

Water-Data Report 2011

07312500 Wichita River at Wichita Falls, TX

Red-Lake Texoma Basin
Wichita Subbasin

LOCATION.--Lat 33°54'34", long 98°32'00" referenced to North American Datum of 1927, Wichita County, TX, Hydrologic Unit 11130206, near center of stream at downstream side of bridge on Beverly Drive (loop 11) in Wichita Falls, 4.0 mi upstream from Fort Worth and Denver Railway Co. bridge, 8.4 mi upstream from Holliday Creek, and 55.3 mi upstream from mouth.

DRAINAGE AREA.--3,140 mi² of which 2,086 mi² probably is noncontributing, of which 2,086 mi² is above Lake Kemp Dam.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Feb. 1901 to Jan. 1902 (monthly discharge only, published in WSP 1311), Oct. 1910 to Dec. 1911 (gage heights only), Mar. 1938 to current year.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 924.26 ft above NGVD of 1929. Feb. 1901 to Jan. 1902 and Oct. 1, 1910, to Dec. 31, 1911, nonrecording gages at site 4.0 mi downstream at different datum. Mar. 30, 1938, to Dec. 1, 1959, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some records listed in the Period of Record for surface water and water quality may not be available electronically. Since installation of gage in Mar. 1938, at least 10% of contributing drainage area has been regulated. Since completion of Lake Kemp (station 07312000) in 1923, no outflow has passed over the spillway. Water is diverted from Lake Diversion (conservation pool storage 40,000 acre-ft) 41 mi upstream for the irrigation of 42,000 acres by the city Wichita Falls and the Wichita County Water Improvement District No. 2 for mining, industrial, irrigation, and recreational uses.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 50,000 ft³/s June 8, 1915, computed by Vernon L. Sullivan, engineer for Big Wichita River Irrigation Co.

07312500 Wichita River at Wichita Falls, TX—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	67	60	31	31	34	19	52	50	e45	46	35	54
2	65	76	33	28	31	17	55	48	45	47	33	59
3	62	53	28	28	42	18	61	56	47	50	34	60
4	58	55	27	27	36	18	56	43	47	51	39	54
5	57	57	26	25	29	17	52	35	49	59	37	58
6	55	42	26	62	31	18	44	29	49	55	34	62
7	56	39	29	52	30	27	43	35	51	52	34	59
8	56	33	28	43	27	38	37	39	49	53	33	51
9	59	32	33	31	27	38	35	40	54	53	36	48
10	68	38	36	33	25	31	36	31	48	55	41	47
11	68	40	34	34	25	26	40	33	47	53	43	50
12	61	45	32	39	28	26	42	36	46	48	46	50
13	52	42	31	34	27	22	49	36	41	46	48	47
14	51	38	32	37	26	23	47	38	46	55	56	50
15	45	39	32	41	26	32	44	33	49	58	56	47
16	44	38	31	42	28	60	42	33	46	51	55	49
17	59	37	30	45	26	20	49	35	44	44	58	67
18	61	34	29	48	25	20	58	39	43	52	52	74
19	50	29	29	40	24	22	45	43	46	48	50	71
20	47	29	29	37	25	22	40	89	51	44	47	66
21	46	29	28	43	26	29	32	106	47	42	44	54
22	68	31	24	52	24	33	32	111	50	41	43	43
23	100	29	23	45	20	38	31	78	58	42	40	42
24	153	33	25	46	20	39	40	68	55	39	39	43
25	103	48	25	54	21	36	55	54	53	35	41	44
26	73	49	25	45	22	33	54	51	51	34	48	39
27	63	45	31	35	23	37	41	49	48	34	53	37
28	61	44	45	38	21	51	42	47	57	30	55	39
29	57	39	49	38	---	54	43	46	55	33	54	37
30	50	34	38	35	---	56	39	46	52	33	54	37
31	54	---	27	32	---	59	---	44	---	35	53	---
Total	1,969	1,237	946	1,220	749	979	1,336	1,521	1,469	1,418	1,391	1,538
Mean	63.5	41.2	30.5	39.4	26.8	31.6	44.5	49.1	49.0	45.7	44.9	51.3
Max	153	76	49	62	42	60	61	111	58	59	58	74
Min	44	29	23	25	20	17	31	29	41	30	33	37
Ac-ft	3,910	2,450	1,880	2,420	1,490	1,940	2,650	3,020	2,910	2,810	2,760	3,050

