Water-Data Report 2008

08033500 Neches River near Rockland, TX

Neches Basin
Lower Neches Subbasin

LOCATION.--Lat 31°01′30″, long 94°23′58″ referenced to North American Datum of 1983, Tyler County, TX, Hydrologic Unit 12020003, on downstream side of bridge at U.S. Highway 69, 2,200 ft upstream from abandoned ferry crossing, 0.8 mi upstream from Texas and New Orleans Railway Co. bridge, 1.2 mi north of Rockland, 3.2 mi downstream from Billiams Creek and 32.4 mi upstream from Angelina River.

DRAINAGE AREA.--3,636 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1903 to current year.

REVISED RECORDS.--WSP 878: 1926-27. WSP 1342: 1922(M), 1935. WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 88.41 ft above NGVD of 1929. Prior to May 23, 1973, nonrecording gage located 2,200 ft downstream at datum 3.00 ft higher. May 23, 1973, to Sept. 30, 1975, recording gage at present site at datum 3.00 ft higher. Satellite telemeter at station.

REMARKS.--Records good. Since water year 1962, at least 10% of contributing drainage area has been regulated. 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.--58 years (water years 1904-1961), 2,362 ft^3/s (1,711,000 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Historical flood information begins with flood in May 1884, which reached a stage of 38.0 ft, present site, from information by local resident (discharge, about 62,000 ft^3/s).

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS, 1904-1961: Maximum discharge, 49,800 ft^3/s May 6, 1944 (gage height, 35.04 ft), present site; minimum observed during period of daily records, 1.6 ft^3/s Sept. 28-30, and Oct. 1, 2, 1956.

08033500 Neches River near Rockland, TX—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	196	217	789	929	2,340	3,970	3,310	1,440	1,880	311	83	614
2	194	219	663	852	2,640	3,150	3,450	1,350	1,920	283	77	595
3	192	213	564	776	2,260	2,680	3,540	1,270	1,910	263	75	561
4	188	204	505	713	1,960	2,620	3,430	1,190	1,820	240	77	507
5	183	195	460	655	1,710	2,680	4,140	1,120	1,650	226	74	460
6	183	184	420	601	1,470	2,710	5,040	1,050	1,460	214	81	426
7	196	178	387	556	1,260	2,930	5,510	968	1,300	218	83	396
8	196	177	353	528	1,090	3,390	5,580	872	1,180	280	87	376
9	185	175	326	508	954	3,670	5,730	800	1,060	339	90	366
10	179	172	308	495	854	3,770	5,780	785	965	375	94	357
11	172	170	298	489	785	4,490	5,670	799	881	380	89	337
12	168	170	296	475	899	5,230	5,350	823	878	376	92	299
13	166	170	315	472	2,220	5,520	4,850	833	908	364	103	402
14	164	168	314	469	2,940	5,700	4,120	828	926	348	110	1,280
15	172	164	515	472	2,590	5,900	3,280	1,210	822	324	135	1,100
16	204	163	1,370	513	4,100	5,930	2,670	1,510	672	300	327	770
17	212	168	2,500	586	8,170	5,740	2,300	1,570	575	309	656	733
18	216	325	2,220	594	9,710	5,460	2,310	1,640	577	301	747	872
19	211	308	1,890	876	10,300	5,130	2,470	1,790	538	265	710	952
20	209	299	2,010	1,460	10,700	4,660	2,220	1,880	482	230	655	986
21	209	278	2,670	1,510	11,700	4,190	2,110	1,830	462	204	769	1,010
22	222	262	3,300	1,310	12,800	3,910	2,030	1,680	495	182	1,080	1,030
23	244	250	2,730	1,310	13,400	3,770	1,990	1,510	482	163	1,370	1,030
24	252	260	2,250	1,390	13,200	3,600	1,950	1,410	433	152	1,390	1,030
25	253	489	1,790	1,480	12,100	3,420	1,930	1,390	389	138	1,450	1,040
26	252	1,190	1,410	1,810	10,700	3,290	1,900	1,440	362	123	1,550	1,060
27	234	1,460	1,210	2,330	9,070	3,210	1,840	1,510	342	115	1,450	1,090
28	219	1,260	1,150	2,030	7,250	3,170	1,740	1,590	333	107	1,230	1,130
29	213	1,070	1,120	1,600	5,310	3,160	1,630	1,670	334	98	994	1,180
30	210	912	1,050	1,370	---	3,160	1,530	1,750	331	92	772	1,220
31	212	---	992	1,420	---	3,260	---	1,820	---	86	661	---
Total	6,306	11,470	36,175	30,579	164,482	123,470	99,400	41,328	26,367	7,406	17,161	23,209
Mean	203	382	1,167	986	5,672	3,983	3,313	1,333	879	239	554	774
Max	253	1,460	3,300	2,330	13,400	5,930	5,780	1,880	1,920	380	1,550	1,280
Min	164	163	296	469	785	2,620	1,530	785	331	86	74	299
Ac-ft	12,510	22,750	71,750	60,650	326,300	244,900	197,200	81,970	52,300	14,690	34,040	46,040

