Water-Data Report 2008

08055500 Elm Fork Trinity River near Carrollton, TX

Upper Trinity Basin
Elm Fork Trinity Subbasin

LOCATION.--Lat 32°57′57″, long 96°56′39″ referenced to North American Datum of 1927, Dallas County, TX, Hydrologic Unit 12030103, on right bank at upstream side of bridge on Sandy Lake Road, 75 ft upstream from Carrollton Dam, 0.3 mi downstream from Denton Creek, 1.0 mi upstream from St. Louis Southwestern Railway Lines bridge, 2.3 mi northwest of Carrollton, and 18.2 mi upstream from mouth.

DRAINAGE AREA.--2,459 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Jan. 1907 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to Nov. 1923, published as "near Dallas". Water-quality records: Chemical data: Mar. 1971, Dec. 2002 to May 2005. Pesticide data: Dec. 2002 to May 2005. Precipitation records: Oct. 2001 to Sept. 2002.

REVISED RECORDS.--WSP 788: 1924. WSP 1148: Drainage area at former site. WSP 1632: 1908(M). WSP 1922: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 431.40 ft above NGVD of 1929. Prior to Nov. 1923, non recording gage at site 15.5 mi downstream at different datum. Nov. 1, 1923, to Nov. 13, 1934, non recording gage, and Nov. 14, 1934, to July 6, 1938, water-stage recorder at site 300 ft upstream and at present datum. July 7, 1938, to Apr. 14, 1939, non recording gage at site 9.3 mi downstream at datum 22.94 ft lower. Apr. 15, 1939 to Sept. 30, 1955, water-stage recorder at site 8.5 mi downstream at datum 22.94 ft lower. Oct. 1, 1955, to Sept. 30, 1987, water-stage recorder at site 300 ft upstream and at datum 2.00 ft higher. Oct. 1, 1987 to July 7, 1999, at site 300 ft upstream at present datum. Satellite telemeter at station.

REMARKS.--Records good. Since water year 1954, at least 10% of contributing drainage area has been regulated. The city of Dallas diverts water from the pool at gage and from the river 14.0 mi downstream for municipal use. A wastewater treatment plant returns water to the river below the station. TXU Electric Co. diverts water from the pool at gage into North Lake for cooling water at their electric generating plant. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--47 years (water years 1908-54), 818 ft^3/s (592,600 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1866 reached about the same stage as flood of May 25, 1908.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS 1907-1954: Maximum gage height, about 19 ft, May 25, 1908, present site and datum, from information by local resident; estimated discharge, 145,000 ft^3/s, at site 8.5 mi downstream, from information by U.S. Army Corps of Engineers; maximum gage height subsequent to 1908, 16.5 ft, Apr. 26, 1942, present site and datum, from observation by National Weather Service; discharge at site 8.5 mi downstream, 90,700 ft^3/s; no flow at times.

