

Water-Data Report 2011

08068000 West Fork San Jacinto River near Conroe, TX

San Jacinto Basin
West Fork San Jacinto Subbasin

LOCATION.--Lat 30°14'40", long 95°27'25" referenced to North American Datum of 1927, Montgomery County, TX, Hydrologic Unit 12040101, near center of bridge on downstream side of Interstate Highway 45 northbound feeder road, 300 ft upstream from Missouri Pacific Railroad Co. bridge, 3.5 mi downstream from Lake Creek, 4.2 mi south of Conroe, and at mile 79.

DRAINAGE AREA.--828 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1924 to Sept. 1927, July 1939 to current year.

REVISED RECORDS.--WSP 1058: 1926. WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 95.03 ft above NGVD of 1929. May 7, 1924, to Sept. 30, 1927, nonrecording gage at railroad bridge 300 ft downstream at datum 30.10 ft higher. July 13, 1939, to Sept. 30, 1963, water-stage recorder at datum 5.0 ft higher. Satellite telemeter at station.

REMARKS.--Records good. Since water year 1973, at least 10% of contributing drainage area has been regulated. There are no large diversions above station. Some records listed in the "Period of Record" for surface water and water quality may not be available electronically.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--36 years (water years 1925-27, 1940-72), prior to regulation by Lake Conroe, (station 08067600) 477 ft³/s (345,600 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Dec. 1913 reached a stage of 30.2 ft, present site and datum, from information by Missouri Pacific Railroad Co., discharge 101,000 ft³/s, from rating curve as explained below.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS, 1925-1927, 1940-1972: Maximum discharge, 110,000 ft³/s Nov. 25, 1940 (gage height, 30.85 ft), present datum, from rating curve extended above 43,000 ft³/s on basis of velocity-area studies; no flow June 14, 1956, and Sept. 19 to Oct. 1, 1965, result of temporary dams. Maximum stage since at least Dec. 1913, that of Nov. 25, 1940.

08068000 West Fork San Jacinto River near Conroe, 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	22	22	30	33	94	29	25	17	13	9.3	15	240
2	21	355	29	31	81	28	24	17	14	8.6	15	249
3	21	168	29	30	57	28	23	17	13	9.2	15	252
4	20	64	28	32	51	28	21	16	12	8.9	14	250
5	22	46	27	57	47	32	23	16	11	8.0	13	245
6	23	35	27	39	43	31	26	16	11	9.2	12	243
7	22	31	26	34	39	30	24	15	10	9.3	12	254
8	21	29	31	32	38	30	22	16	9.0	9.6	10	251
9	22	27	30	136	43	31	23	15	12	7.8	9.3	245
10	22	26	29	116	49	28	24	13	9.3	9.1	12	243
11	22	26	30	66	46	27	23	17	9.9	9.2	11	245
12	22	27	27	54	42	26	23	26	9.2	8.7	9.2	242
13	23	29	28	45	38	26	20	46	9.0	9.1	9.2	248
14	22	28	28	40	34	34	21	20	9.7	7.7	13	244
15	22	133	28	38	37	51	21	17	10	10	16	236
16	21	65	27	67	38	39	20	16	10	11	13	232
17	22	43	27	136	37	35	19	14	9.7	11	47	230
18	22	37	26	72	35	33	20	13	9.0	12	160	232
19	22	33	25	52	33	30	19	12	9.1	19	231	279
20	22	31	27	46	32	29	20	16	9.2	34	239	264
21	22	29	28	47	32	28	21	20	9.7	19	237	256
22	22	28	27	43	32	27	20	19	85	13	236	251
23	22	31	27	40	32	27	20	17	49	12	245	249
24	22	35	30	58	31	26	19	16	18	10	243	252
25	22	29	76	91	31	26	18	16	15	13	281	253
26	21	27	46	55	30	26	18	14	14	65	245	252
27	22	28	36	47	30	24	19	14	11	18	240	251
28	21	28	33	44	29	25	18	13	11	12	238	247
29	21	32	39	41	---	25	16	13	10	11	240	246
30	21	33	53	39	---	25	16	12	10	13	244	250
31	21	---	40	90	---	25	---	13	---	16	243	---
Total	673	1,555	994	1,751	1,161	909	626	522	441.8	422.7	3,567.7	7,431
Mean	21.7	51.8	32.1	56.5	41.5	29.3	20.9	16.8	14.7	13.6	115	248
Max	23	355	76	136	94	51	26	46	85	65	281	279
Min	20	22	25	30	29	24	16	12	9.0	7.7	9.2	230
Ac-ft	1,330	3,080	1,970	3,470	2,300	1,800	1,240	1,040	876	838	7,080	14,740