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2008[Z], BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	878	1,510	2,686	3,803	4,245	4,310	3,528	3,472	2,559	1,319	437	487
Max	10,620	8,813	8,982	13,170	13,930	15,890	11,990	12,730	10,510	11,260	3,262	3,042
(WY)	(1995)	(2005)	(1995)	(1998)	(1992)	(2001)	(1979)	(1969)	(2001)	(1989)	(2007)	(1979)
Min	36.6	65.8	213	263	311	395	282	307	102	42.9	34.2	43.1
(WY)	(1964)	(1965)	(1981)	(1981)	(2000)	(1996)	(1971)	(1996)	(1971)	(1971)	(1964)	(1964)

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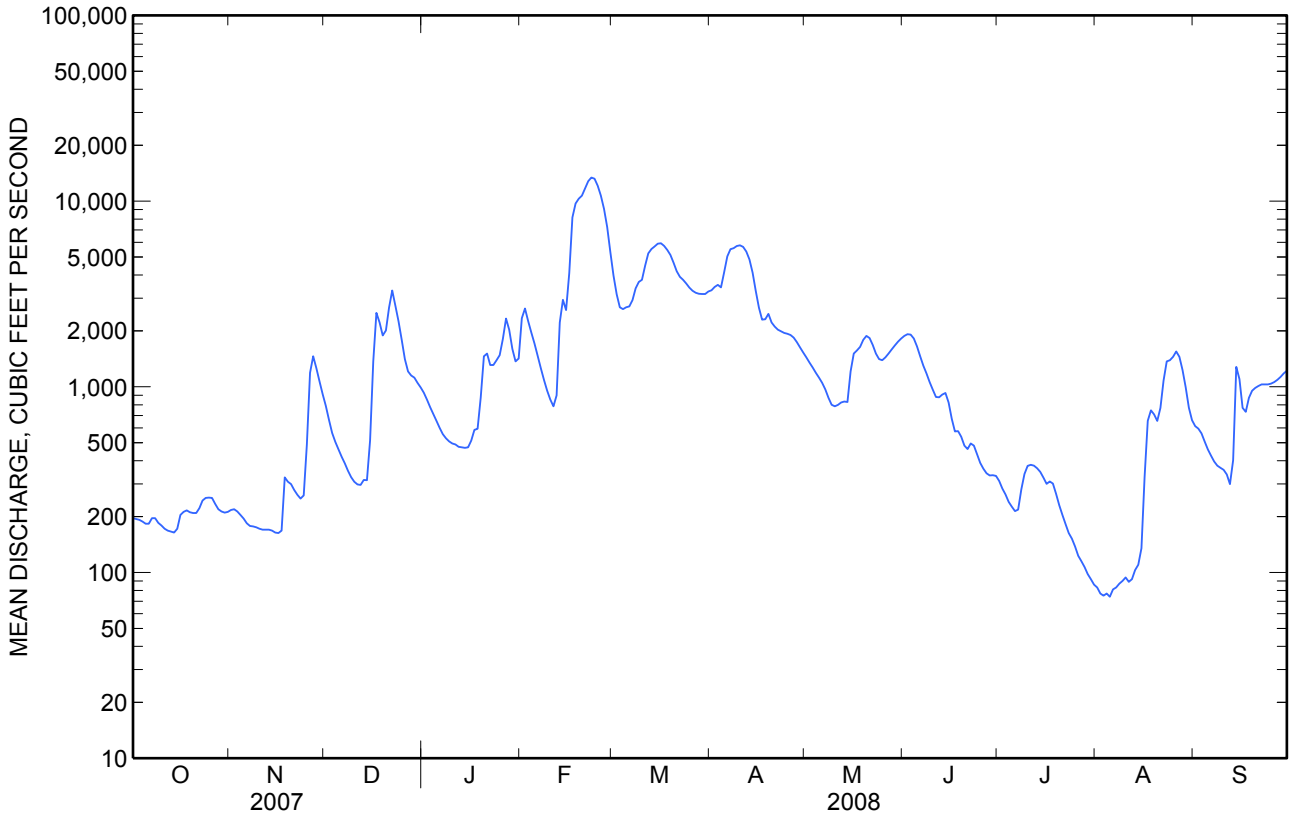
SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1962 - 2008[Z]	
Annual total	1,234,505		587,353			
Annual mean	3,382		1,605		2,427	
Highest annual mean					5,328	1995
Lowest annual mean					352	1971
Highest daily mean	20,800	Jan 19	13,400	Feb 23	41,600	Jul 2, 1989
Lowest daily mean	163	Nov 16	74	Aug 5	18	Aug 30, 1970
Annual seven-day minimum	168	Nov 11	79	Aug 1	23	Jul 21, 1971
Maximum peak flow			13,500	Feb 23	42,300	Oct 20, 1994
Maximum peak stage			21.56	Feb 23	33.29	Oct 20, 1994
Annual runoff (ac-ft)	2,449,000		1,165,000		1,758,000	
10 percent exceeds	8,040		3,930		6,420	
50 percent exceeds	2,120		874		941	
90 percent exceeds	212		172		118	

[Z] Period of regulated streamflow.



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Apr. 1941 to Sept. 1942, Sept. 1945 to Sept. 1947, Dec. 1967 to current year.
BIOCHEMICAL DATA: Dec. 1967 to current year.
PESTICIDE DATA: Oct. 1970 to Aug. 1980.
