	20.5
29	27.5	24.5	26.0	33.0	27.5	30.0	31.5	26.0	28.5	23.5	21.5	22.5
30	26.0	22.0	24.0	31.0	27.0	29.0	31.0	26.0	28.0	23.5	21.5	22.5
31	---	---	---	29.5	26.0	28.0	31.0	25.0	28.0	---	---	---
MONTH	29.0	18.0	23.9	33.5	21.5	27.9	32.0	23.0	27.6	31.5	11.0	21.8

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

285

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	9.1	7.4	8.1	9.6	8.3	8.9	10.7	10.2	9.9	13.9	10.8	12.3
2	9.0	7.3	8.0	9.5	7.7	8.6	10.5	9.9	10.2	14.2	11.9	12.8
3	9.1	7.3	8.0	9.3	7.1	8.0	10.0	9.4	9.7	14.0	11.7	12.8
4	9.1	7.1	7.8	---	---	---	9.8	9.1	9.4	14.6	12.7	13.6
5	9.3	7.0	7.8	---	---	---	10.5	9.1	9.8	14.5	13.2	13.7
6	9.2	7.2	8.4	---	---	---	10.6	9.9	10.2	13.9	12.6	13.2
7	9.1	7.1	7.9	---	---	---	11.8	10.1	11.0	14.5	12.7	13.4
8	9.6	8.2	8.8	---	---	---	11.7	10.8	11.2	14.3	12.5	13.2
9	9.8	8.2	8.9	---	---	---	12.2	11.3	11.7	---	---	---
10	10.0	8.4	9.1	---	---	---	12.2	11.4	11.7	---	---	---
11	10.0	8.4	9.0	---	---	---	12.5	11.6	12.0	---	---	---
12	9.8	8.1	8.9	---	---	---	12.6	11.8	12.1	---	---	---
13	9.9	7.9	8.7	---	---	---	12.3	11.4	11.8	---	---	---
14	9.6	7.9	8.5	---	---	---	12.1	11.1	11.5	---	---	---
15	9.3	7.9	8.4	---	---	---	12.1	10.9	11.3	---	---	---
16	9.6	7.8	8.5	11.2	9.3	10.0	12.2	10.6	11.2	---	---	---
17	9.4	7.4	8.1	10.9	8.9	9.6	12.6	10.5	11.4	---	---	---
18	7.4	5.9	6.6	11.3	8.9	9.8	12.8	10.6	11.5	---	---	---
19	8.1	7.1	7.7	9.2	7.1	8.7	12.6	10.4	11.2	---	---	---
20	10.1	7.8	8.5	7.2	6.8	7.0	12.6	9.9	10.9	---	---	---
21	10.5	7.7	8.7	7.9	7.2	7.6	12.9	10.1	11.2	---	---	---
22	11.0	7.8	9.0	8.9	7.7	8.4	12.9	10.5	11.4	---	---	---
23	10.5	8.0	9.0	9.6	8.9	9.4	13.1	10.7	11.6	---	---	---
24	10.3	8.0	8.8	9.7	9.4	9.6	13.0	10.6	11.5	---	---	---
25	10.4	8.4	9.3	9.5	9.3	9.4	13.3	11.1	11.9	---	---	---
26	10.5	8.7	9.6	9.4	8.9	9.3	13.4	11.0	11.9	---	---	---
27	9.9	8.5	9.1	9.2	8.8	9.0	13.3	10.7	11.6	---	---	---
28	9.9	8.2	8.9	10.0	9.1	9.6	12.1	10.2	10.9	---	---	---
29	9.5	8.2	8.6	10.4	9.8	10.1	12.9	10.2	11.2	---	---	---
30	9.7	7.9	8.6	10.6	10.1	10.3	12.9	10.4	11.3	---	---	---
31	9.7	7.8	8.6	---	---	---	12.0	10.1	10.8	---	---	---
MONTH	11.0	5.9	8.5	---	---	---	13.4	9.1	11.1	---	---	---

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	13.4	10.9	12.1	11.0	8.8	10.0	---	---	---
2	---	---	---	13.5	12.3	12.8	11.0	8.6	9.6	---	---	---
3	---	---	---	13.5	11.4	12.6	11.0	8.4	9.6	---	---	---
4	---	---	---	12.7	10.9	11.6	11.6	8.7	10.0	---	---	---
5	---	---	---	12.8	10.4	11.4	11.5	8.3	9.7	---	---	---
6	---	---	---	13.1	10.3	11.3	11.4	8.1	9.4	11.1	8.2	9.2
7	13.5	9.7	11.3	13.5	10.5	12.1	12.2	7.7	9.5	8.5	6.5	7.1
8	14.2	10.8	12.2	13.9	11.4	12.6	12.0	8.0	9.7	6.9	5.5	6.6
9	14.1	10.6	12.0	13.6	10.5	12.0	12.1	7.8	9.7	6.8	5.5	6.4
10	13.9	10.3	11.6	13.4	9.8	11.4	12.3	8.7	10.2	8.2	6.7	7.5
11	14.1	10.5	12.0	13.4	9.1	10.8	12.3	10.2	11.2	10.2	7.2	8.4
12	14.2	11.7	12.7	11.8	8.6	9.9	12.3	9.6	10.9	11.3	7.1	8.9
13	14.4	12.4	13.1	8.9	6.0	7.0	12.5	9.2	10.7	13.5	7.2	9.8
14	13.9	11.8	12.6	7.2	5.8	6.9	12.1	8.9	10.3	13.5	6.7	9.7
15	14.3	11.0	12.4	7.2	5.8	6.8	13.0	8.7	10.4	12.3	7.0	9.2
16	14.7	11.3	12.6	7.6	7.0	7.4	12.5	8.3	10.0	11.3	6.6	8.6
17	14.7	11.3	12.7	8.5	7.3	7.9	11.1	8.2	9.6	12.3	7.0	9.0
18	14.7	10.5	12.2	10.3	7.6	8.6	13.1	9.0	10.8	11.2	7.1	8.9
19	14.8	10.2	11.8	11.6	7.6	9.1	13.3	8.6	10.6	11.5	7.4	9.2
20	14.6	9.7	11.4	13.0	7.5	9.7	13.8	8.7	10.9	10.7	7.0	8.6
21	14.3	9.2	11.1	12.8	7.9	9.8	13.4	8.1	10.5	10.6	6.8	8.3
22	13.5	8.8	10.6	13.3	7.3	9.8	12.1	8.7	10.0	10.1	6.4	7.9
23	13.0	8.3	10.1	12.9	7.5	9.7	---	---	---	8.7	6.6	7.5
24	13.0	8.5	10.2	12.4	7.7	9.7	---	---	---	10.0	6.9	8.4
25	12.5	8.2	10.0	10.9	7.8	9.1	---	---	---	11.1	7.9	9.2
26	12.1	7.8	9.3	12.6	8.0	10.1	---	---	---	10.7	7.2	8.7
27	11.7	7.5	9.0	12.4	8.5	10.2	---	---	---	---	---	---
28	12.5	8.9	10.6	11.4	8.6	10.1	---	---	---	---	---	---
29	---	---	---	11.9	9.7	10.7	---	---	---	---	---	---
30	---	---	---	11.6	10.0	10.7	---	---	---	---	---	---
31	---	---	---	11.1	9.6	10.4	---	---	---	---	---	---
MONTH	---	---	---	13.9	5.8	10.1	---	---	---	---	---	---

ARKANSAS RIVER BASIN
07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

287

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	---	---	---	8.4	6.1	7.0	9.6	6.0	7.5
2	---	---	---	---	---	---	7.4	6.2	6.7	9.8	5.9	7.4
3	---	---	---	---	---	---	6.2	4.3	5.0	8.6	5.9	7.1
4	---	---	---	---	---	---	5.2	4.4	4.9	9.0	6.2	7.3
5	---	---	---	---	---	---	4.4	4.0	4.2	8.9	6.0	7.2
6	5.4	4.2	4.7	---	---	---	4.0	3.6	3.9	8.8	6.1	7.2
7	4.2	3.7	3.9	---	---	---	5.7	4.0	4.9	9.0	6.1	6.8
8	---	---	---	---	---	---	7.0	5.6	6.2	8.8	6.5	7.5
9	---	---	---	---	---	---	9.3	6.1	7.4	8.6	6.6	7.4
10	---	---	---	---	---	---	11.1	6.6	8.5	9.1	6.4	7.4
11	---	---	---	---	---	---	12.1	6.7	9.0	9.0	6.2	7.2
12	---	---	---	9.0	5.3	6.9	12.5	6.6	9.1	9.6	6.3	7.6
13	---	---	---	8.7	5.3	6.8	12.0	6.7	8.9	---	---	---
14	6.5	5.5	5.9	8.5	5.4	6.7	11.4	6.9	8.8	---	---	---
15	8.9	6.0	7.1	8.4	5.4	6.6	11.4	6.6	8.5	---	---	---
16	11.5	6.3	8.5	8.6	5.2	6.5	13.0	6.9	9.3	---	---	---
17	12.7	6.6	9.3	8.6	5.1	6.6	11.9	7.0	8.9	---	---	---
18	13.0	6.7	9.7	8.4	5.3	6.6	14.3	7.1	9.9	---	---	---
19	12.4	6.8	9.4	8.2	5.1	6.4	13.1	6.7	9.3	---	---	---
20	11.7	6.6	8.9	9.0	5.2	6.8	12.0	6.3	8.6	---	---	---
21	11.1	6.4	8.5	8.8	4.9	6.5	11.1	5.9	8.1	---	---	---
22	10.3	6.3	8.1	8.5	4.7	6.2	9.5	6.0	7.2	---	---	---
23	9.4	6.1	7.7	5.2	4.1	4.7	9.6	5.8	7.4	---	---	---
24	9.8	6.2	7.9	5.7	3.9	4.8	9.3	6.0	7.4	---	---	---
25	11.4	6.3	8.4	5.7	3.8	4.7	9.3	6.0	7.4	---	---	---
26	12.5	6.2	8.9	7.5	5.6	6.4	9.4	5.8	7.3	---	---	---
27	11.4	5.9	8.3	10.9	5.8	7.8	9.0	5.8	7.2	8.0	7.4	7.7
28	---	---	---	10.6	5.5	7.6	8.9	5.8	7.0	8.0	7.0	7.5
29	---	---	---	10.1	5.5	7.4	9.3	5.6	7.1	7.7	6.7	7.1
30	---	---	---	9.8	5.7	7.4	8.9	5.6	7.0	8.9	7.2	7.9
31	---	---	---	9.5	5.9	7.4	9.4	5.8	7.3	---	---	---
MONTH	---	---	---	---	---	---	14.3	3.6	7.4	---	---	---

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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1902 to April 1908, October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected at site 1.1 mi upstream February 1914 to March 1934 and at site 0.1 mi upstream thereafter are contained in reports of National Weather Service. Published as Canadian River (North Fork) near El Reno 1902-4.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,295.00 ft above sea level. October 1902 to April 1908, nonrecording gage at site about 450 ft upstream at different datum. October 1937 to September 1988, gage at site 500 ft upstream and datum 4.02 ft higher.

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	440	68	158	79	73	53	104	82	239	e165	91	124
2	232	69	149	78	71	51	101	82	214	e155	532	120
3	167	72	143	79	70	50	101	82	162	e150	1800	116
4	136	65	135	78	66	52	100	82	3250	e145	2140	111
5	121	68	123	80	63	56	99	80	3420	e160	2350	107
6	113	67	118	81	62	63	94	196	3170	e170	2550	104
7	109	62	114	78	60	66	92	532	3160	e145	1570	100
8	106	61	111	84	58	61	90	988	2280	e130	886	98
9	96	62	110	81	58	59	88	591	4900	e115	658	98
10	91	73	106	84	57	60	88	299	6160	e110	508	98
11	86	83	103	81	57	58	90	186	4770	113	e460	98
12	82	66	102	80	55	57	90	142	4360	e103	e420	125
13	80	62	97	78	56	935	84	124	2130	e95	e380	208
14	78	61	97	76	57	1330	82	111	1120	86	354	174
15	78	65	94	75	56	1080	82	97	791	82	e310	133
16	79	66	93	75	57	647	80	90	604	80	e260	362
17	78	64	92	74	58	362	88	87	493	80	e280	1140
18	345	62	90	72	57	253	99	81	420	79	e250	646
19	265	68	89	72	56	209	127	80	364	75	e200	862
20	132	2830	88	72	56	172	119	78	e300	71	e230	1010
21	97	2820	85	69	55	150	97	75	e250	71	187	871
22	83	1510	84	76	53	133	107	74	e200	73	176	1570
23	76	697	82	77	52	119	230	69	e180	134	172	959
24	72	493	83	78	50	111	170	74	e160	1150	162	747
25	70	364	83	79	50	107	140	76	e190	1020	154	533
26	64	286	82	82	50	108	111	292	e210	384	147	626
27	63	244	82	86	49	119	97	566	219	210	148	632
28	62	210	81	89	52	114	90	641	199	138	145	583
29	62	188	81	87	---	110	86	374	187	108	141	551
30	62	171	81	80	---	107	80	199	177	92	135	527
31	67	---	79	77	---	107	---	155	---	82	129	---
TOTAL	3692	11077	3115	2437	1614	6959	3106	6685	44279	5771	17925	13433
MEAN	119	369	100	78.6	57.6	224	104	216	1476	186	578	448
MAX	440	2830	158	89	73	1330	230	988	6160	1150	2550	1570
MIN	62	61	79	69	49	50	80	69	160	71	91	98
AC-FT	7320	21970	6180	4830	3200	13800	6160	13260	87830	11450	35550	26640

e Estimated

ARKANSAS RIVER BASIN

289

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

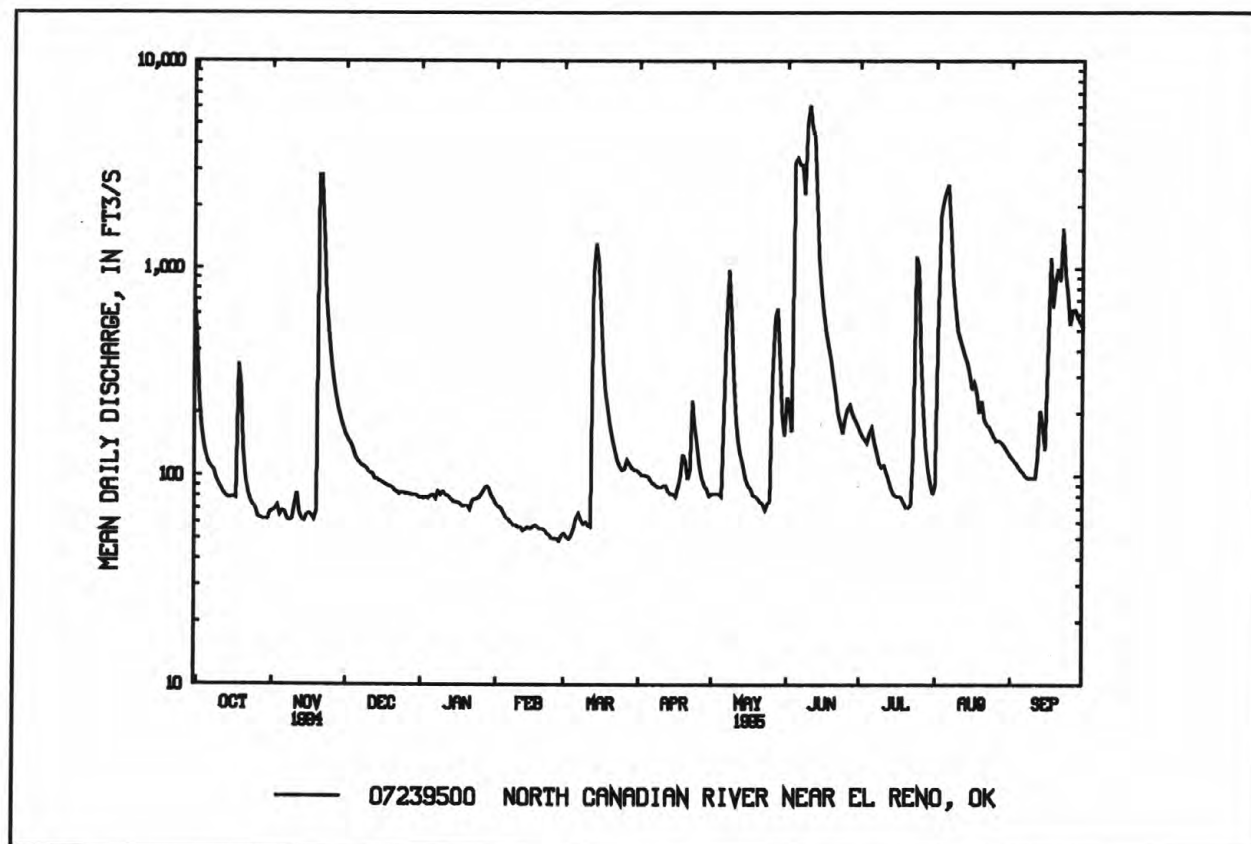
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	175	117	83.9	85.4	123	186	227	397	508	277	174	214
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	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1949 - 95
ANNUAL TOTAL	90912	120093	
ANNUAL MEAN	249	329	^a 214
HIGHEST ANNUAL MEAN			807
LOWEST ANNUAL MEAN			31.8
HIGHEST DAILY MEAN	3000	Apr 12	6160
LOWEST DAILY MEAN	22	Aug 30	49
ANNUAL SEVEN-DAY MINIMUM	29	Aug 25	51
INSTANTANEOUS PEAK FLOW			8170
INSTANTANEOUS PEAK STAGE			18.73
ANNUAL RUNOFF (AC-FT)	180300	238200	155100
10 PERCENT EXCEEDS	771	651	607
50 PERCENT EXCEEDS	93	100	48
90 PERCENT EXCEEDS	43	62	1.8

^aPrior to regulation, 1903-07, 1938-48, 264 ft³/s.

^bPresent datum.



PERIOD OF RECORD.--Water years 1944-45, 1950-51, 1953, 1955-57, 1974-79, October 1991 to current year.

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.

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: Maximum recorded (greater than 20 percent missing record), 1,990 microsiemens, Oct. 4,5; minimum recorded, 187 microsiemens, Nov. 22.

WATER TEMPERATURE: Maximum, 33.5°C, July 21, 22; minimum, 0.5°C, Mar. 2.3.

[illegible]

[illegible]

[illegible]

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

293

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	15.0	11.5	13.0	9.0	6.5	8.0	---	---	---
2	---	---	---	15.5	11.5	13.5	10.5	7.5	9.0	---	---	---
3	---	---	---	20.5	15.5	17.5	12.5	10.5	11.5	---	---	---
4	24.5	21.0	23.0	18.0	12.5	15.0	15.0	12.5	13.5	---	---	---
5	24.5	21.0	22.5	14.0	11.0	12.0	13.5	9.5	11.0	---	---	---
6	23.0	20.0	21.5	15.0	10.0	12.0	9.5	9.0	9.5	---	---	---
7	22.0	16.5	19.0	15.5	11.0	13.5	9.0	7.5	8.0	---	---	---
8	19.0	15.0	16.5	19.0	13.5	16.0	8.0	6.5	7.0	---	---	---
9	18.5	13.5	16.0	17.0	10.5	13.0	6.5	5.0	6.0	---	---	---
10	18.5	13.0	15.5	12.5	9.0	10.5	6.5	4.5	5.5	7.0	4.5	6.0
11	18.5	13.0	15.5	12.5	9.5	11.0	5.5	4.0	4.5	8.0	5.0	6.5
12	18.5	13.0	15.5	12.0	10.0	11.0	5.0	2.5	4.0	8.5	7.0	8.0
13	20.5	15.0	17.5	---	---	---	6.0	4.5	5.0	9.0	7.0	8.0
14	18.0	15.5	17.0	---	---	---	7.5	6.0	6.5	8.5	6.0	7.0
15	17.0	15.5	16.0	---	---	---	7.5	6.5	7.0	8.5	5.5	7.0
16	18.0	15.5	16.5	11.0	7.0	9.0	9.5	7.5	8.5	9.0	6.5	8.0
17	20.0	18.0	19.0	12.5	9.0	10.5	8.5	6.0	7.5	9.0	7.5	8.0
18	21.0	19.5	20.0	11.5	7.5	10.0	8.5	6.0	7.5	7.5	5.5	6.5
19	21.5	19.0	20.0	12.5	11.0	11.5	9.5	6.5	8.0	7.0	4.0	5.5
20	22.0	19.5	20.5	15.5	11.5	13.0	10.5	8.5	9.5	7.0	4.0	5.5
21	22.5	20.0	21.0	12.0	9.5	10.5	9.0	7.0	8.0	6.0	4.5	5.5
22	21.5	17.5	19.5	10.0	8.0	9.0	8.0	5.5	7.0	5.5	2.5	4.0
23	20.0	16.5	18.5	8.0	7.0	7.5	7.0	5.0	6.0	5.0	2.0	3.5
24	19.5	17.5	18.5	8.5	7.0	7.5	7.5	5.5	6.5	6.5	3.0	4.5
25	17.5	14.0	15.5	9.0	7.5	8.5	6.5	3.5	5.0	8.0	5.0	6.5
26	---	---	---	11.0	9.0	10.0	7.0	4.0	5.5	8.5	7.0	7.5
27	16.0	11.5	13.5	---	---	---	8.0	5.5	7.0	11.0	8.0	9.5
28	16.5	13.0	14.5	---	---	---	8.5	8.0	8.0	10.0	6.5	8.0
29	15.0	13.5	14.0	9.5	7.5	8.5	8.5	8.0	8.0	6.5	4.5	5.5
30	17.0	14.5	16.0	8.5	6.5	7.5	10.0	7.0	8.5	7.0	3.0	5.0
31	16.5	13.0	15.0	---	---	---	10.5	8.0	9.5	7.5	4.5	6.0
MONTH	---	---	---	---	---	---	15.0	2.5	7.6	---	---	---

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	10.0	6.0	8.0	5.0	1.0	2.5	17.0	10.5	13.5	18.5	15.0	16.5
2	12.0	8.0	10.0	1.5	.5	1.0	19.0	12.5	15.5	16.5	14.0	15.5
3	11.0	8.5	9.5	5.0	.5	2.5	16.5	14.5	15.0	15.5	14.0	15.0
4	10.0	6.0	8.0	5.0	4.0	4.5	19.5	13.0	16.0	21.5	14.0	17.5
5	10.0	6.5	8.0	6.0	5.0	5.5	19.5	14.0	17.0	19.5	16.5	18.0
6	10.0	7.0	8.5	8.5	5.5	7.0	20.0	15.5	17.5	19.5	16.0	17.5
7	10.0	7.0	8.5	6.0	2.0	4.0	22.5	16.0	19.0	19.5	18.5	19.0
8	8.0	4.5	6.5	7.0	.5	3.5	24.0	17.5	20.5	20.0	17.0	18.5
9	9.5	5.0	7.0	10.0	3.0	6.0	21.5	17.5	19.0	21.5	18.0	19.5
10	10.0	6.5	8.0	11.5	5.0	8.5	17.5	11.5	14.5	21.5	18.5	20.0
11	7.5	4.5	6.0	11.5	7.5	9.5	15.0	8.5	12.0	22.5	17.5	20.0
12	4.5	2.0	3.0	14.0	10.5	12.5	18.0	10.5	14.0	21.5	19.0	20.5
13	3.0	2.0	2.5	13.5	11.0	12.0	20.5	13.0	16.5	27.0	20.5	23.5
14	4.5	3.0	3.5	13.0	11.5	12.5	21.0	15.5	18.0	26.0	21.5	24.0
15	7.0	4.5	5.5	14.5	12.5	13.5	20.5	15.5	18.0	25.5	21.0	23.5
16	5.5	3.5	4.5	16.5	14.0	15.5	22.5	18.5	20.5	---	---	---
17	8.0	2.5	5.0	18.5	15.0	16.5	20.5	16.5	17.5	---	---	---
18	9.5	5.0	7.0	19.0	15.0	17.0	20.5	14.0	17.0	---	---	---
19	12.0	6.5	9.0	20.0	15.5	18.0	18.5	15.0	16.5	---	---	---
20	13.5	8.0	10.5	19.5	15.5	17.5	21.0	14.5	17.5	25.5	19.5	22.5
21	14.0	9.0	11.5	20.0	15.0	17.5	21.5	15.5	18.0	27.0	20.5	23.5
22	14.0	10.0	12.0	21.5	17.0	19.5	17.5	11.0	13.0	27.5	21.5	24.5
23	15.5	10.5	12.5	20.5	16.0	18.5	13.5	9.0	11.0	24.0	20.5	22.0
24	14.0	9.5	11.5	19.5	15.0	17.5	16.0	10.5	13.5	20.5	17.0	18.0
25	15.5	9.5	12.5	18.0	16.5	17.0	19.0	12.5	15.5	17.0	16.0	16.5
26	17.0	13.0	14.5	20.0	15.5	17.0	19.0	14.5	16.5	20.5	16.0	17.5
27	15.5	10.5	13.0	17.5	12.5	15.0	18.0	12.5	15.5	22.5	19.5	20.5
28	10.5	5.0	7.5	15.0	10.5	12.0	18.5	14.0	16.0	23.0	20.0	21.5
29	---	---	---	11.0	9.5	10.0	21.5	16.0	18.0	22.5	20.0	21.0
30	---	---	---	11.5	8.5	10.0	19.5	16.5	17.5	21.0	19.0	20.0
31	---	---	---	13.5	9.0	11.5	---	---	---	25.0	19.0	22.0
MONTH	17.0	2.0	8.3	21.5	.5	11.5	24.0	8.5	16.3	---	---	---

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

295

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	26.0	21.5	23.5	26.5	20.5	23.5	26.5	22.5	24.5	31.5	26.0	28.5
2	27.0	22.5	24.5	25.5	21.5	24.0	25.0	22.0	23.0	31.0	26.0	29.0
3	25.5	22.0	24.0	28.0	22.0	25.0	24.5	22.5	23.5	29.0	25.5	27.5
4	---	---	---	29.0	23.5	26.0	25.0	21.0	23.5	29.5	24.5	27.0
5	---	---	---	29.5	23.0	26.0	27.5	22.0	25.0	30.0	24.5	27.5
6	24.0	20.0	21.5	30.5	23.5	27.0	28.5	27.0	27.5	29.0	24.5	27.0
7	28.0	24.0	26.0	31.0	24.5	27.5	29.0	27.5	28.5	28.0	24.0	26.0
8	29.0	28.0	28.5	31.5	24.5	28.0	28.5	27.0	27.5	24.0	20.5	22.0
9	28.5	19.5	22.5	31.5	24.5	28.0	27.5	27.0	27.5	23.0	19.0	21.0
10	21.0	20.0	20.5	33.0	25.5	29.0	---	---	---	24.5	20.0	22.0
11	20.5	19.0	19.5	33.0	26.0	29.5	---	---	---	23.0	20.5	21.5
12	22.5	19.5	21.0	32.5	26.0	29.5	---	---	---	---	---	---
13	24.5	21.0	23.0	32.5	26.5	29.0	---	---	---	---	---	---
14	26.0	23.0	24.5	31.0	25.5	28.5	---	---	---	---	---	---
15	26.5	23.5	25.0	31.0	25.5	28.5	29.5	27.0	28.0	---	---	---
16	27.0	23.5	25.0	32.0	25.0	28.5	29.0	26.0	27.0	---	---	---
17	27.0	24.0	25.5	30.5	26.0	28.0	30.5	25.5	28.0	---	---	---
18	26.5	23.5	25.0	31.0	25.5	28.0	31.0	26.0	28.5	---	---	---
19	27.0	23.0	25.0	30.0	26.0	28.0	32.0	26.5	29.0	23.0	21.5	22.0
20	28.0	23.0	25.5	30.5	25.5	28.0	32.5	27.5	30.0	21.5	19.0	20.0
21	28.5	23.5	26.0	33.5	26.5	29.5	31.0	28.0	29.0	19.0	13.5	16.5
22	28.5	24.0	26.5	33.5	27.0	30.0	32.5	28.0	30.5	13.5	11.5	12.0
23	27.0	24.0	25.5	31.5	27.0	29.5	32.0	27.5	30.0	14.5	11.5	13.0
24	27.0	23.0	25.0	29.5	21.5	24.0	31.0	26.0	28.5	15.5	14.5	15.0
25	26.5	22.0	24.0	29.0	25.0	27.5	30.5	25.5	28.0	16.0	15.0	15.5
26	27.5	22.5	25.0	31.0	27.0	29.0	32.0	26.5	29.0	17.5	14.5	16.0
27	29.0	23.5	26.0	32.0	27.0	29.5	32.5	27.0	30.0	19.0	15.5	17.5
28	28.5	24.0	26.5	33.0	27.0	30.0	32.0	27.0	29.5	20.0	16.5	18.0
29	27.5	24.5	25.5	32.5	27.5	30.0	32.0	27.0	29.5	22.0	19.5	20.5
30	25.0	21.5	23.0	31.0	26.5	28.5	31.5	27.0	29.5	21.5	19.5	20.5
31	---	---	---	29.0	25.5	27.5	31.5	26.0	28.5	---	---	---
MONTH	---	---	---	33.5	20.5	27.9	---	---	---	---	---	---

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).

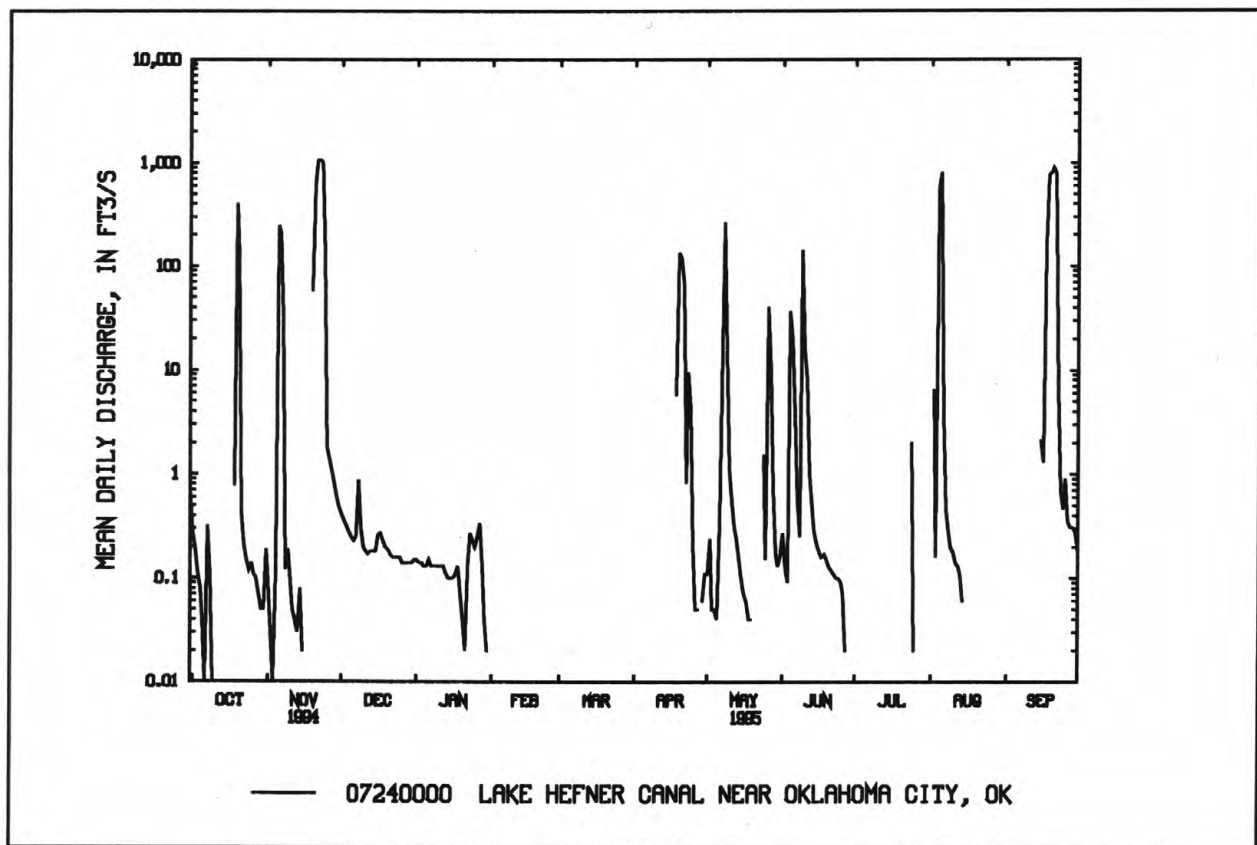
GAGE.--Water stage recorder and concrete control. Datum of gage is 1,196.06 ft above sea level. Prior to Apr. 8, 1947, nonrecording gage at site 2.7 mi upstream at different datum. Apr. 8, 1947, to Apr. 30, 1950, water-stage recorder at site 3.0 mi upstream at different datum. May 1, 1950 to May 19, 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	.09	.41	.15	.00	.00	.00	.11	.27	.00	.00	.00
2	.19	.03	.36	.14	.00	.00	.00	.24	.13	.00	6.4	.00
3	.11	.01	.32	.14	.00	.00	.00	.05	.09	.00	.16	.00
4	.08	.12	.28	.13	.00	.00	.00	.05	37	.00	553	.00
5	.04	247	.25	.13	.00	.00	.00	.04	20	.00	820	.00
6	.01	211	.23	.15	.00	.00	.00	.34	3.7	.00	3.7	.00
7	.32	33	.25	.13	.00	.00	.00	16	.57	.00	.46	.00
8	.11	.12	.88	.13	.00	.00	.00	267	.25	.00	.31	.00
9	.01	.19	.30	.13	.00	.00	.00	15	144	.00	.20	.00
10	.00	.09	.20	.13	.00	.00	.00	1.1	16	.00	.18	.00
11	.00	.05	.18	.13	.00	.00	.00	.55	8.1	.00	.14	.00
12	.00	.04	.17	.13	.00	.00	.00	.31	1.0	.00	.13	.00
13	.00	.03	.18	.11	.00	.00	.00	.25	.49	.00	.11	.00
14	.00	.08	.18	.10	.00	.00	.00	.16	.29	.00	.06	.00
15	.00	.02	.18	.10	.00	.00	.00	.10	.22	.00	.00	2.1
16	.00	.00	.26	.10	.00	.00	.00	.07	.18	.00	.00	1.3
17	.00	.00	.27	.11	.00	.00	.00	.06	.16	.00	.00	163
18	.78	.00	.23	.13	.00	.00	5.8	.04	.17	.00	.00	773
19	406	58	.20	.07	.00	.00	134	.04	.15	.00	.00	800
20	131	607	.19	.04	.00	.00	117	.00	.13	.00	.00	884
21	.44	1070	.17	.02	.00	.00	66	.00	.12	.00	.00	792
22	.21	1070	.16	.13	.00	.00	.82	.02	.11	.00	.00	6.4
23	.15	1000	.16	.27	.00	.00	9.5	.00	.10	.00	.00	.69
24	.12	127	.16	.23	.00	.00	4.2	1.5	.10	2.0	.00	.46
25	.14	1.8	.16	.20	.00	.00	.21	.15	.09	.02	.00	.91
26	.11	1.4	.14	.25	.00	.00	.05	41	.07	.00	.00	.35
27	.10	1.1	.14	.34	.00	.00	.05	10	.02	.00	.00	.31
28	.07	.82	.14	.13	.00	.00	.00	.72	.00	.00	.00	.31
29	.05	.61	.14	.04	---	.00	.06	.18	.00	.00	.00	.28
30	.05	.48	.14	.02	---	.00	.11	.13	.00	.00	.00	.18
31	.19	---	.15	.00	---	.00	---	.16	---	.00	.00	---
TOTAL	540.55	4430.08	7.18	4.01	0.00	0.00	337.80	355.37	233.51	2.02	1384.85	3425.29
MEAN	17.4	148	.23	.13	.000	.000	11.3	11.5	7.78	.065	44.7	114
MAX	406	1070	.88	.34	.00	.00	134	267	144	2.0	820	884
MIN	.00	.00	.14	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	1070	8790	14	8.0	.00	.00	670	705	463	4.0	2750	6790
CAL YR 1994	TOTAL 22223.51		MEAN 60.9		MAX 1070		MIN .00		AC-FT 44080			
WTR YR 1995	TOTAL 10720.66		MEAN 29.4		MAX 1070		MIN .00		AC-FT 21260			



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 poor. Flow regulated by Canton Lake (station 07238500) and Lake Overholser (station 07240500). Diversions upstream from station into Lake Overholser and Lake Hefner Canal (station 07240000). U.S. Geological Survey's satellite tele-meter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e11	e15	217	136	101	73	111	95	414	e230	e200	102
2	e11	e14	247	120	95	73	110	87	454	e190	1790	96
3	e40	e14	222	112	96	73	118	87	372	158	2230	96
4	57	e13	156	111	90	73	227	88	4600	e150	1610	96
5	57	58	140	110	88	72	73	88	9970	e148	1650	96
6	56	e34	138	125	101	76	73	680	7440	e145	2340	96
7	56	e20	168	123	100	77	85	1110	5350	e142	2420	96
8	57	5.0	196	120	76	64	66	2690	3660	e140	1030	94
9	55	12	181	117	75	62	63	1710	6260	e138	855	92
10	58	4.8	144	117	76	62	142	684	10100	e133	472	92
11	67	e4.5	120	115	76	61	167	306	10600	e130	303	92
12	67	e4.3	127	115	76	61	110	344	6910	160	292	95
13	67	e4.6	132	119	77	196	109	341	5440	e150	287	93
14	67	e4.8	132	117	76	198	109	330	2560	e145	280	92
15	66	e4.6	132	117	76	58	110	145	1540	e138	202	103
16	65	4.4	133	118	76	584	110	66	938	e130	148	210
17	65	e4.1	132	117	77	333	157	120	1060	e122	145	137
18	78	e8.0	132	117	75	292	275	177	762	e120	160	50
19	e45	e30	132	94	75	245	46	136	574	e118	189	53
20	e40	147	132	95	76	213	e20	132	618	e118	189	47
21	e35	1780	133	103	76	158	40	131	582	e116	155	82
22	e32	3410	132	103	76	137	176	128	432	e115	131	2230
23	e30	351	132	115	74	134	772	127	394	e115	110	1800
24	e29	74	132	128	74	132	e80	153	345	950	92	590
25	e40	60	132	131	75	131	30	178	355	1070	99	567
26	e73	53	132	92	74	161	114	3040	317	e600	104	447
27	22	55	126	71	73	149	90	4290	307	e250	104	542
28	e20	46	117	82	73	110	89	1510	304	e200	109	596
29	e18	103	117	124	---	110	88	614	e290	e165	e110	588
30	e17	182	117	122	---	110	88	348	e260	e130	110	454
31	e16	---	127	115	---	110	---	301	---	106	110	---
TOTAL	1417	6520.1	4510	3501	2253	4388	3848	20236	83208	6722	18026	9824
MEAN	45.7	217	145	113	80.5	142	128	653	2774	217	581	327
MAX	78	3410	247	136	101	584	772	4290	10600	1070	2420	2230
MIN	11	4.1	117	71	73	58	20	66	260	106	92	47
AC-FT	2810	12930	8950	6940	4470	8700	7630	40140	165000	13330	35750	19490

e Estimated

ARKANSAS RIVER BASIN

299

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1995, BY WATER YEAR (WY)

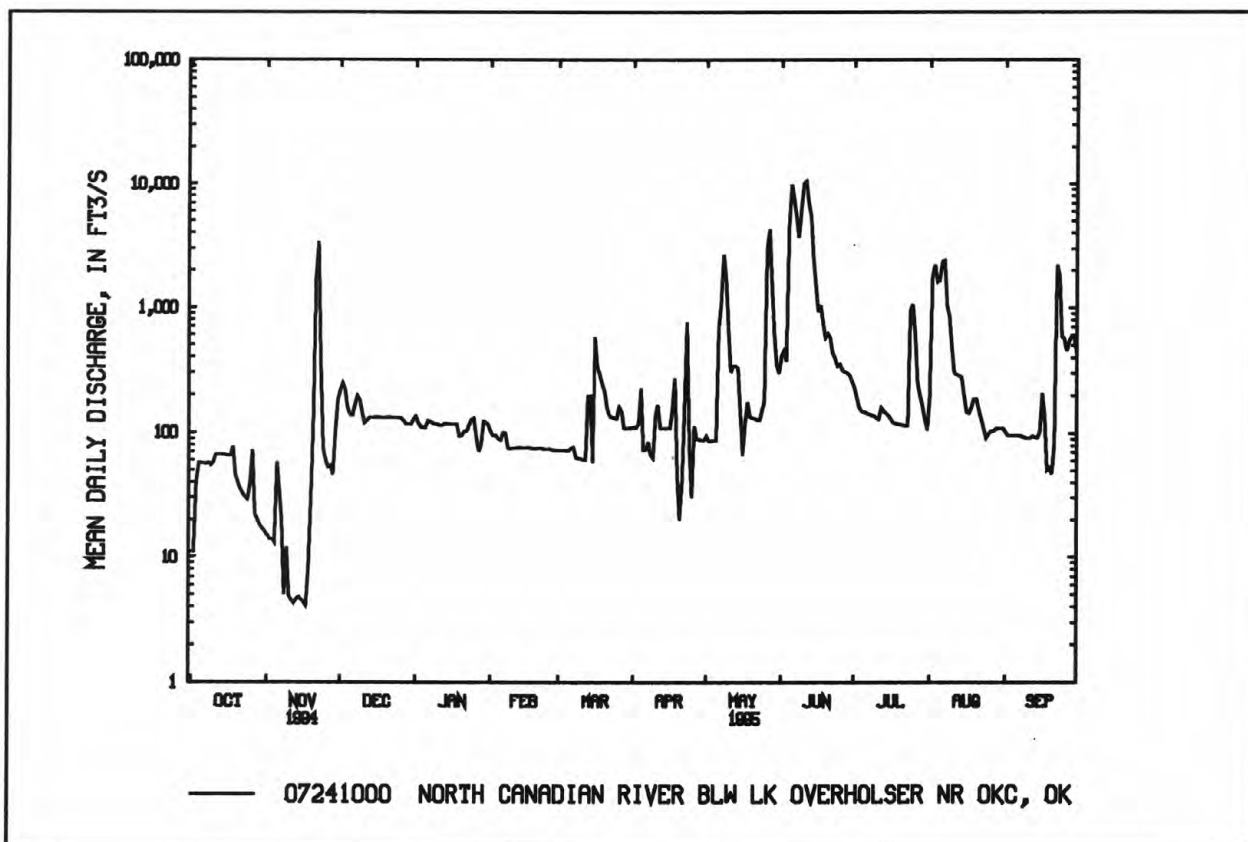
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	169	112	80.2	70.0	103	143	114	323	431	156	93.1	102
MAX	2426	1489	563	515	668	1487	538	2922	2774	1749	884	826
(WY)	1987	1975	1993	1987	1987	1990	1987	1993	1995	1957	1957	1989
MIN	.000	.000	.016	.045	.061	.000	.027	.45	.013	.039	.000	.000
(WY)	1953	1955	1957	1955	1955	1954	1954	1956	1953	1954	1953	1954

SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1953 - 95

ANNUAL TOTAL	65451.3	164453.1	158
ANNUAL MEAN	179	451	749
HIGHEST ANNUAL MEAN			1987
LOWEST ANNUAL MEAN			.42
HIGHEST DAILY MEAN	3410	Nov 22	10600
LOWEST DAILY MEAN	2.1	Feb 15	4.1
ANNUAL SEVEN-DAY MINIMUM	4.5	Nov 11	4.5
INSTANTANEOUS PEAK FLOW			19500
INSTANTANEOUS PEAK STAGE			25.05
ANNUAL RUNOFF (AC-FT)	129800	326200	114600
10 PERCENT EXCEEDS	384	715	400
50 PERCENT EXCEEDS	77	117	10
90 PERCENT EXCEEDS	16	46	.50

^aNo flow at times in 1952-57.

