

Water-Data Report 2011

08078000 Chocolate Bayou near Alvin, TX

 Galveston Bay-Sabine Lake Basin
 West Galveston Bay Subbasin

LOCATION.--Lat 29°22'16.7", long 95°19'22.2" referenced to North American Datum of 1927, Brazoria County, TX, Hydrologic Unit 12040204, on left bank 13 ft downstream from bridge on Farm Road 1462, 5.9 mi southwest of Alvin, and 6.9 mi upstream from State Highway 35.

DRAINAGE AREA.--87.7 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Aug. to Oct. 1944 and Mar. to Dec. 1946 (low-water records during irrigation season), Jan. 1947 to Feb. 1958, and Mar. 1958 to Feb. 1959 (discharge measurements only), Mar. 1959 to current year (daily mean discharges).

PERIOD OF RECORD, Water-Quality.--

CHEMICAL DATA: Feb. 1968 to Aug. 1985.

BIOCHEMICAL DATA: Feb. 1968 to Aug. 1985.

BIOLOGICAL DATA: May 1971 to Aug. 1985.

PESTICIDE DATA: May 1971 to Feb. 1979.

SEDIMENT DATA: Feb. 1978 to Aug. 1985.

GAGE.--Water-stage recorder. Datum of gage is 0.31 ft above NGVD of 1929. Prior to May 3, 1959, nonrecording gage or water-stage recorders located at various sites from 900 to 1,400 ft upstream and at datum 3.00 ft higher. May 3, 1959 to Sept. 30, 1987, present site, at datum 10.00 ft higher. Satellite telemeter at station.

REMARKS.--Records fair. No known regulation. Stage-discharge relation is affected by seasonal vegetation during most years. Large area of riceland above station is irrigated with water diverted from the Brazos River. Low flow from Apr. to Oct. is largely drainage from these irrigated lands. Diversions for irrigation occur above station. Some records listed in the "Period of Record" for surface water and water quality may not be available electronically.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 14, 1939, reached a stage of 32.5 ft, present site and datum, adjusted from floodmark 1,700 ft to right and 550 ft upstream from present gage, on basis of slope of flood of Oct. 8, 1949, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 30	1915	*1,400	*24.02
Jan 25	1400	1,260	23.29