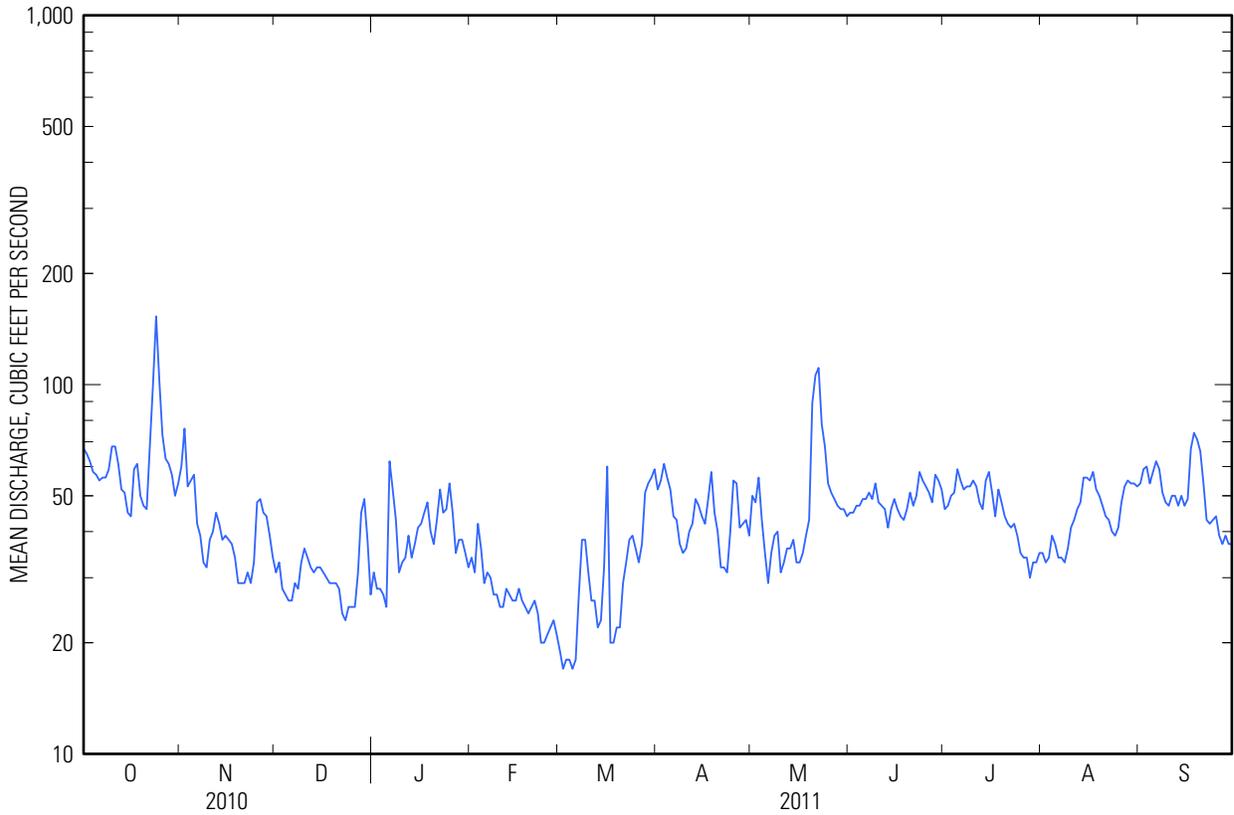
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	362	195	106	88.1	140	182	216	495	467	243	247	284
Max	4,017	1,784	1,091	859	1,252	1,412	1,450	4,105	4,475	1,659	2,791	2,619
(WY)	(1942)	(1973)	(1992)	(1992)	(1992)	(1993)	(1990)	(1941)	(1941)	(2007)	(1950)	(1950)
Min	27.2	23.5	14.2	13.7	14.7	16.7	27.6	35.4	34.9	38.8	44.9	32.7
(WY)	(2004)	(1998)	(2004)	(2004)	(2002)	(2003)	(2003)	(2000)	(2008)	(2006)	(2011)	(2004)

07312500 Wichita River at Wichita Falls, TX—Continued

SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1938 - 2011	
Annual total	81,696		15,773			
Annual mean	224		43.2		250	
Highest annual mean					977	1941
Lowest annual mean					43.2	2011
Highest daily mean	2,510	Apr 19	153	Oct 24	17,300	Oct 3, 1941
Lowest daily mean	22	Apr 11	17	Mar 2	3.8	Jun 23, 2008
Annual seven-day minimum	23	Apr 8	18	Feb 28	9.1	Mar 10, 2002
Maximum peak flow			178	Oct 23	17,800	Oct 3, 1941
Maximum peak stage			3.31	Oct 23	24.40	Jun 30, 2007
Annual runoff (ac-ft)	162,000		31,290		180,800	
10 percent exceeds	519		58		466	
50 percent exceeds	83		43		75	
90 percent exceeds	29		26		31	



07312500 Wichita River at Wichita Falls, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Apr. 1966 to July 1975, Oct. 1981 to Sept. 1989, June 1996 to Sept. 1997, Oct. 2005 to current year.

BIOCHEMICAL DATA: Nov. 1981 to Aug. 1989 and June 1996 to Sept. 1997, Oct. 2005 to current year.

SEDIMENT DATA: June 1942 to Oct. 1946, Apr. 1966 to July 1975.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct. 1, 1981 to Sept. 1989, June 1996 to Sept. 2002, Oct. 2005 to current year.

TEMPERATURE: Oct. 1, 1981 to Sept. 1989, June 1996 to Sept. 2002, Oct. 2005 to current year.

INSTRUMENTATION.--Water-quality monitor Oct. 1981 to Sept. 1989, June 1996 to Sept. 2002, Oct. 2005 to current year.

REMARKS.--Temperature record good. Specific conductance record good. Interruptions or periods of missing record may be due to instrument failure, no flow conditions, or data corrections exceeding allowable criteria, which were deleted. Other than no flow conditions, minimum and maximum extremes may have occurred during period of missing record.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 9490 microsiemens/cm, Mar. 2, 1984; minimum, 245 microsiemens/cm, Oct. 24, 1983.

