Water-Data Report 2011

08053000 Elm Fork Trinity River near Lewisville, TX

Upper Trinity Basin
Elm Fork Trinity Subbasin

LOCATION.--Lat 33°02′44″, long 96°57′39″ referenced to North American Datum of 1927, Denton County, TX, Hydrologic Unit 12030103, on left bank at downstream edge of highway right-of-way, 90 ft to left of left end of bridge on State Highway 121, 1.8 mi east of Lewisville, 1.9 mi downstream from Lewisville Lake, 8.3 mi upstream from Denton Creek, and 28.2 mi upstream from mouth.

DRAINAGE AREA.--1,673 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Mar. 1949 to current year.

PERIOD OF RECORD, Water-Quality.--
CHEMICAL DATA: Jan. 1981 to July 1997.
BIOCHEMICAL DATA: Jan. 1981 to July 1997.
RADIOCHEMICAL DATA: May 1981.

PERIOD OF DAILY RECORD, Water-Quality.--
SPECIFIC CONDUCTANCE: Oct. 1988 to Sept. 1989.
WATER TEMPERATURE: Oct. 1988 to Sept. 1989.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 432.39 ft above NGVD of 1929 (U.S. Army Corps of Engineers benchmark). Prior to Jan. 6, 1950, non-recording gage 0.6 mi upstream at datum 3.26 ft lower. Satellite telemeter at station.

REMARKS.--Records good. Some records listed in the Period of Record for surface water and water quality may not be available electronically. Since Nov. 1954, at least 10% of contributing drainage area has been regulated. Most of low flow is used by the City of Dallas for municipal supply (see Elm Fork Trinity River near Carrollton, station 08055500).

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--5 years (water years 1950-54) prior to regulation, 402 ft^3/s (291,200 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1907, 33.8 ft in 1908, present site and datum, from information by local resident.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS 1950-1954: Maximum discharge, 21,700 ft^3/s, Sept. 15, 1950, gage height, 30.75 ft; no flow June 14, 1954.

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

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	381	282	192	175	345	201	331	315	293	434	544	486
2	230	317	196	176	318	242	316	791	363	565	545	497
3	233	353	180	179	314	280	318	333	411	672	607	482
4	224	303	180	211	315	320	328	251	414	448	600	477
5	215	244	178	243	330	347	188	219	379	401	610	482
6	253	189	173	242	327	321	258	184	345	463	610	464
7	303	187	167	241	318	323	335	183	344	500	609	462
8	330	184	168	241	315	324	316	184	363	559	496	482
9	331	183	171	363	320	274	316	219	415	572	470	501
10	289	186	172	203	316	280	315	255	496	537	524	505
11	273	182	172	182	314	322	425	330	516	524	568	500
12	287	222	169	179	314	322	267	257	492	493	589	498
13	318	206	169	179	313	326	263	184	457	492	572	499
14	336	190	171	124	270	324	323	221	464	493	418	501
15	336	190	174	37	222	325	296	254	500	513	435	485
16	337	188	171	99	243	325	244	252	487	582	431	453
17	337	184	169	260	254	328	279	253	508	627	430	372
18	340	183	170	226	252	327	342	238	505	536	429	315
19	340	174	171	139	252	342	366	292	504	446	428	365
20	339	175	174	160	272	355	329	383	469	463	452	365
21	324	176	208	180	351	355	282	340	606	432	505	365
22	275	176	239	181	411	357	304	191	270	489	535	377
23	285	184	318	179	408	353	300	219	308	571	516	361
24	203	196	414	179	358	351	284	196	460	594	471	295
25	177	192	280	178	216	353	325	671	452	594	444	375
26	173	183	177	148	183	351	328	964	470	620	435	632
27	171	182	179	188	185	368	323	402	460	545	442	594
28	189	185	181	298	191	392	318	313	439	542	487	558
29	262	181	259	310	---	392	317	312	417	542	526	435
30	319	176	190	308	---	393	302	312	416	546	564	383
31	301	---	181	309	---	381	---	309	---	545	557	---
Total	8,711	6,153	6,113	6,317	8,227	10,254	9,238	9,827	13,023	16,340	15,849	13,566
Mean	281	205	197	204	294	331	308	317	434	527	511	452
Max	381	353	414	363	411	393	425	964	606	672	610	632
Min	171	174	167	37	183	201	188	183	270	401	418	295
Ac-ft	17,280	12,200	12,130	12,530	16,320	20,340	18,320	19,490	25,830	32,410	31,440	26,910

