Water-Data Report 2012

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".

PERIOD OF RECORD, Water-Quality.--
CHEMICAL DATA: Mar. 1971, Dec. 2002 to May 2005.
BIOLOGICAL DATA: Dec. 2002 to Nov. 2003.
PESTICIDE DATA: Dec. 2002 to May 2005.

PERIOD OF DAILY RECORD, Atmospheric.--
PRECIPITATION DATA: 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 except those for estimated daily mean discharges, which are poor. Some records listed in the "Period of Record" for surface water and water quality may not be available electronically. Since water year 1955, 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 Energy 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.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	90	58	93	e20	809	67	4,890	123	46	188	366	264
2	135	134	190	e36	870	103	4,820	122	152	171	282	235
3	78	197	218	e126	835	87	4,480	233	69	144	276	269
4	118	205	1,180	e111	884	48	4,160	376	88	169	240	337
5	183	172	871	e65	825	1.7	3,780	243	165	235	203	195
6	188	166	117	78	743	51	3,900	85	557	300	240	170
7	244	133	84	85	340	89	2,470	e157	1,170	218	289	120
8	255	158	79	103	290	154	2,430	e168	132	166	228	104
9	540	107	44	762	274	69	2,520	70	177	198	257	227
10	236	69	33	1,020	318	186	2,170	11	195	133	247	300
11	104	133	30	171	303	715	2,030	284	127	132	216	352
12	513	138	18	53	287	118	2,010	498	126	191	229	226
13	88	121	26	119	355	29	1,910	81	151	244	262	209
14	117	107	65	132	302	9.9	1,570	36	241	171	250	230
15	66	119	434	57	253	80	1,910	156	217	254	1,910	172
16	197	241	296	52	270	108	1,630	95	34	188	80	117
17	244	175	83	32	271	127	1,490	127	177	139	215	133
18	260	173	71	73	1,810	127	1,380	151	135	54	225	115
19	117	144	129	92	2,130	311	1,200	144	124	62	322	151
20	127	161	319	99	1,450	5,070	1,190	132	135	192	21	146
21	140	168	57	98	1,250	1,280	969	148	227	295	153	126
22	113	514	33	79	724	841	907	148	211	87	245	147
23	230	110	72	122	550	2,340	912	97	100	96	185	296
24	138	90	53	263	168	3,160	612	104	71	174	19	317
25	39	76	30	5,300	121	3,920	314	241	186	123	177	238
26	22	63	25	1,840	145	4,140	155	202	210	155	195	122
27	144	50	16	529	121	4,500	102	150	166	231	235	109
28	221	53	103	1,070	118	4,620	71	133	171	159	253	276
29	164	37	66	1,090	90	4,620	63	271	330	159	150	433
30	87	66	e62	1,040	---	4,820	47	554	375	229	71	611
31	36	---	e33	901	---	4,920	---	442	---	368	150	---
Total	5,234	4,138	4,930	15,618	16,906	46,711.6	56,092	5,782	6,265	5,625	8,191	6,747
Mean	169	138	159	504	583	1,507	1,870	187	209	181	264	225
Max	540	514	1,180	5,300	2,130	5,070	4,890	554	1,170	368	1,910	611
Min	22	37	16	20	90	1.7	47	11	34	54	19	104
Ac-ft	10,380	8,210	9,780	30,980	33,530	92,650	111,300	11,470	12,430	11,160	16,250	13,380

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2012[Z], BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	420	725	754	575	733	1,106	1,081	1,386	1,436	896	559	355
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)