WATER TEMPERATURE: Maximum, 36.0°C, July 15, 2000; minimum -0.2°C, Dec. 8, 9, 10, 2005, and Jan. 28, 2009.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 9,400 microsiemens/cm, Aug. 8; minimum, 2,880 microsiemens/cm, Oct. 24.

WATER TEMPERATURE: Maximum, 35.2°C, Aug. 3; minimum, -0.1°C, Feb. 1, 2, 3, 10, 11.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 1 of 4

[% , percent; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; --, no data; <, less than]

Date	Sample start time	Medium name	Sample type	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Discharge, instantaneous, ft ³ /s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)
10-06-2010	1420	Surface water	Regular	753	27.0	56	12.5	143
12-09-2010	1415	Surface water	Regular	745	21.0	33	10.6	97
02-16-2011	1115	Surface water	Regular	736	20.0	29	12.5	122
05-10-2011	1040	Surface water	Regular	730	25.0	41	5.1	64
05-10-2011	1041	<i>QC sample - Surface water</i>	<i>Replicate</i>	--	--	--	--	--
06-29-2011	1100	Surface water	Regular	739	33.0	58	5.5	75
09-01-2011	1005	Surface water	Regular	738	32.0	54	9.5	125

07312500 Wichita River at Wichita Falls, TX—Continued

WATER-QUALITY DATA

WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 2 of 4

[%, percent; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; --, no data; <, less than]

Date	Sample start time	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, µS/cm at 25 °C (00095)	Temperature, water, °C (00010)	Dissolved solids, water, filtered, sum of constituents, mg/L (70301)	Hardness, water, mg/L as CaCO ₃ (00900)	Non-carbonate hardness, water, filtered, field, mg/L as CaCO ₃ (00904)	Suspended solids, water, unfiltered, mg/L (00530)	Calcium, water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)
12-09-2010	1415	7.9	6,990	9.6	4,230	1,400	1,180	28	325	142
02-16-2011	1115	8.0	6,680	11.6	4,100	1,360	1,160	32	314	141
05-10-2011	1040	7.8	6,660	23.6	4,210	1,400	1,230	120	331	139
05-10-2011	1041	--	--	--	--	1,380	--	136	324	138
06-29-2011	1100	7.8	7,430	29.1	4,820	1,400	1,290	108	347	130
09-01-2011	1005	7.6	8,060	26.8	5,250	1,600	1,480	< 30	411	140

WATER-QUALITY DATA

WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 3 of 4

[%, percent; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; --, no data; <, less than]

Date	Sample start time	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)	Alkalinity, water, filtered, inflection-point, incremental titration method, field, mg/L as CaCO ₃ (39086)	Bicarbonate, water, filtered, inflection-point, incremental titration method, field, mg/L (00453)	Carbonate, water, filtered, inflection-point, incremental titration method, field, mg/L (00452)	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Silica, water, filtered, mg/L as SiO ₂ (00955)
12-09-2010	1415	8.46	940	215	259	2	1,860	.34	6.0
02-16-2011	1115	8.20	933	205	246	2	1,810	.34	4.0
05-10-2011	1040	11.7	959	166	199	2	1,730	.43	6.1
05-10-2011	1041	11.4	961	--	--	--	1,800	.43	6.2
06-29-2011	1100	14.0	1,130	108	130	< 1	1,880	.49	8.2
09-01-2011	1005	15.0	1,170	120	144	1	2,060	.47	7.5

07312500 Wichita River at Wichita Falls, TX—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 4 of 4

[%, percent; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; μS/cm, microsiemens per centimeter; --, no data; <, less than]

Date	Sample start time	Sulfate, water, filtered, mg/L (00945)	Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrite, water, filtered, mg/L as N (00613)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, filtered, mg/L as P (00666)
10-06-2010	1420	557	.31	< .010	.14	.008	.013	< .02
12-09-2010	1415	817	.32	< .010	.11	.008	.007	< .02
02-16-2011	1115	763	.37	.011	.16	.011	.006	< .02
05-10-2011	1040	934	.48	.012	< .02	< .001	.008	< .02
05-10-2011	1041	937	.48	.012	< .02	< .001	.008	.03
06-29-2011	1100	1,250	.60	< .010	< .02	< .001	.009	< .02
09-01-2011	1005	1,370	.47	.013	< .02	< .001	< .004	< .02