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2011[Z], BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	432	654	620	498	622	895	840	1,179	1,219	849	548	395
Max	3,628	6,300	4,681	5,267	4,611	4,218	3,939	8,391	5,222	5,509	4,101	2,495
(WY)	(1982)	(1982)	(1982)	(1992)	(1992)	(1997)	(2002)	(1990)	(1957)	(2007)	(1982)	(2007)
Min	23.1	37.4	35.0	15.2	23.6	37.7	14.0	84.4	109	157	54.7	65.0
(WY)	(1959)	(1955)	(1955)	(1955)	(1955)	(1955)	(1989)	(1981)	(1955)	(1961)	(1963)	(1958)

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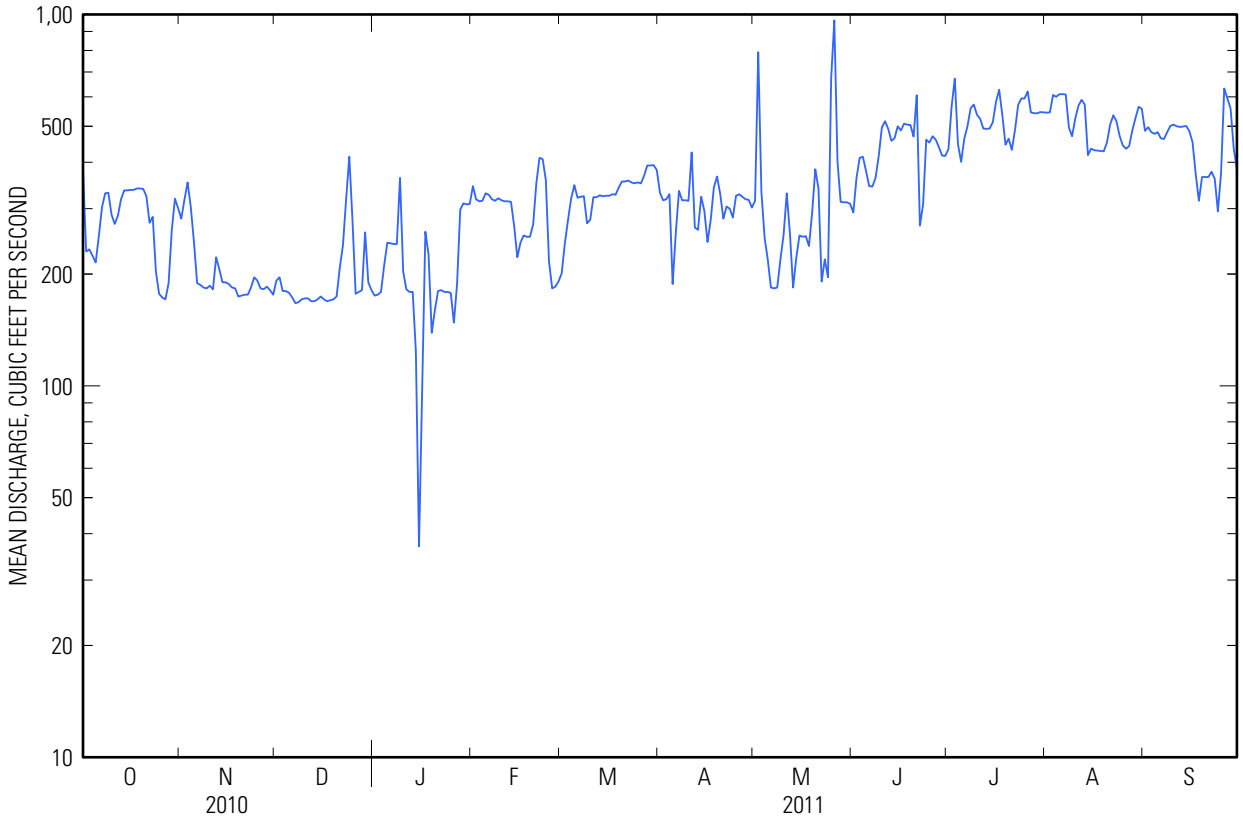
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1955 - 2011[z]	
Annual total	348,800		123,618			
Annual mean	956		339		730	
Highest annual mean					3,062	1982
Lowest annual mean					94.2	1955
Highest daily mean	4,590	Feb 21	964	May 26	19,000	May 4, 1990
Lowest daily mean	34	Jul 7	37	Jan 15	0.00	Oct 20, 1993
Annual seven-day minimum	154	May 7	143	Jan 10	0.29	Nov 3, 1983
Maximum peak flow			1,270	May 26	19,600	May 4, 1990
Maximum peak stage			10.63	May 26	30.15	May 4, 1990
Annual runoff (ac-ft)	691,800		245,200		528,500	
10 percent exceeds	3,340		535		2,860	
50 percent exceeds	372		320		238	
90 percent exceeds	176		179		86	

[z] Period of regulated streamflow.