^bFrom high-water mark.



WATER QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1988 to current year.

pH: October 1988 to June 1991.

WATER TEMPERATURE: October 1988 to current year.

DISSOLVED OXYGEN: October 1988 to current year.

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

REMARKS.--Interruptions in record were due to malfunction of the recording instrument and insufficient flow for probes to function properly.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 2,050 microsiemens, Nov. 19, 1991; minimum, 100 microsiemens, Nov. 20, 1994.

pH: Maximum, 8.9 units, Oct. 27, 1989, Nov. 27, 1989, Sept. 15, 17, 1990; minimum, 6.2 units, Aug. 8, 1989.

WATER TEMPERATURE: Maximum, 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.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded (more than 20 percent missing record), 1,830 microsiemens, Oct. 6; minimum recorded, 100 microsiemens, Nov. 20.

WATER TEMPERATURE: Maximum, 31.0°C, July 13,14,17,29, Aug. 21; minimum, 1.0°C, Jan. 7,8.

DISSOLVED OXYGEN: Maximum, 15.1 mg/l, Nov. 18; minimum, 4.0 mg/l, July 16,17.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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)
SEP											
27...	1415	10.0	18.0	731	1028	1028	596	8.20	1170	9.4	8.3
27...	1418	20.0	18.0	731	1028	1028	596	8.20	1180	9.2	8.3
27...	1423	30.0	18.0	731	1028	1028	596	8.20	1170	9.2	8.3
27...	1427	40.0	18.0	731	1028	1028	596	8.20	1170	9.2	8.3
27...	1430	50.0	18.0	731	1028	1028	596	8.20	1170	9.2	8.3
27...	1434	60.0	18.0	731	1028	1028	596	8.20	1170	9.2	8.3
27...	1437	70.0	18.0	731	1028	1028	596	8.20	1170	9.2	8.3
27...	1442	80.0	18.0	731	1028	1028	596	8.20	1170	9.1	8.3
27...	1445	90.0	18.0	731	1028	1028	596	8.20	1170	9.2	8.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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 OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT												
04...	1230	1028	80020	57	1770	8.5	31.0	24.0	5.8	737	8.6	107
NOV												
08...	1400	1028	80020	5.0	1150	8.3	23.5	20.0	21	730	11.2	129
DEC												
21...	1230	1028	80020	132	1590	8.3	7.5	9.0	7.9	737	11.6	104
JAN												
11...	1230	1028	80020	117	1570	8.3	18.0	7.0	2.7	725	13.0	113
FEB												
08...	1300	1028	80020	75	1480	8.5	9.5	9.5	6.2	743	13.1	118
MAR												
14...	1300	1028	80020	285	698	8.0	16.5	14.0	140	735	9.4	94
APR												
25...	1330	1028	80020	28	920	8.2	24.5	17.0	75	734	9.4	101
MAY												
16...	1340	1028	80020	20	1220	8.3	27.5	23.0	23	727	8.4	103
JUN												
20...	1215	1028	80020	610	1200	8.4	31.5	26.0	22	727	8.1	105
JUL												
25...	1400	1028	80020	1070	441	8.0	37.5	26.5	210	733	7.3	94
AUG												
09...	1405	1028	80020	860	685	8.2	34.5	29.0	42	730	7.3	99
SEP												
12...	1200	1028	80020	88	1320	8.3	26.0	23.0	21	734	8.6	105
DATE		NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL AS CACO3) (MG/L) (00900)	HARD- NESS 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)
OCT												
04...	--	4.1	890	510	--	--	--	--	--	--	--	--
NOV												
08...	0.74	1.6	1800	520	320	140	78	31	100	40	2	5.4
DEC												
21...	0.75	3.5	230	65	--	--	--	--	--	--	--	--
JAN												
11...	1.0	0.5	95	72	--	--	--	--	--	--	--	--
FEB												
08...	0.59	4.0	130	32	--	--	--	--	--	--	--	4.8
MAR												
14...	2.4	6.1	K15000	K11000	--	--	--	--	--	--	--	--
APR												
25...	1.7	8.1	K6000	2400	--	--	--	--	--	--	--	--
MAY												
16...	0.97	5.9	2700	1800	390	120	97	36	110	38	2	6.6
JUN												
20...	--	4.0	140	180	--	--	--	--	--	--	--	--
JUL												
25...	1.6	2.4	6000	570	--	--	--	--	--	--	--	--
AUG												
09...	0.63	2.2	750	610	230	66	64	18	51	31	1	7.2
SEP												
12...	0.49	4.7	K4000	7200	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	BICAR- BONATE WATER DIS IT FIELD	CAR- BONATE WATER DIS IT FIELD	ALKA- LITY WAT DIS TOT IT FIELD	SULFATE DIS- SOLVED (MG/L	CHLO- RIDE, DIS- SOLVED (MG/L	FLUO- RIDE, DIS- SOLVED (MG/L	SILICA, DIS- SOLVED (MG/L	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L	SOLIDS, SUM OF CONSTI- TUTENTS, DIS- SOLVED (MG/L	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)
	HCO3	CO3	CACO3	AS SO4)	AS CL)	AS F)	SIO2)	AS	AS	AC-FT)	DAY)	(00530)
	(00453)	(00452)	(39086)	(00945)	(00940)	(00950)	(00955)	(70300)	(70301)	(70303)	(70302)	
	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS
OCT												
04...	164	6	144	--	--	--	--	--	--	--	--	56
NOV												
08...	225	0	184	190	130	0.60	12	704	661	0.96	9.50	40
DEC												
21...	359	0	294	--	--	--	--	--	--	--	--	30
JAN												
11...	356	0	292	--	--	--	--	--	--	--	--	11
FEB												
08...	361	14	320	270	140	0.70	--	958	--	--	--	19
MAR												
14...	146	0	120	--	--	--	--	--	--	--	--	186
APR												
25...	207	0	170	--	--	--	--	--	--	--	--	208
MAY												
16...	329	0	270	200	110	0.60	11	772	736	1.05	41.7	50
JUN												
20...	326	10	284	--	--	--	--	--	--	--	--	38
JUL												
25...	97	0	80	--	--	--	--	--	--	--	--	228
AUG												
09...	205	0	168	110	45	0.40	16	432	414	0.59	1000	96
SEP												
12...	310	0	254	--	--	--	--	--	--	--	--	49
DATE	NITRO- GEN, NITRATE TOTAL (MG/L	NITRO- GEN, NITRATE DIS- SOLVED (MG/L	NITRO- GEN, NITRATE DIS- SOLVED (MG/L	NITRO- GEN, NITRATE DIS- SOLVED (MG/L	NITRO- GEN, NITRATE DIS- SOLVED (MG/L	NITRO- GEN, NITRATE DIS- SOLVED (MG/L	NITRO- GEN, NITRATE DIS- SOLVED (MG/L	NITRO- GEN, NITRATE DIS- SOLVED (MG/L	NITRO- GEN, NITRATE DIS- SOLVED (MG/L	NITRO- GEN, NITRATE DIS- SOLVED (MG/L	NITRO- GEN, NITRATE DIS- SOLVED (MG/L	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L
	AS N)	AS N)	AS NO3)	AS N)	AS NO2)	AS N)	AS N)	AS N)	AS N)	AS NH4)	AS N)	AS N)
	(00620)	(00618)	(71851)	(00613)	(71856)	(00630)	(00631)	(00608)	(71846)	(00607)	(00623)	
	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS
OCT												
04...	--	--	--	<0.010	--	--	<0.050	0.020	0.03	0.38	0.40	
NOV												
08...	0.320	0.320	1.4	0.020	0.07	0.340	0.340	0.060	0.08	0.34	0.40	
DEC												
21...	0.320	0.320	1.4	0.030	0.10	0.350	0.350	0.040	0.05	0.36	0.40	
JAN												
11...	0.580	0.580	2.6	0.040	0.13	0.620	0.620	0.090	0.12	0.31	0.40	
FEB												
08...	0.160	0.160	0.71	0.030	0.10	0.190	0.190	0.050	0.06	0.35	0.40	
MAR												
14...	0.710	0.710	3.1	0.050	0.16	0.760	0.760	0.690	0.89	0.91	1.6	
APR												
25...	0.480	0.480	2.1	0.040	0.13	0.520	0.520	0.410	0.53	0.79	1.2	
MAY												
16...	0.150	0.150	0.66	0.020	0.07	0.170	0.170	0.140	0.18	0.66	0.80	
JUN												
20...	--	--	--	<0.010	--	--	<0.050	0.020	0.03	0.28	0.30	
JUL												
25...	0.920	0.920	4.1	0.080	0.26	1.00	1.00	0.130	0.17	0.47	0.60	
AUG												
09...	0.120	0.120	0.53	0.010	0.03	0.130	0.130	<0.015	--	--	0.50	
SEP												
12...	0.090	--	--	<0.010	--	0.090	0.090	0.030	0.04	0.37	0.40	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible][illegible]

[illegible]

ARKANSAS RIVER BASIN 305
07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1450	1430	1450	1400	1280	1350	1350	1300	1330	1330	1170	1260
2	1450	1430	1440	1290	1230	1250	1350	1300	1320	1350	1330	1340
3	1450	1320	1410	1230	1190	1210	1370	1320	1340	1380	1340	1360
4	1470	1450	1460	1270	1200	1240	1410	1280	1380	1430	1340	1380
5	1500	1470	1480	1260	1250	1250	1370	1330	1350	1430	1300	1400
6	1520	1500	1510	1250	1030	1200	1350	1320	1330	1340	499	990
7	1530	1460	1510	1420	1030	1310	1390	1330	1360	564	363	450
8	1510	1450	1480	1440	1410	1430	1460	1320	1410	588	354	482
9	1530	1460	1500	1440	1390	1420	1480	1420	1460	700	496	577
10	1540	1530	1540	1410	1020	1330	1470	1240	1380	675	618	644
11	1550	1540	1540	1420	1390	1400	1460	1380	1420	743	641	669
12	1560	1530	1550	1420	1150	1360	1460	1370	1440	854	737	792
13	1550	1530	1540	1190	573	829	1490	1370	1470	909	854	884
14	1550	1530	1540	632	422	506	1540	1480	1500	1080	909	973
15	1550	1520	1530	627	422	474	1540	1510	1530	1160	1020	1120
16	1550	1530	1540	766	390	596	1530	1480	1500	1220	1150	1190
17	1560	1520	1550	717	351	506	1500	925	1310	1270	1210	1230
18	1560	1500	1540	446	380	416	---	---	---	1310	1080	1190
19	1540	1520	1530	---	---	---	---	---	---	1390	1300	1330
20	1530	1510	1520	---	---	---	---	---	---	1390	1370	1380
21	1550	1520	1530	---	---	---	---	---	---	1410	1380	1390
22	---	---	---	1020	970	988	1180	695	1010	1430	1410	1420
23	1540	863	1210	1140	1000	1080	---	---	---	1430	1410	1420
24	1540	1490	1520	1210	1130	1170	---	---	---	1430	1250	1320
25	1550	1390	1490	1240	1200	1220	---	---	---	1410	1260	1340
26	1500	1460	1490	1280	1170	1230	1010	934	958	1260	371	773
27	1510	1340	1450	1260	1100	1160	1150	1010	1070	700	615	666
28	1490	1380	1430	1260	1190	1220	1210	1140	1170	716	559	633
29	---	---	---	1340	1260	1300	1280	1200	1220	642	351	529
30	---	---	---	1390	1340	1370	1300	1260	1280	701	548	609
31	---	---	---	1400	1350	1370	---	---	---	714	660	685
MONTH	---	---	---	---	---	---	---	---	---	1430	351	1010

[illegible]

ARKANSAS RIVER BASIN 307
07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	16.0	11.0	13.0	7.5	7.0	7.0	7.0	6.0	6.5
2	---	---	---	16.0	11.0	13.5	8.0	7.0	7.5	7.0	5.5	6.0
3	23.0	19.5	20.0	21.0	15.0	17.5	9.5	8.0	9.0	6.0	4.0	5.5
4	23.5	21.0	22.0	17.0	11.5	14.0	12.0	9.5	11.0	4.0	2.5	3.5
5	24.0	21.5	22.0	12.0	8.0	10.0	11.5	10.0	10.5	3.0	2.5	2.5
6	23.0	21.5	22.0	15.5	9.5	12.0	11.5	9.5	10.5	3.0	1.5	2.5
7	21.5	19.5	20.5	16.5	11.0	13.5	10.5	8.5	9.5	2.0	1.0	1.5
8	20.5	18.5	19.5	19.5	13.0	16.0	8.5	7.0	7.5	2.5	1.0	2.0
9	20.5	17.5	19.0	16.0	10.5	12.5	7.0	5.5	6.0	4.0	2.0	3.0
10	---	---	---	14.0	9.5	11.0	6.0	4.5	5.0	4.5	3.0	4.0
11	---	---	---	14.0	10.0	11.5	5.0	4.0	4.5	5.5	4.0	4.5
12	---	---	---	12.0	9.5	11.0	5.0	3.5	4.0	7.0	5.0	6.0
13	19.0	16.5	17.5	14.0	11.5	13.0	4.5	4.0	4.0	7.5	6.5	7.0
14	17.5	16.5	17.0	14.0	11.5	13.0	4.5	4.0	4.5	---	---	---
15	16.5	16.5	16.5	13.5	9.0	11.0	5.5	4.5	5.0	---	---	---
16	17.0	16.5	17.0	13.5	8.0	10.5	7.0	5.5	6.0	---	---	---
17	18.0	17.0	17.5	12.5	9.5	11.0	---	---	---	---	---	---
18	19.5	17.5	18.5	13.0	8.0	10.5	---	---	---	---	---	---
19	22.5	17.0	19.0	12.5	11.5	11.5	---	---	---	---	---	---
20	22.5	17.5	19.5	13.5	11.5	12.5	9.5	7.5	8.5	---	---	---
21	22.0	18.0	19.5	11.5	10.5	10.5	9.0	7.5	8.0	---	---	---
22	22.5	16.0	18.5	10.5	9.0	10.0	9.0	7.5	8.0	---	---	---
23	21.0	16.0	18.0	9.5	7.5	8.5	8.5	7.5	8.0	---	---	---
24	19.5	16.5	18.0	9.0	7.5	8.0	7.5	6.5	7.0	---	---	---
25	18.0	14.5	16.0	9.0	8.0	8.5	7.0	6.0	6.5	5.5	4.5	5.0
26	---	---	---	10.5	8.5	9.5	7.0	6.0	6.5	9.0	5.0	6.5
27	---	---	---	11.0	8.0	9.5	7.0	6.0	6.5	13.0	7.0	9.0
28	16.5	13.0	14.0	10.5	7.5	8.5	7.0	6.5	6.5	8.5	6.5	7.0
29	15.5	12.5	14.0	9.5	7.0	8.0	7.0	6.5	7.0	6.5	6.5	6.5
30	16.5	14.5	20.5	8.5	7.5	8.0	8.0	7.0	7.5	8.0	6.5	7.0
31	15.0	12.0	13.5	---	---	---	8.0	7.0	8.0	7.0	6.0	6.5
MONTH	---	---	---	21.0	7.0	11.2	---	---	---	---	---	---

ARKANSAS RIVER BASIN

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	8.0	5.5	6.5	9.5	7.0	8.5	14.5	10.5	12.5	18.5	17.0	17.5
2	8.5	6.5	7.0	7.0	6.0	6.5	14.0	12.0	13.5	18.0	16.5	17.0
3	9.0	7.5	8.0	6.5	5.0	5.5	15.0	14.0	14.5	16.5	16.0	16.5
4	9.5	7.5	8.5	5.0	4.0	4.5	18.0	15.0	16.0	19.0	15.5	17.0
5	10.5	8.5	9.0	4.5	4.0	4.0	18.0	15.0	16.0	17.5	16.5	17.0
6	10.5	9.0	9.5	5.5	3.5	4.5	19.0	16.5	17.0	18.0	16.5	17.0
7	10.0	8.0	9.0	4.0	2.0	3.0	20.0	16.5	18.0	18.5	17.5	18.0
8	9.5	7.5	8.0	5.0	1.5	3.0	21.5	18.0	19.5	18.5	17.5	18.0
9	9.5	7.5	8.5	6.5	3.0	4.5	22.0	19.0	20.0	20.5	17.5	18.5
10	10.0	8.0	8.5	8.0	4.5	6.0	20.0	17.0	18.5	20.5	19.0	19.5
11	8.0	6.5	7.5	8.5	6.0	7.0	17.0	13.5	15.5	20.5	18.5	19.5
12	6.5	5.5	5.5	10.5	8.0	9.5	15.0	11.5	13.5	20.5	19.5	20.0
13	5.5	5.0	5.0	13.0	10.0	11.0	15.0	13.5	14.0	22.0	19.5	20.5
14	5.0	4.5	5.0	15.0	13.0	13.5	17.5	14.5	16.0	25.0	22.0	23.5
15	5.0	3.5	4.5	18.0	13.5	15.0	20.5	17.0	18.0	28.0	3.5	23.5
16	4.0	3.0	3.5	17.0	13.5	15.0	21.0	18.0	19.5	24.0	22.0	23.0
17	5.5	2.5	3.5	18.0	16.5	17.0	20.5	18.0	19.5	25.0	23.0	23.5
18	6.0	3.5	4.5	18.5	16.5	18.0	---	---	---	23.5	21.0	21.5
19	8.0	5.0	6.0	19.5	17.0	18.5	---	---	---	23.0	20.0	21.5
20	9.0	6.0	7.5	20.5	17.0	18.5	---	---	---	21.5	19.5	20.5
21	9.5	7.0	8.0	19.0	17.5	18.5	---	---	---	24.0	21.0	22.0
22	11.0	8.0	9.5	19.0	18.0	18.5	17.5	12.0	15.5	23.5	21.5	22.5
23	13.0	10.0	10.0	20.5	18.0	19.0	15.0	10.5	12.0	23.5	22.5	23.0
24	12.5	10.5	11.5	20.0	18.5	19.0	15.0	11.0	13.0	22.5	20.5	21.0
25	14.0	11.0	12.5	19.0	17.5	18.5	15.5	12.5	14.0	20.5	17.5	19.5
26	15.0	12.5	13.5	19.0	16.5	18.0	16.0	14.0	15.0	19.5	16.0	18.0
27	14.0	12.5	13.5	17.5	15.5	16.5	17.5	13.5	15.5	21.0	19.0	20.0
28	12.5	9.5	11.0	16.5	14.0	15.5	17.0	15.5	16.0	22.0	20.0	21.0
29	---	---	---	14.0	13.0	13.5	19.0	16.0	17.5	22.0	19.5	21.0
30	---	---	---	13.0	11.5	12.5	18.0	17.5	18.0	21.0	20.0	20.5
31	---	---	---	13.5	10.5	11.5	---	---	---	21.0	19.5	20.0
MONTH	15.0	2.5	8.0	20.5	1.5	12.1	---	---	---	28.0	3.5	20.0

ARKANSAS RIVER BASIN

309

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	24.5	20.5	22.5	25.0	23.0	24.0	29.0	27.5	28.0	30.0	28.0	28.5
2	24.5	23.5	24.0	24.0	23.0	23.5	27.5	23.5	25.0	29.0	27.5	28.5
3	25.5	24.0	24.5	25.5	23.0	24.0	25.0	24.0	24.5	28.5	27.5	28.0
4	24.5	17.5	19.5	26.0	24.0	25.0	27.0	25.0	26.0	29.0	26.5	27.5
5	21.5	19.0	20.0	27.5	24.5	26.0	27.5	25.5	26.5	28.0	26.5	27.0
6	23.5	20.5	22.0	27.5	25.5	26.0	29.0	27.0	27.5	27.5	26.0	27.0
7	26.5	23.5	25.0	28.0	25.5	26.5	29.5	28.0	29.0	27.5	26.0	26.5
8	28.0	26.5	27.0	28.5	27.0	27.5	29.5	27.5	29.0	26.0	24.5	25.0
9	27.5	21.5	22.5	29.5	27.5	28.0	29.5	28.5	29.0	25.5	24.0	24.5
10	23.5	21.5	22.0	30.0	27.5	28.5	29.0	28.0	28.0	24.0	22.5	23.5
11	22.0	20.5	21.0	30.5	28.0	29.0	29.0	27.5	28.5	23.0	22.0	22.5
12	23.0	20.0	21.5	30.5	29.0	29.5	29.5	27.5	28.5	23.0	22.0	22.5
13	24.0	21.5	23.0	31.0	29.5	30.0	29.5	27.5	28.5	24.0	22.0	22.5
14	25.0	22.5	24.0	31.0	29.5	30.0	29.5	28.0	28.5	24.5	23.0	23.5
15	25.0	23.5	24.5	30.5	29.5	30.0	29.0	28.0	28.5	24.5	24.0	24.5
16	25.0	24.5	25.0	30.5	29.0	29.5	29.0	28.0	28.5	24.5	24.0	24.0
17	26.0	25.0	25.0	31.0	29.0	30.0	28.0	27.5	28.0	25.0	23.0	23.5
18	26.0	24.5	25.0	30.5	29.0	30.0	28.5	27.0	28.0	24.0	22.5	23.0
19	25.5	24.5	25.0	30.0	28.5	29.0	29.5	28.0	28.5	24.5	22.0	23.0
20	26.0	25.0	25.5	30.0	29.0	29.5	30.0	28.5	29.0	22.0	21.0	21.5
21	26.5	25.5	26.0	30.0	28.5	29.0	31.0	29.0	30.0	21.0	15.5	18.5
22	27.0	26.0	26.5	30.5	28.5	29.0	30.0	28.5	29.0	18.0	17.0	17.5
23	28.0	26.0	27.0	30.5	29.0	29.5	29.5	28.5	29.0	18.0	16.5	17.0
24	27.5	25.5	26.5	28.5	25.0	26.5	29.0	27.5	28.0	16.5	14.0	15.0
25	26.0	24.0	25.5	27.5	25.0	26.0	28.0	27.0	27.5	15.5	14.5	15.0
26	27.0	24.0	25.5	28.0	27.0	27.5	28.5	27.5	28.0	16.5	15.5	16.0
27	26.0	24.5	25.0	29.0	27.5	28.5	---	---	---	18.0	16.5	17.5
28	27.0	25.5	26.0	30.5	28.5	29.5	---	---	---	21.0	18.0	19.5
29	27.5	26.5	27.0	31.0	29.5	30.0	---	---	---	22.5	21.0	22.0
30	26.5	24.5	25.0	30.5	29.5	30.0	---	---	---	23.5	22.0	22.5
31	---	---	---	---	---	---	29.0	28.0	28.5	---	---	---
MONTH	28.0	17.5	24.3	---	---	---	---	---	---	30.0	14.0	22.6

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

ARKANSAS RIVER BASIN 311
07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]



Discharge from air shaft pipe at Site 4

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	72	348	190	168	113	177	235	567	576	270	176
2	36	46	413	192	153	120	172	202	841	459	2670	162
3	36	42	434	170	150	124	173	188	619	412	2530	154
4	72	132	379	163	151	141	202	188	5790	388	2220	153
5	79	1320	289	163	141	122	278	179	8190	377	1720	144
6	68	380	256	164	142	119	148	1360	8910	371	2160	140
7	155	135	281	179	154	482	138	2470	6240	363	2650	139
8	301	99	721	177	148	191	145	4610	4530	357	1990	136
9	92	212	459	169	130	140	130	2510	13500	346	930	136
10	78	136	322	163	126	127	530	1340	10700	341	782	135
11	82	86	256	163	125	121	457	524	13100	340	447	136
12	90	73	221	161	126	119	266	473	7790	339	412	1030
13	89	70	221	161	126	667	199	455	7190	335	399	284
14	88	80	225	163	127	1260	196	427	4390	329	391	191
15	89	71	221	156	129	413	189	392	3160	325	380	240
16	95	65	285	153	125	348	185	181	1760	324	285	730
17	90	61	229	318	124	592	348	151	1660	314	258	362
18	294	61	212	179	122	509	996	192	1630	314	244	257
19	299	585	208	166	121	386	267	224	1030	314	271	470
20	77	3650	339	142	119	378	171	186	1060	313	289	154
21	67	2160	233	139	118	311	126	182	1010	311	284	253
22	58	3470	211	206	117	232	782	177	889	324	237	1150
23	48	1650	203	268	115	215	1340	166	784	319	218	2130
24	45	420	199	184	114	209	940	543	712	1550	190	1220
25	67	313	197	199	115	207	264	314	677	1670	170	646
26	63	267	195	353	113	268	223	6520	653	1190	182	803
27	46	244	194	394	113	275	254	6020	618	449	192	680
28	72	225	184	172	112	212	209	3160	601	379	192	719
29	48	209	175	166	---	184	203	1100	593	359	190	634
30	46	265	172	194	---	180	199	961	661	348	182	606
31	88	---	171	183	---	178	---	691	---	337	179	---
TOTAL	2894	16599	8453	5950	3624	8943	9907	36321	109855	14473	23514	14170
MEAN	93.4	553	273	192	129	288	330	1172	3662	467	759	472
MAX	301	3650	721	394	168	1260	1340	6520	13500	1670	2670	2130
MIN	36	42	171	139	112	113	126	151	567	311	170	135
AC-FT	5740	32920	16770	11800	7190	17740	19650	72040	217900	28710	46640	28110

ARKANSAS RIVER BASIN

315

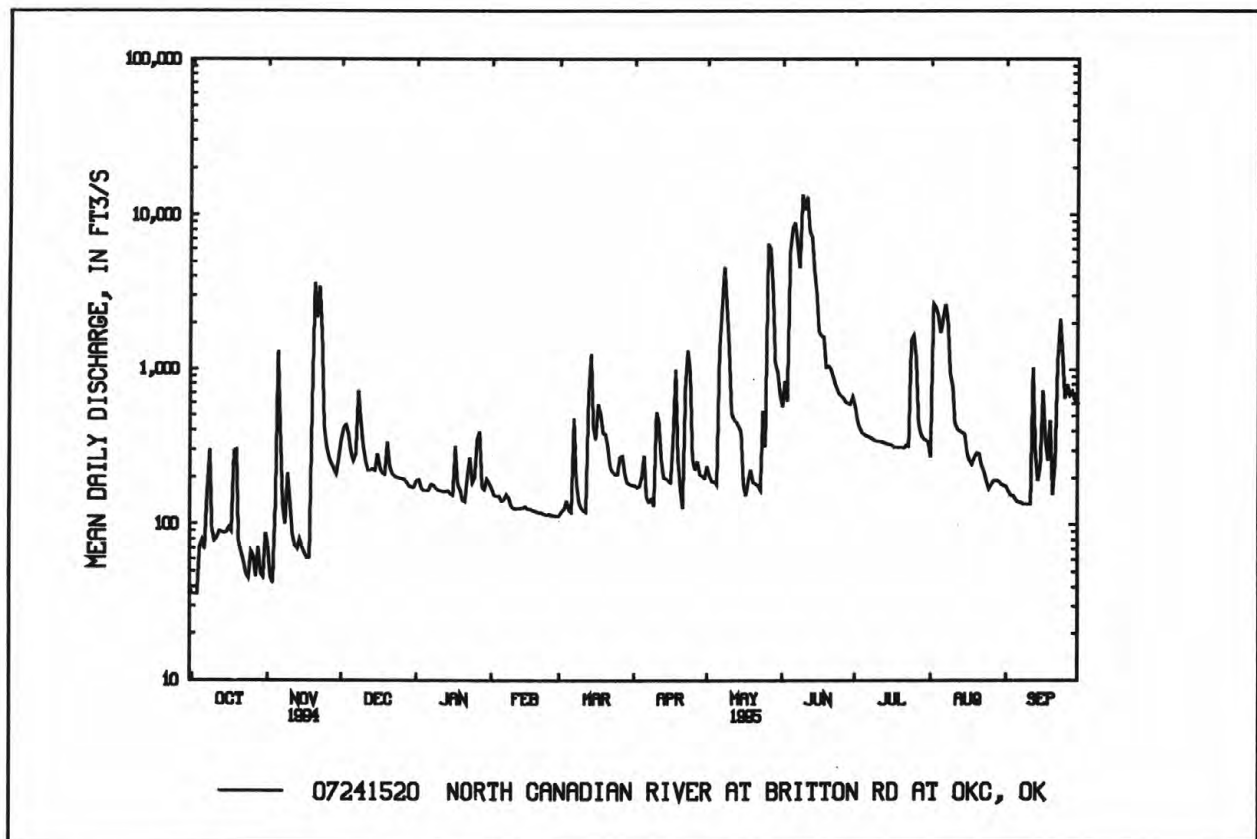
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	162	281	368	251	309	542	397	1202	1473	367	375	491
MAX	410	553	968	519	605	1993	786	4095	3662	1044	966	1350
(WY)	1990	1995	1992	1993	1993	1990	1990	1993	1995	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 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1989 - 95

ANNUAL TOTAL	103416	254703	
ANNUAL MEAN	283	698	518
HIGHEST ANNUAL MEAN			835
LOWEST ANNUAL MEAN			167
HIGHEST DAILY MEAN	3650	Nov 20	13500
LOWEST DAILY MEAN	36	Oct 1-3	36
ANNUAL SEVEN-DAY MINIMUM	39	Sep 27	55
INSTANTANEOUS PEAK FLOW			21900
INSTANTANEOUS PEAK STAGE			22.39
ANNUAL RUNOFF (AC-FT)	205100		505200
10 PERCENT EXCEEDS	527		1350
50 PERCENT EXCEEDS	135		221
90 PERCENT EXCEEDS	58		91
			375500
			1020
			205
			73



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, dissolved oxygen, and alkalinity were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum 2,630 microsiemens, July 18, 1990; minimum 117 microsiemens, Sept. 6, 1992.

pH: Maximum 9.1 units, June 27, 1991; minimum 6.3 units, Aug. 8, 1989.

WATER TEMPERATURE: Maximum 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.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum 1,720 microsiemens, Sept. 9,10; minimum 158 microsiemens, Nov. 20.

WATER TEMPERATURE: Maximum 34.0°C, Aug. 21; minimum 0.5°C, Jan. 7.

DISSOLVED OXYGEN: Maximum recorded (greater than 20 percent missing record), 17.0 mg/L, Apr. 4; minimum recorded, 1.5 mg/L, Aug. 23.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	SAMPLE LOC - ATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPER - ATURE WATER (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) (00400)
SEP											
26...	1050	80.0	15.5	732	1028	1028	831	11.16	792	8.5	8.0
26...	1053	90.0	15.5	732	1028	1028	831	11.16	812	8.7	8.0
26...	1056	100	15.5	732	1028	1028	831	11.16	800	8.7	8.0
26...	1059	110	15.0	732	1028	1028	831	11.16	800	8.5	8.0
26...	1102	120	15.0	732	1028	1028	831	11.16	804	8.8	8.0
26...	1105	130	15.0	732	1028	1028	831	11.16	802	8.8	8.0
26...	1108	15.0	15.0	732	1028	1028	831	11.16	798	8.4	8.0
26...	1111	30.0	15.0	732	1028	1028	831	11.16	803	8.7	8.0
26...	1114	45.0	15.0	732	1028	1028	831	11.16	804	9.0	8.0
26...	1117	60.0	15.0	732	1028	1028	831	11.16	819	9.2	8.1
26...	1120	75.0	15.0	732	1028	1028	831	11.16	808	9.1	8.1
26...	1123	90.0	15.0	732	1028	1028	831	11.16	805	8.9	8.1

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

317

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (000027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (000028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (000061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (000095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (000020)	TEMPER- ATURE WATER (DEG C) (000010)	TUR- BID- ITY (NTU) (000076)	BARO- METRIC PRES- SURE (MM OF HG) (000025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT												
04...	0830	1028	80020	37	1550	8.0	19.0	22.0	1.8	735	4.4	53
NOV												
08...	0830	1028	80020	99	757	8.1	18.5	14.0	14	729	8.1	83
DEC												
21...	1000	1028	80020	229	1290	8.1	4.5	7.0	15	737	10.3	89
JAN												
11...	0915	1028	80020	161	1510	8.3	9.0	6.5	2.9	725	11.1	96
FEB												
08...	0945	1028	80020	159	1460	8.5	0.0	4.5	3.8	745	10.6	84
MAR												
15...	0915	1028	80020	403	602	7.9	14.0	13.5	84	735	7.3	73
APR												
25...	0930	1028	80020	260	766	7.8	13.5	12.5	210	734	7.8	76
MAY												
16...	0930	1028	80020	174	1120	8.3	25.0	23.5	26	727	6.5	80
JUN												
21...	0845	1028	80020	1010	1180	8.4	25.0	25.0	32	731	6.2	79
JUL												
25...	0845	1028	80020	1850	750	7.9	25.5	25.0	170	730	4.9	62
AUG												
09...	0945	1028	80020	1020	582	8.0	28.0	28.0	130	729	6.0	80
SEP												
12...	1045	1028	80020	2320	433	7.7	22.5	20.5	280	732	4.5	52

DATE	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	OXYGEN DEMAND, BIO- CHEM- ICAL, (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
OCT												
04...	2.3	4.9	79	25	--	--	--	--	--	--	--	--
NOV												
08...	2.3	1.5	6000	470	220	48	60	18	64	38	2	6.2
DEC												
21...	1.4	1.9	1100	630	--	--	--	--	--	--	--	--
JAN												
11...	1.6	1.4	560	110	--	--	--	--	--	--	--	--
FEB												
08...	1.2	4.0	560	64	430	120	100	43	130	39	3	5.2
MAR												
15...	2.4	6.6	2600	2900	--	--	--	--	--	--	--	--
APR												
25...	2.6	13	5800	2100	--	--	--	--	--	--	--	--
MAY												
16...	1.2	7.2	480	220	360	89	90	32	96	36	2	7.3
JUN												
21...	--	5.7	190	220	--	--	--	--	--	--	--	--
JUL												
25...	1.0	7.8	>6000	890	--	--	--	--	--	--	--	--
AUG												
09...	0.69	2.5	750	870	190	51	54	14	39	30	1	6.7
SEP												
12...	1.5	4.2	>60000	K160000	--	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	BICAR- BONATE WATER DIS IT FIELD MG/L HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L 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, 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- PENDE MG/L (00530)
OCT 04...	294	0	241	--	--	--	--	--	--	--	--	24
NOV 08...	215	0	176	52	98	0.50	10	424	424	0.58	113	22
DEC 21...	312	0	256	--	--	--	--	--	--	--	--	31
JAN 11...	364	0	298	--	--	--	--	--	--	--	--	14
FEB 08...	358	9	308	220	160	0.70	10	918	860	1.25	394	7
MAR 15...	161	0	132	--	--	--	--	--	--	--	--	166
APR 25...	188	0	154	--	--	--	--	--	--	--	--	420
MAY 16...	317	5	268	--	110	--	6.5	682	--	--	--	84
JUN 21...	341	7	292	--	--	--	--	--	--	--	--	92
JUL 25...	167	0	137	--	--	--	--	--	--	--	--	432
AUG 09...	173	0	142	88	36	0.30	14	361	340	0.49	994	244
SEP 12...	83	0	*118	--	--	--	--	--	--	--	--	1060

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 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)
OCT 04...	1.53	1.53	6.8	0.070	0.23	1.60	1.60	0.090	0.12	0.61	0.70
NOV 08...	1.55	1.55	6.9	0.050	0.16	1.60	1.60	0.280	0.36	0.42	0.70
DEC 21...	0.950	0.950	4.2	0.050	0.16	1.00	1.00	0.130	0.17	0.27	0.40
JAN 11...	1.16	1.16	5.1	0.040	0.13	1.20	1.20	0.140	0.18	0.26	0.40
FEB 08...	0.780	0.780	3.5	0.040	0.13	0.820	0.820	0.020	0.03	0.38	0.40
MAR 15...	1.13	1.13	5.0	0.070	0.23	1.20	1.20	0.320	0.41	0.88	1.2
APR 25...	1.39	1.39	6.2	0.110	0.36	1.50	1.50	0.520	0.67	0.58	1.1
MAY 16...	0.560	0.560	2.5	0.020	0.07	0.580	0.580	<0.015	--	--	0.60
JUN 21...	--	--	--	<0.010	--	--	<0.050	0.020	0.03	0.38	0.40
JUL 25...	0.570	0.570	2.5	0.030	0.10	0.600	0.600	0.030	0.04	0.37	0.40
AUG 09...	0.280	0.280	1.2	0.010	0.03	0.290	0.290	<0.015	--	--	0.40
SEP 12...	0.670	0.670	3.0	0.030	0.10	0.700	0.700	0.340	0.44	0.46	0.80

* ALKALINITY, LAB (MG/L AS CaCO₃)

[illegible]

[illegible]

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

321

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	CYAN- AZINE TOTAL (UG/L) (81757)	2,4-D, TOTAL (UG/L) (39730)	P,P'- DDD UNFILT RECOVER (UG/L) (39360)	P,P'- DDT UNFILT RECOVER (UG/L) (39370)	DEF TOTAL (UG/L) (39040)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	DISUL- FOTON UNFILT RECOVER (UG/L) (39011)	2, 4-DP TOTAL (UG/L) (82183)	ENDO- SULFAN, I TOTAL (UG/L) (39388)
OCT 04...	--	--	--	--	--	--	--	--	--	--
NOV 08...	<0.200	0.110	<0.001	<0.001	<0.001	<0.010	0.030	<0.001	<0.010	0.080
DEC 21...	--	--	--	--	--	--	--	--	--	--
JAN 11...	--	--	--	--	--	--	--	--	--	--
FEB 08...	<0.200	0.010	<0.001	<0.001	<0.001	<0.010	0.010	<0.001	<0.010	<0.010
MAR 15...	--	--	--	--	--	--	--	--	--	--
APR 25...	--	--	--	--	--	--	--	--	--	--
MAY 16...	<0.200	0.180	<0.001	<0.001	<0.001	<0.010	0.020	0.001	<0.010	<0.010
JUN 21...	--	--	--	--	--	<0.010	0.010	--	<0.010	--
JUL 25...	--	--	--	--	--	<0.010	0.180	--	<0.010	--
AUG 09...	<0.200	--	<0.001	<0.001	<0.001	<0.010	<0.010	<0.001	<0.010	--
SEP 12...	--	--	--	--	--	<0.010	0.210	--	<0.010	--

DATE	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METHYL PARA- THION, TOTAL (UG/L) (39600)	MIREX, TOTAL (UG/L) (39755)	PARA- THION, TOTAL (UG/L) (39540)	PER- THANE TOTAL (UG/L) (39034)
OCT 04...	--	--	--	--	--	--	--	--	--	--	--
NOV 08...	<0.001	<0.010	<0.001	0.001	0.007	<0.010	<0.010	<0.010	<0.010	<0.010	<0.100
DEC 21...	--	--	--	--	--	--	--	--	--	--	--
JAN 11...	--	--	--	--	--	--	--	--	--	--	--
FEB 08...	<0.001	<0.010	<0.001	<0.001	0.002	<0.010	<0.010	<0.010	<0.010	<0.010	<0.100
MAR 15...	--	--	--	--	--	--	--	--	--	--	--
APR 25...	--	--	--	--	--	--	--	--	--	--	--
MAY 16...	<0.001	<0.010	<0.001	<0.001	0.004	<0.010	<0.010	<0.010	<0.010	<0.010	<0.100
JUN 21...	--	<0.010	--	--	--	<0.010	--	<0.010	--	<0.010	--
JUL 25...	--	<0.010	--	--	--	0.010	--	<0.010	--	<0.010	--
AUG 09...	<0.001	<0.010	<0.001	<0.001	0.001	<0.010	<0.010	<0.010	<0.010	<0.010	<0.100
SEP 12...	--	<0.010	--	--	--	E0.160	--	0.010	--	<0.010	--

E Malathion was above the control limits in the set spike; therefore, there is a possibility that the malathion value is slightly high. The compound was definitely detected, but the value may not be exact.