07312500 Wichita River at Wichita Falls, TX—Continued

**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	4,290	3,540	4,000	5,260	5,210	5,230	6,580	6,320	6,440	7,060	6,390	6,720
2	4,380	3,960	4,210	5,250	5,180	5,210	6,630	6,300	6,510	---	---	---
3	4,540	4,290	4,420	5,380	5,150	5,240	6,740	6,620	6,680	6,950	6,820	6,890
4	4,510	4,140	4,290	5,510	5,300	5,420	6,860	6,640	6,750	6,920	6,750	6,820
5	4,490	4,220	4,360	5,800	5,490	5,630	6,970	6,800	6,880	6,900	6,750	6,830
6	4,740	4,480	4,630	5,860	5,720	5,790	7,090	6,930	7,010	7,270	5,340	6,730
7	4,810	4,520	4,660	5,880	5,630	5,780	7,090	6,870	6,970	5,590	5,000	5,190
8	4,830	4,510	4,620	5,720	5,510	5,640	7,100	7,000	7,050	6,560	5,480	5,810
9	5,000	4,710	4,830	5,570	5,440	5,480	7,060	6,660	6,880	7,080	6,560	6,770
10	5,110	4,950	5,060	5,700	5,570	5,620	7,070	6,260	6,730	7,110	6,340	6,790
11	4,950	4,610	4,740	5,690	5,600	5,650	6,600	6,240	6,470	6,480	6,000	6,210
12	4,900	4,630	4,770	5,890	5,570	5,650	6,790	6,580	6,690	6,540	6,060	6,380
13	5,200	4,710	4,950	5,890	5,530	5,620	6,880	6,700	6,800	---	---	---
14	5,270	5,030	5,150	5,640	5,550	5,590	6,960	6,740	6,840	---	---	---
15	5,250	5,030	5,090	5,660	5,600	5,630	6,910	6,640	6,820	6,680	6,410	6,560
16	5,260	5,090	5,150	5,720	5,620	5,660	6,930	6,750	6,860	6,410	5,930	6,170
17	5,560	5,000	5,140	5,760	5,650	5,700	---	---	---	6,420	6,090	6,240
18	5,320	5,000	5,180	5,880	5,670	5,760	6,890	6,680	6,820	---	---	---
19	5,220	5,060	5,140	6,200	5,870	6,000	6,980	6,840	6,900	6,120	5,890	6,060
20	5,360	5,160	5,270	6,430	6,190	6,330	6,950	6,770	6,870	6,060	5,860	5,980
21	5,430	5,240	5,310	6,440	6,130	6,240	6,960	6,770	6,910	6,200	5,940	6,090
22	5,580	4,810	5,230	6,240	6,100	6,190	7,080	6,780	6,940	6,280	5,810	6,080
23	5,250	3,530	4,590	6,230	5,950	6,120	7,220	6,670	6,960	5,950	5,450	5,750
24	4,460	2,880	3,910	6,500	6,150	6,350	7,290	6,990	7,110	6,160	5,670	5,910
25	3,480	3,060	3,280	6,820	6,500	6,660	7,200	6,990	7,120	6,150	5,740	6,010
26	4,080	3,460	3,790	6,820	6,060	6,490	7,370	7,200	7,300	5,950	5,680	5,790
27	4,470	4,080	4,250	6,090	5,900	6,000	7,390	7,280	7,340	5,840	5,470	5,730
28	4,860	4,470	4,660	6,020	5,930	5,970	7,400	6,320	7,030	6,710	5,810	6,270
29	4,920	4,790	4,840	6,140	5,970	6,050	6,610	5,730	6,290	6,920	6,200	6,630
30	5,040	4,920	4,990	6,320	6,120	6,220	---	---	---	6,780	6,250	6,560
31	5,250	5,040	5,150	---	---	---	6,620	6,210	6,350	6,640	6,440	6,540
Month	5,580	2,880	4,700	6,820	5,150	5,830	---	---	---	---	---	---

