Water-Data Report TX-2005

08057000 Trinity River at Dallas, TX

Trinity River Basin

LOCATION.--Lat 32°46′29″, long 96°49′18″ referenced to North American Datum of 1927, Dallas County, 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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1898 to Dec. 1899 (gage heights only published in WSP 28 and 37), July 1903 to current year. Daily discharges are not available for all periods prior to 1931. Precipitation records: 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.--No estimated daily discharges. Records good except those for Dec. 13, 23, Mar. 8, and Apr. 19, which are fair. Since 1914, at least 10% of contributing drainage area as 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 1903-1913: 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.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	588	8,720	8,540	903	5,140	1,340	3,540	615	2,100	480	441	438
2	1,200	10,100	7,960	1,930	4,160	2,090	3,130	585	2,240	469	435	428
3	1,070	4,410	7,290	8,060	4,290	1,530	2,320	548	837	465	431	419
4	4,890	2,870	7,120	13,600	3,910	1,650	2,770	886	719	450	428	413
5	10,200	2,660	6,710	7,370	3,390	1,810	1,320	1,210	996	466	434	404
6	2,940	3,020	6,720	3,220	2,910	1,370	814	959	1,080	529	704	420
7	1,050	2,320	7,620	3,690	2,740	1,880	759	715	691	877	610	411
8	892	2,640	7,480	5,850	2,940	1,280	695	731	604	1,470	771	407
9	869	2,990	6,920	6,490	2,660	1,100	704	725	556	602	1,140	404
10	1,540	2,250	6,730	6,800	2,190	1,030	736	671	510	507	911	396
11	1,720	1,910	6,040	6,890	2,100	981	737	632	520	505	778	402
12	1,070	2,170	5,390	6,950	1,690	929	721	587	506	478	707	427
13	907	1,430	4,810	6,990	1,630	916	643	587	475	458	582	421
14	882	1,250	4,570	6,910	1,430	902	632	2,310	475	474	496	410
15	851	1,310	4,470	5,480	1,220	901	654	1,910	468	1,030	828	886
16	735	1,400	4,400	4,030	1,160	854	666	782	461	1,130	1,750	1,070
17	665	4,260	4,260	4,120	1,420	826	666	649	452	750	1,130	603
18	662	14,400	3,690	3,330	997	811	645	687	447	605	678	465
19	639	9,930	2,570	3,220	911	818	626	684	445	514	530	442
20	642	5,140	2,380	2,400	923	802	633	635	440	481	475	424
21	618	6,580	1,900	2,150	942	844	628	605	442	466	485	410
22	661	9,540	1,650	1,650	906	858	665	591	439	460	482	408
23	952	13,600	1,520	1,280	1,200	784	633	602	444	448	470	413
24	826	11,100	1,150	1,250	2,360	740	629	628	446	438	485	409
25	2,020	6,020	1,050	1,250	1,740	723	718	640	439	438	496	412
26	5,150	4,980	1,310	1,250	1,110	1,940	1,100	654	435	437	449	416
27	1,420	5,970	1,080	1,550	3,020	5,800	795	619	436	511	438	403
28	794	7,220	967	4,340	2,310	5,950	655	1,520	433	710	502	422
29	696	7,430	937	2,380	---	2,850	639	3,620	447	582	564	526
30	990	8,370	941	1,730	---	3,770	589	1,290	477	495	550	420
31	741	---	912	5,990	---	3,670	---	866	---	460	481	---
Total	48,880	165,990	129,087	133,053	61,399	51,749	30,462	28,743	19,460	18,185	19,661	13,929
Mean	1,577	5,533	4,164	4,292	2,193	1,669	1,015	927	649	587	634	464
Max	10,200	14,400	8,540	13,600	5,140	5,950	3,540	3,620	2,240	1,470	1,750	1,070
Min	588	1,250	912	903	906	723	589	548	433	437	428	396
Ac-ft	96,950	329,200	256,000	263,900	121,800	102,600	60,420	57,010	38,600	36,070	39,000	27,630

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 – 2005[hz], BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,193	1,358	1,502	1,370	2,035	2,380	2,538	3,758	3,043	1,275	749	798
Max	10,050	14,150	12,860	13,350	10,410	14,910	27,050	28,050	17,390	8,629	6,075	7,107
(WY)	(1982)	(1982)	(1992)	(1992)	(1992)	(1945)	(1942)	(1990)	(1941)	(1989)	(1982)	(1962)
Min	68.2	58.2	53.0	62.4	76.9	68.2	91.5	213	68.0	51.9	50.2	52.4
(WY)	(1935)	(1956)	(1939)	(1940)	(1940)	(1956)	(1955)	(1937)	(1953)	(1956)	(1956)	(1956)