[illegible]

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

323

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1530	1450	1480	1000	861	911	1150	788	909	1590	1490	1550
2	1530	1400	1490	1310	1000	1160	1370	1150	1230	1530	1430	1480
3	1550	1460	1510	1520	1310	1430	1410	1360	1390	1580	1510	1540
4	1670	1110	1480	1460	502	1290	1390	1340	1360	1580	1550	1560
5	1410	1180	1330	502	192	301	1460	1380	1410	1580	1530	1560
6	1600	1400	1510	368	248	296	1450	1320	1380	1590	1560	1570
7	1690	456	1430	676	368	513	1470	1370	1420	1600	1400	1550
8	787	366	515	965	676	817	1470	483	944	1550	1400	1500
9	1380	787	1160	1070	478	832	1240	695	1070	1560	1540	1550
10	1490	1380	1440	693	454	552	1330	1210	1260	1560	1530	1540
11	1620	1480	1550	975	693	856	1340	1290	1320	1560	1520	1540
12	1650	1560	1620	1210	975	1120	1430	1270	1350	1570	1520	1540
13	1630	1570	1600	1360	1170	1290	1470	1430	1460	1560	1540	1540
14	1630	1600	1620	1470	1140	1330	1510	1470	1480	1560	1480	1540
15	1640	1600	1620	1310	1140	1240	1520	1490	1510	1560	1460	1520
16	1630	1550	1580	1390	1280	1370	1500	1150	1350	1570	1500	1550
17	1630	1570	1610	1490	1360	1410	1490	1260	1400	1510	870	1150
18	1630	411	1260	1550	1410	1480	1520	1490	1510	1380	1080	1260
19	541	432	510	1420	217	878	1530	1510	1520	1500	1380	1420
20	810	456	473	282	158	192	1530	825	1230	1520	1430	1480
21	1100	810	971	825	190	374	1400	1050	1290	1520	1480	1500
22	1230	974	1040	1110	464	1010	1460	1400	1440	1480	1140	1370
23	1420	1230	1330	1060	929	992	1480	1450	1470	1260	996	1070
24	1490	1390	1450	1020	991	1010	1510	1480	1500	1350	1180	1300
25	1550	1050	1430	1060	1020	1040	1520	1500	1510	1360	1280	1320
26	1050	874	953	1070	1020	1040	1540	1520	1530	1370	605	1250
27	1330	1030	1200	1150	1050	1100	1530	1500	1520	741	544	628
28	1510	1230	1350	1210	1150	1170	1540	1510	1520	1110	741	967
29	1380	1240	1310	1260	1180	1210	1550	1530	1540	1460	1100	1270
30	1490	1320	1420	1590	999	1310	1560	1530	1550	1380	1310	1350
31	1480	861	1320	---	---	---	1560	1540	1550	1390	1340	1380
MONTH	1690	366	1310	1590	158	984	1560	483	1380	1600	544	1400

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 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1430	1380	1400	1500	1460	1480	---	---	---	1250	1080	1170
2	1450	1430	1440	1460	1440	1450	---	---	---	1220	1140	1190
3	1450	1430	1440	1640	1450	1550	---	---	---	1280	1220	1260
4	1450	1390	1430	2070	1560	1790	---	---	---	1310	1260	1280
5	1480	1390	1450	1580	1520	1540	---	---	---	1340	1280	1300
6	1480	1460	1470	1520	1440	1500	1390	1330	1360	1280	282	599
7	1490	1460	1480	1440	522	772	1390	1350	1370	737	239	485
8	1490	1440	1470	750	581	664	1420	1340	1370	514	209	343
9	1520	1470	1500	982	750	863	1420	1310	1380	688	514	598
10	1530	1480	1510	1070	982	1030	1410	446	1070	784	647	723
11	1510	1490	1500	1140	1060	1120	622	429	515	1140	780	977
12	1530	1490	1510	1160	1120	1140	910	622	758	1140	770	838
13	1540	1480	1510	1120	527	790	1010	910	952	938	822	881
14	1540	1470	1510	571	437	502	1120	952	1060	990	938	966
15	1520	1480	1500	753	571	668	1220	1110	1160	1100	988	1030
16	1520	1490	1510	1060	753	838	1310	1220	1280	1240	1100	1150
17	1500	1480	1490	859	639	750	1320	776	1220	1340	1170	1270
18	1510	1480	1500	893	703	767	776	468	580	1230	1180	1220
19	1510	1480	1500	811	744	788	676	642	654	1250	1150	1200
20	1500	1460	1480	837	776	815	888	673	766	1300	1220	1270
21	1500	1450	1470	930	825	873	1050	888	937	1330	1240	1290
22	1490	1460	1470	993	908	950	1110	461	924	1290	1190	1250
23	1500	1450	1480	1020	966	996	583	429	461	1310	1230	1270
24	1490	1460	1480	1100	1020	1060	725	583	662	1290	622	1030
25	1500	1460	1480	1170	1030	1110	827	725	758	1040	650	823
26	1510	1460	1480	1180	1030	1120	988	827	916	1090	188	560
27	1490	1470	1480	1210	1110	1160	1040	970	994	590	457	510
28	1500	1470	1490	1200	1100	1140	1110	1000	1060	623	245	527
29	---	---	---	1190	1140	1170	1180	1110	1150	684	610	637
30	---	---	---	1230	1160	1200	1220	1160	1190	716	495	604
31	---	---	---	---	---	---	---	---	---	824	687	750
MONTH	1540	1380	1480	---	---	---	---	---	---	1340	188	936

325

[illegible]

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	26.0	19.0	22.0	15.5	11.0	13.5	8.5	6.5	7.5	---	---	---
2	25.5	20.0	22.5	16.5	11.5	14.0	9.5	7.0	8.0	---	---	---
3	27.0	20.5	23.5	22.0	16.0	19.0	11.5	9.5	10.5	---	---	---
4	26.5	21.5	24.0	19.5	13.5	16.0	13.5	11.5	12.5	3.0	1.0	2.0
5	24.5	21.5	23.0	13.5	10.0	11.0	13.0	9.0	10.5	2.5	1.0	2.0
6	---	---	---	13.0	9.5	11.5	10.5	8.5	9.5	4.0	2.5	3.0
7	21.5	16.5	19.0	15.5	11.5	13.5	10.5	8.0	9.0	3.0	.5	2.0
8	18.5	15.5	17.0	18.5	14.0	16.5	8.0	5.0	6.5	5.0	2.5	3.5
9	19.5	14.0	16.5	18.0	11.5	14.0	6.0	4.5	5.0	7.0	3.5	5.5
10	20.0	14.0	17.0	13.5	10.5	12.0	6.0	4.5	5.5	9.0	6.5	8.0
11	19.5	14.0	17.0	15.0	11.5	13.0	5.5	4.0	4.5	9.5	6.5	8.5
12	20.0	14.0	17.5	13.5	11.0	12.5	5.0	3.0	4.0	9.5	8.0	9.0
13	21.5	17.5	19.5	15.0	12.5	14.0	6.0	4.5	5.0	9.0	8.0	8.5
14	20.0	17.0	18.5	15.5	14.5	15.0	7.0	6.0	6.5	8.5	6.0	7.5
15	18.0	16.0	16.5	15.0	12.0	13.5	7.0	6.0	6.5	8.5	5.5	7.0
16	19.0	16.0	17.5	12.5	10.0	10.5	9.0	7.0	8.0	10.0	7.0	8.5
17	20.5	19.0	19.5	13.0	12.5	12.0	8.0	6.0	7.0	10.0	8.0	9.0
18	21.5	19.5	20.0	13.0	10.0	11.5	8.0	6.0	7.0	8.0	3.5	5.5
19	22.5	18.5	20.5	13.0	12.5	13.0	9.5	6.5	8.0	7.0	1.0	4.5
20	---	---	---	14.5	12.5	14.0	10.0	8.5	9.5	7.5	4.5	6.0
21	26.0	19.5	20.5	12.5	11.0	12.0	9.0	5.0	8.0	7.5	5.5	6.5
22	22.5	17.0	19.5	11.5	10.0	10.5	8.0	6.0	7.0	6.5	2.5	4.0
23	21.0	16.0	18.5	10.0	9.5	9.5	7.5	6.0	7.0	5.0	2.0	3.5
24	19.0	17.0	18.0	9.5	8.5	9.5	7.5	6.0	6.5	7.0	3.5	5.5
25	17.0	13.5	15.0	11.0	9.5	10.0	7.5	4.5	6.0	9.0	5.5	7.5
26	16.5	11.0	14.0	13.0	11.0	11.5	8.0	5.5	7.0	8.5	7.5	8.0
27	17.0	11.5	14.0	14.0	11.5	13.0	9.0	6.5	7.5	11.0	8.0	9.5
28	15.5	12.0	14.0	11.5	9.0	10.0	9.0	8.5	8.5	10.5	6.0	8.0
29	16.0	12.5	14.5	9.5	8.0	8.5	8.5	8.0	8.5	---	---	---
30	18.5	15.5	17.0	8.5	7.0	7.5	9.0	7.5	8.5	---	---	---
31	17.5	13.5	15.0	---	---	---	9.0	7.0	8.5	8.0	5.0	6.5
MONTH	---	---	---	22.0	7.0	12.4	13.5	3.0	7.5	---	---	---

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

327

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	10.5	6.0	8.5	5.5	1.5	3.5	---	---	---	17.0	15.0	16.0
2	12.5	8.5	10.5	2.5	1.5	2.0	19.5	13.5	16.5	16.5	13.5	15.0
3	12.0	9.0	10.0	6.5	2.0	4.0	17.0	14.0	15.0	16.0	14.0	15.0
4	10.0	6.0	8.5	6.5	5.5	6.0	18.5	13.0	15.5	21.5	14.0	17.5
5	---	---	---	7.0	6.5	6.5	19.0	14.0	16.5	20.0	16.0	18.0
6	10.0	7.0	8.5	10.0	7.0	8.5	20.5	14.5	17.5	17.5	16.0	16.5
7	10.0	6.5	8.5	8.5	4.5	5.5	22.0	15.5	18.5	17.5	17.0	17.5
8	8.5	4.5	7.0	7.5	2.0	4.5	23.5	16.5	20.0	18.5	16.5	17.5
9	10.0	6.0	8.0	10.5	5.0	8.0	22.0	17.5	19.5	20.0	17.0	18.5
10	11.0	7.5	9.0	12.0	7.0	9.5	19.5	11.0	14.5	20.5	17.0	19.0
11	9.0	4.5	6.5	13.0	9.0	11.0	14.5	8.0	11.0	22.0	17.5	19.5
12	4.5	2.0	2.5	15.0	12.0	13.5	17.5	11.5	14.5	21.5	19.0	19.5
13	3.5	2.0	2.5	14.5	13.5	13.5	19.5	12.5	16.0	26.0	20.0	22.5
14	5.0	3.5	4.0	14.0	12.5	13.5	20.0	14.5	17.0	25.0	22.0	24.0
15	7.5	5.0	6.5	16.5	13.5	15.0	20.5	15.0	18.0	25.5	21.5	23.5
16	6.0	4.0	4.5	18.0	13.5	15.5	23.0	19.0	20.5	25.5	23.5	24.0
17	8.5	3.0	5.5	18.5	14.0	16.0	21.5	16.0	18.0	25.5	21.5	23.0
18	9.5	6.0	8.0	18.5	15.0	17.0	19.0	16.0	17.0	23.5	18.0	20.0
19	12.0	7.5	10.0	19.5	16.0	17.5	18.0	14.5	16.0	25.0	17.0	20.5
20	13.5	8.5	11.5	19.0	15.5	17.5	21.0	14.0	17.0	26.0	20.0	23.0
21	13.5	10.0	12.0	20.0	15.0	17.5	21.5	15.0	18.0	27.0	21.0	24.0
22	13.5	10.0	12.0	21.5	17.5	19.5	17.5	9.5	12.5	27.5	22.0	24.5
23	15.0	11.0	13.0	20.5	16.0	18.5	13.0	10.0	11.0	25.5	21.0	22.0
24	13.5	10.0	12.0	20.5	15.0	18.0	15.0	10.5	12.5	21.0	17.5	19.0
25	15.0	10.0	12.5	18.5	16.0	17.0	18.5	12.5	15.0	17.5	17.0	17.0
26	16.5	13.0	14.5	19.0	15.5	17.0	17.5	14.0	16.0	20.0	17.0	18.0
27	15.5	12.0	14.5	---	---	---	17.5	11.5	14.5	22.0	19.5	20.5
28	12.0	5.5	8.5	---	---	---	17.5	14.0	16.0	23.0	20.5	21.5
29	---	---	---	---	---	---	20.5	15.5	18.0	22.5	21.0	21.5
30	---	---	---	---	---	---	19.5	17.0	17.5	21.5	20.5	21.0
31	---	---	---	---	---	---	---	---	---	25.0	20.5	22.5
MONTH	---	---	---	---	---	---	---	---	---	27.5	13.5	20.0

MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER		

[illegible]

329

[illegible]

ARKANSAS RIVER BASIN
07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	11.7	9.4	11.0	14.0	10.8	12.3	15.8	9.3	12.1	9.7	6.8	8.2
2	12.1	9.1	10.2	13.9	12.1	12.9	16.0	8.8	11.9	11.3	7.1	9.0
3	12.5	8.6	10.3	13.6	11.3	12.5	13.6	8.1	10.8	10.2	7.2	8.5
4	13.0	9.4	10.8	11.5	9.8	10.7	17.0	8.2	11.8	11.8	7.2	9.2
5	12.7	8.8	10.6	12.3	9.5	10.7	12.3	6.1	9.1	12.6	6.4	8.7
6	12.9	9.3	10.7	12.6	9.1	10.5	14.3	7.3	10.0	7.1	4.8	5.7
7	13.1	9.0	10.8	10.2	7.3	9.3	13.1	7.0	9.7	6.0	5.4	5.8
8	13.7	10.3	11.7	11.2	9.7	10.6	13.7	6.4	9.3	6.0	5.7	5.9
9	13.8	9.9	11.5	10.6	8.8	9.9	12.9	6.1	8.8	6.3	5.8	6.1
10	14.6	9.5	11.5	10.6	8.3	9.4	7.4	5.2	6.8	6.9	6.1	6.5
11	15.0	9.9	12.2	11.0	8.1	9.3	8.8	6.5	7.7	7.4	6.3	6.8
12	15.0	11.8	13.3	10.6	7.6	8.7	11.2	7.3	8.7	7.7	6.4	7.1
13	15.2	12.5	13.7	7.6	4.3	6.1	12.3	7.1	9.2	9.8	7.0	8.1
14	14.5	12.1	13.1	7.2	6.1	6.8	12.4	6.4	9.0	14.0	6.5	9.6
15	15.2	11.1	12.9	7.7	6.8	7.3	13.8	6.2	9.4	15.1	6.5	10.3
16	15.6	11.7	13.3	8.1	6.7	7.6	13.2	5.7	8.8	11.7	5.7	8.4
17	15.8	12.1	13.8	7.4	6.2	6.8	7.9	5.0	6.0	16.2	5.8	9.9
18	16.0	11.0	13.1	7.9	6.9	7.4	6.5	4.5	5.6	13.7	6.0	9.5
19	16.4	10.3	12.9	8.4	7.2	7.8	7.8	6.3	7.0	13.2	6.9	9.7
20	16.5	9.9	12.6	9.9	7.4	8.6	7.3	5.9	6.9	14.7	5.7	9.4
21	16.3	9.5	12.3	12.6	8.0	9.7	7.0	5.8	6.5	14.6	5.1	8.9
22	15.0	8.7	11.5	14.1	7.5	10.1	9.4	6.9	8.0	13.1	4.6	8.3
23	15.4	8.3	11.3	14.3	7.4	10.3	8.9	8.3	8.6	8.3	4.6	6.1
24	15.9	8.5	11.6	13.5	7.7	10.2	8.6	6.1	8.0	5.8	3.9	5.1
25	14.6	8.6	11.1	11.5	7.6	9.3	7.9	6.2	7.4	7.6	5.8	6.9
26	14.0	7.7	10.1	12.0	6.9	9.1	8.9	7.5	8.3	7.4	6.3	6.8
27	12.4	6.8	9.1	13.8	8.6	10.9	10.2	8.2	9.2	6.7	6.3	6.5
28	13.2	8.4	10.7	13.7	8.9	11.4	12.9	8.1	10.0	7.1	6.5	6.8
29	---	---	---	14.7	10.5	12.2	15.5	7.3	10.5	7.5	6.5	7.0
30	---	---	---	14.1	10.3	12.0	12.6	6.7	9.2	7.4	6.8	7.1
31	---	---	---	14.3	10.2	12.1	---	---	---	7.5	6.6	7.1
MONTH	16.5	6.8	11.7	14.7	4.3	9.8	17.0	4.5	8.8	16.2	3.9	7.7

331

[illegible]

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.--No estimated daily discharges. Records fair. Flow regulated by Canton Lake (station 07238500) and by Lake Overholser (station 07240500) where diversions are made into Lake Hefner Canal (station 07240000). Low flow sustained in part by sewage effluent from Oklahoma City. U.S. Geological Survey's satellite telemeter located at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	118	200	285	203	272	165	287	339	994	893	530	286
2	108	168	321	225	252	173	275	344	1130	770	2830	283
3	106	132	424	228	232	178	270	310	1250	599	2970	276
4	106	134	416	221	224	196	277	305	4360	558	3000	272
5	165	1100	338	209	224	207	323	296	8030	524	2200	270
6	170	1310	275	206	220	187	328	930	9730	504	2480	273
7	163	402	262	212	221	425	246	3010	7600	493	3090	273
8	489	264	519	223	228	466	229	5860	5430	475	3090	266
9	321	233	802	219	226	262	222	3160	8630	453	1680	268
10	208	374	442	219	215	217	254	2010	15300	438	1560	268
11	178	250	333	208	214	201	878	1280	11900	437	1160	267
12	189	197	282	207	206	187	516	792	10700	429	881	612
13	193	167	261	195	200	509	332	773	7440	428	816	959
14	191	140	262	196	213	2050	294	722	5370	421	765	383
15	193	157	260	197	211	1070	280	696	3730	410	748	322
16	201	144	263	196	196	472	275	590	2530	392	664	658
17	201	140	296	265	203	805	286	387	1960	392	478	827
18	208	135	236	343	201	598	953	373	2000	389	428	545
19	681	231	228	235	200	620	848	404	1660	358	408	674
20	349	3750	253	212	193	528	353	401	1330	359	445	471
21	205	2450	370	198	189	495	296	367	1360	360	442	320
22	181	3610	268	203	179	402	389	365	1300	365	419	607
23	155	2860	249	332	179	346	2030	354	1110	381	354	2000
24	137	894	243	298	177	330	1330	448	1040	1010	328	1620
25	133	451	234	276	176	321	717	831	940	2080	278	876
26	167	359	225	281	168	335	384	3800	908	1880	260	960
27	162	302	227	669	163	357	356	8710	868	1140	275	740
28	136	270	229	361	169	360	385	4740	841	599	281	928
29	165	255	217	257	---	313	333	2140	817	557	284	776
30	135	237	206	266	---	296	331	1310	849	541	289	738
31	129	---	204	279	---	295	---	1090	---	534	287	---
TOTAL	6243	21316	9430	7839	5751	13366	14277	47137	121107	19169	33720	18018
MEAN	201	711	304	253	205	431	476	1521	4037	618	1088	601
MAX	681	3750	802	669	272	2050	2030	8710	15300	2080	3090	2000
MIN	106	132	204	195	163	165	222	296	817	358	260	266
AC-FT	12380	42280	18700	15550	11410	26510	28320	93500	240200	38020	66880	35740

ARKANSAS RIVER BASIN

333

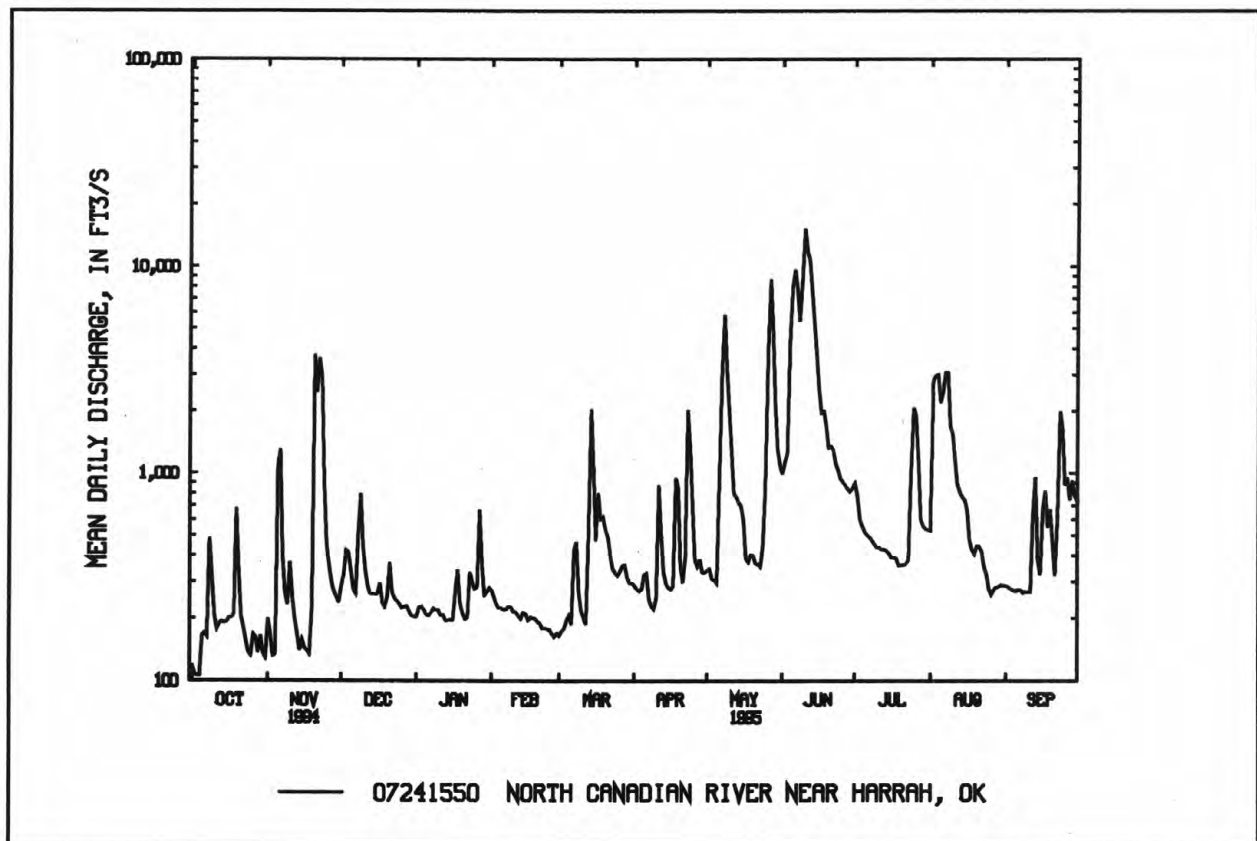
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	410	368	292	273	333	530	488	978	948	346	251	318
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 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1969 - 95

ANNUAL TOTAL	153095	317373	
ANNUAL MEAN	419	870	461
HIGHEST ANNUAL MEAN			1322
LOWEST ANNUAL MEAN			93.0
HIGHEST DAILY MEAN	3750	Nov 20	15300
LOWEST DAILY MEAN	106	Oct 3,4	106
ANNUAL SEVEN-DAY MINIMUM	115	Sep 28	134
INSTANTANEOUS PEAK FLOW			17700
INSTANTANEOUS PEAK STAGE			19.26
ANNUAL RUNOFF (AC-FT)	303700	629500	334300
10 PERCENT EXCEEDS	834	2000	1000
50 PERCENT EXCEEDS	233	333	200
90 PERCENT EXCEEDS	135	180	69



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 were analyzed by The University of Iowa Hygienic Laboratory. Chlorophyll data for water years 1991 to 1995 are published in this report.

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.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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)
SEP											
26...	1350	7.00	18.0	733	1028	1028	1120	7.30	658	7.9	7.9
26...	1353	27.0	17.5	733	1028	1028	1120	7.30	657	8.0	7.9
26...	1356	47.0	17.5	733	1028	1028	1120	7.30	653	8.0	7.9
26...	1359	67.0	17.5	733	1028	1028	1120	7.30	670	8.0	8.0
26...	1405	122	17.5	733	1028	1028	1120	7.30	651	7.8	8.0
26...	1408	137	17.5	733	1028	1028	1120	7.30	649	8.1	8.0
26...	1411	152	17.5	733	1028	1028	1120	7.30	648	8.0	8.0
26...	1414	167	17.5	733	1028	1028	1120	7.30	647	8.2	8.0
26...	1417	182	17.5	733	1028	1028	1120	7.30	647	8.0	8.0
26...	1420	197	17.5	733	1028	1028	1120	7.30	647	7.8	7.9

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

335

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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												
04...	0945	1028	80020	115	1110	*8.3	22.0	23.0	2.0	737	8.0	97
NOV												
08...	1000	1028	80020	249	608	8.0	20.5	15.0	49	730	8.6	90
DEC												
21...	1115	1028	80020	376	925	8.1	7.5	9.5	43	738	9.7	88
JAN												
11...	1030	1028	80020	206	1270	8.2	14.0	8.5	5.7	726	11.8	106
FEB												
08...	1115	1028	80020	218	1250	*8.4	3.0	7.5	7.8	745	11.8	101
MAR												
15...	1015	1028	80020	1110	603	7.9	16.5	14.0	160	736	8.0	81
APR												
25...	1115	1028	80020	675	744	7.9	17.5	13.5	170	736	8.4	84
MAY												
16...	1100	1028	80020	625	952	8.3	26.0	24.0	48	725	8.3	104
JUN												
21...	1115	1028	80020	1400	1090	8.3	30.0	26.0	57	732	8.0	103
JUL												
25...	1015	1028	80020	1740	594	7.9	29.5	25.5	280	730	4.7	60
AUG												
09...	1100	1028	80020	1400	553	7.9	30.5	29.0	150	731	5.9	80
SEP												
12...	1145	1028	80020	310	1160	8.2	24.0	22.5	53	733	8.6	104

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

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB FLD. AS 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, DIS- SOLVED (MG/L AS NA) (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
OCT												
04...	5.9	5.5	240	200	--	--	--	--	--	--	--	--
NOV												
08...	3.1	2.5	5800	810	160	45	42	13	56	42	2	7.0
DEC												
21...	2.5	5.9	5700	3300	--	--	--	--	--	--	--	--
JAN												
11...	0.63	2.5	2600	250	--	--	--	--	--	--	--	--
FEB												
08...	2.7	7.2	K19000	1600	350	98	85	34	120	42	3	7.3
MAR												
15...	2.5	9.7	7500	K14000	190	55	48	17	49	--	2	--
APR												
25...	3.0	9.8	K7700	3500	--	--	--	--	--	--	--	--
MAY												
16...	2.1	7.0	180	180	300	70	76	26	82	37	2	7.7
JUN												
21...	0.70	6.0	220	210	--	--	--	--	--	--	--	--
JUL												
25...	1.4	8.0	33000	1500	--	--	--	--	--	--	--	--
AUG												
09...	1.2	2.0	720	950	180	49	50	13	40	32	1	7.9
SEP												
12...	3.4	9.0	3000	4500	300	93	74	28	110	--	3	--
DATE	BICAR- BONATE WATER DIS IT FIELD HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD 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												
04...	210	0	172	--	--	--	--	640	--	--	--	42
NOV												
08...	139	0	114	65	75	0.60	7.9	359	348	0.49	241	70
DEC												
21...	205	0	168	--	--	--	--	544	--	--	--	126
JAN												
11...	295	0	242	--	--	--	--	787	--	--	--	25
FEB												
08...	312	0	256	160	140	0.80	9.7	808	722	1.10	476	27
MAR												
15...	165	0	135	--	--	--	9.2	365	--	--	--	384
APR												
25...	181	0	148	--	--	--	--	464	--	--	--	440
MAY												
16...	272	3	228	--	89	--	6.0	592	--	--	--	146
JUN												
21...	311	12	274	--	--	--	--	669	--	--	--	180
JUL												
25...	150	0	123	--	--	--	--	356	--	--	--	580
AUG												
09...	159	0	130	78	38	0.40	13	340	323	0.46	1290	320
SEP												
12...	254	0	208	--	--	--	12	708	--	--	--	190

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

337

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	NITRO- GEN, NITRATE	NITRO- GEN, DIS- SOLVED	NITRO- GEN, DIS- SOLVED	NITRO- GEN, DIS- SOLVED	NITRO- GEN, DIS- SOLVED	NITRO- GEN, NO2+NO3	NITRO- GEN, NO2+NO3	NITRO- GEN, AMMONIA	NITRO- GEN, AMMONIA	NITRO- GEN, AMMONIA	NITRO- GEN, AMMONIA	PHOS- PHORUS
	(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												
04...	5.16	5.16	23	0.040	0.13	5.20	5.20	0.020	0.03	0.68	0.70	0.920
NOV												
08...	2.40	2.40	11	0.100	0.33	2.50	2.50	0.200	0.26	0.40	0.60	0.320
DEC												
21...	1.61	1.61	7.1	0.090	0.30	1.70	1.70	0.420	0.54	0.38	0.80	0.220
JAN												
11...	0.300	0.300	1.3	0.030	0.10	0.330	0.330	0.070	0.09	0.23	0.30	0.060
FEB												
08...	1.65	1.65	7.3	0.050	0.16	1.70	1.70	0.540	0.70	0.46	1.0	0.780
MAR												
15...	1.54	1.54	6.8	0.060	0.20	1.60	1.60	0.190	0.24	0.71	0.90	0.170
APR												
25...	2.14	2.14	9.5	0.060	0.20	2.20	2.20	0.180	0.23	0.62	0.80	0.170
MAY												
16...	1.48	1.48	6.6	0.020	0.07	1.50	1.50	<0.015	--	--	0.60	0.360
JUN												
21...	0.280	0.280	1.2	0.020	0.07	0.300	0.300	0.020	0.03	0.38	0.40	0.160
JUL												
25...	0.600	0.600	2.7	0.060	0.20	0.660	0.660	0.310	0.40	0.39	0.70	0.090
AUG												
09...	0.690	0.690	3.1	0.020	0.07	0.710	0.710	0.040	0.05	0.46	0.50	0.220
SEP												
12...	2.78	2.78	12	0.020	0.07	2.80	2.80	<0.015	--	--	0.60	0.210
DATE	PHOS- PHORUS	PHOS- PHATE,	ARSENIC	BARIUM,	BERYL-	CADMIUM	CHRO-	COBALT,	COPPER,	IRON,	LEAD,	
	ORTH,	ORTH,	DIS-	DIS-	LIUM,	DIS-	MIUM,	DIS-	DIS-	DIS-	DIS-	
	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	
	(MG/L	(MG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	
DATE	AS P)	AS PO4)	AS AS)	AS BA)	AS BE)	AS CD)	AS CR)	AS CO)	AS CU)	AS FE)	AS PB)	
	(00671)	(00660)	(01000)	(01005)	(01010)	(01025)	(01030)	(01035)	(01040)	(01046)	(01049)	
OCT												
04...	0.960	2.9	--	--	--	--	--	--	--	--	--	
NOV												
08...	0.310	0.95	3	110	0.7	<1.0	<5	<3	<10	25	<10	
DEC												
21...	0.210	0.64	2	--	--	--	--	--	--	--	--	
JAN												
11...	0.050	0.15	--	--	--	--	--	--	--	--	--	
FEB												
08...	0.820	2.5	2	160	<0.5	1.0	<5	7	<10	27	20	
MAR												
15...	0.160	0.49	3	130	0.5	<1.0	<5	<3	<10	88	<10	
APR												
25...	0.160	0.49	--	--	--	--	--	--	--	--	--	
MAY												
16...	0.330	1.0	4	160	<0.5	<1.0	<5	<3	<10	10	<10	
JUN												
21...	0.150	0.46	5	--	--	--	--	--	--	--	--	
JUL												
25...	0.100	0.31	--	--	--	--	--	--	--	--	--	
AUG												
09...	0.220	0.67	4	130	<0.5	2.0	<5	<3	<10	9	20	
SEP												
12...	0.190	0.58	4	150	<0.5	3.0	<5	<3	<10	9	10	

DATE	LITHIUM	MANGA-	MERCURY	MOLYB-	NICKEL,	SELE-	SILVER,	STRON-	VANA-	ZINC,	PHENOLS TOTAL (UG/L) (32730)
	DIS-	NESE,	DIS-	DENUM,	DIS-	NIUM,	DIS-	TIUM,	DIUM,	DIS-	
	SOLVED	DIS-	SOLVED	DIS-	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	
	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	
	AS LI)	AS MN)	AS HG)	AS MO)	AS NI)	AS SE)	AS AG)	AS SR)	AS V)	AS ZN)	
OCT											
04...	--	--	--	--	--	--	--	--	--	--	--
NOV											
08...	10	2	--	<10	<10	<1	<1.0	420	<6	3	--
DEC											
21...	--	--	<0.1	--	--	<1	--	--	--	--	3
JAN											
11...	--	--	--	--	--	--	--	--	--	--	--
FEB											
08...	32	19	--	10	<10	<1	4.0	940	9	20	--
MAR											
15...	8	2	<0.1	<10	<10	<1	<1.0	460	<6	12	<1
APR											
25...	--	--	--	--	--	--	--	--	--	--	--
MAY											
16...	20	<1	<0.1	<10	<10	<1	<1.0	780	9	8	--
JUN											
21...	--	--	<0.1	--	--	4	--	--	--	--	<1
JUL											
25...	--	--	--	--	--	--	--	--	--	--	--
AUG											
09...	7	<1	<0.1	<10	<10	<2	<1.0	390	12	<3	--
SEP											
12...	26	4	<0.1	<10	20	<1	<1.0	810	<6	10	<1

[illegible]

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

339

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	PROPA- CHLOR WATER WHOLE RECOV. (UG/L) (30295)	TER- BACIL WATER WHOLE RECOV. (UG/L) (30311)	VER- NOLATE WATER WHOLE RECOV. (UG/L) (30324)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	ALDRIN, TOTAL (UG/L) (39330)	AME- TRYNE TOTAL (UG/L) (82184)	ATRA- ZINE WATER UNFLTRD REC (UG/L) (39630)	DEETHYL ATRA- ZINE, WATER, WHOLE, TOTAL (UG/L) (75981)	DE-ISO PROPYL ATRAZIN WATER, WHOLE, TOTAL (UG/L) (75980)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L) (39350)	CHLOR- PYRIFOS TOTAL RECOVER (UG/L) (38932)
OCT											
04...	--	--	--	--	--	--	--	--	--	--	--
NOV											
08...	<0.100	<0.200	<0.100	<0.100	<0.001	<0.100	<0.100	<0.200	<0.200	<0.100	0.010
DEC											
21...	--	--	--	--	--	--	--	--	--	--	--
JAN											
11...	--	--	--	--	--	--	--	--	--	--	--
FEB											
08...	<0.100	<0.200	<0.100	<0.100	<0.001	<0.100	0.300	<0.200	<0.200	<0.100	0.010
MAR											
15...	--	--	--	--	--	--	--	--	--	--	--
APR											
25...	--	--	--	--	--	--	--	--	--	--	--
MAY											
16...	<0.100	<0.200	<0.100	<0.100	<0.001	<0.100	0.200	0.240	<0.200	<0.100	0.010
JUN											
21...	--	--	--	--	--	--	--	--	--	--	<0.010
JUL											
25...	--	--	--	--	--	--	--	--	--	--	0.010
AUG											
09...	<0.100	<0.200	<0.100	<0.100	<0.001	<0.100	<0.100	<0.200	<0.200	<0.100	<0.010
SEP											
12...	--	--	--	--	--	--	--	--	--	--	0.010

DATE	CYAN- AZINE TOTAL (UG/L) (81757)	2,4-D, TOTAL (UG/L) (39730)	P,P'- DDD UNFILT RECOVER (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	P,P'- DDT UNFILT RECOVER (UG/L) (39370)	DEF TOTAL (UG/L) (39040)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	DISUL- FOTON UNFILT RECOVER (UG/L) (39011)	2, 4-DP TOTAL (UG/L) (82183)	ENDO- SULFAN, I TOTAL (UG/L) (39388)
OCT											
04...	--	--	--	--	--	--	--	--	--	--	--
NOV											
08...	<0.200	0.120	<0.001	<0.001	<0.001	<0.010	0.070	<0.001	<0.010	0.070	<0.001
DEC											
21...	--	--	--	--	--	--	--	--	--	--	--
JAN											
11...	--	--	--	--	--	--	--	--	--	--	--
FEB											
08...	<0.200	0.040	<0.001	<0.001	<0.001	<0.010	0.070	0.001	<0.010	<0.010	<0.001
MAR											
15...	--	--	--	--	--	--	--	--	--	--	--
APR											
25...	--	--	--	--	--	--	--	--	--	--	--
MAY											
16...	<0.200	0.160	<0.001	<0.001	<0.001	<0.010	0.040	0.001	<0.010	<0.010	<0.001
JUN											
21...	--	--	--	--	--	<0.010	0.030	--	<0.010	--	--
JUL											
25...	--	--	--	--	--	<0.010	0.270	--	<0.010	--	--
AUG											
09...	<0.200	0.070	<0.001	<0.001	<0.001	<0.010	0.020	0.001	<0.010	<0.010	<0.002
SEP											
12...	--	--	--	--	--	<0.010	0.070	--	<0.010	--	--

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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 04...	--	--	--	--	--	--	--	--	--	--	--
NOV 08...	<0.001	<0.010	<0.001	<0.001	0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.100
DEC 21...	--	--	--	--	--	--	--	--	--	--	--
JAN 11...	--	--	--	--	--	--	--	--	--	--	--
FEB 08...	<0.001	<0.010	<0.001	<0.001	0.012	0.010	<0.010	<0.010	<0.010	<0.010	<0.100
MAR 15...	--	--	--	--	--	--	--	--	--	--	--
APR 25...	--	--	--	--	--	--	--	--	--	--	--
MAY 16...	<0.001	<0.010	<0.001	0.001	0.007	<0.010	<0.010	<0.010	<0.010	<0.010	<0.100
JUN 21...	--	<0.010	--	--	--	<0.010	--	<0.010	--	<0.010	--
JUL 25...	--	<0.010	--	--	--	0.050	--	<0.010	--	<0.010	--
AUG 09...	<0.001	<0.010	<0.001	0.003	0.008	<0.010	<0.010	<0.010	<0.010	<0.010	<0.100
SEP 12...	--	<0.010	--	--	--	EO.010	--	<0.010	--	<0.010	--

DATE	PHORATE TOTAL (UG/L) (39023)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)	PRO- PAZINE TOTAL (UG/L) (39024)	SILVEX, TOTAL (UG/L) (39760)	SIMA- ZINE TOTAL (UG/L) (39055)	SIME- TRYNE TOTAL (UG/L) (39054)	TOX- 2,4,5-T TOTAL (UG/L) (39740)	APHENE, TOTAL (UG/L) (39400)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	TOTAL TRI- THION (UG/L) (39786)
OCT 04...	--	--	--	--	--	--	--	--	--	--	--
NOV 08...	<0.010	<0.200	<0.100	<0.100	<0.010	1.10	<0.100	<0.010	<1.00	<0.100	<0.010
DEC 21...	--	--	--	--	--	--	--	--	--	--	--
JAN 11...	--	--	--	--	--	--	--	--	--	--	--
FEB 08...	<0.010	<0.200	<0.100	<0.100	<0.010	<0.100	<0.100	<0.010	<1.00	<0.100	<0.010
MAR 15...	--	--	--	--	--	--	--	--	--	--	--
APR 25...	--	--	--	--	--	--	--	--	--	--	--
MAY 16...	<0.010	<0.200	<0.100	<0.100	<0.010	0.200	<0.100	<0.010	<1.00	<0.100	<0.010
JUN 21...	<0.010	--	--	--	--	--	--	--	--	--	<0.010
JUL 25...	<0.010	--	--	--	--	--	--	--	--	--	<0.010
AUG 09...	<0.010	<0.200	<0.100	<0.100	<0.010	<0.100	<0.100	<0.010	<1.00	<0.100	<0.010
SEP 12...	<0.010	--	--	--	--	--	--	--	--	--	<0.010

E Malathion was above the control limits in the set spike; therefore, there is a possibility that the malathion value is slightly high. The compound was definitely detected, but the value may not be exact.