07312500 Wichita River at Wichita Falls, TX—Continued

**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

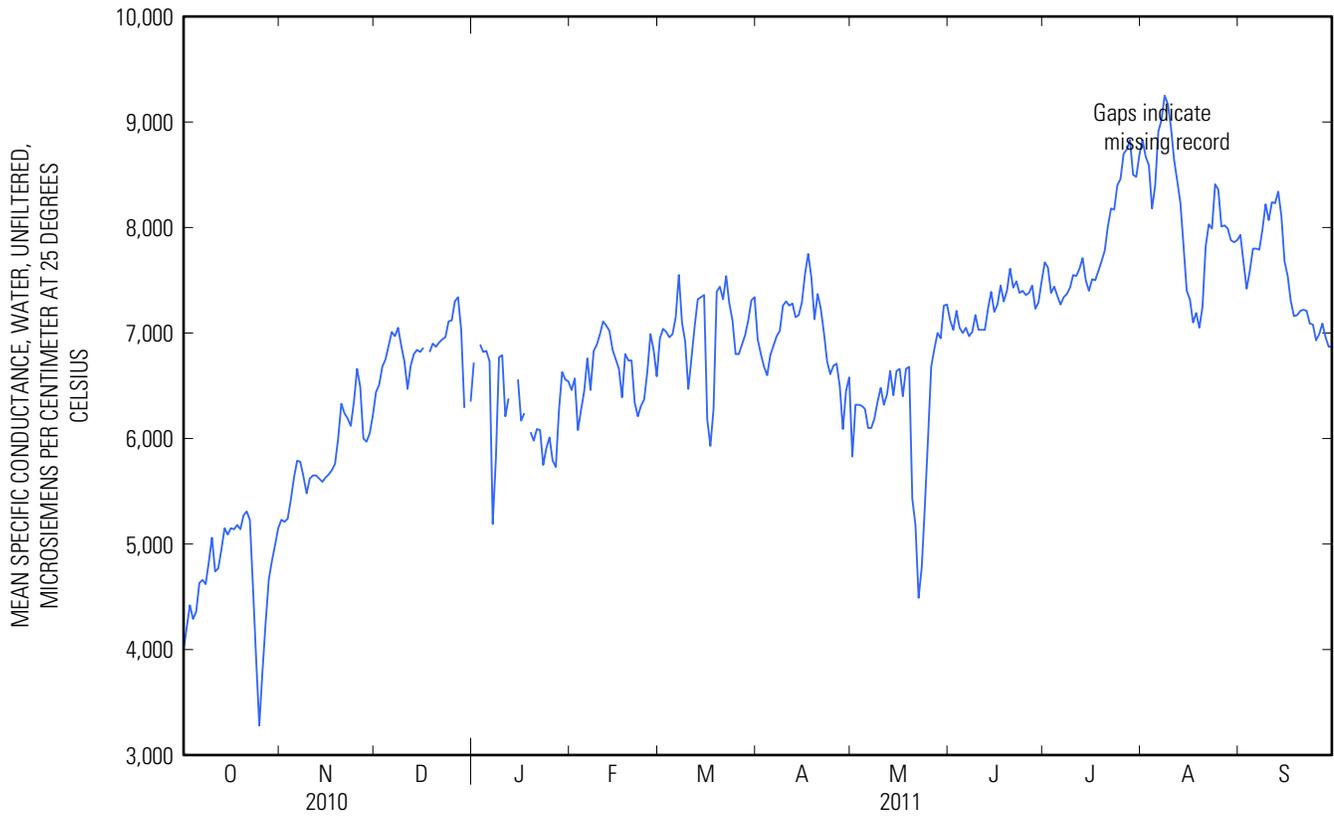
Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	6,560	6,390	6,460	7,050	6,820	6,950	7,070	6,810	6,940	6,670	5,060	5,830
2	6,720	6,450	6,570	7,100	6,950	7,040	6,890	6,600	6,800	6,480	6,100	6,320
3	6,530	5,880	6,080	7,170	6,860	7,010	6,850	6,460	6,680	6,400	6,240	6,320
4	6,340	6,180	6,270	7,200	6,720	6,960	6,850	6,250	6,600	6,440	6,110	6,310
5	6,720	6,180	6,450	7,450	6,600	6,990	6,940	6,260	6,790	6,380	6,170	6,280
6	7,020	6,430	6,760	7,470	6,810	7,150	7,010	6,780	6,880	6,170	5,980	6,100
7	6,900	6,040	6,460	7,680	7,430	7,550	7,050	6,850	6,970	6,190	5,980	6,100
8	6,980	6,620	6,830	7,580	6,700	7,100	7,120	6,940	7,020	6,360	6,030	6,190
9	6,990	6,730	6,890	7,630	6,570	6,920	7,360	7,110	7,260	6,520	6,160	6,350
10	7,130	6,750	6,990	7,010	6,070	6,470	7,430	7,190	7,300	6,670	6,250	6,480
11	7,230	7,060	7,110	6,850	6,570	6,760	7,370	7,140	7,260	6,650	5,890	6,320
12	7,170	6,970	7,070	7,250	6,750	7,060	7,440	7,110	7,280	6,650	6,220	6,420
13	7,060	6,960	7,020	7,410	7,150	7,320	7,350	6,920	7,150	6,770	6,490	6,640
14	7,040	6,670	6,840	7,450	7,160	7,340	7,290	6,810	7,170	6,740	6,130	6,410
15	6,890	6,610	6,750	7,640	7,010	7,360	7,540	6,960	7,290	6,770	6,410	6,640
16	7,030	6,100	6,660	7,150	5,540	6,180	7,910	7,120	7,560	6,760	6,540	6,660
17	6,730	6,040	6,390	6,550	5,340	5,930	7,980	7,320	7,750	6,710	6,200	6,400
18	6,880	6,720	6,800	7,100	5,700	6,280	7,960	6,850	7,530	6,960	6,300	6,660
19	6,830	6,610	6,740	7,580	7,100	7,390	7,320	6,850	7,130	6,770	6,570	6,680
20	6,840	6,620	6,740	7,650	7,200	7,440	7,620	7,160	7,370	6,860	3,860	5,430
21	6,870	6,100	6,340	7,640	7,070	7,320	7,620	6,920	7,230	5,740	3,970	5,180
22	6,310	6,030	6,210	7,820	7,280	7,540	7,250	6,550	7,000	5,450	3,990	4,490
23	6,430	6,180	6,310	7,430	7,120	7,280	7,110	6,540	6,730	5,060	4,500	4,780
24	6,470	6,300	6,370	7,410	6,860	7,120	6,700	6,450	6,610	5,810	4,790	5,370
25	6,870	6,450	6,630	6,940	6,650	6,800	6,900	6,480	6,690	6,440	5,750	6,010
26	7,080	6,870	6,990	6,970	6,440	6,800	6,780	6,580	6,710	6,860	6,430	6,680
27	6,960	6,690	6,840	7,020	6,790	6,890	6,710	5,990	6,500	7,130	6,600	6,850
28	7,090	6,220	6,590	7,080	6,800	6,980	6,370	5,940	6,090	7,210	6,810	7,000
29	---	---	---	7,490	6,720	7,120	6,560	6,360	6,450	7,190	6,700	6,950
30	---	---	---	7,440	7,050	7,310	6,650	6,480	6,580	7,380	7,150	7,260
31	---	---	---	7,620	6,910	7,340	---	---	---	7,360	7,190	7,270
Month	7,230	5,880	6,650	7,820	5,340	7,020	7,980	5,940	6,980	7,380	3,860	6,270

