Water-Data Report 2011

08057000 Trinity River at Dallas, TX

Upper Trinity Basin
Upper Trinity Subbasin

LOCATION.--Lat 32°46′29″, long 96°49′18″ referenced to North American Datum of 1927, Dallas County, TX, Hydrologic Unit 12030105, on right bank (levee) 90 ft downstream from Commerce Street viaduct in Dallas, 5.2 mi downstream from confluence of West and Elm Forks, and at mile 500.3.

DRAINAGE AREA.--6,106 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Oct. 1898 to Dec. 1899 (gage heights only published in WSP 28 and 37), Oct. 1903 to current year.

PERIOD OF RECORD, Water-Quality.--
CHEMICAL DATA: Jan. 1969.
SEDIMENT DATA: Sept. 2010.

PERIOD OF DAILY RECORD, Atmospheric.--
PRECIPITATION DATA: Oct. 2001 to Sept. 2002.

REVISED RECORDS.--WSP 850: 1903-06 (monthly and annual means). WSP 1732: 1937(M). WSP 1922: Drainage area. WDR TX-73-1: 1972.

GAGE.--Water-stage recorder. Datum of gage is 368.02 ft above NGVD of 1929. Oct. 1, 1898, to Dec. 31, 1899, nonrecording gage at site 2.0 mi upstream at different datum. July 1, 1903, to July 20, 1930, nonrecording gage at present site and datum. July 21, 1930, to Sept. 30, 1932, nonrecording gage at site 6.0 mi downstream at datum 3.08 ft lower. Satellite telemeter at station.

REMARKS.--Records poor. Some records listed in the Period of Record for surface water and water quality may not be available electronically. Since water year 1914, at least 10% of contributing drainage area has been regulated. The City of Dallas diverts water for municipal use from the Elm Fork, Lake Ray Hubbard (on the East Fork), and from Lake Tawakoni (on the Sabine River), and purchases water from North Texas Municipal Water District (from the East Fork). Wastewater effluent from the City of Dallas is returned to the river downstream from this station. The Trinity River Authority and the City of Fort Worth discharge wastewater effluent into the river upstream from this station. There are many other diversions upstream from this station for municipal, industrial and other uses.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--10 years (water years 1904-13), 1,047 ft^3/s (758,600 acre-ft/yr).

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

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS 1904-1913: Maximum discharge, 184,000 ft^3/s, May 25, 1908, gage height, 52.6 ft, from rating curve extended above 109,000 ft^3/s. Maximum stage since at least 1840, that of May 25, 1908.