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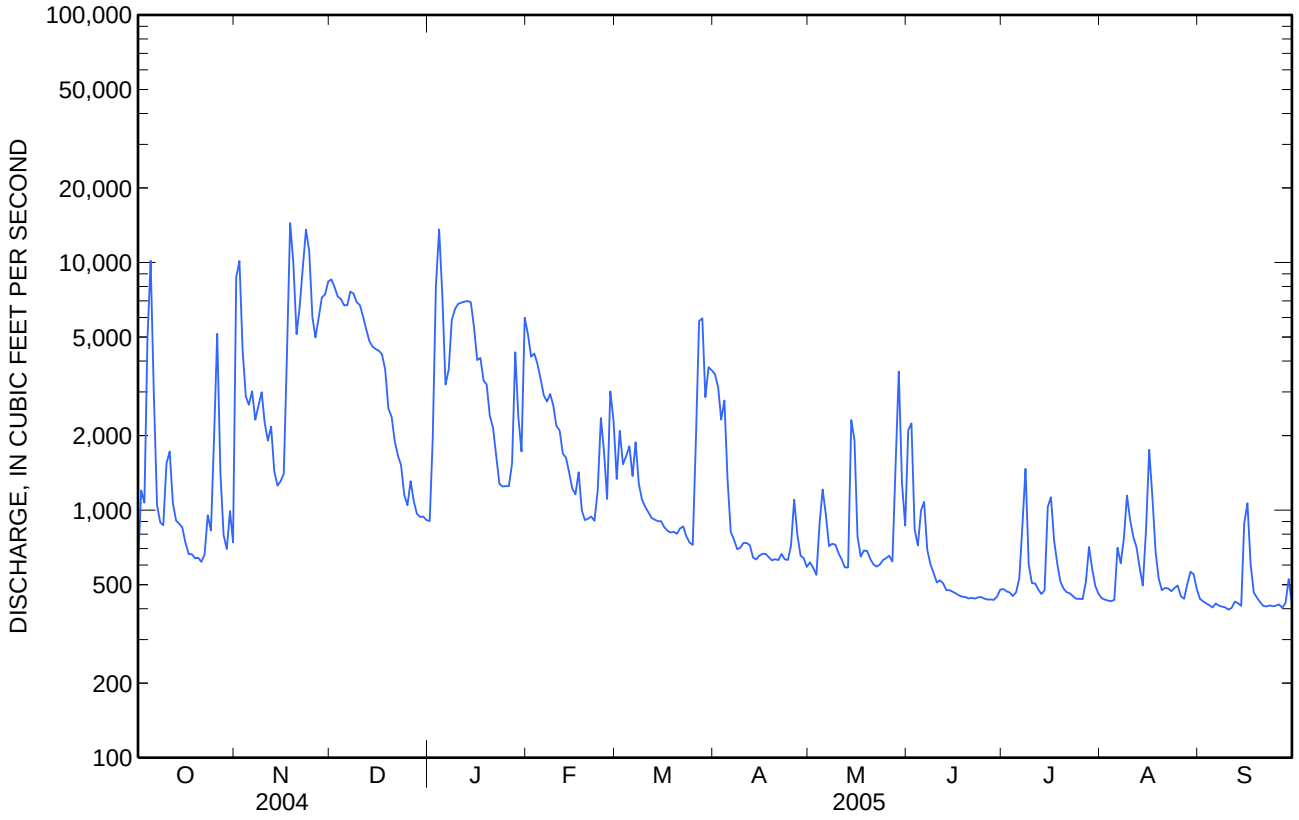
SUMMARY STATISTICS

	Calendar Year 2004		Water Year 2005		Water Years 1931 – 2005[hz]	
Annual total	1,219,068		720,598			
Annual mean	3,331		1,974		1,831	
Highest annual mean					7,154	1982
Lowest annual mean					115	1956
Highest daily mean	25,800	Jun 11	14,400	Nov 18	103,000	Apr 26, 1942
Lowest daily mean	487	Jan 15	396	Sep 10	10	Oct 1, 1953
Annual seven-day minimum	499	Jan 9	406	Sep 5	26	Apr 12, 1935
Maximum peak flow			16,100	Nov 18	111,000	Apr 26, 1942
Maximum peak stage			34.36	Nov 18	47.10	May 3, 1990
Annual runoff (ac-ft)	2,418,000		1,429,000		1,326,000	
10 percent exceeds	8,840		5,890		5,220	
50 percent exceeds	1,320		886		456	
90 percent exceeds	580		439		117	

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