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

341

CHLOROPHYLL ANALYSES, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SESTON, TOTAL (MG/L) (71100)	CHLORO- PHYLL A PHYTO- PLANK- TON ACID M. (UG/L) (32211)	PHEO- PHYTIN PHYTO- PLANK- TON, ACID M. (UG/L) (32218)	CHLORO- PHYLL A PHYTO- PLANK- TON, UNCORR. (UG/L) (32230)	CHLORO- PHYLL B PHYTO- PLANK- TON, UNCORR. (UG/L) (32231)	CHLORO- PHYLL C PHYTO- PLANK- TON, UNCORR. (UG/L) (32232)
AUG 14...	1040	1028	9831	8.0	15.0	8.00	21.0	3.00	3.00
SEP 12...	1150	1028	9831	9.0	35.0	5.00	39.0	4.00	3.00

CHLOROPHYLL ANALYSES, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SESTON, TOTAL (MG/L) (71100)	CHLORO- PHYLL A PHYTO- PLANK- TON ACID M. (UG/L) (32211)	PHEO- PHYTIN PHYTO- PLANK- TON, ACID M. (UG/L) (32218)	CHLORO- PHYLL A PHYTO- PLANK- TON, UNCORR. (UG/L) (32230)	CHLORO- PHYLL B PHYTO- PLANK- TON, UNCORR. (UG/L) (32231)	CHLORO- PHYLL C PHYTO- PLANK- TON, UNCORR. (UG/L) (32232)
MAY 21...	1036	1028	9831	44	11.0	12.0	17.0	13.0	17.0
JUN 12...	0920	1028	9831	20	39.0	16.0	50.0	4.00	12.0
SEP 10...	0955	1028	9831	14	25.0	21.0	38.0	5.00	8.00

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

CHLOROPHYLL ANALYSES, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SESTON, TOTAL (MG/L) (71100)	CHLORO- PHYLL A PHYTO- PLANK- TON ACID M. (UG/L) (32211)	PHEO- PHYTIN PHYTO- PLANK- TON, ACID M. (UG/L) (32218)	CHLORO- PHYLL A PHYTO- PLANK- TON, UNCORR. (UG/L) (32230)	CHLORO- PHYLL B PHYTO- PLANK- TON, UNCORR. (UG/L) (32231)	CHLORO- PHYLL C PHYTO- PLANK- TON, UNCORR. (UG/L) (32232)
OCT									
08...	1130	1028	9831	1.0	31.0	5.00	35.0	5.00	15.0
NOV									
13...	1100	1028	9831	4.0	5.00	<1.00	5.00	2.00	3.00
DEC									
11...	1020	1028	9831	6.0	27.0	66.0	65.0	46.0	9.00
JAN									
29...	0957	1028	9831	6.0	10.0	4.00	13.0	1.00	<1.00
FEB									
05...	1210	1028	9831	--	13.0	5.00	17.0	1.00	2.00
MAR									
17...	1130	1028	9831	11	31.0	8.00	36.0	7.00	10.0
APR									
21...	1130	1028	9831	60	11.0	13.0	19.0	6.00	12.0
MAY									
19...	1115	1028	9831	--	87.0	20.0	101	6.00	13.0
JUN									
23...	1200	1028	9831	16	77.0	2.00	81.0	1.00	14.0
JUL									
22...	1130	1028	9831	130	59.0	<1.00	59.0	38.0	53.0
AUG									
25...	1215	1028	9831	24	140	9.00	149	16.0	15.0
SEP									
09...	1115	1028	9831	8.0	140	9.00	149	16.0	15.0

CHLOROPHYLL ANALYSES, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SESTON, TOTAL (MG/L) (71100)	CHLORO- PHYLL A PHYTO- PLANK- TON ACID M. (UG/L) (32211)	PHEO- PHYTIN PHYTO- PLANK- TON, ACID M. (UG/L) (32218)	CHLORO- PHYLL A PHYTO- PLANK- TON, UNCORR. (UG/L) (32230)	CHLORO- PHYLL B PHYTO- PLANK- TON, UNCORR. (UG/L) (32231)	CHLORO- PHYLL C PHYTO- PLANK- TON, UNCORR. (UG/L) (32232)
OCT									
14...	1145	1028	9831	7.0	22.0	3.00	31.0	7.00	3.00
NOV									
17...	1100	1028	9831	6.0	9.00	<1.00	9.00	4.00	<1.00
DEC									
08...	1000	1028	9831	10	3.00	<1.00	3.00	5.00	<1.00
JAN									
06...	1130	1028	9831	8.0	--	--	--	--	--
FEB									
23...	0930	1028	9831	40	15.0	11.0	22.0	9.00	23.0
MAR									
16...	1000	1028	9831	8.0	60.0	10.0	68.0	3.00	8.00
APR									
13...	1000	1028	9831	18	28.0	26.0	44.0	3.00	9.00
MAY									
18...	1045	1028	9831	130	15.0	11.0	21.0	13.0	14.0
JUN									
15...	0930	1028	9831	28	167	338	345	372	453
JUL									
13...	1000	1028	9831	26	68.0	45.0	97.0	19.0	15.0
AUG									
25...	1330	1028	9831	44	41.0	19.0	53.0	13.0	12.0
SEP									
07...	1200	1028	9831	20	119	15.0	132	15.0	11.0

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

343

CHLOROPHYLL ANALYSES, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SESTON, TOTAL (MG/L) (71100)	CHLORO- PHYLL A PHYTO- PLANK- TON ACID M. (UG/L) (32211)	PHEO- PHYTIN PHYTO- PLANK- TON, ACID M. (UG/L) (32218)	CHLORO- PHYLL A PHYTO- PLANK- TON, UNCORR. (UG/L) (32230)	CHLORO- PHYLL B PHYTO- PLANK- TON, UNCORR. (UG/L) (32231)	CHLORO- PHYLL C PHYTO- PLANK- TON, UNCORR. (UG/L) (32232)
OCT									
13...	1200	1028	9831	6.0	18.0	12.0	24.0	2.00	8.00
NOV									
02...	1130	1028	9831	4.0	12.0	<1.00	12.0	2.00	5.00
DEC									
07...	1130	1028	9831	3.0	1.00	3.00	3.00	<1.00	1.00
JAN									
18...	1130	1028	9831	4.0	1.00	18.0	12.0	4.00	3.00
FEB									
15...	1130	1028	9831	3.0	4.00	8.00	9.00	3.00	<1.00
MAR									
29...	0945	1028	9831	18	46.0	12.0	54.0	10.0	14.0
APR									
20...	1030	1028	9831	24	--	--	--	--	--
MAY									
10...	0915	1028	9831	24	68.0	8.00	76.0	<1.00	3.00
JUN									
15...	1115	1028	9831	22	64.0	33.0	84.0	15.0	26.0
JUL									
26...	1000	1028	9831	28	3.00	4.00	5.00	<1.00	<1.00
AUG									
23...	1015	1028	9831	24	101	37.0	126	15.0	23.0
SEP									
07...	0945	1028	9831	11	33.0	8.00	39.0	1.00	6.00

CHLOROPHYLL ANALYSES, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SESTON, TOTAL (MG/L) (71100)	CHLORO- PHYLL A PHYTO- PLANK- TON ACID M. (UG/L) (32211)	PHEO- PHYTIN PHYTO- PLANK- TON, ACID M. (UG/L) (32218)	CHLORO- PHYLL A PHYTO- PLANK- TON, UNCORR. (UG/L) (32230)	CHLORO- PHYLL B PHYTO- PLANK- TON, UNCORR. (UG/L) (32231)	CHLORO- PHYLL C PHYTO- PLANK- TON, UNCORR. (UG/L) (32232)
OCT									
04...	0945	1028	9831	6.0	23.0	9.00	30.0	3.00	1.00
NOV									
08...	1000	1028	9831	21	<1.00	7.00	5.00	<1.00	<1.00
DEC									
21...	1115	1028	9831	4.0	2.00	21.0	2.00	158	48.0
JAN									
11...	1030	1028	9831	17	2.00	11.0	9.00	<1.00	<1.00
FEB									
08...	1115	1028	9831	6.0	26.0	<1.00	26.0	<1.00	<1.00
MAR									
15...	1015	1028	9831	32	26.0	27.0	42.0	11.0	23.0
APR									
25...	1115	1028	9831	56	25.0	27.0	42.0	<1.00	9.00
MAY									
16...	1100	1028	9831	16	82.0	36.0	106	8.00	18.0
JUN									
21...	1115	1028	9831	22	165	<1.00	171	4.00	14.0
JUL									
25...	1015	1028	9831	64	33.0	<1.00	33.0	2.00	<1.00
AUG									
09...	1100	1028	9831	28	--	--	--	--	--
SEP									
12...	1145	1028	9831	18	52.0	23.0	68.0	5.00	11.0

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PHYTOPLANKTON ANALYSIS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE TIME	OCT 04, 94 0945		NOV 08, 94 1000		DEC 21, 94 1115		JAN 11, 95 1030		FEB 08, 95 1115	
TOTAL CELLS/ML	18000		5700		9900		14000		17000	
	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	2	--		--		--		--	
...OOCYSTACEAE										
....ANKISTRODESMUS	5400	30	1500	26	6500	66	5000	36	6900	41
....CHLORELLA	1200	7	--		--		770	6	--	
...SCENEDESMACEAE										
....SCENEDESMUS	3500	19	1500	26	770	8	3900	28	3100	18
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	3100	17	770	14	390	4	1200	9	1900	11
...VOLVOCACEAE										
....PANDORINA	--		--		--		390	3	--	
CHRYSTOPHYTA (YELLOW-GREEN ALGAE)										
.BACILLARIOPHYCEAE										
..PENNALES										
...NAVICULACEAE										
....NAVICULA	2300	13	1200	21	770	8	1200	9	2700	16
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	2300	13	770	14	1500	15	770	6	770	5
..OSCILLATORIALES										
...OSCILLATORIACEAE										
....OSCILLATORIA	--		--		--		--		1200	7
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--		--		--		770	6	390	2

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

345

PHYTOPLANKTON ANALYSIS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE TIME	MAR 15, 95 1015		APR 25, 95 1115		MAY 16, 95 1100		JUN 21, 95 1115		JUL 25, 95 1015	
TOTAL CELLS/ML	15000		20000		24000		35000		26000	
	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...HYDRODICTYACEAE										
....PEDIASTRUM	--		--		--		390	1	--	
...OOCYSTACEAE										
....ANKISTRODESMUS	9200	61	4200	21	11000	46	23000	66	2700	10
....CHLORELLA	--		--		1200	5	770	2	--	
...SCENEDESMACEAE										
....SCENEDESMUS	--		1900	10	6500	27	5800	17	8500	33
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--		4600	23	--		--		1500	6
...VOLVOCACEAE										
....GONIUM	--		390	2	--		--		--	
..ZYGNEMATALES										
...DESMIDIACEAE										
....STAUSTRUM	--		--		390	2	1500	4	--	
CHRYSTOPHYTA (YELLOW-GREEN ALGAE)										
.BACILLARIOPHYCEAE										
..PENNALES										
...FRAGILARIACEAE										
....FRAGILARIA	--		--		390	2	--		390	2
...NAVICULACEAE										
....NAVICULA	2700	18	4200	21	1500	6	2700	8	5000	19
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	2700	18	3900	20	2700	11	390	1	3900	15
..OSCILLATORIALES										
...NOSTOCACEAE										
....ANABAENA	--		--		--		--		2300	9
...OSCILLATORIACEAE										
....OSCILLATORIA	--		1200	6	--		770	2	1900	7

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PHYTOPLANKTON ANALYSIS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	AUG 09, 95	SEP 12, 95		
TIME	1100	1145		
TOTAL CELLS/ML	19000	24000		
	CELLS	PER-	CELLS	PER-
	/ML	CENT	/ML	CENT
CHLOROPHYTA (GREEN ALGAE)				
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...OOCYSTACEAE				
....ANKISTRODESMUS	6200	33	7300	30
...SCENEDESMACEAE				
....SCENEDESMUS	3900	21	10000	42
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	1200	6	--	
...VOLVOCAEAE				
....GONIUM	--		390	2
CHRYSTOPHYTA (YELLOW-GREEN ALGAE)				
.BACILLARIOPHYCEAE				
..PENNALES				
...NAVICULACEAE				
....NAVICULA	3100	16	2700	11
CYANOPHYTA (BLUE-GREEN ALGAE)				
.CYANOPHYCEAE				
..CHROOCOCCALES				
...CHROOCOCCACEAE				
....ANACYSTIS	1200	6	1900	8
..OSCILLATORIALES				
...NOSTOCACEAE				
....ANABAENA	1900	10	--	
...OSCILLATORIACEAE				
....OSCILLATORIA	1200	6	--	
EUGLENOPHYTA (EUGLENOIDS)				
.EUGLENOPHYCEAE				
..EUGLENALES				
...EUGLENACEAE				
....EUGLENA	--		1900	8

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

347

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1140	1080	1110	---	---	---	1210	927	1030	1330	1290	1310
2	1170	1040	1110	925	823	861	1140	780	867	1360	1290	1330
3	1170	1050	1100	1040	925	983	1190	966	1090	1300	1250	1270
4	1180	1100	1130	1080	931	1020	1220	1160	1190	1290	1240	1260
5	1420	1150	1230	945	232	642	1160	1110	1130	1310	1290	1300
6	1230	1170	1190	355	223	274	1130	1090	1110	1310	1280	1290
7	1320	1160	1230	537	355	457	1140	1040	1090	1310	1270	1290
8	1270	485	916	729	537	632	1130	964	1050	1370	1230	1320
9	798	537	700	869	727	781	1090	537	643	1310	1220	1270
10	1140	798	985	944	737	829	1050	773	979	1310	1270	1290
11	1210	1140	1180	817	722	778	1080	1010	1040	1320	1290	1310
12	1320	1210	1270	944	817	868	1100	1050	1070	1320	1260	1290
13	1380	1310	1350	1000	932	973	1120	1030	1070	1300	1270	1290
14	1390	1310	1340	1060	1000	1030	1190	1120	1160	1300	1270	1280
15	1370	1220	1310	1190	1030	1110	1200	1180	1190	1320	1260	1290
16	1380	1320	1340	1110	1030	1080	1230	1170	1200	1300	1250	1270
17	1360	1150	1280	1100	1040	1080	1230	1030	1130	1320	1140	1200
18	1290	1210	1260	1130	1100	1110	---	---	---	1320	899	983
19	1300	503	840	1120	826	999	---	---	---	1140	985	1080
20	746	611	695	1000	192	309	---	---	---	1200	1140	1180
21	877	699	776	667	200	305	---	---	---	1200	1160	1180
22	1040	876	912	1050	326	728	1240	1010	1100	1180	1120	1150
23	---	---	---	998	862	954	1290	1240	1270	1190	989	1120
24	---	---	---	905	860	878	1300	1270	1280	1030	930	965
25	---	---	---	887	876	882	1330	1280	1310	1140	1030	1090
26	---	---	---	898	873	882	1340	1310	1320	1160	1020	1090
27	---	---	---	898	871	879	1350	1320	1340	1180	605	859
28	---	---	---	915	871	895	1330	1310	1330	780	638	704
29	---	---	---	942	908	926	1340	1290	1310	926	780	870
30	---	---	---	968	927	945	1330	1300	1320	1140	913	1040
31	---	---	---	---	---	---	1320	1300	1310	1120	1090	1100
MONTH	---	---	---	---	---	---	---	---	---	1370	605	1170

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1150	1120	1130	1110	1090	1100	1190	1130	1160	1030	1010	1020
2	1160	1130	1150	1110	1080	1090	1230	1180	1200	1050	993	1020
3	1170	1140	1160	1100	1080	1090	1230	1210	1220	1050	1000	1040
4	1180	1150	1160	1180	1100	1130	1210	1180	1200	1100	1040	1070
5	1200	1130	1170	1360	1180	1260	---	---	---	1140	1060	1090
6	1180	1130	1160	1180	1110	1150	---	---	---	1060	263	611
7	1170	1130	1160	1110	522	818	---	---	---	480	312	401
8	1210	1160	1190	688	483	598	1210	800	1090	---	---	---
9	1220	1160	1190	803	688	746	986	810	900	---	---	---
10	1240	1210	1220	803	529	637	964	493	772	808	556	673
11	1220	1180	1210	593	539	564	932	371	528	732	622	697
12	1230	1200	1210	634	593	615	1140	568	946	978	732	874
13	1250	1190	1210	637	539	610	1140	1100	1120	832	739	770
14	1260	1150	1180	568	258	396	1200	1140	1170	882	787	844
15	1220	1170	1200	679	500	612	1220	1130	1190	926	882	907
16	1230	1210	1220	755	663	707	1180	1140	1170	971	917	946
17	1240	1150	1200	843	627	720	1180	954	1090	999	934	959
18	1180	1160	1170	808	678	757	1000	446	737	1100	999	1040
19	1210	1180	1200	757	698	725	859	454	727	1070	996	1040
20	1200	1160	1180	822	757	793	815	729	771	1070	996	1030
21	1190	1150	1170	930	811	869	903	810	860	1070	1030	1050
22	1210	1180	1200	974	930	958	905	449	770	1140	1060	1080
23	1200	1170	1190	1030	964	1000	728	270	370	1140	1110	1120
24	1190	1150	1170	1050	1020	1040	687	335	572	1150	1010	1080
25	1210	1160	1180	1080	1040	1060	782	684	737	1140	602	764
26	1200	1120	1150	1130	1080	1100	842	782	819	758	210	468
27	1130	1110	1120	1120	1070	1090	937	827	893	490	162	322
28	1120	1070	1090	1140	1070	1100	969	925	947	594	482	523
29	---	---	---	1160	1130	1150	993	944	970	490	455	472
30	---	---	---	1130	1080	1090	1040	988	1020	482	370	441
31	---	---	---	1140	1100	1120	---	---	---	413	367	391
MONTH	1260	1070	1180	1360	258	893	---	---	---	---	---	---

349

[illegible]

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.8	8.1	8.4	8.4	7.5	8.1	8.4	8.2	8.2	8.7	8.6	8.7
2	8.8	8.1	8.5	8.5	8.0	8.3	8.4	8.3	8.4	8.7	8.6	8.6
3	8.8	8.1	8.5	8.5	7.9	8.2	8.5	8.4	8.5	8.7	8.5	8.5
4	8.9	7.6	8.5	8.4	7.8	7.9	8.6	8.5	8.5	8.5	8.4	8.4
5	9.0	7.8	8.2	8.1	7.4	7.8	8.6	8.5	8.5	8.5	8.3	8.4
6	9.0	8.6	8.8	8.4	7.5	8.0	8.5	8.5	8.5	8.5	8.4	8.5
7	8.8	7.8	8.3	8.4	7.4	8.1	8.5	8.4	8.4	8.5	8.4	8.4
8	8.0	7.4	7.7	8.5	8.0	8.2	8.5	8.3	8.4	8.6	8.4	8.5
9	8.3	7.4	7.9	8.5	8.1	8.3	8.3	8.1	8.2	8.6	8.4	8.5
10	8.4	7.8	8.3	8.4	8.0	8.1	8.5	8.3	8.4	8.6	8.4	8.5
11	8.5	8.1	8.3	8.4	8.1	8.3	8.4	8.4	8.4	8.6	8.4	8.5
12	8.7	7.9	8.3	8.5	8.0	8.3	8.4	8.4	8.4	8.7	8.5	8.6
13	9.1	8.3	8.6	8.5	7.7	8.1	8.4	8.4	8.4	8.8	8.6	8.6
14	9.2	8.4	8.8	8.5	7.7	8.1	8.4	8.4	8.4	8.8	8.6	8.7
15	8.8	8.1	8.2	8.7	8.1	8.4	8.5	8.4	8.4	8.8	8.6	8.7
16	8.1	7.8	7.9	8.6	7.9	8.4	8.5	8.4	8.5	8.7	8.4	8.6
17	7.9	7.5	7.7	8.5	8.0	8.1	8.5	8.4	8.4	8.6	8.5	8.5
18	8.7	7.4	7.8	8.5	8.0	8.1	---	---	---	8.5	8.2	8.2
19	8.0	7.0	7.6	---	---	---	---	---	---	8.5	8.3	8.4
20	7.8	7.0	7.3	8.3	7.9	8.1	---	---	---	8.5	8.4	8.4
21	8.0	7.1	7.4	8.3	8.1	8.2	---	---	---	8.5	8.3	8.4
22	8.2	7.1	7.8	8.3	8.1	8.2	8.7	8.5	8.6	8.5	8.4	8.4
23	8.3	7.4	8.0	8.3	8.2	8.3	8.7	8.7	8.7	8.5	8.2	8.4
24	8.3	7.5	7.9	8.3	8.2	8.2	8.8	8.7	8.7	8.3	8.1	8.2
25	8.3	7.8	8.1	8.3	8.2	8.3	8.7	8.6	8.7	8.3	8.2	8.3
26	8.3	7.6	8.0	8.3	8.2	8.3	8.7	8.6	8.6	8.3	8.2	8.3
27	8.0	7.5	7.9	8.3	8.2	8.2	8.7	8.6	8.6	8.3	7.9	8.0
28	8.1	7.8	7.9	8.3	8.3	8.3	8.6	8.5	8.6	8.1	8.0	8.0
29	8.3	7.6	7.9	8.3	8.2	8.3	8.7	8.6	8.6	8.2	8.1	8.2
30	8.3	7.7	7.9	8.2	8.2	8.2	8.7	8.6	8.6	8.4	8.1	8.3
31	8.2	7.5	7.9	---	---	---	8.7	8.6	8.6	8.4	8.3	8.4
MAX	9.2	8.6	8.8	---	---	---	---	---	---	8.8	8.6	8.7
MIN	7.8	7.0	7.3	---	---	---	---	---	---	8.1	7.9	8.0

351

[illegible]

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

353

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	28.0	21.0	24.0	16.0	11.0	13.5	---	---	---	8.5	5.5	7.0
2	27.5	22.0	24.5	17.5	12.0	14.5	11.5	8.5	10.0	6.0	4.0	5.5
3	28.5	22.0	25.0	23.5	17.0	20.0	13.0	11.5	12.0	5.5	4.0	5.0
4	---	---	---	20.5	13.5	17.5	15.5	13.0	14.0	5.0	2.5	4.0
5	---	---	---	13.5	9.5	12.0	14.5	11.5	12.5	4.0	2.0	3.0
6	---	---	---	12.0	9.0	10.5	12.5	11.0	11.5	5.0	3.0	4.0
7	---	---	---	15.5	11.0	13.5	12.0	10.0	11.0	5.0	1.5	3.5
8	---	---	---	19.5	14.5	17.0	10.5	7.5	8.5	6.5	3.0	5.0
9	---	---	---	19.0	12.5	15.0	7.5	5.5	6.5	8.0	4.0	6.0
10	---	---	---	14.5	12.0	13.0	7.5	5.5	6.5	10.5	7.0	9.0
11	---	---	---	16.0	13.0	14.0	6.5	5.5	6.0	10.5	7.5	9.5
12	22.0	15.0	18.5	14.5	12.0	13.5	7.0	4.0	5.5	11.5	9.5	10.5
13	23.0	18.5	21.0	15.5	14.0	14.5	7.5	6.0	7.0	10.5	9.0	9.5
14	21.0	18.5	19.5	17.0	15.0	16.0	8.5	7.5	8.0	9.5	7.0	8.5
15	19.0	17.0	17.5	16.5	13.5	15.0	9.0	8.0	8.5	9.5	6.0	8.0
16	19.0	16.5	18.0	15.5	11.0	13.5	11.0	8.5	9.5	11.0	7.5	9.0
17	20.5	19.0	20.0	---	---	---	10.0	7.5	9.0	11.0	9.0	10.0
18	24.0	20.0	21.0	---	---	---	---	---	---	9.5	6.5	8.0
19	23.0	19.5	21.0	13.0	11.0	12.0	---	---	---	8.0	5.5	6.5
20	23.5	20.0	21.5	---	---	---	---	---	---	8.5	5.0	7.0
21	23.5	20.0	21.0	---	---	---	---	---	---	8.5	6.5	7.5
22	24.0	17.5	20.5	---	---	---	9.5	7.5	8.5	7.5	4.0	5.5
23	23.0	17.0	20.0	---	---	---	8.5	7.0	7.5	5.5	3.0	4.5
24	20.5	17.5	19.0	---	---	---	8.5	6.5	7.5	7.5	3.5	5.5
25	19.5	12.0	15.5	---	---	---	8.5	5.5	7.0	10.0	6.0	8.0
26	18.0	10.5	14.0	---	---	---	8.5	5.5	7.5	9.5	8.0	8.5
27	19.0	12.0	15.0	---	---	---	10.0	6.5	8.5	10.5	9.0	10.0
28	19.5	12.5	14.5	---	---	---	10.0	9.0	9.5	10.5	7.0	8.5
29	17.5	13.5	15.5	---	---	---	10.0	9.5	9.5	7.0	5.5	6.0
30	20.5	16.5	18.0	---	---	---	10.5	9.0	10.0	8.0	4.5	6.0
31	18.5	11.0	15.0	---	---	---	10.5	8.5	10.0	9.0	5.5	7.5
MONTH	---	---	---	---	---	---	---	---	---	11.5	1.5	7.0

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	11.0	7.0	9.0	7.0	3.0	5.0	18.5	12.0	15.0	17.5	15.5	16.5
2	13.0	9.0	11.0	3.5	2.5	3.0	19.0	13.5	16.5	16.5	14.5	15.5
3	12.5	10.0	11.0	6.5	2.5	4.5	17.5	15.0	15.5	16.0	14.0	15.0
4	11.0	7.5	9.5	6.5	5.5	6.0	18.5	13.5	15.5	21.5	14.5	17.5
5	11.0	8.0	9.5	8.0	6.5	7.5	19.0	14.0	16.5	19.5	16.5	18.0
6	11.0	8.0	9.5	10.5	7.0	8.5	21.0	15.5	17.5	18.0	15.5	17.0
7	11.0	8.5	9.5	9.0	4.0	6.0	22.5	16.5	19.5	17.5	16.5	17.0
8	9.5	5.5	7.5	7.5	2.5	5.0	24.0	17.5	20.5	---	---	---
9	10.5	6.5	8.5	10.5	5.0	7.5	23.5	19.0	21.0	---	---	---
10	11.5	8.0	9.5	12.5	7.0	9.5	20.5	12.0	16.0	---	---	---
11	9.5	6.0	7.5	14.0	9.0	11.5	13.5	10.0	12.0	21.5	18.0	19.5
12	6.0	3.5	4.0	15.0	12.5	13.5	17.0	11.0	13.5	20.5	18.5	19.5
13	4.5	3.0	3.5	14.5	13.5	14.0	19.5	13.0	16.5	25.0	20.0	22.5
14	5.5	3.5	4.5	14.0	13.0	13.5	20.5	15.0	18.0	26.5	23.0	24.5
15	8.0	5.5	7.0	16.0	13.5	14.5	21.0	16.0	18.5	26.0	22.5	24.5
16	6.5	5.0	5.5	18.0	14.0	16.0	22.5	19.0	20.5	25.5	23.5	24.0
17	9.5	3.5	6.5	17.5	15.0	16.5	21.5	17.5	19.0	25.0	22.0	23.5
18	10.5	6.5	8.5	19.0	15.0	17.0	18.5	16.0	17.0	23.0	18.5	20.0
19	13.0	8.0	10.5	20.0	16.5	18.0	18.0	16.0	17.0	23.0	17.0	20.0
20	15.0	9.0	12.0	20.0	16.5	18.5	21.0	14.5	17.5	25.0	19.5	22.0
21	15.5	10.5	13.0	19.5	15.5	17.5	21.5	16.0	18.5	26.0	21.0	23.5
22	14.5	11.5	13.0	21.5	17.5	19.5	18.5	10.5	13.5	26.5	22.0	24.0
23	16.0	11.5	13.5	21.0	16.5	19.0	11.0	9.5	10.5	24.5	21.0	22.5
24	14.5	10.5	13.0	20.0	16.0	18.0	13.0	10.5	12.0	---	---	---
25	15.5	10.5	13.0	18.0	16.0	17.0	17.5	12.0	14.5	---	---	---
26	17.0	13.5	15.0	18.5	16.0	17.0	17.5	14.0	16.0	---	---	---
27	16.5	13.5	15.5	17.5	13.0	15.5	18.0	12.5	15.5	---	---	---
28	13.5	7.0	9.5	15.0	11.5	13.0	17.5	14.5	16.0	---	---	---
29	---	---	---	14.0	11.0	12.5	20.5	15.5	17.5	---	---	---
30	---	---	---	12.5	10.0	11.5	19.0	17.0	18.0	---	---	---
31	---	---	---	17.0	11.0	13.5	---	---	---	---	---	---
MONTH	17.0	3.0	9.6	21.5	2.5	12.6	24.0	9.5	16.5	---	---	---

355

[illegible]

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	12.6	7.3	9.3	---	---	---	9.7	9.4	9.5	12.6	10.5	11.4
2	11.7	6.9	8.8	11.1	8.9	9.8	9.8	9.4	9.6	13.1	11.4	12.2
3	11.1	6.8	8.6	10.3	7.6	8.9	9.6	9.3	9.5	12.8	11.7	12.1
4	11.4	6.5	8.5	---	---	---	9.5	9.0	9.2	13.0	11.6	12.2
5	15.7	6.6	9.4	---	---	---	9.6	9.0	9.3	13.1	12.0	12.5
6	---	---	---	---	---	---	9.8	9.4	9.6	12.8	11.8	12.2
7	9.4	7.0	7.7	---	---	---	10.1	9.4	9.7	13.2	11.8	12.5
8	8.3	5.4	6.7	---	---	---	10.5	9.6	10.1	13.4	12.0	12.6
9	9.2	7.0	8.2	---	---	---	10.8	9.9	10.5	13.2	11.5	12.3
10	9.7	8.0	8.9	---	---	---	11.3	10.8	11.1	12.8	10.9	11.7
11	10.3	8.1	9.0	---	---	---	11.4	10.9	11.2	12.1	10.0	11.1
12	12.4	8.6	10.1	9.4	8.4	8.9	11.5	10.8	11.3	11.9	9.6	10.5
13	14.8	8.1	10.6	9.0	8.2	8.7	11.0	10.6	10.8	12.3	9.6	10.7
14	17.1	7.7	11.2	8.9	8.0	8.5	10.8	10.5	10.6	12.7	10.1	11.1
15	12.0	7.9	9.7	9.6	8.5	9.1	11.0	10.4	10.6	12.7	10.4	11.3
16	12.6	8.1	9.7	10.1	9.0	9.6	10.8	10.2	10.4	12.3	9.9	10.9
17	10.7	7.3	8.7	9.8	9.2	9.5	10.9	10.3	10.6	11.7	9.5	10.2
18	12.5	7.0	8.8	---	---	---	---	---	---	10.1	8.6	9.4
19	8.2	4.9	6.0	8.9	7.5	8.7	---	---	---	11.8	10.0	10.8
20	---	---	---	7.7	6.1	7.1	---	---	---	12.0	10.5	11.1
21	---	---	---	8.2	7.1	7.9	---	---	---	11.9	10.2	10.9
22	---	---	---	9.5	8.1	8.7	11.1	9.8	10.5	12.5	10.3	11.3
23	---	---	---	10.1	9.4	9.8	11.6	10.5	10.9	12.1	11.1	11.5
24	---	---	---	10.5	9.3	9.7	11.6	10.6	11.0	12.0	10.5	11.2
25	---	---	---	9.5	9.1	9.3	11.7	10.5	11.0	11.7	10.1	10.7
26	---	---	---	9.2	8.8	9.1	12.1	10.9	11.3	10.6	9.6	10.0
27	---	---	---	8.9	8.6	8.8	12.1	10.3	11.2	9.6	7.9	8.6
28	---	---	---	9.6	8.9	9.3	11.5	10.3	10.8	9.5	8.3	8.9
29	---	---	---	9.7	9.3	9.5	11.7	10.3	10.8	10.6	9.5	10.1
30	---	---	---	9.7	9.3	9.5	12.3	10.3	11.0	11.7	10.4	10.9
31	---	---	---	---	---	---	11.4	10.2	10.6	11.2	9.8	10.6
MONTH	---	---	---	---	---	---	---	---	---	13.4	7.9	11.1

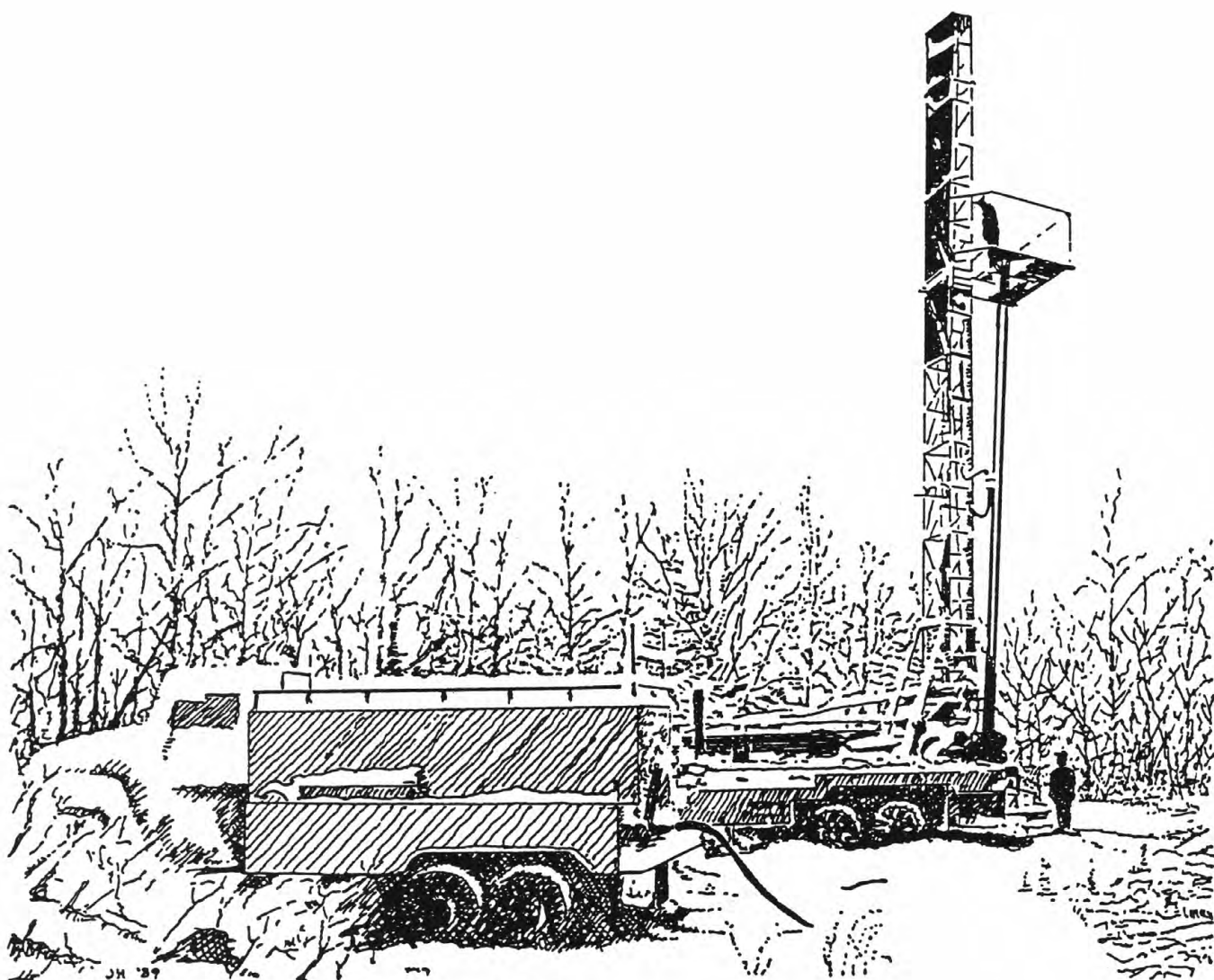
357

[illegible]