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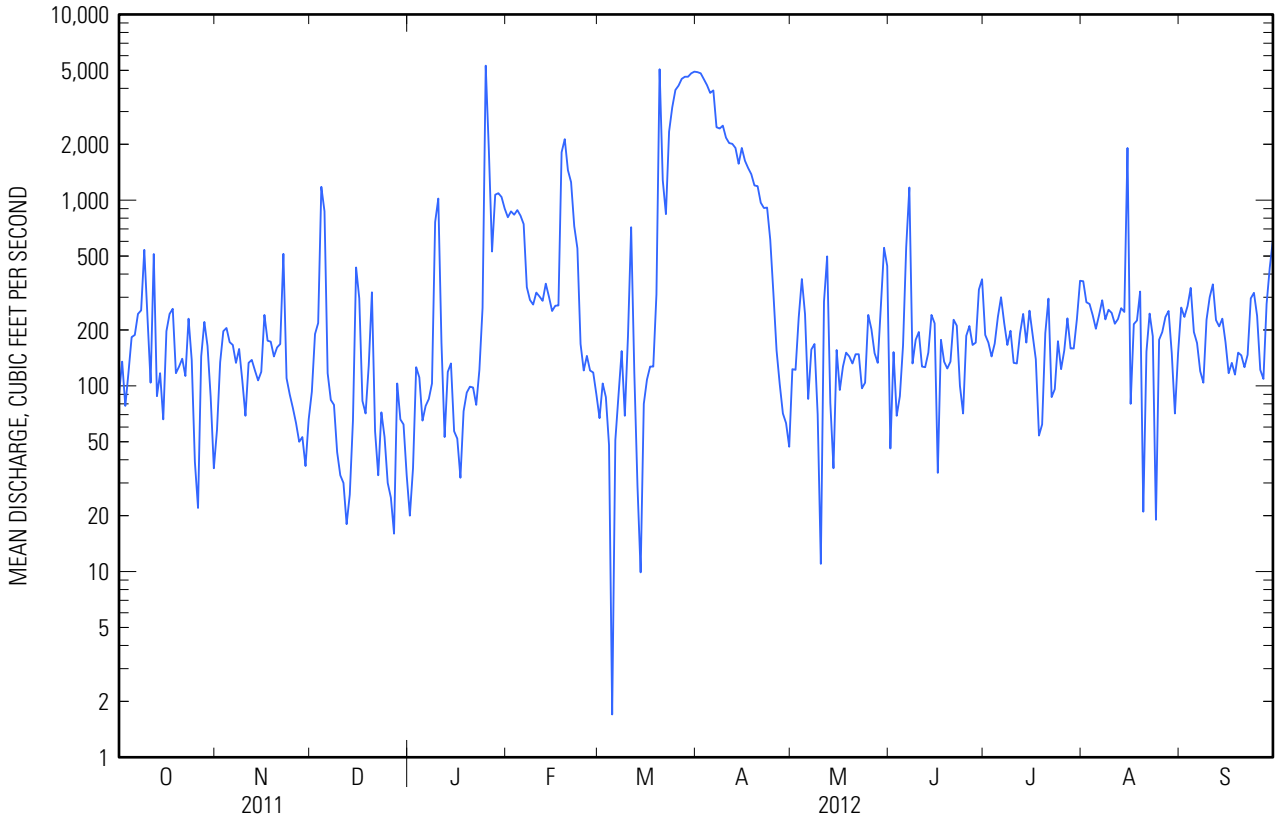
SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1955 - 2012[Z]	
Annual total	66,936.83		182,239.6			
Annual mean	183		498		836	
Highest annual mean					4,289	1982
Lowest annual mean					76.0	1978
Highest daily mean	2,320	May 2	5,300	Jan 25	25,300	May 5, 1990
Lowest daily mean	0.00	Jan 27	1.7	Mar 5	0.00	Dec 2, 1954
Annual seven-day minimum	6.0	Jan 21	41	Dec 21	0.00	Jan 7, 1959
Maximum peak flow			7,340	Jan 25	33,000	Sep 21, 1964
Maximum peak stage			8.53	Jan 25	13.48	May 5, 1990
Annual runoff (ac-ft)	132,800		361,500		605,300	
10 percent exceeds	283		1,220		3,680	
50 percent exceeds	138		170		153	
90 percent exceeds	38		57		38	

[Z] Period of regulated streamflow.