RADIOCHEMICAL DATA: Jan. 1981 to Apr. 1981.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Apr. 1941 to Sept. 1942, Sept. 1945 to Sept. 1947.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 1 of 6

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Time	Sample medium and type	Instantaneous discharge, ft3/s (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf µS/cm 25 degC (00095)
Nov									
29...	0925	Surface water, regular	1,070	15	755	10.1	92	7.0	293
29...	*0951*	*QC - Surface water, regular*	--	--	*755*	*10.1*	*92*	*7.0*	*293*
Feb									
13...	0928	Surface water, regular	2,030	60	760	8.6	80	7.0	248
Apr									
23...	0946	Surface water, regular	1,900	21	757	7.8	89	7.0	201
Jul									
09...	0950	Surface water, regular	347	--	755	--	--	7.2	246

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 2 of 6

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium fraction of cations percent (00932)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inf tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt infl pt titr., field, mg/L (00453)	Carbonate, wat flt infl pt titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)
Nov													
29...	10.7	51	E21	13.0	4.41	5.32	2.2	58	36.3	E30	E37	E.0	27.7
29...	*10.7*	*49*	*E19*	*12.6*	*4.21*	*5.17*	*2.2*	*58*	*35.1*	*E30*	*E37*	*E.0*	*27.6*
Feb													
13...	12.5	51	E34	13.3	4.24	3.30	1.6	50	25.4	16	E20	E.0	30.0
Apr													
23...	21.5	44	--	10.8	4.05	3.78	1.2	45	18.3	--	--	--	21.9
Jul													
09...	29.9	45	--	10.9	4.26	4.57	1.6	52	25.2	46	57	.0	28.1