ARKANSAS RIVER BASIN
07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]



Cleaning and plugging wells, winter 1984

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 poor. Some regulation by Lake Overholser (station 07240500) and other dams upstream. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1923 reached a stage of 26.9 ft, from information provided by U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	207	176	729	e560	e640	e360	e700	1180	e3400	935	516	e235
2	203	168	700	e540	e570	e350	e670	1040	e2900	932	480	e220
3	189	245	680	e500	e540	e370	e650	880	e2500	e920	518	e210
4	180	1600	653	e470	e490	e420	e620	934	e3100	e1000	709	e200
5	178	7420	e640	e460	e470	e590	e610	863	e12000	e1100	e6200	e195
6	174	8090	665	e471	e440	e560	e580	1450	e11700	e800	e4000	e190
7	250	e2000	e700	e478	e430	e780	e560	e7000	10500	e680	e2700	e180
8	409	e1400	721	e466	e420	e1300	e540	21000	10400	e590	1600	e770
9	894	e1200	e835	458	419	e1000	e510	19400	10700	e550	e1100	e972
10	1120	e1400	e812	457	e410	e840	1840	10400	14700	e515	e1900	e543
11	557	e900	e823	462	e400	e720	2620	6430	11900	488	e1300	e400
12	380	e770	e1020	468	e385	e660	e1000	3730	11800	e455	e1100	e360
13	e340	e670	e845	471	e370	2430	e820	2730	12800	e430	e980	e330
14	278	e620	e734	471	e380	7770	640	2010	13800	e420	e860	e530
15	254	e1100	e674	458	e400	e4500	e550	e1500	12900	e400	814	570
16	249	e680	e660	454	e420	e2900	e480	e1350	8850	e385	e700	946
17	249	e470	e720	449	e440	e2200	440	e1200	4880	378	641	738
18	253	e430	e693	460	e450	e1600	3830	e1100	3400	359	e560	736
19	245	400	e645	555	e450	e1380	2300	e980	2580	341	e500	712
20	219	5330	e630	647	e440	e1250	3080	e860	2320	e680	e460	888
21	228	5510	e615	657	e430	e1150	2060	e800	2140	e650	e430	735
22	225	e3900	e570	667	e410	e1100	1640	e750	1770	e280	e450	619
23	427	e3100	e567	633	e400	e1050	1650	e720	1640	e230	e430	712
24	347	e2200	e608	739	e370	e980	1730	1900	1500	e340	e400	560
25	240	e1600	e607	945	e360	e940	2410	3450	e1300	e420	e380	700
26	204	e1300	e552	1100	e370	e880	2180	5610	e1200	e500	e350	1990
27	216	e1100	e540	e2200	e380	e840	1840	16300	e990	e580	e330	1570
28	194	e930	e545	e1500	e370	e800	1380	15900	981	e1200	e315	1100
29	179	e840	e560	e1100	---	e750	1090	11800	948	e2200	e280	1050
30	184	780	e563	e920	---	e740	1040	e8700	909	e1500	e260	985
31	196	---	e555	e780	---	e720	---	e4000	---	660	e245	---
TOTAL	9468	56329	20861	20996	12054	41930	40060	155967	180508	20918	31508	19946
MEAN	305	1878	673	677	430	1353	1335	5031	6017	675	1016	665
MAX	1120	8090	1020	2200	640	7770	3830	21000	14700	2200	6200	1990
MIN	174	168	540	449	360	350	440	720	909	230	245	180
AC-FT	18780	111700	41380	41650	23910	83170	79460	309400	358000	41490	62500	39560

c Estimated

ARKANSAS RIVER BASIN

361

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

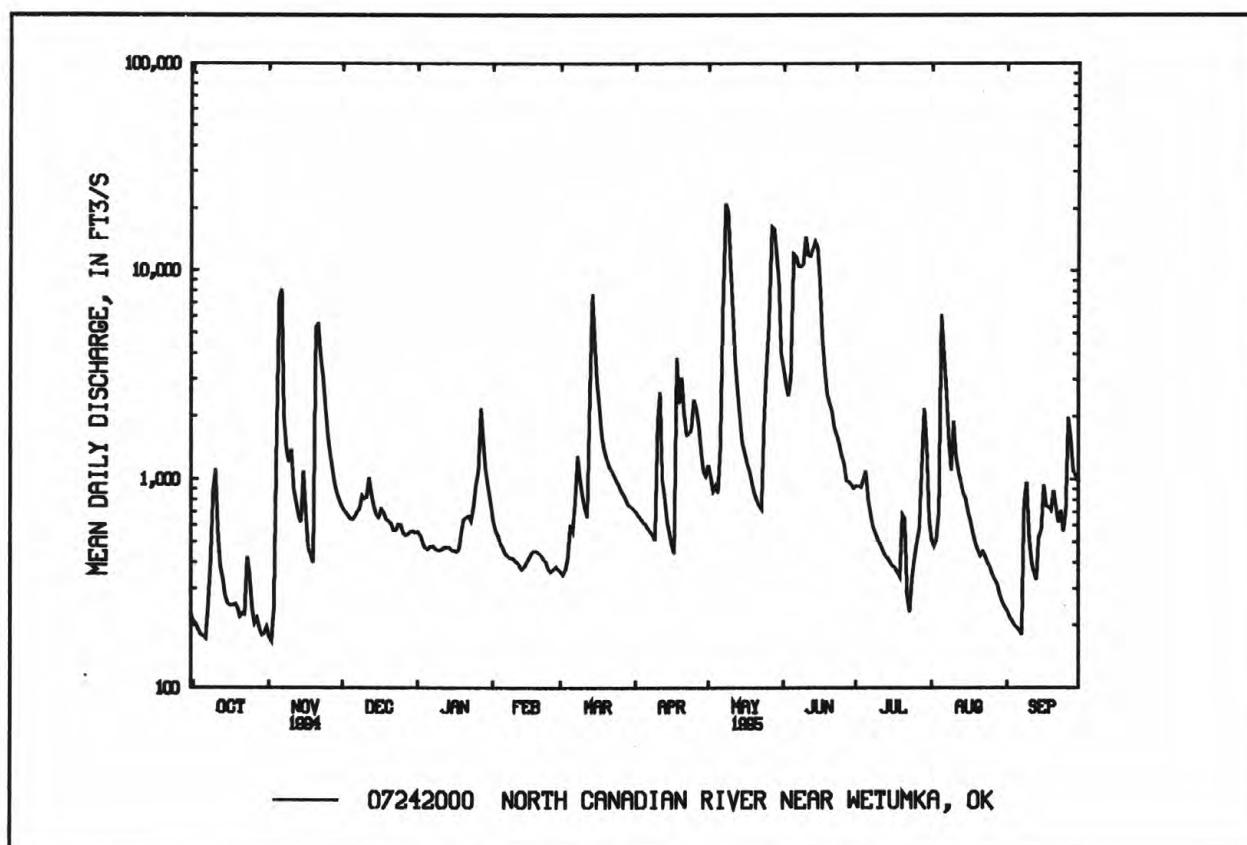
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	690	656	471	412	564	824	1097	1780	1613	658	366	474
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 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1938 - 95

ANNUAL TOTAL	300857	610545	
ANNUAL MEAN	824	1673	800
HIGHEST ANNUAL MEAN			2229 1993
LOWEST ANNUAL MEAN			.156 1956
HIGHEST DAILY MEAN	8920	May 3 21000	May 8 55800 Apr 15 1945
LOWEST DAILY MEAN	158	Aug 4 168	Nov 2 .00 ^a Aug 27 1954
ANNUAL SEVEN-DAY MINIMUM	188	Oct 27 188	Oct 27 .00 Aug 27 1954
INSTANTANEOUS PEAK FLOW		22600	May 8 66000 Apr 15 1945
INSTANTANEOUS PEAK STAGE		18.34	May 8 26.40 Apr 15 1945
ANNUAL RUNOFF (AC-FT)	596700	1211000	579900
10 PERCENT EXCEEDS	1590	3420	1830
50 PERCENT EXCEEDS	468	693	287
90 PERCENT EXCEEDS	225	279	68

^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 September 1995 (discontinued).

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 1994 TO SEPTEMBER 1995

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											
20...	1750	23.0	28.5	750	1028	1028	2290	8.03	627	7.0	8.0
20...	1755	46.0	28.5	750	1028	1028	2290	8.03	627	6.9	8.0
20...	1800	69.0	28.0	750	1028	1028	2290	8.03	626	6.8	8.0
20...	1810	115	28.5	750	1028	1028	2290	8.03	625	6.6	8.0
20...	1815	138	28.5	750	1028	1028	2290	8.03	625	6.6	8.0
20...	1820	161	28.5	750	1028	1028	2290	8.03	626	7.0	8.0
20...	1825	184	28.5	750	1028	1028	2290	8.03	627	7.0	8.0
20...	1830	207	28.0	750	1028	1028	2290	8.03	627	6.8	8.0
20...	1835	230	28.5	750	1028	1028	2290	8.03	629	6.4	7.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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											
17...	1200	1028	80020	249	948	8.8	21.0	19.0	32	748	10.2
DEC											
06...	1600	1028	80020	665	859	8.2	17.0	12.5	66	745	10.0
APR											
04...	1530	1028	80020	620	885	8.6	21.5	19.5	51	750	15.8
JUN											
20...	1645	1028	80020	2290	630	8.1	32.0	28.5	370	750	6.8
AUG											
15...	1350	1028	80020	985	645	8.4	30.5	30.0	180	744	7.4

ARKANSAS RIVER BASIN
07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

363

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS 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 PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
OCT 17...	113	74	89	260	100	69	22	93	43	2	7.1
DEC 06...	96	210	120	270	77	74	21	73	36	2	5.8
APR 04...	175	K30	K11	260	52	61	25	81	40	2	5.3
JUN 20...	89	130	610	230	33	67	14	37	26	1	7.0
AUG 15...	101	K75	80	220	51	62	15	49	32	1	7.8

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 17...	190	5	164	120	120	0.70	4.8	559	541	0.76	376
DEC 06...	238	0	195	75	100	0.50	13	511	490	0.69	918
APR 04...	223	12	203	87	100	0.50	7.3	516	489	0.70	864
JUN 20...	235	0	193	56	42	0.40	13	379	355	0.52	2340
AUG 15...	190	6	166	89	47	0.50	13	399	385	0.54	1060

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 17...	1.08	1.08	4.8	0.020	0.07	1.10	1.10	0.020	0.03	1.9	1.9
DEC 06...	1.96	1.96	8.7	0.040	0.13	2.00	2.00	<0.015	--	0.50	0.50
APR 04...	--	--	--	<0.010	--	--	<0.050	<0.015	--	1.3	1.3
JUN 20...	0.530	0.530	2.3	0.010	0.03	0.540	0.540	0.020	0.03	0.98	1.0
AUG 15...	0.240	--	--	<0.010	--	0.240	0.240	<0.015	--	0.50	0.50

ARKANSAS RIVER BASIN
07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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 ORTH, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTH, 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 17...	3.0	0.310	0.070	0.070	0.21	20	210	<3	11	16
DEC 06...	2.5	0.210	0.130	0.140	0.43	<10	230	<3	<3	22
APR 04...	1.3	0.260	<0.010	0.020	0.06	--	--	--	--	--
JUN 20...	1.5	0.410	0.090	0.100	0.31	10	280	<3	6	11
AUG 15...	0.74	0.220	0.210	0.180	0.55	<10	230	<3	6	4

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 17...	<1	<10	4	<1	<1.0	680	10	113	76	92
DEC 06...	1	20	3	<1	<1.0	630	<6	383	688	74
APR 04...	--	--	--	--	--	--	--	181	303	96
JUN 20...	<1	10	1	<1	<1.0	450	10	1610	9950	78
AUG 15...	<1	<10	2	<1	<1.0	490	17	483	1280	67



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 fair. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	49	357	53	211	98	224	581	942	1540	289	e46
2	15	44	355	49	110	83	226	438	2100	1510	3250	e46
3	20	44	352	50	66	77	264	396	1790	1450	589	e46
4	53	95	351	85	60	83	190	386	7010	1160	288	e45
5	42	1520	310	68	56	80	163	466	3810	580	163	e44
6	25	419	95	56	55	75	150	3880	2260	414	147	44
7	30	170	76	74	52	438	81	4560	1400	732	130	e52
8	80	268	192	52	75	233	68	7640	1340	737	285	e58
9	34	258	137	50	80	175	62	1660	16300	750	363	e70
10	28	234	100	50	65	142	778	966	17500	763	509	e50
11	27	209	86	49	51	125	351	880	3660	773	506	e43
12	27	201	78	48	49	121	145	758	2160	777	508	e37
13	26	195	113	46	50	2260	99	649	1860	792	509	e41
14	26	181	119	46	55	2020	81	559	1800	781	486	e47
15	29	151	117	46	58	695	76	524	1790	781	269	52
16	32	149	155	45	55	344	72	559	1820	792	180	e56
17	32	152	93	90	52	195	197	543	1810	794	e130	e64
18	158	151	73	132	51	157	1210	516	1730	797	e100	73
19	121	523	69	131	50	140	397	631	1710	765	e80	e270
20	224	3680	91	126	50	122	377	615	1630	641	e66	e180
21	234	941	100	100	48	136	255	596	1480	641	e54	e155
22	226	490	178	104	93	489	1700	548	1390	652	51	188
23	221	308	69	113	98	451	1990	420	1380	638	e49	e180
24	220	375	59	126	74	274	666	688	1470	765	e48	e170
25	219	376	58	142	53	118	487	309	1440	334	e47	e170
26	213	364	57	161	215	106	376	3150	1420	653	e46	e160
27	78	370	56	251	380	92	405	2310	1510	585	e46	e150
28	49	367	56	171	128	142	374	896	1590	539	e45	e150
29	48	358	54	163	---	144	397	402	1590	271	e45	e150
30	46	353	50	162	---	148	397	235	1660	241	e45	e150
31	49	---	52	214	---	220	---	497	---	236	e46	---
TOTAL	2644	12995	4108	3053	2440	9983	12258	37258	89352	22884	9369	2987
MEAN	85.3	433	133	98.5	87.1	322	409	1202	2978	738	302	99.6
MAX	234	3680	357	251	380	2260	1990	7640	17500	1540	3250	270
MIN	12	44	50	45	48	75	62	235	942	236	45	37
AC-FT	5240	25780	8150	6060	4840	19800	24310	73900	177200	45390	18580	5920

e Estimated

ARKANSAS RIVER BASIN

367

07242380 DEEP FORK NEAR WARWICK, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1995, BY WATER YEAR (WY)

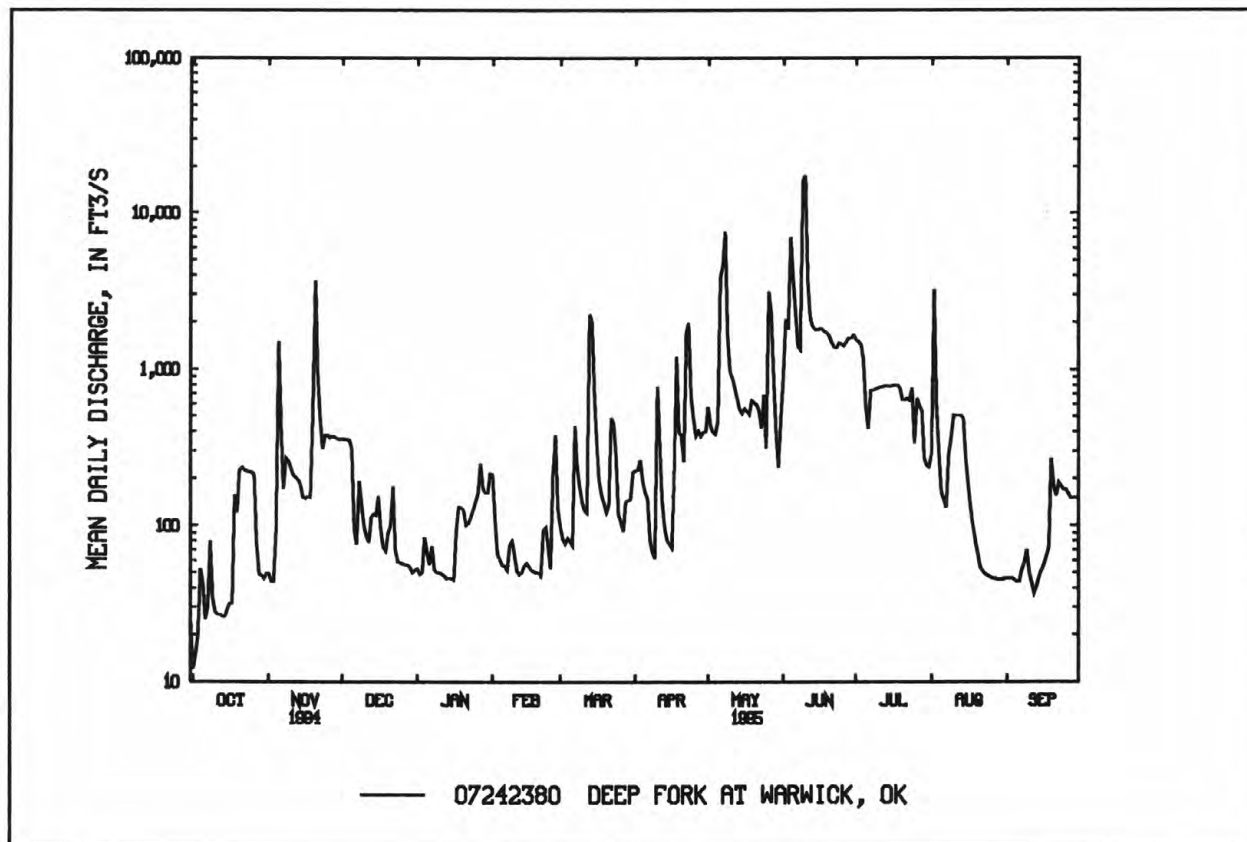
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	100	199	231	144	205	437	517	846	827	213	160	328
MAX	169	433	683	288	516	1219	1435	2494	2978	738	630	1527
(WY)	1990	1995	1993	1993	1993	1990	1990	1993	1995	1995	1989	1989
MIN	46.7	68.3	60.7	65.8	47.0	59.3	101	115	70.5	31.2	24.6	66.6
(WY)	1993	1991	1989	1994	1988	1991	1989	1988	1988	1990	1991	1994

SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1988 - 95

ANNUAL TOTAL	74256	209331	
ANNUAL MEAN	203	574	350
HIGHEST ANNUAL MEAN			574 1995
LOWEST ANNUAL MEAN			119 1991
HIGHEST DAILY MEAN	3680 Nov 20	17500 Jun 10	19000 May 9 1993
LOWEST DAILY MEAN	12 Oct 1	12 Oct 1	^a 3.9 Dec 13 1987
ANNUAL SEVEN-DAY MINIMUM	15 Aug 24	28 Oct 10	11 Sep 9 1990
INSTANTANEOUS PEAK FLOW		34600 Jun 9	34600 Jun 9 1995
INSTANTANEOUS PEAK STAGE		21.28 Jun 9	^b 21.28 Jun 9 1995
ANNUAL RUNOFF (AC-FT)	147300	415200	253800
10 PERCENT EXCEEDS	475	1490	791
50 PERCENT EXCEEDS	80	170	106
90 PERCENT EXCEEDS	25	46	32

^aMinimum daily discharge for period of record, .05 ft³/s Aug. 23, 1987.

^bMaximum gage height for period of record, 22.05 ft, Oct. 21, 1983.



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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	113	808	354	723	1860	444	4080	12700	1540	214	53
2	99	98	733	368	629	1520	432	3260	9940	1700	161	51
3	91	93	686	363	594	914	442	2660	8050	1790	181	49
4	75	126	666	337	564	707	576	2860	6750	1870	689	46
5	60	2370	648	314	497	684	614	2340	6450	1990	1330	43
6	57	3750	633	303	407	660	581	2300	7560	1780	1400	41
7	60	4210	613	307	373	988	521	4160	9560	1290	851	52
8	489	4420	603	330	340	1610	452	8590	11100	675	507	61
9	1630	4550	686	333	321	1590	412	16300	12300	435	392	150
10	1470	4820	924	324	309	1630	720	19300	12100	490	303	342
11	1190	4980	989	319	304	1300	2130	21000	12300	542	293	201
12	618	4350	842	313	303	863	1580	21500	11600	515	307	129
13	309	2010	655	304	303	1980	1560	19300	12900	491	285	103
14	187	927	525	297	293	4940	1240	14100	16200	471	261	99
15	144	696	468	293	282	5600	786	10000	16800	455	244	119
16	126	581	478	293	284	6420	567	7950	13400	443	248	164
17	118	513	906	281	299	6610	489	6550	9750	431	239	385
18	118	453	977	278	298	7590	1180	5450	7680	418	189	577
19	122	505	897	331	295	7540	2000	4220	6320	408	138	989
20	142	2840	724	430	290	6480	2370	2870	5260	520	111	616
21	149	4270	565	493	284	5080	2640	1940	4180	797	97	303
22	203	4910	478	454	275	2500	2190	1520	3270	614	87	291
23	188	5340	431	451	274	1150	2980	1310	2640	490	80	342
24	192	5660	417	495	271	866	3370	1910	2180	462	74	281
25	198	6520	420	681	267	849	3270	2880	1870	547	71	283
26	193	6610	417	799	278	839	3180	3530	1650	641	69	254
27	186	5720	362	1400	1530	758	3300	5410	1520	667	67	231
28	184	3670	335	1690	2140	625	3610	9700	1450	444	63	222
29	182	1380	331	1310	---	522	4340	12400	1390	412	60	219
30	176	954	335	1100	---	464	4640	14900	1400	338	58	213
31	144	---	348	876	---	441	---	15300	---	279	56	---
TOTAL	9201	87439	18900	16221	13027	75580	52616	249590	230270	23945	9125	6909
MEAN	297	2915	610	523	465	2438	1754	8051	7676	772	294	230
MAX	1630	6610	989	1690	2140	7590	4640	21500	16800	1990	1400	989
MIN	57	93	331	278	267	441	412	1310	1390	279	56	41
AC-FT	18250	173400	37490	32170	25840	149900	104400	495100	456700	47490	18100	13700

ARKANSAS RIVER BASIN

369

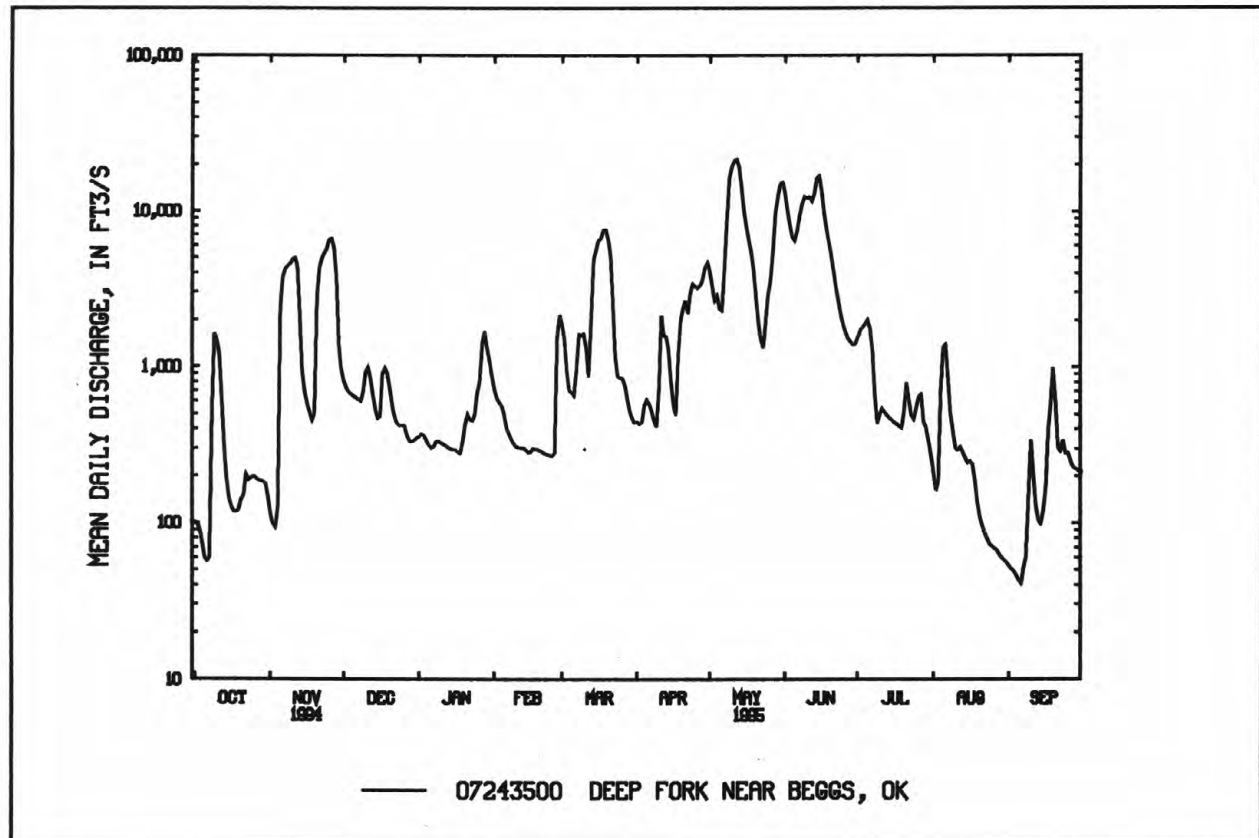
07243500 DEEP FORK NEAR BEGGS, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	708	756	547	402	643	1174	1558	2411	2011	585	249	383
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	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1939 - 95
ANNUAL TOTAL	342359	792823	
ANNUAL MEAN	938	2172	952
HIGHEST ANNUAL MEAN			2645
LOWEST ANNUAL MEAN			114
HIGHEST DAILY MEAN	7720	Mar 14	21500
LOWEST DAILY MEAN	24	Aug 19	41
ANNUAL SEVEN-DAY MINIMUM	36	Jul 8	48
INSTANTANEOUS PEAK FLOW			66800
INSTANTANEOUS PEAK STAGE			34.55
ANNUAL RUNOFF (AC-FT)	679100	1573000	689800
10 PERCENT EXCEEDS	3220	6500	2650
50 PERCENT EXCEEDS	281	581	166
90 PERCENT EXCEEDS	62	124	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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1470	1530	17600	2300	13200	3600	4210	16500	29100	20500	4850	2000
2	438	921	18300	2050	13100	3760	3930	15500	25100	20400	5180	1080
3	3090	204	18600	6540	11200	3530	3930	15500	25200	20400	4840	760
4	2850	521	18600	3370	9600	2650	2680	15500	25500	17500	5050	743
5	677	612	17500	3330	9550	2650	3060	15400	22200	17100	5230	1260
6	2050	172	15000	3580	10700	2670	4070	12000	16500	21000	5070	1320
7	655	118	14000	2560	13100	6790	6910	10700	30000	23000	4920	1110
8	125	4640	9220	3000	13200	7540	3130	5520	29200	24600	5120	710
9	81	5360	9180	2630	13200	9930	1970	3430	25300	24500	4730	481
10	73	5420	5250	1830	9140	7970	5700	18900	14200	24700	4600	413
11	512	5250	4860	1800	6250	3600	5790	33500	8640	24400	5950	397
12	1100	4930	9250	1300	6570	5860	12100	42600	1360	24400	7530	476
13	191	5610	10400	4630	6800	4720	15500	42800	3130	21100	6880	997
14	117	5460	13100	2860	2140	8830	13300	42200	13600	15600	6870	873
15	74	8070	13100	379	1530	13200	13200	40200	32600	12200	6760	544
16	70	9280	13100	168	2270	15900	13200	46000	43900	11700	10100	1790
17	66	9180	12900	4060	2070	19600	10200	45900	43800	11200	10500	1150
18	65	9390	13000	7080	2480	21100	7970	45800	43700	11100	11700	4640
19	63	9460	13000	5870	1850	20900	13500	39800	43700	9320	6150	5110
20	61	9290	7160	5840	1600	21000	16000	27800	43900	11000	5340	5270
21	68	12200	5280	3710	1080	21100	17300	27500	43700	10400	8670	6520
22	63	9900	5420	3010	1360	21100	21200	27300	43600	6650	10000	4200
23	59	9370	5370	5740	672	21000	21300	25400	44200	5460	10300	1650
24	115	12200	3040	5690	599	19000	21100	23100	44500	5240	6570	497
25	1160	13100	2460	5860	106	13600	21100	25100	44400	5080	2060	3200
26	716	13700	2390	9670	729	13700	21000	25300	42300	5140	1680	5130
27	1480	13600	2260	8110	1400	14100	21100	16600	36100	5220	1560	5070
28	242	13300	2860	11100	3400	17900	18200	21100	30100	5630	2980	6460
29	402	13900	3760	9140	---	16000	12000	30800	25300	5160	2840	5370
30	135	15600	3160	10500	---	9190	3210	32300	23500	5130	3990	3490
31	103	---	2890	10500	---	10800	---	33900	---	5090	3130	---
TOTAL	18371	222288	292010	148207	158896	363290	337860	823950	898330	429920	181150	72711
MEAN	593	7410	9420	4781	5675	11720	11260	26580	29940	13870	5844	2424
MAX	3090	15600	18600	11100	13200	21100	21300	46000	44500	24700	11700	6520
MIN	59	118	2260	168	106	2650	1970	3430	1360	5080	1560	397
AC-FT	36440	440900	579200	294000	315200	720600	670100	1634000	1782000	852700	359300	144200

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2840	5796	6964	6053	6101	9345	9010	13690	11900	4836	3621	2644
MAX	13100	21930	29600	20270	19480	30340	37980	64970	35550	13870	20050	13910
(WY)	1987	1975	1993	1988	1993	1985	1990	1990	1982	1995	1992	1992
MIN	241	248	247	119	127	129	81.5	148	600	259	692	558
(WY)	1979	1983	1981	1981	1981	1981	1981	1981	1988	1988	1985	1985

SUMMARY STATISTICS 1994 CALENDAR YEAR

1995 WATER YEAR

WATER YEARS 1968 - 95

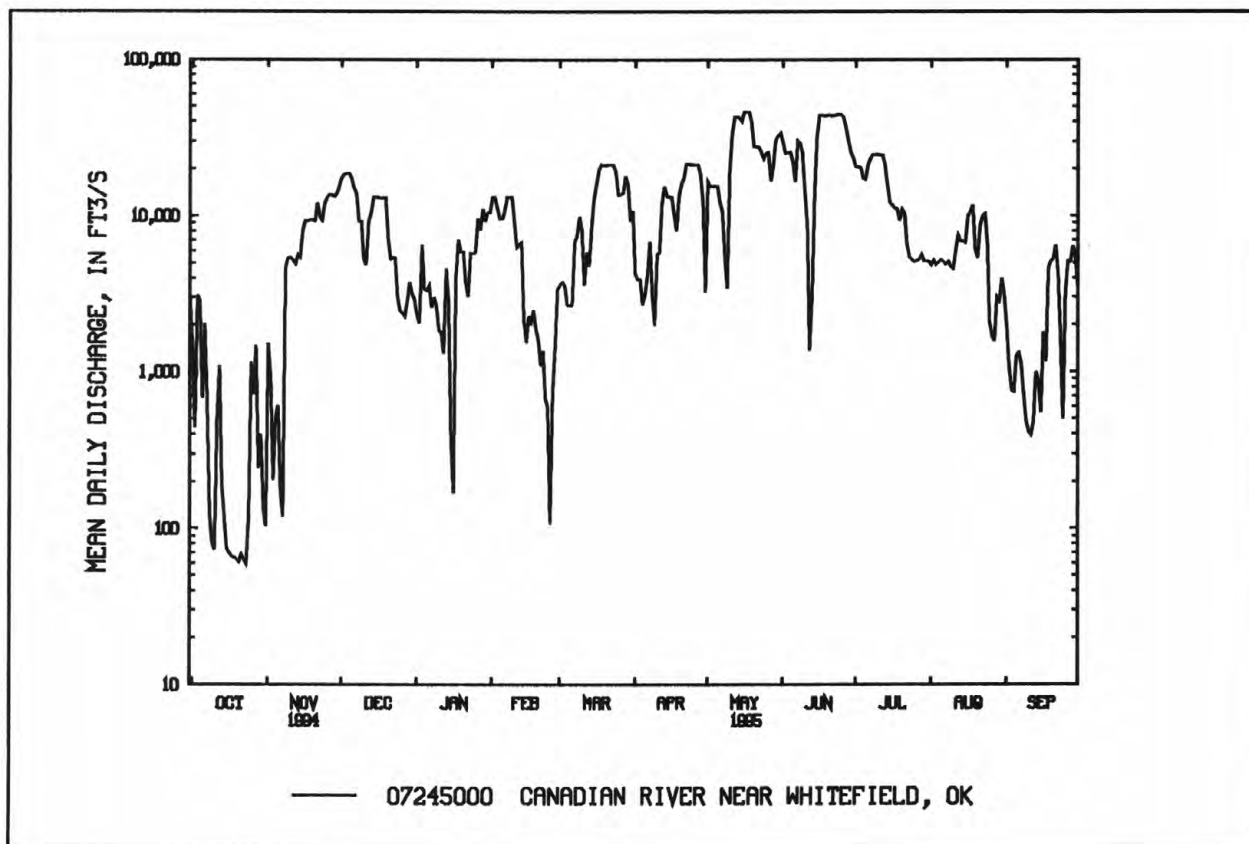
ANNUAL TOTAL	2077004	3946983	
ANNUAL MEAN	5690	10810	^a 6902
HIGHEST ANNUAL MEAN			15200 1993
LOWEST ANNUAL MEAN			1012 1981
HIGHEST DAILY MEAN	42800	Mar 15 46000	May 16 226000 May 5 1990
LOWEST DAILY MEAN	59	Oct 23 59	^b 17 Dec 1 1980
ANNUAL SEVEN-DAY MINIMUM	64	Oct 17 64	Oct 17 39 Oct 7 1985
INSTANTANEOUS PEAK FLOW		46500	May 16 ^c 241000 May 3 1990
INSTANTANEOUS PEAK STAGE		13.82	May 16 ^d 25.32 May 3 1990
INSTANTANEOUS LOW FLOW		9.8	Jan 5 9.8 Jan 5 1995
ANNUAL RUNOFF (AC-FT)	4120000	7829000	5000000
10 PERCENT EXCEEDS	15700	25300	16800
50 PERCENT EXCEEDS	2800	6570	3730
90 PERCENT EXCEEDS	196	638	134

^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 on a six week schedule. 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. No flow Oct. 19, Aug. 16, Sept. 13.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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)
MAR											
21...	0952	1.00	13.5	746	1028	1028	4.9	1.20	74	10.2	7.2
21...	0954	3.00	13.5	746	1028	1028	4.9	1.20	74	10.2	7.2
21...	0956	5.00	13.5	746	1028	1028	4.9	1.20	74	10.3	7.2
21...	0958	7.00	13.5	746	1028	1028	4.9	1.20	74	10.2	7.2
21...	1000	9.00	13.5	746	1028	1028	4.9	1.20	74	10.2	7.2
21...	1003	11.0	13.5	746	1028	1028	4.9	1.20	74	10.1	7.2
21...	1005	13.0	13.5	746	1028	1028	4.9	1.20	74	10.1	7.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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)
NOV									
30...	1000	1028	80020	3.9	87	7.2	8.5	5.5	761
JAN									
18...	1100	1028	80020	34	76	7.3	11.0	9.5	745
MAR									
21...	0930	1028	80020	4.9	75	7.2	18.5	13.5	746
APR									
18...	1040	1028	80020	23	86	7.2	21.5	18.0	740
MAY									
24...	1050	1028	80020	0.65	86	7.5	27.0	24.0	744
JUN									
21...	0945	1028	80020	0.54	67	7.2	25.5	23.5	745

ARKANSAS RIVER BASIN
07246940 POTEAU RIVER EAST OF WALDRON, AR--Continued

373

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	BICAR- BONATE WATER DIS IT MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT 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)
NOV 30...	12.5	100	18	0	15	--	--	<0.050	<0.015
JAN 18...	10.6	95	22	0	18	0.130	0.130	0.130	0.040
MAR 21...	10.2	100	20	0	17	--	--	<0.050	<0.015
APR 18...	9.0	98	23	0	19	0.050	0.050	0.050	0.040
MAY 24...	7.4	90	31	0	26	--	--	<0.050	0.040
JUN 21...	8.3	100	29	0	24	--	--	<0.050	0.050
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)
NOV 30...	--	0.40	0.40	0.40	0.040	0.030	0.09	14	0.14
JAN 18...	0.05	0.46	0.50	0.63	0.070	0.040	0.12	57	5.2
MAR 21...	--	0.40	0.40	0.40	0.050	0.020	0.06	17	0.22
APR 18...	0.05	0.56	0.60	0.65	0.070	0.040	0.12	25	1.6
MAY 24...	0.05	0.36	0.40	0.40	0.030	0.020	0.06	7	0.01
JUN 21...	0.06	0.45	0.50	0.50	0.030	<0.010	--	13	0.02

ARKANSAS RIVER BASIN
07246950 POTEAU RIVER NORTHWEST OF WALDRON, AR

LOCATION.--Lat 34°54'47", long 94°06'28", in SE 1/4 SW 1/4, sec. 17, T.3 N., R.29 W., Scott County, Hydrologic Unit 11110105, at bridge on U.S. Highway 71, 0.9 mi north of Waldron city limits and Kansas City Southern Railroad crossing.

DRAINAGE AREA.--46.1 mi².