07312500 Wichita River at Wichita Falls, TX—Continued

**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	7,220	6,960	7,120	7,790	7,480	7,670	8,950	8,710	8,830	8,080	7,810	7,930
2	7,150	6,900	7,030	7,790	7,480	7,620	8,850	8,490	8,670	7,920	7,200	7,670
3	7,360	7,070	7,210	7,480	7,320	7,380	8,780	8,480	8,590	7,530	7,220	7,420
4	7,150	6,880	7,050	7,560	7,320	7,440	8,480	7,570	8,180	7,880	7,370	7,590
5	7,110	6,880	7,000	7,470	7,220	7,350	8,630	8,270	8,400	7,940	7,610	7,800
6	7,110	6,990	7,050	7,390	7,140	7,270	9,110	8,560	8,910	8,000	7,650	7,800
7	7,090	6,840	6,970	7,470	7,220	7,340	9,110	8,860	9,020	8,050	7,460	7,790
8	7,170	6,860	7,010	7,540	7,190	7,370	9,400	9,090	9,250	8,100	7,870	7,980
9	7,310	6,990	7,170	7,520	7,250	7,430	9,390	8,950	9,170	8,400	8,020	8,220
10	7,090	6,970	7,030	7,690	7,470	7,550	9,190	8,780	8,950	8,320	7,720	8,070
11	7,100	6,980	7,030	7,600	7,460	7,540	8,890	8,510	8,640	8,430	8,030	8,240
12	7,130	6,890	7,030	7,700	7,500	7,610	8,650	8,220	8,440	8,380	7,990	8,230
13	7,330	7,110	7,230	7,820	7,590	7,710	8,540	7,860	8,230	8,600	8,090	8,340
14	7,470	7,240	7,390	7,780	7,320	7,500	8,200	7,480	7,820	8,370	7,890	8,110
15	7,260	7,160	7,200	7,470	7,300	7,400	7,500	7,190	7,400	8,010	6,770	7,680
16	7,380	7,180	7,270	7,600	7,420	7,510	7,480	6,980	7,320	7,990	6,880	7,540
17	7,500	7,340	7,450	7,670	7,340	7,500	7,240	6,910	7,100	7,530	7,090	7,300
18	7,340	7,250	7,300	7,690	7,450	7,590	7,340	7,040	7,190	7,430	6,730	7,160
19	7,490	7,330	7,400	7,860	7,540	7,680	7,290	6,860	7,050	7,370	6,760	7,170
20	7,720	7,490	7,610	7,950	7,680	7,780	7,620	7,020	7,250	7,380	6,920	7,210
21	7,560	7,280	7,430	8,130	7,860	8,010	8,040	7,580	7,820	7,390	6,810	7,220
22	7,570	7,350	7,490	8,280	7,990	8,180	8,150	7,870	8,030	7,430	6,850	7,210
23	7,460	7,290	7,380	8,250	8,030	8,170	8,130	7,870	7,990	7,510	6,210	7,090
24	7,430	7,330	7,400	8,510	8,250	8,400	8,510	8,130	8,410	7,480	6,230	7,080
25	7,500	7,230	7,360	8,640	8,260	8,460	8,520	8,170	8,360	7,490	5,960	6,930
26	7,470	7,200	7,380	8,780	8,590	8,700	8,230	7,860	8,010	7,510	6,160	6,990
27	7,590	7,320	7,450	8,940	8,550	8,740	8,110	7,900	8,020	7,560	6,230	7,090
28	7,320	7,100	7,230	8,910	8,710	8,830	8,120	7,790	7,990	7,520	5,900	6,960
29	7,480	7,110	7,290	8,910	8,140	8,500	8,000	7,730	7,880	7,330	6,170	6,870
30	7,570	7,430	7,490	8,710	8,210	8,480	7,920	7,780	7,860	7,480	5,740	6,870
31	---	---	---	8,820	8,540	8,690	7,980	7,790	7,880	---	---	---
Month	7,720	6,840	7,250	8,940	7,140	7,850	9,400	6,860	8,150	8,600	5,740	7,520