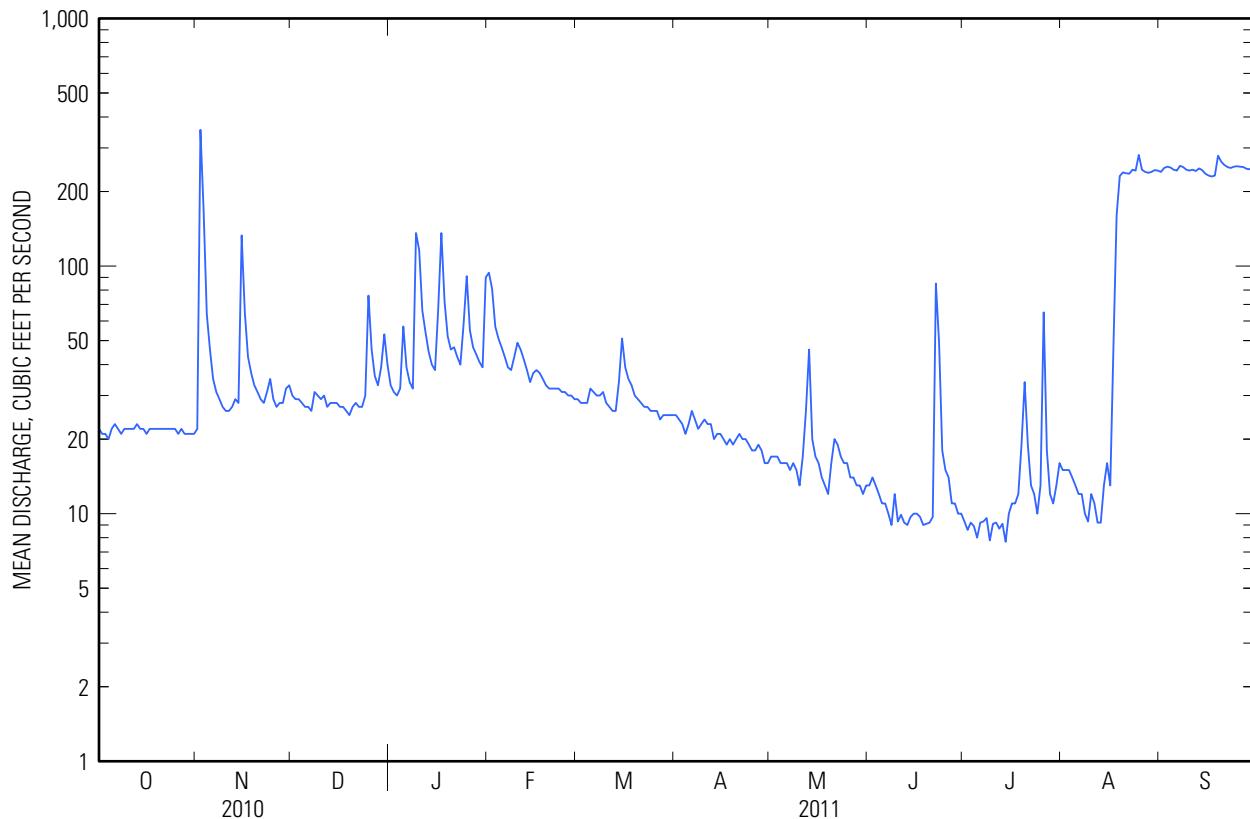
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2011 ^z, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	527	642	618	863	864	616	610	571	592	152	69.5	230
Max	7,836	5,757	2,064	3,360	3,258	2,138	4,185	4,153	3,897	1,148	368	1,945
(WY)	(1995)	(1999)	(1977)	(1998)	(1992)	(2001)	(1979)	(1983)	(2001)	(2007)	(1983)	(1979)
Min	18.7	25.7	31.4	33.0	30.8	29.3	20.9	16.8	14.7	13.6	14.7	20.0
(WY)	(2000)	(1991)	(1981)	(2000)	(2000)	(2011)	(2011)	(2011)	(2011)	(2011)	(2000)	(2000)