PERIOD OF RECORD.--November 1983 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. Additional samples collected by Arkansas Department of Pollution Control and Ecology, Little Rock, Arkansas, are published by the U.S. Geological Survey, Arkansas District in Water Resources Data, Arkansas.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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											
21...	1136	2.00	28.0	743	1028	1028	4.0	25.05	668	8.2	7.0
21...	1140	3.00	28.0	743	1028	1028	4.0	25.05	667	8.3	7.0
21...	1143	4.00	28.0	743	1028	1028	4.0	25.05	667	8.2	7.0
21...	1147	5.00	28.0	743	1028	1028	4.0	25.05	667	8.2	7.0
21...	1150	6.00	28.0	743	1028	1028	4.0	25.05	667	8.3	7.0
21...	1153	7.00	28.0	743	1028	1028	4.0	25.05	667	8.2	7.0
21...	1156	8.00	28.0	743	1028	1028	4.0	25.05	668	8.2	7.0
21...	1200	51.0	25.5	743	1028	1028	4.0	25.05	71	7.0	7.1
21...	1204	52.0	25.5	743	1028	1028	4.0	25.05	71	7.2	7.1
21...	1207	53.0	25.5	743	1028	1028	4.0	25.05	71	7.4	7.1
21...	1210	54.0	25.5	743	1028	1028	4.0	25.05	71	7.6	7.1
21...	1214	55.0	25.5	743	1028	1028	4.0	25.05	71	7.2	7.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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									
19...	0910	1028	80020	2.3	623	7.2	18.5	21.5	748
NOV									
30...	1215	1028	80020	31	*150	7.5	17.5	11.5	759
JAN									
18...	1300	1028	80020	158	156	7.5	9.5	10.5	745
MAR									
21...	1050	1028	80020	21	115	7.2	27.0	17.5	745
APR									
18...	0930	1028	80020	66	84	7.1	17.0	18.5	742
MAY									
24...	1150	1028	80020	3.9	331	7.4	28.0	24.5	743
JUN									
21...	1100	1028	80020	4.0	335	7.1	29.5	26.5	743
AUG									
16...	1000	1028	80020	1.9	780	7.1	30.5	29.0	744
SEP									
13...	1200	1028	80020	2.3	662	7.1	23.5	25.5	749

* SPECIFIC CONDUCTANCE, LAB (μs/cm)

ARKANSAS RIVER BASIN
07246950 POTEAU RIVER NORTHWEST OF WALDRON, AR--Continued

375

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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									
19...	6.1	70	78	0	64	13.0	13.0	13.0	0.270
NOV									
30...	9.4	86	27	0	22	0.480	0.480	0.480	0.190
JAN									
18...	10.9	100	34	0	28	0.600	0.600	0.600	1.20
MAR									
21...	9.8	105	19	0	16	1.00	1.00	1.00	0.030
APR									
18...	8.0	88	20	0	16	0.420	0.420	0.420	0.050
MAY									
24...	6.2	77	49	0	40	5.10	5.10	5.10	0.130
JUN									
21...	7.6	97	38	0	31	7.80	7.80	7.80	0.130
AUG									
16...	6.2	83	72	0	59	25.0	25.0	25.0	0.470
SEP									
13...	6.1	76	72	0	59	8.70	8.70	8.70	0.670

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- SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT									
19...	0.35	3.0	3.3	16	14.0	14.0	43	27	0.17
NOV									
30...	0.24	0.71	0.90	1.4	1.80	1.80	5.5	22	1.8
JAN									
18...	1.5	0.70	1.9	2.5	1.50	1.50	4.6	64	27
MAR									
21...	0.04	0.57	0.60	1.6	0.970	0.930	2.9	11	0.62
APR									
18...	0.06	0.55	0.60	1.0	0.340	0.320	0.98	23	4.1
MAY									
24...	0.17	0.67	0.80	5.9	4.70	4.80	15	31	0.32
JUN									
21...	0.17	1.1	1.2	9.0	4.70	4.50	14	16	0.17
AUG									
16...	0.61	1.5	2.0	27	15.0	14.0	43	38	0.19
SEP									
13...	0.86	1.3	2.0	11	10.0	10.0	31	11	0.07

ARKANSAS RIVER BASIN
07246960 POTEAU RIVER NEAR HON, AR

LOCATION.--Lat 34°55'34", long 94°10'03", in SW 1/4 SE 1/4, sec. 10, T.3 N., R.30 W., Scott County, Hydrologic Unit 11110105, at bridge on State Highway 80, 1.0 mi southeast of Hon, AR.

DRAINAGE AREA.--69.5 mi².

PERIOD OF RECORD.--February 1993 to July 1993, August 1994 to current year.

REMARKS.--Samples 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 1994 TO SEPTEMBER 1995

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											
21...	1245	2.00	26.0	742	1028	1028	5.0	27.60	162	8.1	7.2
21...	1248	3.00	26.0	742	1028	1028	5.0	27.60	162	8.4	7.2
21...	1251	4.00	26.0	742	1028	1028	5.0	27.60	162	8.4	7.2
21...	1253	5.00	26.0	742	1028	1028	5.0	27.60	162	8.5	7.2
21...	1256	6.00	26.0	742	1028	1028	5.0	27.60	162	8.8	7.2
21...	1259	7.00	26.0	742	1028	1028	5.0	27.60	162	8.8	7.2
21...	1302	8.00	26.0	742	1028	1028	5.0	27.60	162	8.8	7.2
21...	1305	9.00	26.0	742	1028	1028	5.0	27.60	162	8.8	7.2
21...	1308	10.0	26.5	742	1028	1028	5.0	27.60	162	8.8	7.2
21...	1312	11.0	26.5	742	1028	1028	5.0	27.60	162	8.8	7.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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									
19...	1155	1028	80020	3.7	452	7.4	24.0	20.0	747
NOV									
30...	1350	1028	80020	56	72	7.1	13.5	10.0	759
FEB									
10...	0845	1028	80020	22	168	7.4	4.5	5.0	746
MAR									
21...	1210	1028	80020	26	105	7.2	27.0	18.5	743
APR									
18...	1215	1028	80020	79	83	7.0	24.0	20.0	741
MAY									
24...	0925	1028	80020	6.1	153	7.1	24.5	23.5	746
JUN									
21...	1230	1028	80020	5.0	164	7.2	31.5	26.0	742
AUG									
16...	1105	1028	80020	2.2	534	7.3	35.0	28.0	742
SEP									
13...	1340	1028	80020	3.4	580	7.7	24.5	22.0	749

ARKANSAS RIVER BASIN
07246960 POTEAU RIVER NEAR HON, AR--Continued

377

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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									
19...	8.4	95	58	0	48	1.80	1.80	1.80	0.090
NOV									
30...	10.7	95	18	0	14	0.160	0.160	0.160	0.030
FEB									
10...	12.5	99	21	0	17	2.80	2.80	2.80	0.020
MAR									
21...	9.4	103	14	0	12	0.900	0.900	0.900	0.040
APR									
18...	8.0	90	18	0	14	0.460	0.460	0.460	0.040
MAY									
24...	6.6	79	30	0	24	0.730	0.730	0.730	0.050
JUN									
21...	7.8	99	20	0	16	2.00	2.00	2.00	0.060
AUG									
16...	5.6	74	64	0	53	10.0	10.0	10.0	0.100
SEP									
13...	7.8	91	88	0	72	5.10	5.10	5.10	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 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									
19...	0.12	1.2	1.3	3.1	4.20	4.20	13	4	0.04
NOV									
30...	0.04	0.47	0.50	0.66	0.350	0.320	0.98	13	2.0
FEB									
10...	0.03	0.68	0.70	3.5	0.840	0.770	2.4	12	0.70
MAR									
21...	0.05	0.66	0.70	1.6	0.770	0.730	2.2	12	0.83
APR									
18...	0.05	0.56	0.60	1.1	0.370	0.330	1.0	28	6.0
MAY									
24...	0.06	0.55	0.60	1.3	1.10	1.10	3.4	10	0.17
JUN									
21...	0.08	0.74	0.80	2.8	1.40	1.30	4.0	9	0.12
AUG									
16...	0.13	1.2	1.3	11	5.80	5.60	17	29	0.18
SEP									
13...	0.04	1.1	1.1	6.2	8.00	7.50	23	5	0.05

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 current year

REMARKS.--Samples collected on a six-week schedule. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field. No flow Sept. 13.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
JUN										
21...	0825	4.00	23.5	747	1028	1028	12	51	6.2	7.2
21...	0827	8.00	23.5	747	1028	1028	12	51	6.1	7.2
21...	0830	12.0	23.5	747	1028	1028	12	51	6.1	7.2
21...	0832	16.0	23.5	747	1028	1028	12	51	6.2	7.2
21...	0834	20.0	23.5	747	1028	1028	12	51	6.0	7.2
21...	0837	24.0	23.5	747	1028	1028	12	51	6.0	7.2
21...	0840	28.0	23.5	747	1028	1028	12	51	5.8	7.2
21...	0843	32.0	23.5	747	1028	1028	12	51	6.1	7.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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									
19...	1050	1028	80020	0.53	67	7.2	21.0	20.5	748
NOV									
30...	0800	1028	80020	129	44	7.4	1.0	8.0	763
FEB									
10...	1000	1028	80020	40	48	7.1	11.5	6.0	746
MAR									
21...	0800	1028	80020	29	61	7.4	8.5	15.0	747
APR									
18...	0800	1028	80020	86	47	7.1	16.0	18.0	742
MAY									
24...	0800	1028	80020	38	39	7.1	22.5	22.0	747
JUN									
21...	0800	1028	80020	12	51	7.2	21.0	23.0	747
AUG									
16...	0800	1028	80020	0.12	76	7.2	23.0	25.5	747

ARKANSAS RIVER BASIN
07246980 JONES CREEK NEAR HON, AR--Continued

379

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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 19...	6.8	77	26	0	21	0.060	0.060	0.060	0.050
NOV 30...	10.8	91	9	0	7	0.080	0.080	0.080	<0.015
FEB 10...	12.1	99	9	0	7	0.100	0.100	0.100	0.020
MAR 21...	8.7	88	8	0	6	--	--	<0.050	<0.015
APR 18...	8.0	87	11	0	9	0.090	0.090	0.090	0.030
MAY 24...	7.0	82	11	0	9	0.080	0.080	0.080	0.030
JUN 21...	6.1	72	16	0	13	0.100	0.100	0.100	0.060
AUG 16...	4.0	50	31	0	25	0.120	0.120	0.120	0.070

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- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT 19...	0.06	0.55	0.60	0.66	0.050	0.020	0.06	3	0.00
NOV 30...	--	0.30	0.30	0.38	0.020	0.010	0.03	14	4.9
FEB 10...	0.03	0.58	0.60	0.70	0.010	0.010	0.03	5	0.54
MAR 21...	--	0.30	0.30	0.30	0.020	<0.010	--	10	0.79
APR 18...	0.04	0.37	0.40	0.49	0.030	0.010	0.03	14	3.2
MAY 24...	0.04	0.17	0.20	0.28	0.020	0.010	0.03	12	1.2
JUN 21...	0.08	0.44	0.50	0.60	0.070	0.020	0.06	10	0.31
AUG 16...	0.09	0.43	0.50	0.62	0.090	0.030	0.09	16	0.01

ARKANSAS RIVER BASIN

07247000 POTEAU RIVER AT CAUTHRON, AR

LOCATION.--Lat 34°55'08", long 94°17'55", NW 1/4 SW 1/4 sec.16, T.3 N., R.31 W., Scott County, Hydrologic Unit 11110105, on right bank at downstream side of highway bridge at Cauthron, 2.9 mi downstream from Cross Creek, 7.8 mi downstream from Jones Creek, and at mile 109.0.

DRAINAGE AREA.--203 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. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	12	202	159	254	45	54	1120	382	134	5.2	1.3
2	2.2	12	173	138	223	39	48	648	550	42	4.3	1.1
3	2.8	16	151	126	197	35	43	432	680	17	3.8	.96
4	3.1	48	133	125	169	33	79	362	361	8.6	3.2	.89
5	3.1	e8180	120	114	150	33	106	292	258	7.9	3.0	.81
6	3.2	e2390	109	166	134	33	78	396	198	37	2.6	.75
7	4.7	e780	97	247	131	737	65	1040	142	21	3.0	.78
8	24	e550	426	169	123	454	59	8540	106	10	1.8	.80
9	40	e3860	3080	150	108	271	51	3000	82	5.8	1.4	.80
10	18	e2390	2220	136	100	210	47	1430	252	3.8	1.7	.81
11	3.4	e730	1120	130	92	169	3500	1090	733	3.0	1.7	.85
12	1.2	e620	663	126	81	141	1270	859	493	2.3	1.1	1.1
13	1.8	e482	483	4690	72	125	670	705	266	2.0	.83	1.5
14	3.1	e3550	408	3940	67	164	409	538	167	1.7	.71	2.2
15	4.3	e2460	363	1420	67	195	302	426	113	1.5	.58	2.7
16	6.1	1390	1290	1030	70	199	238	343	81	1.2	.51	4.1
17	9.6	820	846	725	70	155	211	277	59	1.1	.38	52
18	12	577	531	716	68	127	224	228	44	.96	.26	15
19	12	460	401	1650	62	109	209	188	32	.91	.51	1.9
20	14	391	728	881	55	95	740	151	25	.96	1.6	.67
21	19	377	967	629	51	78	441	125	20	3.2	2.0	.26
22	19	289	574	502	47	65	287	103	15	95	2.4	.10
23	17	231	432	482	42	55	266	84	12	30	3.1	.01
24	17	193	361	511	39	47	262	69	114	15	3.1	.01
25	14	166	305	599	38	39	202	115	53	15	2.9	.01
26	12	151	264	496	35	243	165	110	26	15	2.6	.00
27	10	1160	228	516	36	300	143	74	14	14	2.2	.00
28	10	517	200	421	45	136	122	64	9.4	13	2.0	.00
29	11	319	195	335	---	95	161	50	7.3	9.5	1.7	.15
30	11	242	219	334	---	76	237	38	22	6.5	1.6	.20
31	12	---	177	290	---	63	---	182	---	5.3	1.4	---
TOTAL	322.0	33363	17466	21953	2626	4566	10689	23079	5316.7	524.23	63.18	91.76
MEAN	10.4	1112	563	708	93.8	147	356	744	177	16.9	2.04	3.06
MAX	40	8180	3080	4690	254	737	3500	8540	733	134	5.2	52
MIN	1.2	12	97	114	35	33	43	38	7.3	.91	.26	.00
AC-FT	639	66180	34640	43540	5210	9060	21200	45780	10550	1040	125	182

c Estimated

07247000 POTEAU RIVER AT CAUTHRON, AR--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	115	254	363	287	361	419	349	527	216	59.2	19.6	17.0
MAX	1423	1112	1078	907	1246	849	1092	2080	846	314	83.1	124
(WY)	1985	1995	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

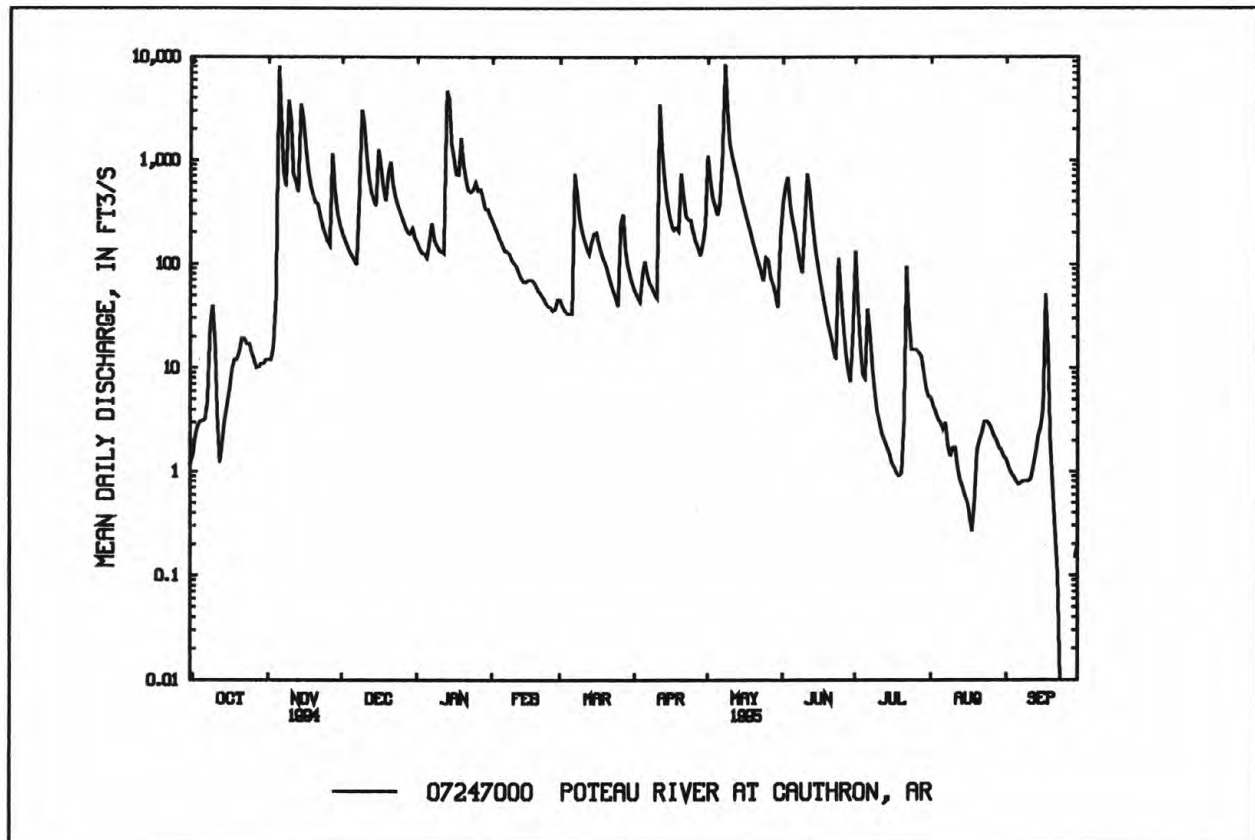
SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1975 - 95

ANNUAL TOTAL	116550.1	120059.87	
ANNUAL MEAN	319	329	^a 249
HIGHEST ANNUAL MEAN			432
LOWEST ANNUAL MEAN			48.7
HIGHEST DAILY MEAN	8180	Nov 5	8540 May 8
LOWEST DAILY MEAN	1.2	Sep 19	.00 Sep 26-28
ANNUAL SEVEN-DAY MINIMUM	1.3	Sep 17	.02 Sep 22
INSTANTANEOUS PEAK FLOW			11500 May 8
INSTANTANEOUS PEAK STAGE			18.32 May 8
INSTANTANEOUS LOW FLOW			.00 at times
ANNUAL RUNOFF (AC-FT)	231200	238100	180000
10 PERCENT EXCEEDS	808	726	605
50 PERCENT EXCEEDS	47	81	51
90 PERCENT EXCEEDS	3.2	1.3	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.



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 1994 TO SEPTEMBER 1995

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											
23...	1006	6.00	27.0	746	1028	1028	12	3.79	70	7.8	7.0
23...	1008	10.0	27.0	746	1028	1028	12	3.79	70	7.8	7.0
23...	1012	14.0	27.0	746	1028	1028	12	3.79	70	7.8	7.0
23...	1015	18.0	27.0	746	1028	1028	12	3.79	70	7.8	7.0
23...	1018	22.0	27.0	746	1028	1028	12	3.79	70	7.8	7.0
23...	1022	26.0	27.0	746	1028	1028	12	3.79	70	7.9	7.0
23...	1026	30.0	27.0	746	1028	1028	12	3.79	71	8.0	7.0
23...	1029	34.0	27.0	746	1028	1028	12	3.79	71	8.0	7.0
23...	1033	38.0	27.0	746	1028	1028	12	3.79	71	8.1	7.0
23...	1037	42.0	27.0	746	1028	1028	12	3.79	71	8.1	7.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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									
18...	0950	1028	80020	12	*78	7.1	20.0	19.0	746
NOV									
30...	1500	1028	80020	231	54	7.0	15.0	10.5	758
JAN									
18...	1620	1028	80020	598	*45	6.8	6.5	9.5	745
MAR									
23...	0745	1028	80020	57	80	7.1	20.0	18.5	745
APR									
18...	1320	1028	80020	227	57	6.9	25.0	20.0	740
MAY									
24...	1330	1028	80020	66	53	6.8	28.5	24.0	746
JUN									
23...	1005	1028	80020	12	70	7.0	27.5	27.0	746
AUG									
16...	1215	1028	80020	0.45	172	7.2	33.5	30.5	743
SEP									
13...	0925	1028	80020	1.7	156	7.3	21.5	22.5	752

*SPECIFIC CONDUCTANCE, LAB (µs/cm)

ARKANSAS RIVER BASIN
07247000 POTEAU RIVER AT CAUTHRON, AR--Continued

383

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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 18...	5.9	65	25	0	20	--	--	<0.050	0.030
NOV 30...	10.0	90	11	0	9	0.100	0.100	0.100	<0.015
JAN 18...	10.3	92	9	0	7	0.110	0.110	0.110	0.040
MAR 23...	8.0	87	15	0	13	0.230	0.230	0.230	0.020
APR 18...	7.4	84	13	0	11	0.170	0.170	0.170	0.030
MAY 24...	8.1	99	14	0	11	0.180	0.180	0.180	0.020
JUN 23...	8.0	103	20	0	16	--	--	<0.050	0.030
AUG 16...	6.9	95	46	0	38	0.050	0.050	0.050	0.060
SEP 13...	4.2	49	47	0	39	--	--	<0.050	<0.015
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 18...	0.04	0.57	0.60	0.60	0.090	0.060	0.18	8	0.26
NOV 30...	--	0.50	0.50	0.60	0.110	0.080	0.25	13	8.1
JAN 18...	0.05	0.26	0.30	0.41	0.070	0.050	0.15	17	27
MAR 23...	0.03	0.48	0.50	0.73	0.240	0.180	0.55	12	1.8
APR 18...	0.04	0.37	0.40	0.57	0.110	0.080	0.25	23	14
MAY 24...	0.03	0.28	0.30	0.48	0.140	0.120	0.37	13	2.3
JUN 23...	0.04	0.47	0.50	0.50	0.190	0.110	0.34	15	0.49
AUG 16...	0.08	0.74	0.80	0.85	0.170	0.150	0.46	19	0.02
SEP 13...	--	0.70	0.70	0.70	0.100	0.030	0.09	13	0.06

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.3	253	182	367	39	64	1550	379	72	7.3	4.5
2	1.2	1.7	206	156	314	36	55	1050	560	88	6.4	4.3
3	1.3	1.8	174	133	264	32	50	534	938	46	5.9	3.9
4	1.2	212	149	128	218	30	101	395	430	29	5.2	3.6
5	1.1	7250	128	121	184	28	120	304	246	29	5.3	3.3
6	1.0	4160	114	154	162	29	90	349	215	30	5.2	3.3
7	1.5	1300	100	330	147	561	67	1270	148	37	6.4	3.5
8	9.5	1020	495	224	141	663	55	6420	109	32	8.2	3.3
9	13	2560	3360	176	116	348	47	5790	86	22	7.4	3.1
10	11	3290	3020	150	104	244	41	1740	77	18	6.2	3.1
11	15	1280	1520	136	95	185	2640	1290	690	15	5.6	3.5
12	9.3	834	926	142	83	149	1800	976	504	13	5.4	4.4
13	5.6	611	670	3920	74	128	834	727	279	12	5.7	4.4
14	3.6	2310	555	6700	69	155	463	570	170	10	5.5	3.8
15	2.5	3860	498	1890	68	220	309	445	117	9.2	5.7	4.1
16	1.6	1760	1330	1320	71	250	234	352	88	8.9	5.4	5.7
17	1.2	1080	1280	978	71	191	203	285	68	9.6	5.2	9.1
18	1.0	753	767	846	68	147	224	229	56	9.9	4.7	49
19	.99	597	566	1960	62	116	267	186	46	8.5	4.6	37
20	1.0	513	809	1240	56	96	1270	150	38	8.2	4.8	19
21	1.7	505	1350	885	51	79	690	122	33	17	4.7	13
22	2.9	388	824	728	46	66	375	102	30	16	4.9	9.7
23	3.1	294	606	691	43	57	278	85	26	47	4.9	7.6
24	3.7	234	502	734	39	50	287	74	41	32	4.9	6.6
25	3.8	194	408	846	35	42	203	85	85	22	6.7	6.7
26	3.8	170	341	746	35	311	152	106	50	17	9.5	6.2
27	3.6	1050	288	723	33	846	121	86	34	15	9.9	5.8
28	3.2	837	243	639	33	276	94	66	26	17	7.0	5.5
29	2.7	459	227	503	---	149	176	58	23	19	5.1	4.8
30	2.0	327	262	487	---	101	297	51	23	13	4.2	4.4
31	1.3	---	215	435	---	78	---	47	---	8.7	4.1	---
TOTAL	115.69	37852.8	22186	28303	3049	5702	11607	25494	5615	731.0	182.0	246.2
MEAN	3.73	1262	716	913	109	184	387	822	187	23.6	5.87	8.21
MAX	15	7250	3360	6700	367	846	2640	6420	938	88	9.9	49
MIN	.99	1.3	100	121	33	28	41	47	23	8.2	4.1	3.1
AC-FT	229	75080	44010	56140	6050	11310	23020	50570	11140	1450	361	488

ARKANSAS RIVER BASIN

385

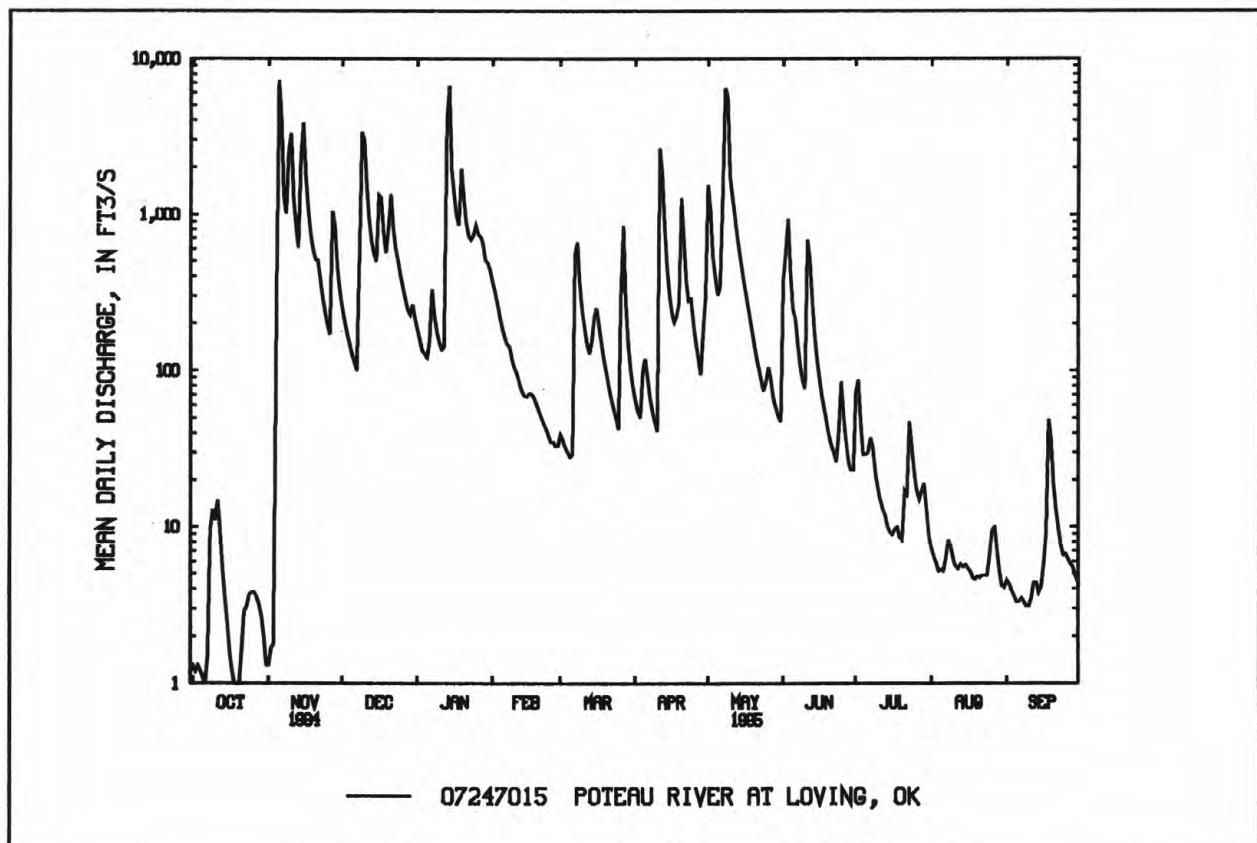
07247015 POTEAU RIVER NEAR LOVING, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	75.8	602	772	846	326	388	311	606	231	25.8	7.97	47.7
MAX	202	1262	800	913	438	711	543	898	600	53.9	11.1	148
(WY)	1994	1995	1994	1995	1994	1994	1993	1993	1992	1992	1993	1992
MIN	3.73	235	716	725	109	184	64.4	104	12.6	8.17	5.87	7.50
(WY)	1995	1993	1995	1994	1995	1995	1992	1992	1994	1993	1995	1993

SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1992 - 95

ANNUAL TOTAL	145004.22	141083.69	
ANNUAL MEAN	397	387	361
HIGHEST ANNUAL MEAN		387	1995
LOWEST ANNUAL MEAN		343	1994
HIGHEST DAILY MEAN	7250	Nov 5	7670 May 10 1993
LOWEST DAILY MEAN	.36	Sep 21	.36 Sep 21 1994
ANNUAL SEVEN-DAY MINIMUM	.51	Sep 16	.51 Sep 16 1994
INSTANTANEOUS PEAK FLOW		8540	Jan 14 1995
INSTANTANEOUS PEAK STAGE		27.40	Jan 14 1995
INSTANTANEOUS LOW FLOW		.99	Oct 19 1994
ANNUAL RUNOFF (AC-FT)	287600	279800	261900
10 PERCENT EXCEEDS	1080	953	846
50 PERCENT EXCEEDS	52	85	68
90 PERCENT EXCEEDS	1.7	3.8	3.7



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 1994 TO SEPTEMBER 1995

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											
23...	0855	10.0	26.0	745	1028	1028	27	9.00	73	5.6	6.8
23...	0858	15.0	26.0	745	1028	1028	27	9.00	73	5.6	6.8
23...	0903	20.0	26.0	745	1028	1028	27	9.00	73	5.8	6.8
23...	0906	25.0	26.0	745	1028	1028	27	9.00	73	6.0	6.8
23...	0910	50.0	26.0	745	1028	1028	27	9.00	73	5.4	6.8
23...	0913	55.0	26.0	745	1028	1028	27	9.00	73	6.1	6.8
23...	0916	60.0	26.0	745	1028	1028	27	9.00	73	5.8	6.8
23...	0920	65.0	26.0	745	1028	1028	27	9.00	73	5.8	6.8
23...	0923	70.0	26.0	745	1028	1028	27	9.00	73	6.0	6.8
23...	0927	75.0	26.0	745	1028	1028	27	9.00	73	5.9	6.8
23...	0930	80.0	26.0	745	1028	1028	27	9.00	73	6.0	6.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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									
18...	1155	1028	80020	0.99	*82	7.0	21.5	20.0	746
DEC									
01...	0955	1028	80020	255	58	6.9	9.5	9.5	763
JAN									
19...	1015	1028	80020	2380	51	6.9	3.0	7.5	750
MAR									
23...	0900	1028	80020	58	83	7.4	21.0	19.5	747
APR									
18...	1730	1028	80020	235	62	6.8	27.0	20.0	745
MAY									
25...	1140	1028	80020	84	58	6.7	23.0	24.0	752
JUN									
23...	0850	1028	80020	27	73	6.8	25.5	26.0	745
AUG									
18...	0805	1028	80020	4.8	141	7.1	24.0	27.5	748
SEP									
13...	0805	1028	80020	4.8	140	7.5	20.0	21.5	753

*SPECIFIC CONDUCTANCE, LAB (µs/cm)

ARKANSAS RIVER BASIN
07247015 POTEAU RIVER AT LOVING, OK--Continued

387

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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 18...	4.9	55	29	0	24	0.070	0.070	0.070	0.090
DEC 01...	11.2	98	13	0	11	0.100	0.100	0.100	<0.015
JAN 19...	10.8	91	10	0	8	0.120	0.120	0.120	0.040
MAR 23...	8.0	89	21	0	17	--	--	<0.050	0.020
APR 18...	7.0	79	15	0	12	0.180	0.180	0.180	0.030
MAY 25...	6.9	83	15	0	12	0.100	0.100	0.100	0.030
JUN 23...	6.0	76	18	0	14	0.130	0.130	0.130	0.050
AUG 18...	4.3	55	35	0	29	0.110	0.110	0.110	0.060
SEP 13...	4.6	53	44	0	36	0.070	0.070	0.070	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- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT 18...	0.12	0.61	0.70	0.77	0.050	0.030	0.09	7	0.02
DEC 01...	--	0.40	0.40	0.50	0.100	0.060	0.18	13	9.0
JAN 19...	0.05	0.36	0.40	0.52	0.080	0.050	0.15	70	450
MAR 23...	0.03	0.38	0.40	0.40	0.120	0.080	0.25	15	2.3
APR 18...	0.04	0.37	0.40	0.58	0.100	0.060	0.18	19	12
MAY 25...	0.04	0.17	0.20	0.30	0.040	0.030	0.09	13	2.9
JUN 23...	0.06	0.55	0.60	0.73	0.110	0.050	0.15	22	1.6
AUG 18...	0.08	0.44	0.50	0.61	0.070	0.070	0.21	19	0.25
SEP 13...	0.03	0.58	0.60	0.67	0.050	0.010	0.03	9	0.12

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., LeFlore County, Hydrologic Unit 11110105, on downstream side of bridge pier of county road bridge, 2.2 mi above Haw Creek, 5.0 mi north of Page, and at mile 24.6, .

DRAINAGE AREA.--74.4 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft³/s.

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 5	0700	33,800	19.61	May 1	0700	5,320	12.39
Nov. 9	1300	5,920	12.82	May 8	0800	16,600	16.63
Jan. 13	1400	10,200	14.82				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	3.7	102	73	173	38	56	2290	28	4.4	2.7	.00
2	.00	3.1	90	65	148	37	52	784	33	4.2	2.4	.00
3	.00	3.5	82	63	125	39	49	410	48	4.7	2.2	.00
4	.00	752	75	62	107	40	163	262	37	3.8	1.9	.00
5	.00	11100	67	56	95	40	127	187	27	4.1	1.6	.00
6	.00	852	62	79	85	41	107	270	30	5.0	1.4	.00
7	.06	365	57	92	79	155	92	456	25	6.0	1.2	.00
8	264	216	183	80	70	183	79	6140	20	4.5	.97	.00
9	110	2510	1570	73	64	142	68	1110	17	3.3	.76	.00
10	25	1120	1210	71	62	115	63	506	17	2.6	.56	.00
11	10	513	628	72	58	98	1130	295	53	2.2	.44	.00
12	5.5	296	385	77	53	84	615	205	78	1.9	.29	.00
13	3.8	206	259	5290	50	78	306	164	50	2.1	.18	.00
14	3.0	1350	219	2810	48	126	205	126	36	2.5	.12	.00
15	2.5	1300	185	897	48	132	155	97	27	2.8	.09	.00
16	2.7	773	588	516	48	130	125	80	20	2.9	.06	.00
17	3.2	460	466	336	46	116	130	68	16	3.0	.02	.00
18	4.0	290	299	502	43	101	179	66	13	2.6	.00	.00
19	12	210	222	974	40	89	207	55	11	2.7	.00	.00
20	16	211	379	638	38	79	666	46	9.9	5.1	.00	.00
21	12	220	374	415	36	70	342	39	9.3	6.7	.00	.00
22	13	163	256	329	35	64	210	34	8.8	8.1	.00	.00
23	12	136	206	269	34	58	184	28	7.4	5.5	.00	.00
24	9.8	119	173	252	33	51	151	24	5.8	5.0	.00	.00
25	8.5	106	146	300	31	47	116	35	5.2	3.8	.00	.00
26	7.4	100	123	286	32	133	93	34	4.8	4.2	.00	.00
27	6.1	250	106	461	36	195	83	32	4.5	4.9	.00	.00
28	5.1	189	94	387	39	103	70	31	4.8	5.0	.00	.00
29	4.4	146	98	280	---	81	295	24	4.4	3.7	.00	.00
30	3.9	119	91	243	---	70	326	21	4.0	2.7	.00	.00
31	3.9	---	80	200	---	62	---	23	---	2.5	.00	---
TOTAL	547.8624082.3		8875	16248	1756	2797	6444	13942	654.9	122.5	16.89	0.00
MEAN	17.7	803	286	524	62.7	90.2	215	450	21.8	3.95	.54	.000
MAX	264	11100	1570	5290	173	195	1130	6140	78	8.1	2.7	.00
MIN	.00	3.1	57	56	31	37	49	21	4.0	1.9	.00	.00
AC-FT	1090	47770	17600	32230	3480	5550	12780	27650	1300	243	34	.00

ARKANSAS RIVER BASIN

389

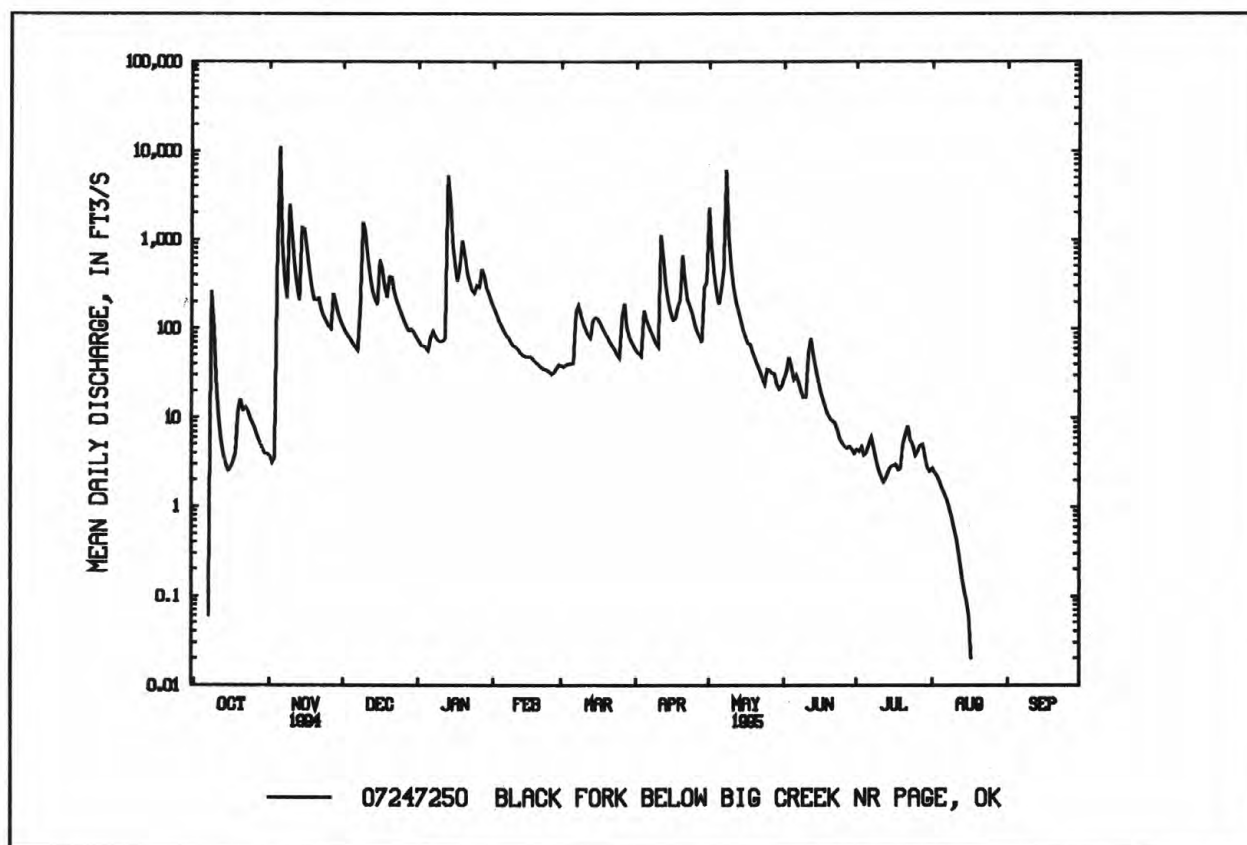
07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	81.1	420	393	454	161	202	206	320	61.4	9.23	7.51	97.9
MAX	208	803	489	549	216	350	401	553	176	16.0	14.4	378
(WY)	1994	1995	1993	1993	1993	1994	1993	1993	1992	1994	1993	1992
MIN	17.2	214	286	289	62.7	90.2	95.4	52.5	16.0	3.44	.54	.000
(WY)	1993	1993	1995	1994	1995	1995	1992	1992	1994	1993	1995	1995