07312500 Wichita River at Wichita Falls, TX—Continued



07312500 Wichita River at Wichita Falls, TX—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	24.5	20.9	22.6	18.0	15.6	16.8	9.3	5.2	7.3	8.1	4.5	6.1
2	24.5	20.8	22.4	16.8	14.9	15.9	10.0	6.2	8.1	5.4	1.8	3.7
3	21.9	19.4	20.4	16.3	13.3	14.9	11.0	6.6	8.8	6.8	2.6	4.8
4	21.0	17.2	19.1	15.6	12.7	14.1	11.1	8.5	9.6	8.3	5.0	6.5
5	21.1	17.4	19.1	14.0	10.3	12.2	9.2	6.4	7.7	7.9	4.0	5.9
6	21.9	17.6	19.7	14.3	10.2	12.2	8.0	4.8	6.4	7.1	4.0	5.6
7	22.8	18.3	20.4	15.1	11.0	13.0	8.4	4.8	6.6	8.2	5.0	6.5
8	22.8	18.8	20.7	16.6	11.9	14.1	9.1	5.4	7.3	7.8	4.9	6.5
9	22.8	18.7	20.7	17.7	13.5	15.5	9.8	6.2	8.0	6.7	5.2	5.9
10	23.1	19.5	21.3	17.7	14.3	16.0	9.3	6.8	8.1	5.2	3.4	4.5
11	23.4	20.2	21.7	18.6	14.6	16.7	9.6	7.4	8.2	3.9	0.9	2.5
12	22.4	19.0	20.7	18.0	14.6	16.9	7.4	4.8	6.1	2.5	0.5	1.7
13	22.0	18.9	20.3	14.7	11.9	13.3	7.0	3.3	5.2	4.1	1.4	2.6
14	20.3	16.2	18.4	13.3	9.7	11.7	8.2	4.3	6.2	5.1	1.6	3.4
15	21.2	16.3	18.8	13.1	10.7	11.9	9.6	5.2	7.5	6.5	3.9	4.9
16	21.1	17.3	19.4	13.6	10.2	11.9	9.3	6.5	8.0	7.0	5.3	5.9
17	21.4	18.1	19.7	13.1	10.4	11.7	8.0	6.6	7.3	8.2	4.2	6.3
18	21.4	18.6	20.0	12.4	9.2	10.8	8.1	5.7	6.8	9.8	7.1	8.1
19	22.8	19.3	21.0	12.9	8.3	10.7	9.0	5.5	7.3	9.0	5.6	7.3
20	22.9	19.1	21.0	14.4	10.2	12.4	11.9	7.6	9.6	7.6	4.3	5.9
21	22.8	18.9	20.8	17.6	13.6	15.3	12.5	8.9	10.7	5.3	2.0	3.8
22	21.6	19.7	20.3	19.0	16.0	17.2	10.4	8.0	9.1	6.2	2.6	4.4
23	19.9	17.6	18.9	16.3	12.9	14.7	8.0	6.5	7.3	7.6	5.1	5.9
24	19.5	16.9	18.0	18.7	14.1	16.2	8.0	6.5	7.6	7.0	3.2	5.2
25	19.3	17.2	18.3	17.6	9.8	13.1	7.4	4.9	5.9	8.6	5.5	6.7
26	19.6	16.6	18.1	9.8	6.9	8.6	5.8	2.4	4.1	8.1	4.4	6.3
27	19.2	16.2	17.5	9.7	6.2	8.0	6.0	2.7	4.4	8.9	3.9	6.5
28	17.2	14.1	15.8	10.8	6.7	8.9	7.4	4.4	6.0	10.2	5.2	7.8
29	16.2	12.4	14.4	12.9	9.9	11.1	11.0	7.3	9.1	11.4	6.4	9.0
30	17.4	13.0	15.1	10.3	7.4	8.7	12.6	9.8	11.0	10.2	7.6	8.4
31	18.9	15.0	16.8	---	---	---	11.4	8.1	9.8	9.6	5.6	7.4
Month	24.5	12.4	19.4	19.0	6.2	13.2	12.6	2.4	7.6	11.4	0.5	5.7

07312500 Wichita River at Wichita Falls, TX—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	6.0	-0.1	1.4	16.7	9.7	13.0	21.4	13.8	17.5	21.9	14.0	16.6
2	0.9	-0.1	0.1	18.4	12.1	14.7	23.1	15.9	19.5	17.1	12.8	14.4
3	0.5	-0.1	0.1	18.4	12.6	15.4	25.2	19.6	22.2	20.6	13.4	16.6
4	3.9	0.1	1.7	19.4	14.7	16.6	23.2	16.6	19.5	22.1	16.1	18.9
5	6.0	0.3	3.1	16.1	11.2	13.4	19.6	13.0	16.3	24.1	16.6	20.1
6	6.0	4.6	5.3	15.4	9.1	11.9	22.7	14.5	18.4	25.5	18.1	21.8
7	8.5	4.1	6.2	14.9	10.8	12.8	24.9	18.0	21.3	28.1	21.0	24.3
8	8.6	4.0	6.4	18.7	12.9	15.3	27.3	20.1	23.4	30.0	23.1	26.1
9	6.6	0.7	2.7	17.1	12.2	14.4	26.4	22.0	24.1	29.2	23.7	26.3
10	4.1	-0.1	1.4	17.0	10.2	13.6	26.6	21.7	23.7	26.1	23.3	24.3
11	6.0	-0.1	2.7	17.2	11.3	14.2	24.1	19.4	21.8	23.5	21.4	22.5
12	8.1	1.6	4.8	19.3	12.8	16.0	23.3	16.5	20.0	27.6	20.0	23.4
13	11.1	4.7	7.8	20.1	14.7	17.1	23.0	17.5	20.2	25.2	20.5	22.9
14	12.3	7.0	9.8	18.4	13.0	15.6	24.9	18.5	21.4	24.1	18.5	21.2
15	15.0	8.9	11.8	15.2	11.9	13.8	21.6	16.7	18.7	24.2	18.1	21.1
16	15.9	9.9	12.9	19.2	12.5	15.4	20.8	13.3	17.0	25.0	18.4	21.6
17	17.9	12.8	15.2	24.1	16.3	19.6	21.4	15.2	18.4	25.5	19.6	22.4
18	18.0	13.0	15.6	25.1	18.7	21.3	25.7	18.8	22.0	27.5	20.8	24.0
19	20.2	15.1	17.2	23.1	17.3	19.9	26.9	21.6	23.9	27.1	23.1	25.0
20	21.2	16.6	18.5	22.6	18.5	20.5	23.4	19.0	20.5	25.7	22.1	24.4
21	18.5	13.4	16.4	21.2	18.7	19.9	19.8	17.3	18.5	27.4	22.3	24.7
22	14.8	9.9	12.5	23.5	18.3	20.6	26.5	19.1	22.4	29.2	24.0	26.1
23	16.6	12.2	14.4	22.3	16.5	19.5	25.2	22.0	23.7	29.6	24.4	26.6
24	20.2	14.5	16.7	20.6	14.8	17.7	22.0	19.2	20.2	29.3	24.9	27.1
25	14.6	10.3	12.4	23.2	16.1	19.2	23.0	18.5	20.1	28.1	23.0	25.5
26	15.3	9.0	12.1	22.3	17.2	19.5	23.8	18.6	21.0	27.8	20.6	24.2
27	19.1	13.9	15.9	17.4	13.4	14.9	21.5	18.4	19.8	29.5	22.1	25.9
28	16.8	11.8	14.3	13.4	11.4	12.4	22.7	15.3	18.9	31.7	24.6	28.1
29	---	---	---	12.2	11.5	11.9	23.1	17.7	20.2	30.4	25.6	27.9
30	---	---	---	13.8	9.6	11.7	24.6	18.9	21.4	29.5	24.2	26.7
31	---	---	---	18.5	10.9	14.4	---	---	---	29.3	24.5	26.8
Month	21.2	-0.1	9.3	25.1	9.1	16.0	27.3	13.0	20.5	31.7	12.8	23.5