08055500 Elm Fork Trinity River near Carrollton, TX—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

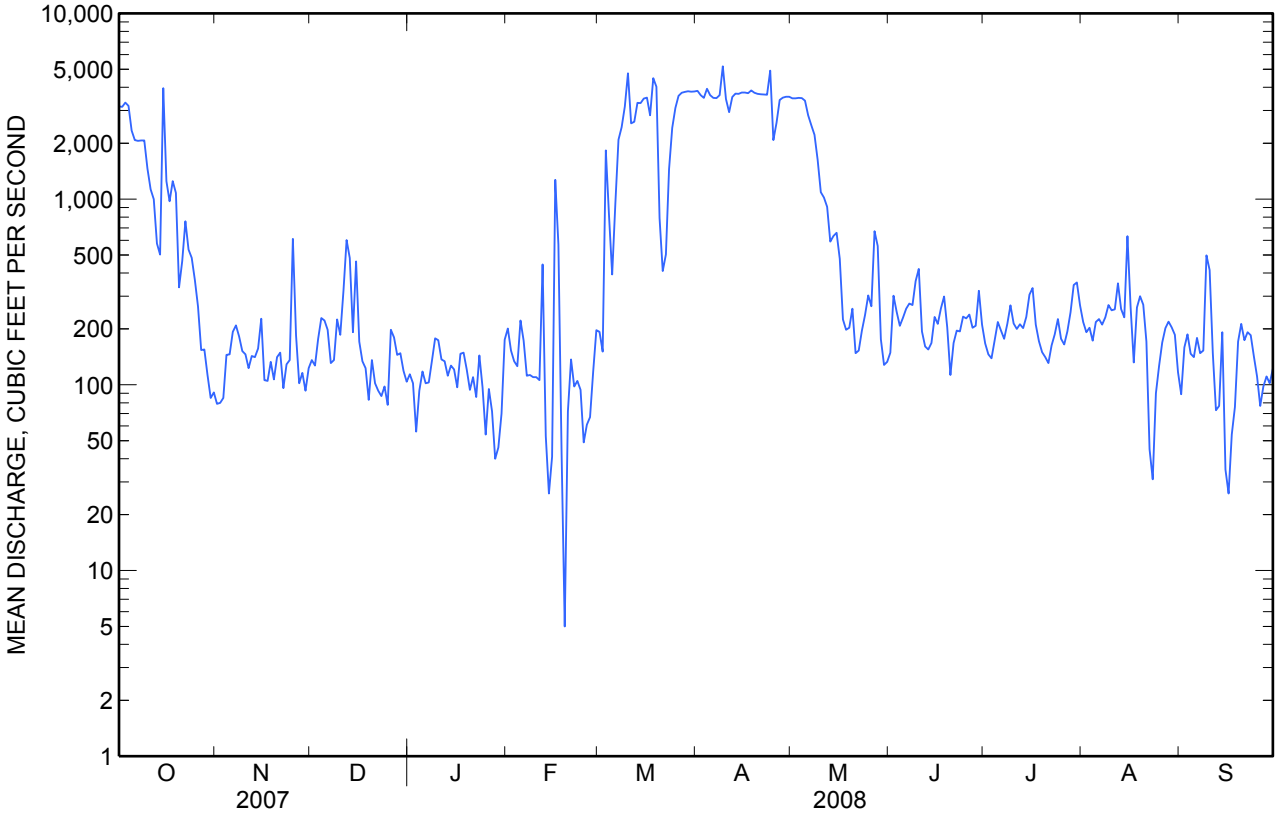
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	3,160	79	136	114	201	193	3,830	3,490	149	167	218	89
2	3,140	80	127	102	153	151	3,630	3,490	302	146	192	159
3	3,310	85	177	56	134	1,830	3,510	3,510	247	139	203	187
4	3,180	145	229	93	126	820	3,930	3,500	208	174	173	147
5	2,340	146	222	118	222	393	3,630	3,390	230	218	218	141
6	2,080	193	198	102	173	939	3,510	2,830	257	196	226	179
7	2,060	209	131	103	112	2,090	3,500	2,500	274	177	211	148
8	2,070	182	136	135	113	2,440	3,630	2,220	269	213	231	153
9	2,070	152	225	178	110	3,150	5,190	1,630	362	268	269	498
10	1,460	146	186	174	110	4,760	3,460	1,090	421	214	252	415
11	1,130	123	320	137	106	2,560	2,940	1,020	194	200	255	148
12	999	143	602	134	445	2,610	3,550	909	161	212	352	73
13	577	141	482	112	53	3,300	3,700	591	155	202	256	77
14	503	157	192	127	26	3,290	3,690	633	168	232	231	192
15	3,960	227	462	121	41	3,480	3,750	659	232	306	632	35
16	1,250	106	171	97	1,270	3,520	3,750	477	213	332	263	26
17	974	105	134	147	569	2,830	3,720	225	258	211	132	54
18	1,250	133	123	149	43	4,480	3,850	198	299	172	261	76
19	1,080	107	83	121	5.0	4,030	3,740	203	204	150	300	171
20	335	141	136	94	72	791	3,690	257	113	141	270	213
21	464	149	102	110	137	410	3,670	148	168	131	171	174
22	760	96	93	86	98	504	3,660	153	196	163	45	192
23	535	129	87	144	105	1,450	3,650	196	194	187	31	185
24	483	136	98	97	94	2,420	4,920	238	233	226	90	142
25	367	611	78	54	49	3,100	2,080	303	228	177	126	111
26	264	185	198	95	61	3,600	2,580	265	239	165	169	77
27	154	102	180	72	67	3,740	3,420	672	203	194	202	98
28	155	116	145	40	118	3,780	3,520	559	208	246	219	111
29	113	93	148	46	197	3,810	3,560	176	321	345	204	102
30	85	123	119	70	---	3,790	3,560	128	211	356	186	122
31	91	---	104	175	---	3,800	---	133	---	268	117	---
Total	40,399	4,540	5,824	3,403	5,010.0	78,061	108,820	35,793	6,917	6,528	6,705	4,495
Mean	1,303	151	188	110	173	2,518	3,627	1,155	231	211	216	150
Max	3,960	611	602	178	1,270	4,760	5,190	3,510	421	356	632	498
Min	85	79	78	40	5.0	151	2,080	128	113	131	31	26
Ac-ft	80,130	9,010	11,550	6,750	9,940	154,800	215,800	71,000	13,720	12,950	13,300	8,920

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2008 [2], BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	418	709	792	598	700	1,092	1,110	1,480	1,551	963	593	338
Max	3,554	8,830	6,785	6,614	5,868	5,655	4,782	10,920	6,757	6,224	6,003	3,406
(WY)	(1982)	(1982)	(1982)	(1992)	(1992)	(1997)	(1995)	(1990)	(1990)	(1989)	(1982)	(1962)
Min	27.8	4.21	0.78	0.80	2.06	3.30	43.5	38.4	77.1	83.9	58.2	14.8
(WY)	(1981)	(1957)	(1978)	(1957)	(1957)	(1957)	(1955)	(1980)	(2005)	(2005)	(1979)	(1985)

08055500 Elm Fork Trinity River near Carrollton, TX—Continued

SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1955 - 2008 [Z]	
Annual total	635,538.67		306,495.0			
Annual mean	1,741		837		863	
Highest annual mean					4,289	1982
Lowest annual mean					76.0	1978
Highest daily mean	8,690	Jun 27	5,190	Apr 9	25,300	May 5, 1990
Lowest daily mean	0.00	Mar 12	5.0	Feb 19	0.00	Dec 2, 1954
Annual seven-day minimum	1.2	Mar 19	68	Jan 24	0.00	Jan 7, 1959
Maximum peak flow			6,650	Mar 18	33,000	Sep 21, 1964
Maximum peak stage			8.21	Mar 18	13.48	May 5, 1990
Annual runoff (ac-ft)	1,261,000		607,900		625,500	
10 percent exceeds	5,940		3,500		3,780	
50 percent exceeds	463		200		153	
90 percent exceeds	20		93		38	

[Z] Period of regulated streamflow.