Water-Data Report 2011

08078000 Chocolate Bayou near Alvin, 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	13	0.76	3.2	198	30	7.3	4.8	4.7	4.3	7.1	9.5	5.0
2	12	13	3.2	60	26	7.4	4.2	9.8	5.4	7.6	7.3	4.7
3	10	41	3.3	31	20	6.9	5.8	8.8	6.7	8.6	12	4.7
4	9.1	32	2.7	20	17	7.1	5.8	5.1	6.3	10	9.4	4.5
5	8.6	14	2.2	16	15	7.2	5.1	6.5	5.6	16	5.9	5.1
6	8.4	6.7	1.9	14	13	6.9	6.1	4.9	5.2	14	4.6	5.9
7	8.2	4.8	1.8	12	12	6.7	4.6	2.9	4.7	12	4.6	5.6
8	8.2	4.4	2.4	11	12	6.7	4.6	3.1	6.9	12	4.8	4.9
9	7.9	3.3	2.4	17	12	6.3	5.1	3.0	8.6	11	5.8	4.7
10	7.6	2.6	3.1	32	15	6.2	5.1	4.8	7.7	9.9	6.1	4.2
11	7.4	6.7	3.1	22	13	6.1	5.5	4.7	6.6	9.5	5.6	4.1
12	7.4	17	2.8	14	12	5.5	4.2	5.2	6.4	8.9	7.6	4.0
13	7.5	12	2.6	12	11	5.5	4.2	6.3	7.2	9.6	7.2	4.0
14	7.2	11	2.3	12	10	6.4	4.8	6.8	7.0	9.5	7.0	4.2
15	7.1	8.0	2.1	11	10	7.0	6.9	6.0	6.2	10	5.8	5.4
16	7.2	6.0	1.9	22	11	8.0	6.7	5.2	6.2	16	4.7	4.8
17	7.5	4.9	2.3	220	10	6.9	5.2	4.4	5.4	18	4.2	5.4
18	7.3	4.0	2.2	127	9.8	6.0	5.3	4.7	4.6	15	4.2	6.5
19	8.0	3.4	2.2	57	9.3	6.0	6.6	4.9	4.4	18	4.2	7.8
20	11	3.0	2.0	32	9.3	6.0	5.5	4.6	5.9	24	4.2	8.1
21	7.5	2.7	1.9	22	9.1	5.8	5.6	4.5	6.1	28	4.2	8.6
22	5.7	2.6	1.9	17	9.4	5.8	4.7	5.1	6.4	16	4.2	7.8
23	4.6	2.4	2.0	14	8.6	6.0	5.3	4.7	26	12	4.2	8.4
24	3.6	2.3	2.7	282	9.4	7.0	5.3	4.1	25	10	5.4	8.6
25	2.8	2.1	15	1,190	8.6	5.6	4.1	3.6	19	12	6.8	7.9
26	2.3	2.8	19	649	8.2	10	4.0	4.4	14	12	7.8	8.1
27	2.0	3.0	7.9	195	8.0	7.8	4.1	4.5	11	11	8.4	8.9
28	1.3	3.5	5.6	90	7.9	5.5	3.6	4.9	9.5	9.1	7.1	9.8
29	0.80	3.6	180	50	---	4.8	3.1	4.7	8.4	8.8	6.4	9.9
30	1.8	3.5	1,260	36	---	5.6	3.9	5.1	7.8	16	5.8	11
31	1.8	---	949	34	---	6.0	---	5.1	---	15	5.3	---
Total	204.80	227.06	2,494.7	3,519	346.6	202.0	149.8	157.1	254.5	396.6	190.3	192.6
Mean	6.61	7.57	80.5	114	12.4	6.52	4.99	5.07	8.48	12.8	6.14	6.42
Max	13	41	1,260	1,190	30	10	6.9	9.8	26	28	12	11
Min	0.80	0.76	1.8	11	7.9	4.8	3.1	2.9	4.3	7.1	4.2	4.0
Ac-ft	406	450	4,950	6,980	687	401	297	312	505	787	377	382

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	112	94.0	106	131	105	74.3	96.9	117	178	152	104	132
Max	981	409	385	464	508	476	572	528	876	1,659	642	843
(WY)	(2007)	(2005)	(2002)	(1992)	(1992)	(1997)	(1997)	(1997)	(1992)	(1968)	(1979)	(1989)
Min	0.52	0.38	0.77	2.17	0.98	0.70	4.99	5.07	8.28	4.82	3.60	4.47
(WY)	(1978)	(2000)	(1990)	(2000)	(2000)	(2000)	(2011)	(2011)	(2009)	(2009)	(2009)	(1999)

08078000 Chocolate Bayou near Alvin, TX—Continued**SUMMARY STATISTICS**

	Calendar Year 2010	Water Year 2011	Water Years 1959 - 2011	
Annual total	34,434.76	8,335.06		
Annual mean	94.3	22.8	116	
Highest annual mean			340	1979
Lowest annual mean			19.4	2000
Highest daily mean	4,180	Jul 3	1,260	Dec 30
Lowest daily mean	0.76	Nov 1	0.76	Nov 1
Annual seven-day minimum	1.5	Oct 26	1.5	Oct 26
Maximum peak flow			1,400	Dec 30
Maximum peak stage			24.02	Dec 30
Annual runoff (ac-ft)	68,300		16,530	
10 percent exceeds	136		17	
50 percent exceeds	20		6.7	
90 percent exceeds	3.1		3.0	
<hr/>				

a At current datum.