SUMMARY STATISTICS 1994 CALENDAR YEAR 1995 WATER YEAR WATER YEARS 1992 - 95

ANNUAL TOTAL	70473.26	75486.45	
ANNUAL MEAN	193	207	202
HIGHEST ANNUAL MEAN			226 1993
LOWEST ANNUAL MEAN			173 1994
HIGHEST DAILY MEAN	11100	Nov 5 11100	Nov 5 11100
LOWEST DAILY MEAN	.00	Sep 20	.00 at times
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 20	.00 Aug 18
INSTANTANEOUS PEAK FLOW			33800 Nov 5 33800
INSTANTANEOUS PEAK STAGE		19.61	Nov 5 19.61
ANNUAL RUNOFF (AC-FT)	139800	149700	146500
10 PERCENT EXCEEDS	467	381	385
50 PERCENT EXCEEDS	41	48	51
90 PERCENT EXCEEDS	.65	.00	1.0



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. No flow Aug. 18, Sept. 13.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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											
23...	0733	6.00	25.5	743	1028	1028	8.7	4.03	37	6.2	6.8
23...	0736	10.0	25.5	743	1028	1028	8.7	4.03	37	6.1	6.8
23...	0739	14.0	25.5	743	1028	1028	8.7	4.03	37	6.4	6.8
23...	0742	18.0	25.5	743	1028	1028	8.7	4.03	37	6.4	6.8
23...	0745	22.0	25.5	743	1028	1028	8.7	4.03	37	6.0	6.8
23...	0748	26.0	25.5	743	1028	1028	8.7	4.03	37	6.2	6.8
23...	0753	30.0	25.5	743	1028	1028	8.7	4.03	37	6.2	6.8
23...	0755	34.0	25.5	743	1028	1028	8.7	4.03	37	6.2	6.8
23...	0758	38.0	25.5	743	1028	1028	8.7	4.03	37	6.2	6.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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									
18...	1400	1028	80020	3.7	46	7.0	24.5	20.5	740
DEC									
01...	1100	1028	80020	104	30	6.7	15.5	9.0	757
JAN									
19...	1130	1028	80020	882	25	6.5	7.5	7.0	750
MAR									
23...	1005	1028	80020	59	29	6.8	24.0	20.0	740
APR									
19...	1040	1028	80020	151	28	6.9	18.5	17.0	745
MAY									
25...	1235	1028	80020	37	32	6.6	25.0	23.5	746
JUN									
23...	0725	1028	80020	8.7	38	6.8	21.0	25.0	743

ARKANSAS RIVER BASIN
07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OK--Continued

391

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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 18...	8.3	95	11	0	9	0.060	0.060	0.060	0.040
DEC 01...	10.8	94	5	0	4	0.090	0.090	0.090	<0.015
JAN 19...	11.5	97	5	0	4	0.100	0.100	0.100	<0.015
MAR 23...	7.8	89	7	0	6	--	--	<0.050	<0.015
APR 19...	8.7	92	7	0	5	--	--	<0.050	<0.015
MAY 25...	6.0	72	9	0	7	0.090	0.090	0.090	0.030
JUN 23...	6.4	80	12	0	10	--	--	<0.050	0.060

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- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 18...	0.05	0.46	0.50	0.56	0.020	0.010	0.03	6	0.06
DEC 01...	--	--	<0.20	--	0.020	<0.010	--	6	1.7
JAN 19...	--	0.20	0.20	0.30	0.020	0.020	0.06	13	31
MAR 23...	--	--	<0.20	--	0.020	<0.010	--	4	0.64
APR 19...	--	--	<0.20	--	<0.010	<0.010	--	5	2.0
MAY 25...	0.04	--	<0.20	--	<0.010	<0.010	--	6	0.60
JUN 23...	0.08	0.34	0.40	0.40	0.030	0.020	0.06	9	0.21

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 1994 TO SEPTEMBER 1995

DATE	TIME	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										
22...	1335	28.5	744	1028	1028	19	9.47	42	7.0	6.8
22...	1338	28.5	744	1028	1028	19	9.47	42	7.2	6.8
22...	1341	28.5	744	1028	1028	19	9.47	42	7.3	6.8
22...	1344	28.5	744	1028	1028	19	9.47	42	7.4	6.8
22...	1347	28.5	744	1028	1028	19	9.47	42	7.4	6.8
22...	1350	28.5	744	1028	1028	19	9.47	42	7.4	6.8
22...	1354	28.5	744	1028	1028	19	9.47	42	7.4	6.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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									
18...	1515	1028	80020	11	*46	7.1	24.5	21.0	745
DEC									
01...	1230	1028	80020	221	38	6.8	11.0	11.0	760
FEB									
09...	1630	1028	80020	122	37	7.6	10.5	7.5	751
MAR									
22...	1210	1028	80020	102	37	7.3	29.0	20.5	738
APR									
19...	1200	1028	80020	309	*35	6.9	18.0	18.0	749
MAY									
24...	1450	1028	80020	55	*39	7.0	26.5	25.5	747
JUN									
22...	1315	1028	80020	19	44	6.8	29.5	28.0	744
AUG									
17...	1220	1028	80020	0.40	57	6.8	35.5	31.5	745
SEP									
13...	1600	1028	80020	0.04	63	7.0	24.0	24.5	751

*SPECIFIC CONDUCTANCE, LAB (µs/cm)

ARKANSAS RIVER BASIN
07247345 BLACK FORK AT HODGEN, OK--Continued

393

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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 18...	8.0	92	15	0	12	0.060	0.060	0.060	0.020
DEC 01...	10.0	90	8	0	6	0.060	0.060	0.060	<0.015
FEB 09...	11.4	97	9	0	7	0.100	0.100	0.100	0.020
MAR 22...	8.8	101	9	0	7	--	--	<0.050	<0.015
APR 19...	8.5	92	8	0	7	--	--	<0.050	0.020
MAY 24...	8.0	100	11	0	9	--	--	<0.050	0.020
JUN 22...	7.3	96	15	0	12	--	--	<0.050	0.040
AUG 17...	5.8	81	20	0	16	--	--	<0.050	0.050
SEP 13...	5.0	61	25	0	20	0.120	0.120	0.120	0.060
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- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 18...	0.03	0.38	0.40	0.46	0.020	<0.010	--	4	0.12
DEC 01...	--	0.30	0.30	0.36	0.020	<0.010	--	6	3.6
FEB 09...	0.03	--	<0.20	--	<0.010	<0.010	--	5	1.6
MAR 22...	--	0.20	0.20	0.20	0.030	<0.010	--	4	1.1
APR 19...	0.03	--	<0.20	--	0.020	<0.010	--	6	5.0
MAY 24...	0.03	--	<0.20	--	<0.010	<0.010	--	8	1.2
JUN 22...	0.05	0.36	0.40	0.40	0.030	0.020	0.06	7	0.36
AUG 17...	0.06	0.35	0.40	0.40	0.020	<0.010	--	9	0.01
SEP 13...	0.08	0.44	0.50	0.62	0.050	<0.010	--	9	0.00

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.--No estimated daily discharges. Records good. 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)
Jan. 14	0800	3,860	16.46	May 8	1300	2,980	15.53

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	1.9	42	46	192	11	62	684	173	22	5.6	5.6
2	.10	1.5	35	38	166	11	52	577	279	11	5.3	11
3	.03	127	29	34	135	11	45	304	682	8.7	5.4	7.2
4	.05	524	24	32	113	9.6	150	190	392	7.5	5.1	5.6
5	.04	1200	20	27	104	9.5	152	136	341	9.0	4.5	5.8
6	.00	635	18	33	93	10	112	192	375	7.8	3.8	6.3
7	.06	307	16	39	90	37	89	438	206	6.0	3.5	9.5
8	.56	152	262	35	79	69	72	2330	124	5.2	3.4	9.8
9	5.5	1100	1810	31	73	61	58	1750	159	4.9	3.2	12
10	5.3	953	1170	38	63	50	55	914	191	4.8	2.8	14
11	3.2	547	760	33	60	44	480	774	759	4.3	2.7	12
12	2.2	303	622	38	53	39	312	601	485	4.3	2.8	16
13	1.6	133	437	982	45	39	177	438	224	10	2.9	21
14	1.3	1550	286	3340	42	49	127	229	132	10	3.3	19
15	1.3	2190	206	1600	39	59	102	123	98	9.8	5.5	15
16	1.3	1180	263	979	37	59	86	90	79	8.0	4.3	20
17	1.2	863	245	827	36	52	73	74	67	6.9	3.4	106
18	1.1	673	167	842	35	48	68	65	58	7.0	2.8	67
19	1.1	541	129	1260	32	42	81	58	49	3.8	2.6	32
20	1.1	480	198	883	26	34	811	49	41	9.5	2.4	34
21	1.7	487	241	675	24	38	601	41	33	55	6.6	27
22	1.2	254	167	543	21	29	281	34	22	39	5.9	17
23	1.2	149	122	430	18	24	207	29	29	31	5.6	11
24	1.2	109	99	408	15	19	190	25	114	34	9.8	8.5
25	1.2	92	84	480	14	14	143	25	57	33	7.3	6.0
26	1.1	81	72	547	14	150	115	52	38	32	5.2	5.2
27	.95	91	61	595	12	241	96	41	24	25	5.3	5.1
28	.98	87	53	435	11	160	90	40	17	23	6.1	6.2
29	1.0	68	62	285	---	116	79	47	15	15	5.2	5.7
30	1.1	52	59	259	---	91	97	48	68	8.5	4.5	5.6
31	1.9	---	51	219	---	73	---	60	---	6.2	4.3	---
TOTAL	40.77	14931.4	7810	16013	1642	1699.1	5063	10458	5331	462.2	141.1	526.1
MEAN	1.32	498	252	517	58.6	54.8	169	337	178	14.9	4.55	17.5
MAX	5.5	2190	1810	3340	192	241	811	2330	759	55	9.8	106
MIN	.00	1.5	16	27	11	9.5	45	25	15	3.8	2.4	5.1
AC-FT	81	29620	15490	31760	3260	3370	10040	20740	10570	917	280	1040

07247500 FOURCHE MALINE NEAR RED OAK, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1995, BY WATER YEAR (WY)

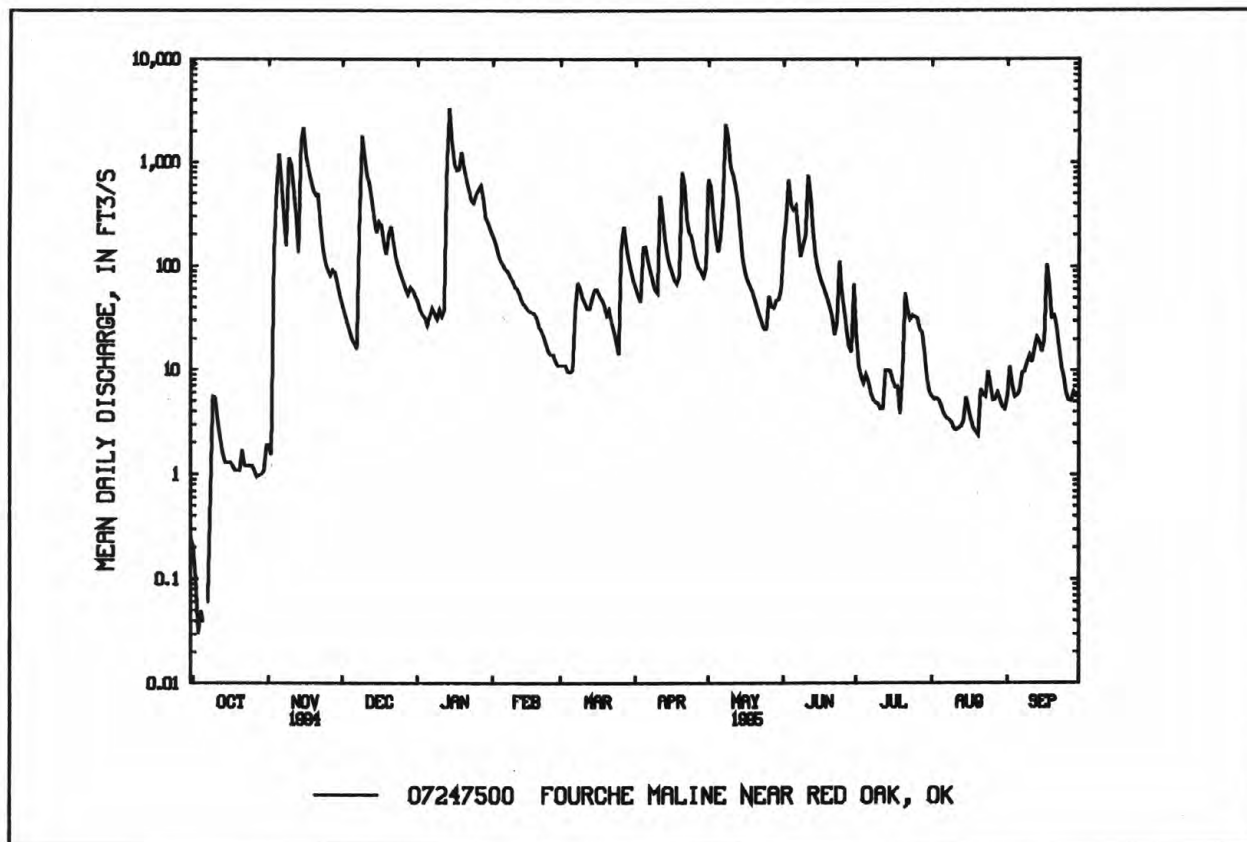
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	70.1	123	134	102	181	224	266	280	118	56.3	17.7	45.9
MAX	675	811	726	517	715	1100	1224	1377	695	847	189	547
(WY)	1971	1986	1972	1995	1945	1945	1957	1960	1945	1950	1964	1950
MIN	.000	.000	.000	.000	1.75	2.42	18.6	8.85	.91	.042	.000	.000
(WY)	1939	1957	1964	1964	1967	1967	1950	1988	1963	1955	1943	1939

SUMMARY STATISTICS 1994 CALENDAR YEAR

1995 WATER YEAR

WATER YEARS 1939 - 95

ANNUAL TOTAL	57324.80	64117.67	
ANNUAL MEAN	157	176	135
HIGHEST ANNUAL MEAN			317
LOWEST ANNUAL MEAN			18.3
HIGHEST DAILY MEAN	2190	Nov 15	3340
LOWEST DAILY MEAN	.00	Oct 6	.00
ANNUAL SEVEN-DAY MINIMUM	.07	Oct 1	.07
INSTANTANEOUS PEAK FLOW			3860
INSTANTANEOUS PEAK STAGE			16.46
INSTANTANEOUS LOW FLOW			.00
ANNUAL RUNOFF (AC-FT)	113700	127200	97680
10 PERCENT EXCEEDS	556	545	306
50 PERCENT EXCEEDS	20	41	17
90 PERCENT EXCEEDS	1.2	2.9	.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 1994 TO SEPTEMBER 1995

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											
22...	0815	2.00	24.5	746	1028	1028	22	2.51	110	5.4	7.0
22...	0818	5.00	24.5	746	1028	1028	22	2.51	110	5.4	7.0
22...	0821	8.00	24.5	746	1028	1028	22	2.51	110	5.2	7.0
22...	0824	11.0	24.5	746	1028	1028	22	2.51	110	5.2	7.0
22...	0827	14.0	24.5	746	1028	1028	22	2.51	110	5.2	7.0
22...	0830	17.0	24.5	746	1028	1028	22	2.51	110	5.2	7.0
22...	0834	20.0	24.5	746	1028	1028	22	2.51	110	5.2	7.0
22...	0837	23.0	24.5	746	1028	1028	22	2.51	110	5.2	7.0
22...	0840	26.0	24.5	746	1028	1028	22	2.51	110	5.3	7.0
22...	0843	29.0	24.5	746	1028	1028	22	2.51	110	5.2	7.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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									
17...	1240	1028	80020	1.2	295	7.6	19.5	18.0	748
NOV									
29...	1215	1028	80020	69	102	7.3	16.5	11.0	757
JAN									
17...	1430	1028	80020	805	46	7.2	13.0	9.0	745
MAR									
20...	1545	1028	80020	32	160	7.6	24.0	19.5	742
APR									
17...	1300	1028	80020	72	97	7.7	24.0	19.0	745
MAY									
23...	1300	1028	80020	28	106	7.0	27.0	23.5	745
JUN									
22...	0740	1028	80020	22	111	7.0	20.0	24.0	746
AUG									
17...	0755	1028	80020	3.4	218	7.2	23.0	26.0	748
SEP									
12...	1245	1028	80020	18	250	7.6	23.0	21.5	750

ARKANSAS RIVER BASIN
07247500 FOURCHE MALINE NEAR RED OAK, OK--Continued

397

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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 17...	3.4	37	119	0	97	--	--	<0.050	0.040
NOV 29...	10.2	93	26	0	22	0.100	0.100	0.100	<0.015
JAN 17...	10.7	95	11	0	9	0.070	0.070	0.070	0.020
MAR 20...	7.8	87	37	0	30	--	--	<0.050	<0.015
APR 17...	7.0	77	37	0	30	0.120	0.120	0.120	0.070
MAY 23...	5.6	68	30	0	25	0.190	0.190	0.190	0.050
JUN 22...	5.4	66	34	0	28	0.190	0.190	0.190	0.050
AUG 17...	3.2	40	86	0	70	--	--	<0.050	0.040
SEP 12...	3.0	35	94	0	77	0.070	0.070	0.070	0.070
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- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
OCT 17...	0.05	0.66	0.70	0.70	0.080	0.010	0.03	16	0.05
NOV 29...	--	0.50	0.50	0.60	0.050	0.020	0.06	18	3.4
JAN 17...	0.03	0.38	0.40	0.47	0.040	0.030	0.09	84	183
MAR 20...	--	0.30	0.30	0.30	0.030	<0.010	--	12	1.0
APR 17...	0.09	0.43	0.50	0.62	0.060	0.020	0.06	41	8.0
MAY 23...	0.06	0.25	0.30	0.49	0.080	0.020	0.06	29	2.2
JUN 22...	0.06	0.55	0.60	0.79	0.090	0.020	0.06	29	1.7
AUG 17...	0.05	0.46	0.50	0.50	0.060	0.020	0.06	30	0.28
SEP 12...	0.09	0.73	0.80	0.87	0.040	<0.010	--	26	1.3

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 1994 TO SEPTEMBER 1995

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											
22...	1000	8.00	26.0	747	1028	1028	46	8.99	91	5.8	7.1
22...	1003	16.0	26.0	747	1028	1028	46	8.99	91	5.9	7.1
22...	1006	24.0	26.0	747	1028	1028	46	8.99	91	6.0	7.0
22...	1009	32.0	26.0	747	1028	1028	46	8.99	91	5.8	7.1
22...	1012	40.0	26.0	747	1028	1028	46	8.99	91	5.8	7.1
22...	1015	48.0	26.0	747	1028	1028	46	8.99	91	5.8	7.1
22...	1018	56.0	26.0	747	1028	1028	46	8.99	91	6.0	7.1
22...	1021	64.0	26.0	747	1028	1028	46	8.99	91	5.2	7.1
22...	1025	72.0	26.0	747	1028	1028	46	8.99	91	5.0	7.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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									
17...	1445	1028	80020	2.3	162	7.3	23.0	18.5	747
NOV									
29...	1400	1028	80020	170	89	7.3	12.0	11.0	756
FEB									
09...	1215	1028	80020	115	87	*7.1	12.0	8.0	752
MAR									
22...	0940	1028	80020	72	95	7.4	24.5	19.5	740
APR									
19...	0800	1028	80020	243	71	7.5	8.5	16.5	751
MAY									
25...	0935	1028	80020	51	93	7.0	19.5	22.0	753
JUN									
22...	0950	1028	80020	46	92	7.0	28.0	25.5	747
AUG									
17...	0930	1028	80020	0.85	147	7.2	28.5	27.0	748
SEP									
12...	1430	1028	80020	4.2	166	7.6	23.0	22.0	750

*PH, LAB (STANDARD UNITS)

ARKANSAS RIVER BASIN
07247650 FOURCHE MALINE NEAR LEFLORE, OK

399

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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									
17...	5.4	59	71	0	58	--	--	<0.050	0.030
NOV									
29...	9.4	86	21	0	18	0.110	0.110	0.110	<0.015
FEB									
09...	11.6	99	21	0	17	0.090	0.090	0.090	<0.015
MAR									
22...	7.6	85	22	0	18	--	--	--	--
APR									
19...	7.5	78	12	0	10	0.080	0.080	0.080	0.030
MAY									
25...	6.4	74	27	0	22	0.170	0.170	0.170	0.040
JUN									
22...	5.8	73	29	0	24	0.150	0.150	0.150	0.040
AUG									
17...	4.7	60	54	0	44	--	--	<0.050	0.070
SEP									
12...	5.8	68	66	0	54	0.080	0.080	0.080	0.050
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- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT									
17...	0.04	0.47	0.50	0.50	0.030	0.010	0.03	67	0.42
NOV									
29...	--	0.40	0.40	0.51	0.040	0.020	0.06	15	6.9
FEB									
09...	--	0.20	0.20	0.29	0.010	0.010	0.03	11	3.4
MAR									
22...	--	0.30	0.30	0.30	0.040	--	--	18	3.5
APR									
19...	0.04	0.47	0.50	0.58	0.050	0.010	0.03	40	26
MAY									
25...	0.05	0.26	0.30	0.47	0.030	0.030	0.09	21	2.9
JUN									
22...	0.05	0.36	0.40	0.55	0.070	0.020	0.06	20	2.5
AUG									
17...	0.09	0.53	0.60	0.60	0.040	<0.010	--	19	0.04
SEP									
12...	0.06	0.75	0.80	0.88	0.050	<0.010	--	21	0.24

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 1994 TO SEPTEMBER 1995

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											
22...	1155	27.0	26.5	746	1028	1028	8.4	21.50	46	7.4	6.8
22...	1158	24.0	26.5	746	1028	1028	8.4	21.50	46	7.4	6.8
22...	1201	21.0	26.5	746	1028	1028	8.4	21.50	46	7.4	6.8
22...	1204	18.0	26.5	746	1028	1028	8.4	21.50	46	7.3	6.8
22...	1207	14.0	26.5	746	1028	1028	8.4	21.50	46	7.3	6.8
22...	1210	11.0	26.5	746	1028	1028	8.4	21.50	46	7.3	6.8
22...	1213	8.00	26.5	746	1028	1028	8.4	21.50	46	7.4	6.8
22...	1216	5.00	26.5	746	1028	1028	8.4	21.50	46	7.4	6.8
22...	1220	2.00	26.5	746	1028	1028	8.4	21.50	46	7.3	6.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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									
17...	1630	1028	80020	0.71	62	7.1	23.0	20.0	745
DEC									
01...	0800	1028	80020	36	42	7.1	-1.0	8.0	763
FEB									
09...	1400	1028	80020	33	38	7.1	11.0	7.0	750
MAR									
22...	0750	1028	80020	24	44	7.3	21.5	18.0	739
APR									
17...	1500	1028	80020	55	44	7.3	26.0	19.5	740
MAY									
25...	0750	1028	80020	20	*44	7.0	18.5	22.0	752
JUN									
22...	1145	1028	80020	8.4	46	6.8	31.5	26.5	746
AUG									
17...	1055	1028	80020	0.13	61	7.1	33.5	30.5	745
SEP									
12...	1540	1028	80020	E0.01	60	7.5	22.5	23.5	748

* SPECIFIC CONDUCTANCE, LAB (µs/cm)

E Estimated discharge

ARKANSAS RIVER BASIN
07247800 HOLSON CREEK AT SUMMERFIELD, OK--Continued

401

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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									
17...	7.8	88	18	0	14	--	--	<0.050	0.040
DEC									
01...	11.0	93	8	0	7	--	--	<0.050	<0.015
FEB									
09...	11.8	98	6	0	5	0.060	0.060	0.060	0.020
MAR									
22...	8.8	96	7	0	6	--	--	<0.050	0.020
APR									
17...	8.6	97	9	0	7	--	--	<0.050	0.020
MAY									
25...	7.5	87	10	0	8	0.060	0.060	0.060	0.030
JUN									
22...	7.3	93	12	0	10	--	--	<0.050	0.050
AUG									
17...	5.3	72	20	0	17	0.070	0.070	0.070	0.050
SEP									
12...	5.0	60	18	0	15	0.180	0.180	0.180	0.070
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									
17...	0.05	0.46	0.50	0.50	0.020	<0.010	--	13	0.02
DEC									
01...	--	--	<0.20	--	0.010	<0.010	--	2	0.19
FEB									
09...	0.03	--	<0.20	--	<0.010	<0.010	--	<1	--
MAR									
22...	0.03	--	<0.20	--	0.010	0.010	0.03	1	0.07
APR									
17...	0.03	--	<0.20	--	0.010	<0.010	--	7	1.0
MAY									
25...	0.04	--	<0.20	--	<0.010	<0.010	--	4	0.21
JUN									
22...	0.06	0.35	0.40	0.40	0.020	0.020	0.06	10	0.23
AUG									
17...	0.06	0.25	0.30	0.37	0.020	<0.010	--	13	0.00
SEP									
12...	0.09	0.43	0.50	0.68	0.010	<0.010	--	18	--

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., LcFlore 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 fair. Flow partially regulated by Wister Reservoir 34.5 mi upstream. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1935 reached a stage of 44.6 ft (HWM) at datum then in use, from information by U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	11	7160	1800	7540	640	770	4360	3330	e205	107	67
2	15	11	7010	1750	7450	452	645	6870	4180	e190	107	66
3	14	85	6850	1700	7390	298	625	5800	6210	e170	98	69
4	13	4770	6670	1660	7160	291	656	6250	4900	e160	107	71
5	11	11500	6420	1250	6910	288	724	6270	5190	e200	239	71
6	11	15100	5120	1270	6680	301	743	4810	7750	e180	243	70
7	16	8050	3200	1680	6040	6190	1320	5130	5170	e168	313	71
8	38	3100	2810	1440	4710	5740	1020	9880	3320	e160	272	71
9	43	7830	11300	1330	4150	3700	e960	18700	2990	e154	278	69
10	32	13500	14800	2730	3440	3990	887	14700	3570	e148	253	69
11	25	10100	9050	3240	2130	3450	1390	6850	8970	e668	134	70
12	21	6510	3070	3240	1680	3080	2700	4700	e5900	e1310	140	76
13	16	5580	4070	7220	1630	2870	2980	5110	e4400	e1300	124	79
14	15	9220	5550	21300	1590	3130	3610	4860	e3000	e1350	116	72
15	14	18500	6730	24500	1240	3170	2960	4700	e2200	e1380	90	71
16	14	16800	7620	15200	1150	2260	2450	4610	e1600	e1400	81	101
17	15	10500	8620	6630	547	1580	2380	5420	e1100	e1400	82	141
18	14	7560	7940	4310	320	1390	2370	5900	e740	1590	82	106
19	24	7930	7300	9510	292	1310	1850	6460	e580	1260	143	115
20	23	8190	7950	9340	265	1230	8280	6950	e450	1250	106	132
21	21	9050	9770	7010	243	710	8020	7080	e300	1340	139	96
22	17	8800	7470	7070	230	476	5220	7030	e230	1230	135	87
23	15	8180	4290	7450	215	431	5410	6920	e200	1150	179	82
24	14	7790	3330	8100	549	404	5260	6840	e190	1200	178	77
25	13	7550	3010	9040	445	521	4960	6770	e180	455	97	74
26	11	7380	2870	8460	305	774	3560	5870	e175	227	80	77
27	11	7570	2770	5960	314	894	2890	3950	e168	244	72	80
28	10	8010	2690	7130	328	1540	2080	3120	e160	206	72	77
29	11	7550	2630	7930	---	2210	1780	2780	e170	157	71	76
30	11	7290	2080	7940	---	1770	3310	2750	e159	127	70	83
31	11	---	1890	7840	---	1320	---	2970	---	114	69	---
TOTAL	534	244017	182040	205030	74943	56410	81810	194410	77482	21093	4277	2466
MEAN	17.2	8134	5872	6614	2677	1820	2727	6271	2583	680	138	82.2
MAX	43	18500	14800	24500	7540	6190	8280	18700	8970	1590	313	141
MIN	10	11	1890	1250	215	288	625	2750	159	114	69	66
AC-FT	1060	484000	361100	406700	148600	111900	162300	385600	153700	41840	8480	4890

c Estimated

ARKANSAS RIVER BASIN

403

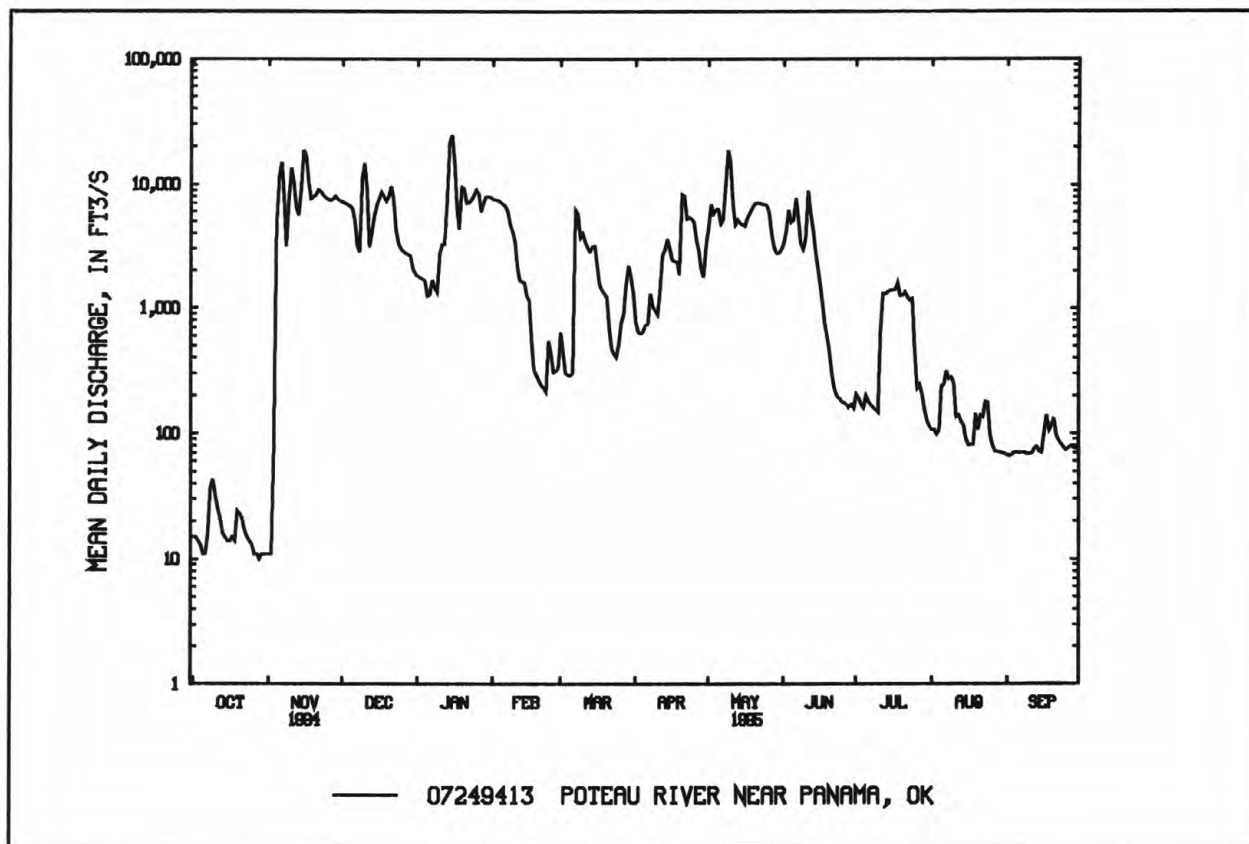
07249413 POTEAU RIVER NEAR PANAMA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	496	2343	3695	4626	4262	3967	4351	7270	3254	410	292	806
MAX	983	8134	6344	6907	7467	6446	8000	16670	5531	680	818	2678
(WY)	1994	1995	1993	1993	1990	1994	1990	1990	1990	1995	1992	1992
MIN	15.0	11.5	10.4	2369	2677	1820	1814	1664	180	71.1	28.4	57.3
(WY)	1990	1990	1990	1994	1995	1995	1994	1992	1994	1994	1994	1994

SUMMARY STATISTICS	1994 CALENDAR YEAR	1995 WATER YEAR	WATER YEARS 1989 - 95
ANNUAL TOTAL	1053205	1144512	
ANNUAL MEAN	2885	3136	3085
HIGHEST ANNUAL MEAN		3907	1990
LOWEST ANNUAL MEAN		2311	1994
HIGHEST DAILY MEAN	18500	24500	67000
LOWEST DAILY MEAN	10	10	6.8
ANNUAL SEVEN-DAY MINIMUM	11	11	7.4
INSTANTANEOUS PEAK FLOW		27000	74600
INSTANTANEOUS PEAK STAGE		38.44	^a 46.59
INSTANTANEOUS LOW FLOW		10	6.8
ANNUAL RUNOFF (AC-FT)	2089000	2270000	2235000
10 PERCENT EXCEEDS	8180	7930	7450
50 PERCENT EXCEEDS	782	1400	1200
90 PERCENT EXCEEDS	17	69	26

^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 current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1993 to current year.