08057000 Trinity River at Dallas, TX—Continued

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

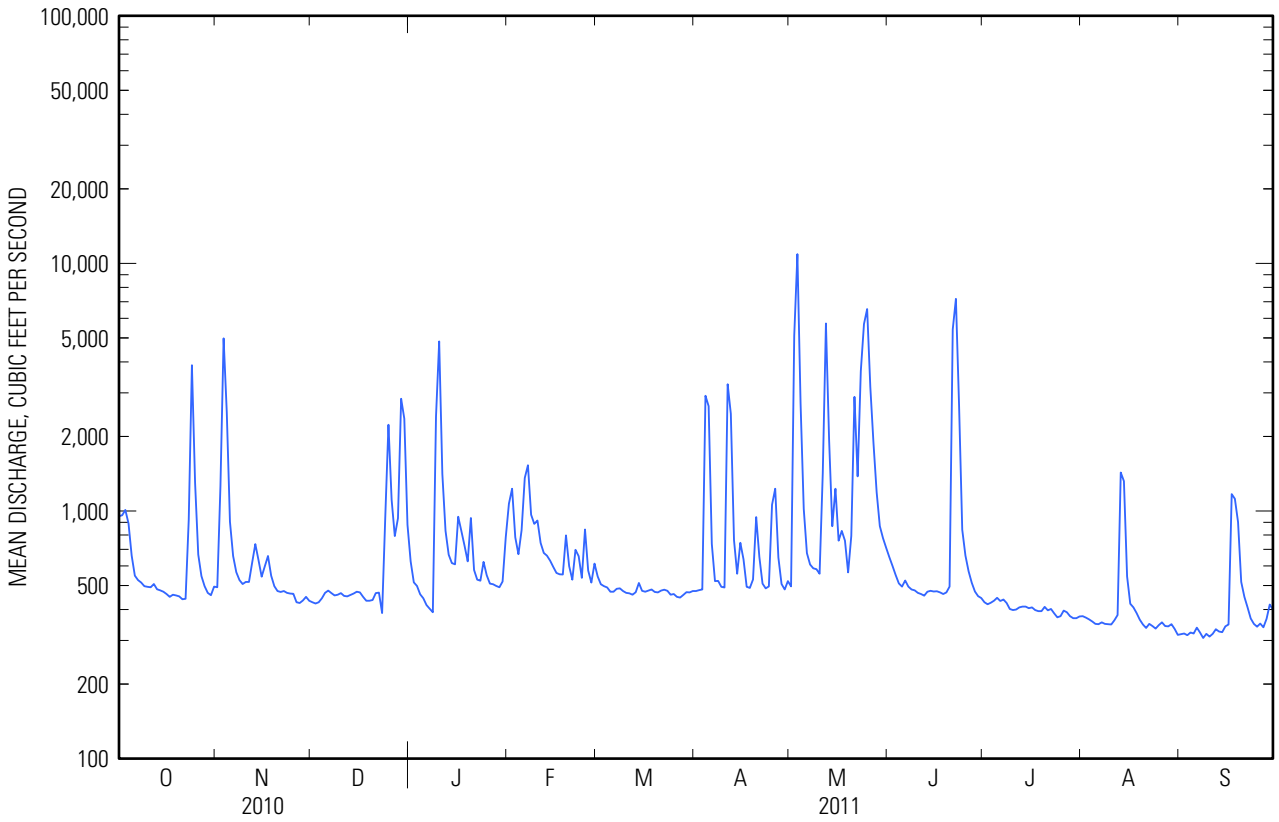
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	953	492	428	626	1,070	544	475	496	651	428	376	318
2	961	1,260	423	515	1,230	506	479	5,100	600	420	371	320
3	1,010	4,980	428	498	783	497	482	10,900	551	426	365	315
4	891	2,500	444	461	669	491	2,920	2,720	510	434	358	323
5	660	905	467	444	837	472	2,650	1,020	495	446	350	320
6	548	658	477	417	1,360	472	736	676	524	433	349	338
7	526	566	466	403	1,530	485	521	608	495	439	355	323
8	514	526	456	390	966	487	522	587	482	425	350	307
9	497	507	459	2,410	887	475	494	582	478	402	349	319
10	494	517	466	4,840	915	467	491	558	467	398	348	311
11	492	517	454	1,410	743	465	3,250	1,420	462	400	362	319
12	507	618	452	832	677	459	2,470	5,720	455	408	380	333
13	483	735	458	666	660	470	763	1,940	472	411	1,430	326
14	478	634	464	616	630	512	558	868	476	411	1,320	324
15	472	543	472	609	594	476	744	1,230	473	405	544	342
16	462	598	469	948	562	472	638	759	474	408	422	348
17	450	658	450	830	555	477	494	831	469	398	408	1,170
18	459	548	434	724	554	482	489	759	462	394	387	1,120
19	456	497	434	626	797	471	529	565	469	394	364	902
20	452	475	437	937	599	469	945	793	495	410	348	517
21	440	471	466	578	528	477	652	2,890	5,410	397	337	450
22	442	475	468	528	697	481	509	1,380	7,190	402	350	408
23	922	467	387	523	657	476	487	3,670	2,660	386	343	368
24	3,880	464	949	623	537	459	496	5,690	840	372	335	350
25	1,300	463	2,230	550	842	462	1,060	6,540	661	376	346	341
26	667	428	1,110	509	575	450	1,230	3,170	571	396	355	351
27	546	425	792	506	514	447	649	1,880	513	390	343	339
28	497	435	935	498	613	458	507	1,190	473	376	342	367
29	467	450	2,840	492	---	470	482	869	453	369	349	419
30	457	434	2,360	519	---	469	521	777	445	369	334	400
31	495	---	880	783	---	475	---	710	---	375	316	---
Total	21,878	23,246	22,455	25,311	21,581	14,773	27,243	66,898	29,176	12,498	13,286	12,688
Mean	706	775	724	816	771	477	908	2,158	973	403	429	423
Max	3,880	4,980	2,840	4,840	1,530	544	3,250	10,900	7,190	446	1,430	1,170
Min	440	425	387	390	514	447	475	496	445	369	316	307
Ac-ft	43,400	46,110	44,540	50,200	42,810	29,300	54,040	132,700	57,870	24,790	26,350	25,170

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2011[hz], BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,202	1,336	1,518	1,336	1,858	2,220	2,649	3,738	2,838	1,253	728	872
Max	10,050	14,150	12,860	13,350	10,410	14,910	27,050	28,050	17,390	11,010	6,075	7,107
(WY)	(1982)	(1982)	(1992)	(1992)	(1992)	(1945)	(1942)	(1990)	(1941)	(2007)	(1982)	(1962)
Min	0.00	0.00	0.00	32.0	24.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1917)	(1917)	(1917)	(1925)	(1918)	(1918)	(1917)	(1918)	(1918)	(1918)	(1914)	(1914)

08057000 Trinity River at Dallas, TX—Continued

SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1914 - 2011[hz]	
Annual total	1,036,965		291,033			
Annual mean	2,841		797		1,794	
Highest annual mean					7,154	1982
Lowest annual mean					9.78	1918
Highest daily mean	39,800	Sep 9	10,900	May 3	103,000	Apr 26, 1942
Lowest daily mean	387	Dec 23	307	Sep 8	0.00	Aug 1, 1914
Annual seven-day minimum	432	Nov 26	320	Sep 5	0.00	Aug 1, 1914
Maximum peak flow			12,600	May 3	111,000	Apr 26, 1942
Maximum peak stage			31.99	May 3	47.10	May 3, 1990
Annual runoff (ac-ft)	2,057,000		577,300		1,300,000	
10 percent exceeds	7,160		1,230		5,180	
50 percent exceeds	934		489		450	
90 percent exceeds	467		353		77	

[h] See Period of Record paragraph.
[z] Period of regulated streamflow.