07312500 Wichita River at Wichita Falls, TX—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	30.8	26.0	28.1	32.6	27.4	29.9	34.8	28.8	31.7	31.3	26.6	28.7
2	29.6	24.8	27.1	33.2	27.3	30.1	35.1	29.1	32.0	31.6	26.6	28.8
3	30.4	24.8	27.4	33.6	28.0	30.7	35.2	29.3	32.1	31.8	27.1	29.3
4	30.5	24.8	27.6	32.5	28.2	30.4	34.4	29.4	31.8	29.5	24.3	27.1
5	31.2	25.2	28.2	33.7	27.8	30.4	34.6	28.2	31.3	26.0	21.3	23.5
6	31.8	26.0	28.7	33.9	28.6	30.8	34.8	28.4	31.5	25.9	20.0	22.8
7	31.4	25.8	28.4	34.1	28.1	30.9	35.0	28.8	31.6	24.9	20.6	22.7
8	31.0	25.4	28.0	34.6	28.7	31.4	34.6	28.3	31.3	26.3	20.4	23.2
9	30.7	25.6	28.0	33.9	29.7	31.7	35.0	28.8	31.7	26.8	21.3	23.9
10	31.1	25.5	28.1	33.6	28.3	30.7	34.6	28.8	31.7	26.7	20.5	23.6
11	31.6	26.1	28.7	33.6	28.4	30.7	32.7	28.7	30.4	27.7	21.4	24.4
12	31.5	26.0	28.6	32.5	28.4	30.4	33.2	28.0	30.2	28.4	22.6	25.5
13	31.8	25.5	28.5	32.6	28.1	30.2	31.6	27.1	29.2	27.2	24.2	25.8
14	31.6	25.6	28.4	34.1	28.2	30.9	33.2	27.8	30.2	26.2	24.1	25.2
15	32.8	26.3	29.4	34.6	29.2	31.6	32.2	29.2	30.7	24.1	19.8	21.5
16	32.3	26.8	29.4	34.2	29.9	31.9	33.4	28.3	30.6	21.5	18.6	20.2
17	32.6	26.4	29.3	33.9	29.4	31.6	33.3	28.4	30.6	26.0	20.7	22.9
18	32.3	27.0	29.7	34.1	29.7	31.7	33.5	28.5	30.7	27.7	22.9	24.9
19	31.6	26.4	28.8	35.1	29.8	32.0	32.9	27.7	30.2	26.9	23.0	24.8
20	30.0	25.4	27.6	34.3	29.0	31.4	33.0	28.0	30.4	26.3	21.7	23.9
21	32.1	25.7	28.7	34.0	28.5	31.1	33.6	28.2	30.7	27.5	22.9	24.8
22	32.6	26.5	29.4	33.6	28.3	30.8	32.8	27.7	30.2	24.9	20.3	21.9
23	32.7	26.9	29.5	34.1	28.3	31.0	33.5	27.8	30.6	23.7	17.6	20.7
24	31.9	26.5	28.9	35.0	28.6	31.6	34.1	28.2	31.0	25.4	19.6	22.5
25	32.8	26.6	29.4	35.0	28.8	31.9	34.0	28.6	31.3	26.1	21.4	23.6
26	33.0	27.3	29.8	34.5	29.1	31.7	34.2	28.6	31.3	24.9	20.1	22.6
27	33.0	26.9	29.6	34.8	28.5	31.4	34.0	28.5	31.2	26.5	20.7	23.5
28	34.4	28.8	31.3	34.1	28.6	31.2	33.6	29.0	31.3	26.7	21.0	23.9
29	33.5	28.2	30.6	34.1	28.6	31.2	32.3	29.1	30.7	27.8	22.1	24.6
30	33.2	27.8	30.3	34.7	28.9	31.5	31.0	27.9	29.2	24.6	20.0	22.3
31	---	---	---	34.9	28.8	31.7	30.8	26.4	28.3	---	---	---
Month	34.4	24.8	28.9	35.1	27.3	31.1	35.2	26.4	30.8	31.8	17.6	24.1

	Max	Min	Mean
Year	35.2	-0.1	19.2

07312500 Wichita River at Wichita Falls, TX—Continued