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 34.0°C, July 29, Aug. 31, Sept. 2; minimum 3.0°C, Jan. 7, 8.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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)
AUG											
17...	0932	5.00	31.0	755	1028	1028	87	6.33	92	5.2	7.2
17...	0934	10.0	31.0	755	1028	1028	87	6.33	92	5.3	7.2
17...	0936	15.0	31.0	755	1028	1028	87	6.33	92	5.3	7.2
17...	0938	20.0	31.0	755	1028	1028	87	6.33	92	5.3	7.2
17...	0940	25.0	31.0	755	1028	1028	87	6.33	93	5.2	7.2
17...	0942	30.0	31.0	755	1028	1028	87	6.33	94	5.3	7.2
17...	0944	35.0	31.0	755	1028	1028	87	6.33	95	5.2	7.2
17...	0946	40.0	30.5	755	1028	1028	87	6.33	95	5.3	7.2
17...	0948	45.0	30.5	755	1028	1028	87	6.33	96	5.3	7.2
17...	0950	50.0	30.5	755	1028	1028	87	6.33	96	5.3	7.2
17...	0952	55.0	31.0	755	1028	1028	87	6.33	97	5.4	7.2
17...	1102	7.00	31.5	755	1028	1028	84	6.31	94	--	--
17...	1104	14.0	31.5	755	1028	1028	84	6.31	94	--	--
17...	1106	21.0	31.5	755	1028	1028	84	6.31	93	--	--
17...	1108	28.0	31.5	755	1028	1028	84	6.31	93	--	--
17...	1110	35.0	31.5	755	1028	1028	84	6.31	94	--	--
17...	1112	42.0	31.0	755	1028	1028	84	6.31	94	--	--
17...	1114	49.0	31.0	755	1028	1028	84	6.31	94	--	--
17...	1116	56.0	31.5	755	1028	1028	84	6.31	94	--	--
17...	1118	63.0	31.5	755	1028	1028	84	6.31	94	--	--

ARKANSAS RIVER BASIN
07249413 POTEAU RIVER NEAR PANAMA, OK--Continued

405

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	AGENCY	AGENCY	DIS-		PH			BARO-	
		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)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT 18...	1345	1028	80020	14	*138	7.3	26.5	21.0	754	7.2
NOV 02...	1100	1028	80020	11	159	7.6	17.5	15.0	754	8.5
DEC 07...	1200	1028	80020	3040	67	7.3	12.0	12.5	760	10.0
JAN 20...	1000	1028	80020	9710	66	6.7	5.5	6.5	760	11.3
FEB 14...	1430	1028	80020	1600	*71	7.3	1.5	5.5	755	12.3
MAR 20...	1300	1028	80020	1240	84	6.7	23.5	17.5	753	9.0
APR 03...	1520	1028	80020	621	95	7.3	14.0	16.0	757	9.4
MAY 09...	1750	1028	80020	19700	56	6.9	27.5	19.0	748	6.5
JUN 21...	1000	1028	80020	E300	101	7.2	31.5	28.5	756	6.2
JUL 18...	1300	1028	80020	1640	74	7.2	33.0	28.5	755	5.6
AUG 17...	0900	1028	80020	87	97	7.4	26.0	30.5	755	5.3
SEP 06...	1315	1028	80020	71	94	7.4	35.5	29.5	758	--
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...	82	0.22	42	0	35	15	81	2		<0.10
NOV 02...	86	0.08	49	0	40	17	99	2		<0.10
DEC 07...	94	0.10	20	0	16	9.1	56	2		<0.10
JAN 20...	93	0.04	22	0	18	8.4	56	2		<0.10
FEB 14...	98	0.04	14	0	12	9.9	53	1		<0.10
MAR 20...	95	0.12	18	0	15	14	62	4		<0.10
APR 03...	96	0.06	21	0	18	15	57	2		<0.10
MAY 09...	72	0.06	18	0	14	6.1	57	3		<0.10
JUN 21...	80	0.10	34	0	28	12	68	2		<0.10
JUL 18...	73	0.16	24	0	19	6.4	52	2		0.30
AUG 17...	72	0.12	35	0	29	7.6	66	2		<0.10
SEP 06...	--	0.16	32	0	26	6.8	56	3		<0.10

* SPECIFIC CONDUCTANCE, LAB (µs/cm)
E Estimated discharge

ARKANSAS RIVER BASIN
07249413 POTEAU RIVER NEAR PANAMA, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	27.0	22.0	23.5	14.5	11.0	12.5	12.5	11.5	12.0	7.5	6.5	7.0
2	26.5	21.5	23.5	16.0	12.0	14.0	12.0	11.5	12.0	6.5	6.0	6.0
3	25.5	22.0	23.5	18.0	15.0	16.0	12.5	12.0	12.0	6.0	5.0	5.5
4	25.5	22.0	23.5	18.5	16.5	18.0	12.5	12.0	12.0	5.0	4.5	4.5
5	25.5	22.0	23.5	18.5	16.5	18.0	12.0	12.0	12.0	4.5	3.5	3.5
6	26.0	22.0	23.5	16.5	15.5	16.0	13.0	12.0	12.5	4.0	3.5	4.0
7	25.0	22.5	23.5	16.0	15.0	15.0	13.0	12.5	12.5	4.0	3.0	3.5
8	22.5	20.5	21.5	17.0	14.5	15.5	12.5	10.5	12.0	3.5	3.0	3.5
9	21.0	18.5	19.5	17.5	16.0	17.0	10.5	8.0	9.0	4.0	3.5	3.5
10	19.5	17.0	18.0	16.0	14.5	15.0	8.0	7.5	7.5	5.5	4.0	5.0
11	18.0	15.5	17.0	15.0	14.0	14.5	7.5	6.5	7.0	7.0	5.5	6.0
12	17.5	16.5	17.0	15.5	15.0	15.5	6.5	5.5	6.0	9.0	7.0	7.5
13	17.0	16.0	16.5	16.0	15.5	15.5	8.0	5.5	7.0	10.5	9.0	10.0
14	18.5	16.0	17.0	16.5	15.5	16.0	9.0	8.0	8.5	10.5	8.5	9.5
15	18.5	16.5	17.5	16.5	16.0	16.5	9.0	8.5	8.5	8.5	8.0	8.5
16	19.0	17.0	18.0	16.0	15.0	15.5	9.0	8.5	8.5	8.5	8.0	8.0
17	19.0	18.0	18.5	15.0	14.5	14.5	8.5	8.5	8.5	9.0	8.0	8.5
18	21.0	18.5	19.5	15.0	14.5	15.0	8.5	8.0	8.0	9.5	9.0	9.5
19	21.5	18.5	19.5	15.5	14.5	15.0	8.0	7.5	8.0	9.0	6.5	7.5
20	21.5	19.5	20.0	15.0	14.5	15.0	8.0	7.5	8.0	7.5	6.5	7.0
21	22.0	19.5	20.5	14.5	14.0	14.0	8.0	7.5	8.0	8.0	7.5	7.5
22	22.5	19.5	21.0	14.0	13.5	14.0	8.0	8.0	8.0	8.0	7.0	7.5
23	21.0	18.0	19.5	13.5	13.5	13.5	8.5	8.0	8.0	7.0	6.5	7.0
24	20.5	17.5	18.5	13.5	13.0	13.0	8.0	7.0	7.5	7.0	6.0	6.5
25	19.0	15.5	17.0	13.5	13.0	13.0	7.0	6.5	7.0	6.5	6.0	6.5
26	16.5	13.0	14.5	13.5	13.0	13.0	6.5	6.5	6.5	6.5	6.5	6.5
27	15.5	11.5	13.5	14.0	13.5	13.5	6.5	6.5	6.5	8.0	6.5	7.5
28	15.5	11.0	13.0	13.5	13.0	13.5	7.0	6.5	7.0	8.5	8.0	8.0
29	17.5	11.5	14.0	13.0	12.5	13.0	7.5	7.0	7.0	8.0	7.0	7.5
30	18.5	12.5	15.0	12.5	12.5	12.5	7.5	7.0	7.0	7.0	6.5	7.0
31	15.5	12.5	14.5	---	---	---	7.5	7.0	7.5	6.5	6.0	6.5
MONTH	27.0	11.0	18.9	18.5	11.0	14.8	13.0	5.5	8.8	10.5	3.0	6.6

ARKANSAS RIVER BASIN
07249413 POTEAU RIVER NEAR PANAMA, OK--Continued

407

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	7.5	6.5	7.0	11.5	9.0	10.5	---	---	---	16.5	15.5	16.0
2	8.0	7.0	7.5	9.0	7.5	8.5	---	---	---	16.5	15.0	15.5
3	8.0	8.0	8.0	7.5	7.0	7.0	16.5	15.0	15.5	16.5	16.5	16.5
4	8.0	7.5	7.5	7.0	6.5	6.5	17.0	15.0	16.0	17.5	16.5	17.0
5	8.0	7.5	7.5	7.0	6.0	6.5	17.5	16.0	16.5	18.0	17.0	17.5
6	7.5	7.5	7.5	9.5	7.0	7.5	18.0	16.0	17.0	18.5	17.0	18.0
7	7.5	7.5	7.5	11.5	8.0	9.5	18.5	17.0	17.5	17.0	16.5	16.5
8	7.5	7.0	7.0	8.0	6.0	6.5	---	---	---	17.5	16.5	17.0
9	7.0	6.5	7.0	---	---	---	---	---	---	19.5	16.5	18.0
10	7.5	7.0	7.5	---	---	---	---	---	---	19.5	19.0	19.0
11	7.5	7.0	7.5	9.0	7.5	8.0	20.0	15.5	18.5	20.0	19.5	19.5
12	7.0	6.0	6.5	9.5	9.0	9.0	16.5	15.0	16.0	19.5	18.5	19.5
13	6.0	5.5	6.0	---	---	---	17.5	16.0	17.0	21.0	19.5	20.0
14	5.5	5.5	5.5	---	---	---	18.0	17.0	17.5	22.5	21.0	21.5
15	6.0	5.5	5.5	---	---	---	18.0	17.5	17.5	23.5	22.5	22.5
16	6.0	5.5	5.5	14.0	12.0	13.0	19.0	18.0	18.5	23.5	23.0	23.0
17	6.0	5.0	5.5	15.5	13.5	14.5	19.5	18.5	19.0	24.5	23.0	24.0
18	6.5	5.0	6.0	16.0	14.5	15.5	20.0	19.5	19.5	24.0	23.0	23.5
19	8.0	5.5	6.5	16.5	15.5	16.0	20.0	18.0	19.5	23.0	22.0	22.5
20	9.0	6.5	7.5	18.0	16.5	17.5	18.0	15.0	15.5	22.0	21.5	22.0
21	9.5	7.5	8.5	19.0	17.0	18.0	18.0	15.0	16.0	22.0	21.5	21.5
22	10.5	8.5	9.5	---	---	---	18.5	18.0	18.5	22.0	21.0	21.5
23	11.5	10.5	11.0	---	---	---	18.5	16.5	17.5	22.5	21.5	22.0
24	12.5	10.5	11.5	21.0	19.5	20.0	16.5	15.5	16.0	23.5	22.0	23.0
25	11.5	9.5	10.5	20.0	18.5	19.5	17.0	16.0	16.5	23.5	23.0	23.0
26	11.5	11.0	11.5	19.5	18.5	19.0	18.0	17.0	17.5	23.5	23.0	23.0
27	13.5	11.5	12.5	18.5	17.0	17.5	18.5	17.5	18.0	24.5	23.0	23.5
28	13.5	11.5	12.5	17.0	16.5	17.0	19.0	17.5	18.0	25.0	23.0	24.0
29	---	---	---	16.5	15.5	16.0	18.5	16.0	17.0	25.0	24.5	24.5
30	---	---	---	16.5	15.5	16.0	16.5	16.0	16.5	24.5	23.0	24.0
31	---	---	---	16.0	15.0	15.5	---	---	---	23.0	22.5	22.5
MONTH	13.5	5.0	8.0	---	---	---	---	---	---	25.0	15.0	20.7

ARKANSAS RIVER BASIN
07249413 POTEAU RIVER NEAR PANAMA, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	24.0	22.0	22.5	29.0	23.0	25.5	31.5	31.0	31.0	33.5	31.0	32.0
2	24.0	18.5	22.0	26.0	25.5	26.0	31.5	30.5	31.0	34.0	30.5	32.0
3	22.5	19.0	21.0	27.5	25.5	26.0	32.5	30.5	31.0	33.5	31.0	32.0
4	24.0	22.5	23.0	28.5	27.5	28.0	32.5	31.0	31.5	33.0	31.0	32.0
5	25.0	23.5	24.5	---	---	---	32.5	31.0	32.0	33.5	30.5	31.5
6	23.5	22.0	23.0	---	---	---	33.0	31.5	32.0	33.5	30.5	31.5
7	25.5	23.5	24.5	---	---	---	31.5	28.5	30.5	32.0	30.0	31.0
8	26.5	25.5	26.0	---	---	---	32.5	30.5	31.0	30.0	28.0	29.0
9	28.0	26.5	27.0	---	---	---	33.0	31.0	32.0	28.0	26.5	27.5
10	28.0	24.0	27.0	---	---	---	33.5	31.5	32.0	28.5	25.5	27.0
11	24.0	22.0	23.0	---	---	---	33.5	31.5	32.5	28.5	25.5	27.0
12	22.5	22.0	22.0	33.0	31.0	32.0	33.5	31.5	32.5	26.5	25.5	26.0
13	23.0	22.5	22.5	32.5	31.5	32.0	33.0	31.5	32.0	26.5	25.0	25.5
14	24.0	22.5	23.0	32.5	31.0	31.5	33.5	31.0	32.0	28.0	25.0	26.5
15	24.5	23.5	24.0	32.0	30.5	31.0	32.5	31.0	31.5	27.0	26.5	26.5
16	26.0	24.5	25.0	32.0	30.0	31.0	33.0	30.5	31.5	26.5	26.0	26.0
17	26.0	26.0	26.0	32.5	31.5	32.0	33.0	30.5	31.5	27.0	25.5	26.5
18	27.0	26.0	26.5	31.5	30.0	31.0	33.0	30.5	31.5	27.5	26.0	27.0
19	27.5	27.0	27.0	32.0	30.5	31.5	33.5	31.0	31.5	27.0	25.5	26.5
20	29.0	27.5	27.5	32.0	30.0	31.0	33.0	30.0	31.5	25.5	24.5	25.0
21	29.0	28.0	28.5	31.5	30.0	31.0	33.0	31.0	32.0	24.5	22.0	23.5
22	30.0	29.0	29.0	32.0	31.5	32.0	33.5	31.5	32.0	22.0	20.0	21.0
23	30.5	29.5	30.0	32.5	31.5	32.0	33.0	30.5	31.5	21.0	19.0	19.5
24	30.0	29.0	29.5	32.0	31.0	31.5	32.0	29.5	30.5	20.0	18.5	19.0
25	30.0	29.0	29.5	33.5	31.0	32.0	32.0	29.0	30.5	19.0	18.5	18.5
26	29.0	27.5	28.0	33.0	30.5	31.0	33.0	29.5	31.0	18.5	17.5	18.0
27	28.0	27.5	27.5	32.0	29.5	30.5	33.5	30.0	31.5	19.5	17.5	18.5
28	28.0	27.0	27.5	33.0	30.5	32.0	33.5	30.5	31.5	21.5	19.0	20.0
29	28.5	27.5	28.0	34.0	32.0	33.0	33.5	30.5	32.0	23.5	20.0	21.5
30	28.5	27.0	27.5	33.5	31.5	33.0	33.5	31.0	32.0	24.5	22.0	23.0
31	---	---	---	33.0	31.5	32.0	34.0	31.0	32.5	---	---	---
MONTH	30.5	18.5	25.7	---	---	---	34.0	28.5	31.6	34.0	17.5	25.7

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Crest-stage partial record stations

The following table contains peaks for a crest-stage station. A crest-stage gage is a device that will register the peak stage occurring between inspections of the gage. The date of the peak is not always certain, but is determined by nearby continuous-record stations, weather records or local inquiry. On this particular station, peaks through July were in an earth channel. Peaks from October 1995 will be from a concrete-lined channel.

Station number	Station name	Location	Drainage Area (mi ²)	Period of Record	Peaks	
					Date	Gage height (ft)
07178018	Mill Creek at Tulsa, OK	Lat 36°08'52", long 95°52'27" in SW 1/4, SE 1/4, sec.1, T.19N, R.13E, Tulsa County, Hydrologic Unit 11070107, at right downstream webwall of three-barrel culvert on 11th Street, .3 mi west of Mingo Road and .2 mi upstream from Mingo Creek. Datum of gage is 607.22 ft mean sea level.	4.76	June 1994 to present	Oct. 18	8.91
					Apr. 29	6.65
					May 7	7.68
					June 9	7.65
					June 23	8.30

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	Lat 35°40'02", long 97°35'45",		1986	05-19-95	10
	Bethany and Warr	in NE 1/4, NW 1/4, sec.26, T.14		1993-95	06-27-95	9.1
	Acres Sewage	N., R.4 W., Oklahoma County,			07-19-95	12
	Treatment Plant	Hydrologic Unit 11050002, at			08-01-95	8.5
	near Edmond, OK.	county road bridge 0.4 mi			09-18-95	19
		upstream of Deer Creek and 0.6				
		mi west of State Highway 74.				

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.		1993-95	05-19-95 06-27-95 07-20-95 08-01-95 09-27-95	43 43 22 18 76
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.		1993-95	05-19-95 06-27-95 07-20-95 08-01-95 09-27-95	56 53 27 39 66
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.		1993-95	05-30-95 07-19-95 08-07-95 09-14-95	9.1 1.2 2.7 1.6
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.		1993-95	05-15-95 06-27-95 07-19-95 08-04-95 09-18-95	15 20 9.6 13 14
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	1993-95	10-19-94 11-30-94 01-18-95 01-25-95 03-21-95 04-13-95 04-18-95 05-24-95 06-21-95	0 3.9 34 30 4.9 30 23 .65 .54

DISCHARGE AT PARTIAL-RECORD STATIONS
AND MISCELLANEOUS SITES

411

Station number	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
ARKANSAS RIVER BASIN						
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	1983-95	10-19-94	2.3
					11-30-94	31
					01-18-95	158
					03-21-95	21
					04-18-95	66
					05-24-95	3.9
					06-21-95	4.0
					08-16-95	1.9
	09-13-95	2.3				
07246960	Poteau River near Hon, AR.	Lat 34°55'34", long 94°10'03", in SW 1/4, SE 1/4, sec.10 T.3 N., R.30 W., Scott County, Hydrologic Unit 11110105, at bridge on State Highway 80, 1.0 mi southwest of Hon, AR.	69.5	1993-95	10-19-94	3.7
					11-30-94	56
					02-10-95	22
					03-21-95	26
					04-18-95	79
					05-24-95	6.1
					06-21-95	5.0
					08-16-95	2.2
	09-13-95	3.4				
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	1993-95	10-19-94	.53
					11-30-94	129
					02-10-95	40
					03-21-95	29
					04-18-95	86
					05-24-95	38
					06-21-95	12
					08-16-95	.12
	09-13-95	0				
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	1992-95	10-18-94	11
					12-01-94	221
					02-09-95	122
					03-22-95	102
					04-19-95	309
					05-24-95	55
					06-22-95	19
					08-17-95	.40
	09-13-95	.04				

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	1992-95	10-17-94	2.3
					11-29-94	170
					02-09-95	115
					03-22-95	72
					04-19-95	243
					05-25-95	51
					06-22-95	46
					08-17-95	.85
					09-12-95	4.2
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	1992-95	10-17-94	.71
					12-01-94	36
					02-09-95	33
					03-22-95	24
					04-17-95	55
					05-25-95	20
					06-22-95	8.4
					08-17-95	.13

DISCHARGE AT PARTIAL-RECORD STATIONS
AND MISCELLANEOUS SITES

413

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.

07164650 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. Prior to October 1994 published as 07165515.

DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, IN INCHES, AT INDICATED TIME,
WATER YEAR ENDING SEPT. 30, 1995

Date	Hour	Discharge	Rainfall*
Oct. 7	1310	<53	.00
	1315	<53	.21
	1320	<53	.09
	1325	<53	.39
	1330	64	.22
	1335	107	.08
	1340	183	.01
	1345	626	.00
	1350	765	.00
	1355	814	.09
	1400	703	.10
	1405	567	.08
	1410	441	.03
	1455	99	.14
	1535	<53	.08

*1.88 inches of rainfall on this date.

Feb. 26	2210	<53	.03
	2215	<53	.07
	2220	<53	.11
	2225	<53	.25
	2230	86	.35
	2235	282	.06
	2240	455	.09
	2245	600	.11
	2250	684	.10
	2255	689	.06
	2300	648	.03
	2305	609	.01
	2310	536	.01
	2315	446	.00
	2350	95	.07

*2..10 inches of rainfall on this date.

Date	Hour	Discharge	Rainfall*
May 7	1410	<53	.00
	1415	<53	.15
	1420	<53	.16
	1430	<53	.02
	1440	<53	.08
	1450	75	.23
	1500	195	.09
	1510	600	.21
	1520	765	.14
	1530	820	.01
	1540	680	.01
	1545	557	.13
	1550	478	.12
	1600	394	.01
	1610	441	.02
	1615	432	.10
	1620	478	.20
	1625	684	.20
	1645	1290	.14
	1650	1290	.15
	1710	970	.07
	1900	<53	.00

*3.47 inches of rainfall on this date.

June 5	2340	<53	.00
	2345	<53	.05
	2350	<53	.07
	2355	<53	.08
june 6	2400	<53	.44
	0005	198	.15
	0010	635	.01
	0015	1010	.00
	0020	1160	.00
	0025	1290	.01

DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, IN INCHES, AT INDICATED TIME,
WATER YEAR ENDING SEPT. 30, 1995

***2.72 inches of rainfall on this date.**

DISCHARGE AT PARTIAL-RECORD STATIONS
AND MISCELLANEOUS SITES

415

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, 199507165560 Little Haikey Tributary at Tulsa, OK--Continued.

Date	Hour	Discharge	Rainfall*	Date	Hour	Discharge	Rainfall*
Oct. 7	1315	<5	.00	May 7	1450	<5	.00
	1320	<5	.16		1455	<5	.03
	1325	11	.38		1500	<5	.06
	1330	56	.19		1505	<5	.22
	1335	97	.06		1510	23	.04
	1340	112	.04		1515	39	.02
	1345	91	.01		1520	58	.03
	1350	64	.02		1525	60	.00
	1400	32	.13		1540	39	.04
	1410	36	.10		1600	49	.04
	1420	37	.03		1605	47	.00
	1500	27	.16		1610	51	.16
	1710	<5	.22		1620	84	.07
					1625	120	.18
*1.63 inches of rainfall on this date.					1630	184	.21
					1640	265	.08
					1645	235	.04
					1650	226	.17
Feb. 26	2205	<5	.00		1700	259	.16
	2210	<5	.08		1710	238	.02
	2215	<5	.06		1715	206	.00
	2220	<5	.04		1815	103	.00
	2225	10	.07		2000	17	.00
	2230	45	.32	*2.79 inches of rainfall on this date.			
	2235	132	.28				
	2240	204	.11				
	2245	214	.08				
	2250	210	.08				
	2255	200	.07				
	2300	204	.06				
	2305	208	.03				
	2310	204	.02				
	2315	187	.01				
	2400	65	.06				

*1.94 inches of rainfall on this date.

DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, IN INCHES, AT INDICATED TIME,

DISCHARGE AT PARTIAL-RECORD STATIONS
AND MISCELLANEOUS SITES

WATER YEAR ENDING SEPT. 30, 1995

Date	Hour	Discharge	Rainfall*	Date	Hour	Discharge	Rainfall*
June 29	0515	<5	.00	Sept. 30	1545	<5	.00
	0520	<5	.05		1550	<5	.19
	0525	<5	.06		1555	20	.44
	0530	<5	.11		1600	130	.24
	0535	6	.03		1605	146	.02
	0540	28	.18		1610	134	.00
	0545	59	.20		1615	91	.00
	0550	95	.14		1705	<5	.00
	0555	116	.22				
	0600	203	.55				
	0605	393	.45				
	0610	562	.29				
	0615	644	.08				
	0620	622	.04				
	0625	532	.04				
	0630	484	.10				
	0635	437	.02				
	0640	381	.01				
	0700	321	.00				
	0800	53	.00				
	0950	<5	.00				

*0.89 inches of rainfall on this date.

*2.58 inches of rainfall on this date.

DISCHARGE AT PARTIAL-RECORD STATIONS
AND MISCELLANEOUS SITES

417

07178010 Brook Hollow at South 136th Ave. 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, 1995

Date	Hour	Discharge	Rainfall*	Date	Hour	Discharge	Rainfall*
Oct. 18	1200	<43	.01	Nov. 4	0540	<43	.00
	1205	<43	.04		0545	<43	.04
	1210	<43	.03		0550	<43	.21
	1215	<43	.02		0555	<43	.11
	1220	<43	.12		0615	179	.04
	1225	44	.32		0630	138	.10
	1230	124	.41		0700	100	.02
	1235	280	.09		0800	65	.00
	1240	489	.02		0830	56	.04
	1245	520	.00		0845	68	.00
	1250	471	.00		0850	68	.01
	1255	418	.01		0855	65	.07
	1300	382	.00		0900	78	.42
	1305	359	.00		0905	132	.12
	1320	327	.00		0910	216	.04
	1400	192	.01		0915	388	.03
	1500	138	.00		0920	394	.01
	1600	98	.00		0925	340	.00
	1700	69	.00		0930	287	.00
	1815	<43	.00		0935	241	.01
*1.88 inches of rainfall on this date.				1000	157	.07	
				1030	183	.14	
				1100	181	.12	
				1130	201	.12	
				1200	201	.09	
				1300	172	.11	
				1400	134	.05	
				1500	104	.00	
				1915	<43	.08	
*2.49 inches of rainfall on this date.							

DISCHARGE AT PARTIAL-RECORD STATIONS
AND MISCELLANEOUS SITES

07178010 Brook Hollow at South 136th Ave. at Tulsa, OK--Continued.

DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, IN INCHES, AT INDICATED TIME,
WATER YEAR ENDING SEPT. 30, 1995

Date	Hour	Discharge	Rainfall*	Date	Hour	Discharge	Rainfall*
June 9	1100	<43	.01				
	1105	<43	.01				
	1110	<43	.01				
	1115	<43	.02				
	1120	<43	.16				
	1125	<43	.31				
	1130	114	.27				
	1135	294	.22				
	1140	549	.15				
	1145	660	.14				
	1150	689	.15				
	1155	719	.06				
	1200	733	.02				
	1205	736	.01				
	1210	723	.12				
	1215	719	.02				
	1220	736	.02				
	1225	743	.00				
	1230	736	.00				
	1235	740	.00				
	1240	733	.00				
	1245	723	.00				
	1250	723	.00				
	1255	733	.00				
	1320	679	.00				
	1400	483	.00				
	1500	241	.00				
	1600	126	.00				
	1820	<43	.00				

*1.84 inches of rainfall on this date.

419

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

Date	Hour	Discharge	Rainfall*	Date	Hour	Discharge	Rainfall*
Nov. 4	0845	<633	.03	May 7	1525	<633	.01
	0850	<633	.01	(Cont.)	1530	<633	.04
	0855	<633	.00		1535	756	.01
	0900	<633	.02		1540	839	.00
	0905	<633	.02		1545	979	.00
	0910	<633	.00		1550	925	.02
	0915	<633	.00		1555	963	.06
	0920	<633	.29		1600	891	.12
	0925	<633	.20		1605	809	.02
	0930	<633	.10		1610	831	.00
	0935	<633	.09		1615	720	.02
	0940	<633	.03		1620	769	.08
	0945	<633	.03		1625	822	.03
	0950	638	.11		1630	800	.18
	0955	743	.02		1635	921	.21
	1000	835	.00		1640	996	.08
	1005	912	.01		1645	1090	.02
	1010	946	.00		1650	1140	.02
	1015	950	.01		1655	1240	.07
	1020	933	.00		1700	1260	.12
	1025	921	.02		1705	1330	.11
	1030	900	.04		1710	1370	.01
	1045	711	.06		1715	1390	.01
	1110	<633	.08		1720	1460	.00
*2.81 total rainfall on this date.					1725	1440	.00
					1730	1420	.00
					1735	1450	.00
May 7	1450	<633	.00		1740	1430	.00
	1455	<633	.02		1745	1330	.00
	1500	<633	.17		1750	1290	.00
	1505	<633	.20		1835	<633	.00
	1510	<633	.15	*3.48 inches of rainfall on this date.			
	1515	<633	.31				
	1520	<633	.09				

DISCHARGE AT PARTIAL-RECORD STATIONS
AND MISCELLANEOUS SITES

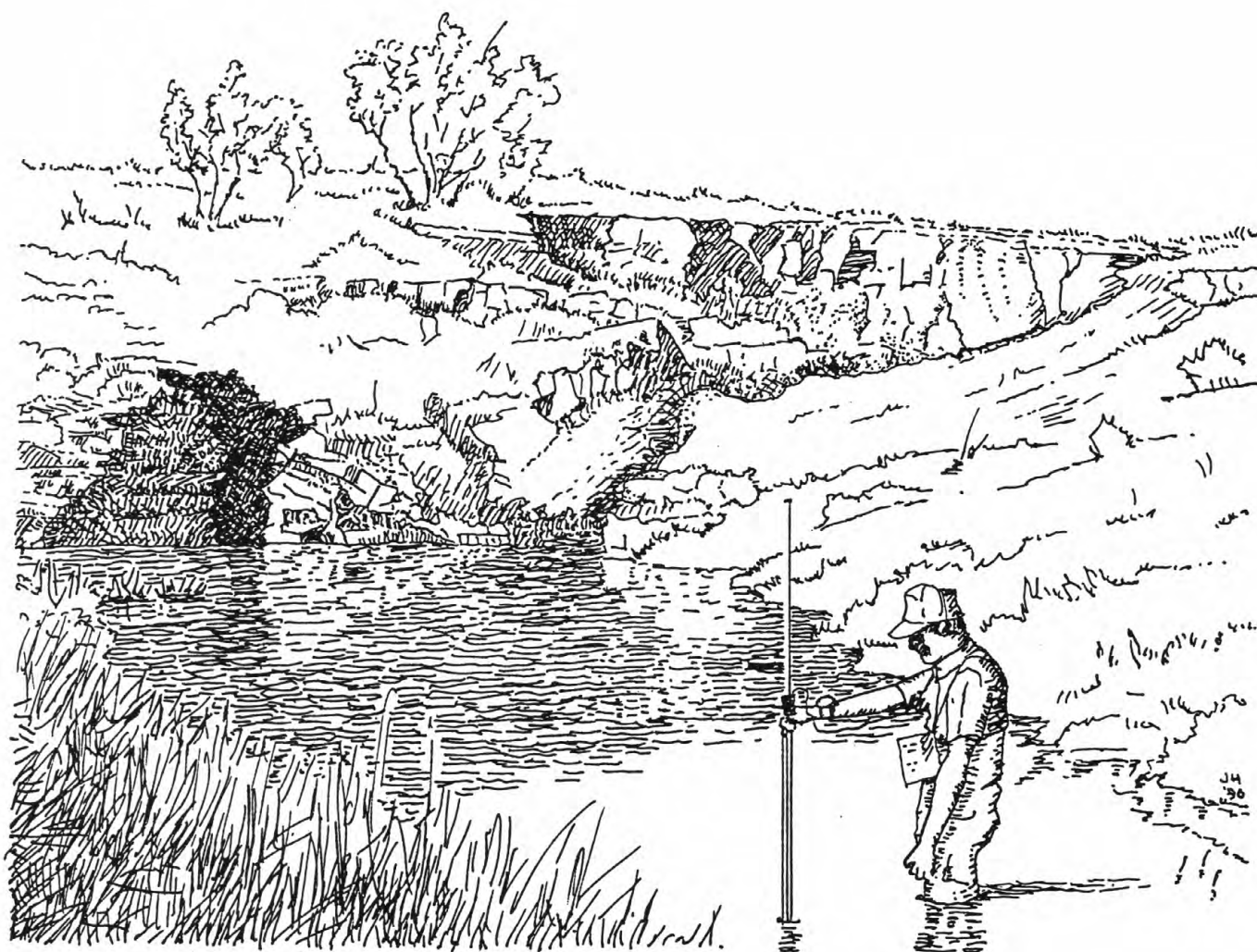
07178020 Tupelo Creek at US 169 at Tulsa, OK--Continued.

DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, IN INCHES, AT INDICATED TIME,
WATER YEAR ENDING SEPT. 30, 1995

Date	Hour	Discharge	Rainfall*	Date	Hour	Discharge	Rainfall*
June 9	1040	<633	.00	June 23	1435	<633	.00
	1045	<633	.07		1440	<633	.03
	1050	<633	.13		1445	<633	.07
	1055	<633	.04		1450	<633	.16
	1100	<633	.04		1455	<633	.33
	1105	<633	.02		1500	<633	.22
	1110	<633	.01		1505	<633	.13
	1115	<633	.13		1510	693	.12
	1120	<633	.34		1515	791	.05
	1125	<633	.24		1520	852	.03
	1130	<633	.19		1525	887	.02
	1135	835	.14		1530	895	.01
	1140	1010	.05		1535	865	.00
	1145	1210	.14		1540	925	.00
	1150	1410	.06		1545	895	.00
	1155	1490	.00		1550	895	.00
	1200	1490	.02		1555	787	.01
	1205	1540	.08		1600	707	.01
	1210	1600	.08		1610	<633	.00
	1215	1640	.01				
	1220	1650	.01				
	1225	1710	.00				
	1230	1610	.00				
	1235	1700	.00				
	1240	1560	.00				
	1245	1560	.00				
	1250	1480	.00				
	1255	1500	.00				
	1300	1390	.00				
	1305	1410	.00				
	1310	1330	.00				
	1405	<633	.01				

*2.72 inches of rainfall on this date.

*2.03 inches of rainfall on this date.



Measuring runoff into a sinkhole in the Blaine aquifer

	Page		Page
A			
Accuracy of the Records	26	Chikaskia River near Blackwell	48
Acre-foot, definition of	31	Chisholm Creek, at Edmond	68, 410
Algae, definition of	31	near Edmond	70, 410
Aquifer, definition of	31	Chlorophyll, definition of	32
Arkansas River at Ralston	50	Chouteau, Neosho River near	190
at Tulsa	78	Christie, Peacheater Creek at	216
near Haskell	96	Cimarron River, at Perkins	
Salt Fork, at Tonkawa	46	near Dover	60
near Alva	44	near Forgan	56
Aroclor, definition of	31	near Guthrie	74
Arrangement of Records	27	near Kenton	54
Artesian, definition of	31	near Ripley	76
Artificial substrate, definition of	35	near Waynoka	58
Ash mass, definition of	31	Claremore, Verdigris River near	104
Avant, Bird Creek at	106	Classification of Records	27
B		Coal Creek at Tulsa	124
Bacteria, definition of	31	Coldwater Creek near Guymon	252
Baron Fork at Eldon	218	Color unit, definition of	32
Bartlesville, Caney River above Coon Creek at	100	Commerce, Neosho River near	168, 170
Beaver River, at Beaver	256	Contents, definition of	32
near Felt	250	Control structure, definition of	32
Beaver, Beaver River at	256	Control, definition of	32
Bed load discharge, definition of	35	Cooperation	1
Bed load, definition of	34	Cottonwood Creek near Seward	72
Bed material, definition of	31	Cubic feet per second per square mile, definition of	32
Beggs, Deep Fork near	368	Cubic foot per second, definition of	32
Big Cabin Creek near Big Cabin	182	D	
Big Cabin, Big Cabin Creek near	182	Data Collection and Computation	23, 29
Biochemical oxygen demand, definition of	31	Data Presentation	23, 28, 29
Biomass, definition of	31	Deep Fork, near Beggs	368
Bird Creek at State Highway 266 near Catoosa	154	near Warwick	366
at Avant	106	Deer Creek, at Oklahoma City	66, 410
near Owasso	126	below Bluff Creek at Oklahoma City	64, 410
near Sperry	108	Definition of Terms	31
Black Bear Creek at Pawnee	52	Diatoms, definition of	34
Black Fork, at Hodgen	392, 411	Discharge, definition of	32
below Big Creek near Page	388	Dissolved, definition of	32
Blackwell, Chikaskia River near	48	Dissolved-solids concentration, definition of	32
Blue-green algae, definition of	34	Dover, Cimarron River near	60
Bluff Creek above Bethany and Warr Acres		Downstream Order System	21
Sewage Treatment Plant near Edmond	62, 409	Drainage area, definition of	32
Bottom material, definition of	31	Drainage basin, definition of	32
Bridgeport, Canadian River at	232	Dry mass, definition of	31
Brook Hollow at South 136th Street at Tulsa	417, 418	E	
C		Edmond, Bluff Creek above Bethany and	
Calumet, North Canadian River near	268	Warr Acres Sewage Treatment Plant near	62, 409
Calvin, Canadian River at	244	Chisholm Creek at	68, 410
Canadian River, at Bridgeport	232	Chisholm Creek near	70, 410
at Calvin	244	El Reno, North Canadian River near	288
at Purcell	234	Eldon, Baron Fork at	218
near Whitefield	370	Elk River near Tiff City, MO	176
Caney River, above Coon Creek at Bartlesville	100	Explanation of the Records	21
near Ramona	102	F	
Catoosa, Bird Creek at State Highway 266	154	Fecal coliform bacteria, definition of	31
Cauthron, AR, Poteau River at	380	Fecal streptococcal bacteria, definition of	31
Cells/volume, definition of	31	Felt, Beaver River near	250
Chemical oxygen demand, definition of	32	Flat Rock Creek at Cincinnati Avenue at Tulsa	122
Chemical Quality of Streamflow	13	Flint Creek near Kansas	204
		Forgan, Cimarron River near	56

	Page		Page
Fourche Maline, near LeFlore	398, 412	Mean discharge, definition of	32
Fourche Maline, near Red Oak	394	Measuring point, definition of	32
Fred Creek at Evanston Ave., at Tulsa	413, 414	Miami, Neosho River at	170
G		Micrograms per gram, definition of	32
Gage height, definition of	32	per liter, definition of	33
Gaging station, definition of	32	Milligrams of carbon per area or volume	
Gore, Illinois River near	224	per unit time, definition of	34
Green algae, definition of	34	Milligrams of oxygen per area or volum	
Ground-water records		per unit time, definition of	34
See Volume 2	18	Milligrams per liter, definition of	33
Guthrie, Cimarron River near	74	Mingo Creek at 46th Street North at Tulsa	140
Guymon, Coldwater Creek near	252	N	
II		National Stream Quality Accounting Network, definition of	33
Haikey Creek at 101st Street South at Tulsa	92	National Trends Network, definition of	33
Hardness, definition of	32	Natural substrate, definition of	35
Harrah, North Canadian River near	332	Neosho River at Miami	170
Haskell, Arkansas River near	96	near Chouteau	190
High-water mark	32	near Commerce	168, 170
Hodgen, Black Fork at	392, 411	near Langley	180
Holson Creek at Summerfield	400, 412	Norman, Lake Thunderbird near	236
Hon, AR, Jones Creek near	378, 411	Little River below Lake Thunderbird near	238
Poteau River near	376, 411	North Canadian River at Britton Road at Oklahoma City	314
Hydrologic Benchmark Network, definition of	32	at Woodward	258
Hydrologic unit, definition of	32	below Lake Overholser near Oklahoma City	298
I		below Weavers Creek near Watonga	266
Illinois River, near Gore	224	near Calumet	268
near Tahlequah	208	near El Reno	288
near Watts	192	near Harrah	332
Instantaneous discharge, definition of	32	near Seiling	264
Introduction	1	near Wetumka	360
J		O	
Joe Creek at 61st Street at Tulsa	90	O'the Cherokees, Lake, near Langley	178
Jones Creek near Hon, AR	378, 411	Oklahoma City, Deer Creek at	66, 410
K		Deer Creek below Bluff Creek at	64, 410
Kansas, Flint Creek near	204	Lake Hefner Canal near	296
Kenton, Cimarron River near	54	North Canadian River at Britton Road at	314
L		North Canadian River below Lake Overholser near	298
Laboratory Measurements	28	On-site Measurements and Sample Collection	27
Lake Hefner Canal near Oklahoma City	296	Organic mass, definition of	31
Lakes and reservoirs		Organism, definition of	33
Hudson, Lake, near Locust Grove	188	Count/area, definition of	33
O' the Cherokees, Lake, at Langley	178	Count/volume, definition of	33
Spavinaw Lake at Spavinaw	186	Other Records Available	26
Thunderbird, Lake, near Norman	236	Owasso, Bird Creek near	126
Land-surface datum, definition of	32	P	
Langley, Lake O' the Cherokees near	178	Page, Black Fork below Big Creek near	388
Neosho River near	180	Palo Duro Creek at Range	254
Latitude-Longitude System	22	Panama, Poteau River near	402
LeFlore, Fourche Maline near	398, 412	Parameter Code, definition of	33
Lenapah, Verdigris River near	98	Partial-record station, definition of	33
Little Haikey Creek at 101st Street South at Tulsa	94	Particle size, definition of	33
Little River, below Lake Thunderbird near Norman	238	Particle-size classification, definition of	33
near Sasakwa	242	Pawnee, Black Bear Creek at	52
near Tecumseh	240	Peachwater Creek at Christie	216
Locust Grove, Lake Hudson near	188	Percent composition, definition of	33
Loving, Poteau River near	384	Periphyton, definition of	33
M		Pesticides, definition of	33
Mean concentration, definition of	35	Phytoplankton, definition of	34
		Picocurie, definition of	33

	Page		Page
Plankton, definition of	34	Suspended, total, definition of	36
Poteau River, at Cauthron, AR	380	Suspended-sediment concentration, definition of	35
east of Waldron, AR	372, 410	discharge, definition of	35
near Hon, AR	376, 411	load, definition of	35
near Loving	384	Sycamore, Spavinaw Creek near	184
near Panama	402		T
northwest of Waldron, AR	374, 411	Tahlequah, Illinois River near	208
Primary productivity, definition of	34	Taxonomy, definition of	36
Publications on Techniques of Water-Resources Investigations	37	Techumseh, Little River near	240
Purcell, Canadian River at	234	Terms, definition of	31
	Q	Tiff City, MO, Elk River near	176
Quapaw, Spring River near	174	Time-weighted average, definition of	36
	R	Tonkawa, Salt Fork Arkansas River at	46
Ralston, Arkansas River at	50	Tons per acre-foot, definition of	36
Ramona, Caney River near	102	Tons per day, definition of	36
Range, Palo Duro Creek at	254	Total coliform bacteria, definition of	31
Records of Ground-Water Levels	29	Total discharge, definition of	36
Records of Stage and Water Discharge	22	Total organism count, definition of	33
Records of Surface-Water Quality	27	Total recoverable, definition of	36
Recoverable from bottom material, definition of	34	Total sediment discharge, definition of	35
Red Oak, Fourche Maline near	394	Total, definition of	36
Remark Codes	29	Total-sediment load, definition of	35
Return period, definition of	34	Tulsa, Arkansas River at	78
Ripley, Cimarron River near	76	Coal Creek at	124
Runoff in inches, definition of	34	Flat Rock Creek at Cincinnati Avenue at	122
	S	Haikey Creek at 101st Street South at	92
Sager Creek near West Siloam Springs	198	Joe Creek at 61st Street at	90
Salt Fork Arkansas River, at Tonkawa	46	Little Haikey Creek at 101st Street South at	94
near Alva	44	Mingo Creek at 46th Street North at	140
Sasakwa, Little River near	242	Tupelo Creek at US 169 at Tulsa	419, 420
Sea Level, definition of	34		V
Sediment	28	Verdigris River, near Claremore	104
Sediment, definition of	34	near Lenapah	98
Seiling, North Canadian River near	264		W
Seward, Cottonwood Creek near	72	Waldon, AR, Poteau River east of	410
Sodium-adsorption-ratio, definition of	35	Waldron, AR, Poteau River East of	372
Solute, definition of	35	Poteau River northwest of	374, 411
Spavinaw Creek near Sycamore	184	Warwick, Deep Fork near	366
Spavinaw Lake at Spavinaw	186	Water Temperature	28
Spavinaw, Spavinaw Lake near	186	Water year, definition of	36
Special Networks and Programs	21	Watonga, North Canadian River below	
Specific conductance, definition of	35	Weavers Creek near	266
Sperry, Bird Creek near	108	Watts, Illinois River near	192
Spring River near Quapaw	174	Waynoka, Cimarron River near	58
Stage-discharge relation, definition of	35	WDR, definition of	36
Station Identification Numbers	21	Weighted average, definition of	36
Streamflow	2	West Siloam Springs, Sager Creek near	198
Streamflow, definition of	35	Wet mass, definition of	31
Substrate, definition of	35	Wetumka, North Canadian River near	360
Summary of Hydrologic Conditions	2	Whitefield, Canadian River near	370
Summerfield, Holson Creek at	400, 412	Woodward, North Canadian River at	258
Surface area, definition of	35	WSP, definition of	36
Surficial bed material, definition of	35		Z
Suspended sediment, definition of	35	Zooplankton, definition of	34
Suspended, definition of	35		
Suspended, recoverable, definition of	35		

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.

U.S. DEPARTMENT OF THE INTERIOR
U.S. Geological Survey
202 N.W. 66th, Building 7
Oklahoma City, OK 73116

USGS LIBRARY - RESTON



3 1818 00237350 2