08033500 Neches River near Rockland, TX—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 3 of 6
[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L as SiO2 (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total non-filterable, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L (71846)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate + nitrite water fltrd, mg/L as N (00631)	Nitrate water, fltrd, mg/L (71851)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L (71856)
Nov													
29...	E.07	11.6	51.4	E171	187	45	1.0	.10	.077	.51	2.22	.50	.024
29...	*E.08*	*11.6*	*51.3*	*E168*	*189*	*--*	*.86*	*.09*	*.067*	*.50*	*2.20*	*.50*	*.024*
Feb													
13...	<.12	14.9	40.2	E142	162	88	.39	E.02	E.018	.14	--	--	--
Apr													
23...	E.10	11.2	27.2	--	132	27	.52	E.02	E.015	.10	.436	.10	.008
Jul													
09...	.15	12.2	24.8	138	--	--	.43	--	<.020	<.04	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 4 of 6
[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)	Total nitrogen, water, fltrd, mg/L (00602)	Orthophosphate, water, fltrd, mg/L (00660)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L as P (00666)	Aluminum, water, fltrd, µg/L (01106)	Antimony, water, fltrd, µg/L (01095)	Arsenic water, fltrd, µg/L (01000)	Barium, water, fltrd, µg/L (01005)	Beryllium, water, fltrd, µg/L (01010)	Cadmium water, fltrd, µg/L (01025)	Chromium, water, fltrd, µg/L (01030)
Nov													
29...	.007	.97	1.6	.128	.042	.08	18.1	E.09	.93	43	.07	E.03	E.11
29...	*.007*	*.79*	*1.4*	*.153*	*.050*	*.09*	*10.2*	*E.09*	*.86*	*42*	*.07*	*E.03*	*E.11*
Feb													
13...	<.002	E.39	.53	.023	.008	E.02	27.0	<.14	.59	54	.09	E.02	E.12
Apr													
23...	.002	E.52	.62	.041	.013	E.03	11.3	<.14	.90	40	.01	E.03	E.10
Jul													
09...	<.002	--	--	.034	.011	<.04	--	--	--	--	--	--	--

08033500 Neches River near Rockland, TX—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 5 of 6
[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Cobalt water, fltrd, µg/L (01035)	Copper, water, fltrd, µg/L (01040)	Iron, water, fltrd, µg/L (01046)	Lead, water, fltrd, µg/L (01049)	Mangan-ese, water, fltrd, µg/L (01056)	Mercury water, fltrd, µg/L (71890)	Molyb-denum, water, fltrd, µg/L (01060)	Nickel, water, fltrd, µg/L (01065)	Selen-ium, water, fltrd, µg/L (01145)	Silver, water, fltrd, µg/L (01075)	Zinc, water, fltrd, µg/L (01090)	Uranium natural water, fltrd, µg/L (22703)	Data base number
Nov													
29...	.41	8.6	134	.14	98.5	<.010	.4	3.4	.14	<.1	4.3	.11	01
29...	*.41*	*8.9*	*70*	*E.04*	*97.6*	*<.010*	*.4*	*3.4*	*.13*	*<.1*	*4.1*	*.11*	*02*
Feb													
13...	.76	4.5	183	.20	131	<.010	E.1	2.8	.15	.1	6.0	.10	01
Apr													
23...	.12	E.96	300	.14	7.3	<.010	E.2	2.8	.19	<.1	1.8	.05	01
Jul													
09...	--	--	--	--	--	--	--	--	--	--	--	--	01

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 6 of 6
[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Medium code
Nov	
29...	WS
29...	*WSQ*
Feb	
13...	WS
Apr	
23...	WS
Jul	
09...	WS