08068000 West Fork San Jacinto River near Conroe, TX—Continued**SUMMARY STATISTICS**

	Calendar Year 2010	Water Year 2011		Water Years 1973 - 2011 ^z	
Annual total	75,091	20,054.2			
Annual mean	206	54.9		527	
Highest annual mean				1,444	1995
Lowest annual mean				39.3	2000
Highest daily mean	4,030	Feb 15	355	Nov 2	97,200 Oct 18, 1994
Lowest daily mean	15	Aug 28	7.7	Jul 14	7.7 Jul 14, 2011
Annual seven-day minimum	19	Aug 9	8.7	Jul 8	8.7 Jul 8, 2011
Maximum peak flow			618	Nov 2	115,000 Oct 18, 1994
Maximum peak stage			3.81	Nov 2	32.30 Oct 18, 1994
Annual runoff (ac-ft)	148,900		39,780		381,900
10 percent exceeds	355		238		1,360
50 percent exceeds	41		27		86
90 percent exceeds	22		11		24

^z Period of regulated streamflow.



08068000 West Fork San Jacinto River near Conroe, TX—Continued**WATER-QUALITY RECORDS****PERIOD OF RECORD--**

CHEMICAL DATA: Mar. 1959 to Sept. 1994, Aug. 2011.

BIOCHEMICAL DATA: Mar. 1959 to Sept. 1994, Aug. 2011.

PESTICIDE DATA: May 1975 to June 1982.

SEDIMENT DATA: Feb. 1966 to Sept. 1967, Oct. 1974 to Sept. 1994, Sept. 2008 to current year.

PERIOD OF DAILY RECORD--

SPECIFIC CONDUCTANCE: Oct. 1961 to Sept. 1990.

WATER TEMPERATURE: Oct. 1961 to Sept. 1990.

DISSOLVED OXYGEN: Aug. 1979 to May 1981.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 1 of 4

[%; percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; FNU, Formazin nephelometric units; LED, light-emitting diode; N, nitrogen; P, phosphorus; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Date	Sample start time	Medium name	Sample type	Barometric pressure, mm Hg (00025)	Discharge, instantane- neous, ft ³ /s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, 25 °C (00095)
08-19-2011	1503	Surface water	Regular	756	244	8.0	110	8.1	383

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 2 of 4

[%; percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; FNU, Formazin nephelometric units; LED, light-emitting diode; N, nitrogen; P, phosphorus; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Date	Sample start time	Temperature, water, °C (00010)	Turbidity, water, unfiltered, monochrome near infrared LED light, 780-900 nm, detection angle 90 +/- 2.5 degrees, FNU (63680)	Gage height, ft (00065)	ANC, water, unfiltered, inflection-point, incremental titration method, field, mg/L as CaCO ₃ (00419)	Ammonia, Carbon dioxide, water, unfiltered, mg/L (00405)	Ammonia, water, unfiltered, per liter as NH4 (71845)	Nitrate, water, unfiltered, mg/L as N (00610)	Nitrate, water, unfiltered, mg/L as N (00620)
08-19-2011	1503	31.7	12	2.98	87	1.5	.236	.183	.550

08068000 West Fork San Jacinto River near Conroe, TX—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 3 of 4

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Date	Sample start time	Orthophos-			Phosphate,			Manga-	Actinomycetes,		Methylisob-	
		Nitrite, water, unfiltered, mg/L as N (00615)	phate, water, unfiltered, mg/L as P (70507)	water, milligrams per liter (00650)	Phosphorus, unfiltered, mg/L as P (00665)	water, colonies per milliliter (63688)	agar layer, recoverable, µg/L (01055)		unfiltered, recoverable, µg/L (62749)	water, filter), recoverable, µg/L (62719)	(0.7 micron	(0.7 micron
08-19-2011	1503	< .050	.1280	.392	.24670	E 420	63.0	.005	.009	86	than 0.0625	Geosmin, water, filter), diameter, percent smaller

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER
2011

Part 4 of 4

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; FNU, Formazin nephelometric units; LED, light-emitting diode; N, nitrogen; P, phosphorus; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Date	Sample start time	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons per day (80155)
08-19-2011	1503	23	15