

Water-Data Report 2009

07077700 BAYOU DEVIEW NEAR MORTON, AR

White Basin
Cache Subbasin

LOCATION.--Lat 35°15'07", long 91°06'43" referenced to North American Datum of 1983, in SW ¼ SE ¼ sec.5, T.7 N., R.1 W., Woodruff County, AR, Hydrologic Unit 08020302, at bridge on U.S. Hwy 64, 1.0 mi west of Morton, and at river mile 39.6.

DRAINAGE AREA.--421 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Apr 1939 to May 1973, Aug 1973 to Sep 1977, and Oct 1997 to current year in reports of the U.S. Geological Survey. Feb 1939 to Dec 1963 in reports of Mississippi River Commission. Jan 1964 to current year in reports of U.S. Army Corps of Engineers, Memphis District.

REVISED RECORDS.--WDR Arkansas 1973: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 187.71 ft above NGVD of 1929. Nonrecording gage prior to Nov 8, 1949. At datum 0.26 ft below NGVD of 1929 prior to Jan 1, 1952.

COOPERATION. --Gage-height records furnished by U.S. Army Corps of Engineers.

REMARKS.--Water-discharge records fair except estimated daily discharges and discharges below 10 ft³/s, which are poor. Satellite telemeter at station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,690 ft³/s, May 10, gage height, 18.45 ft; minimum discharge, 0.00 ft³/s, Jul 4, 5, gage height, 12.38 ft.

07077700 BAYOU DEVIEW NEAR MORTON, AR—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	74	e28	e6.0	612	1,340	274	1,520	1,660	1,560	32	1,350	121
2	74	e27	e5.9	444	1,280	224	1,380	1,730	1,430	20	1,400	114
3	72	e26	e5.8	317	1,130	192	1,180	1,820	1,200	6.8	1,370	126
4	70	e25	e13	211	900	160	911	1,860	1,220	1.3	1,170	130
5	69	e23	50	e156	677	129	645	1,870	1,370	7.2	1,090	184
6	e67	e21	95	e137	525	121	425	e1,940	1,480	31	1,260	449
7	e65	e19	124	212	452	124	266	e2,150	1,560	43	1,270	530
8	e63	e18	122	321	394	125	174	e2,400	1,600	38	1,100	496
9	e61	e16	145	295	361	147	113	e2,640	1,580	27	750	409
10	e59	e14	355	218	473	137	105	2,660	1,450	18	465	296
11	e58	e13	435	162	989	127	101	2,650	1,140	17	362	256
12	e56	e11	379	127	1,260	349	105	2,590	733	126	416	243
13	e54	e10	267	101	1,410	814	652	2,540	544	385	337	199
14	e53	e9.3	209	87	1,460	966	937	2,510	735	e667	230	185
15	e52	e8.6	179	87	1,470	978	1,030	2,490	1,160	904	148	555
16	e52	e8.4	176	65	1,470	838	986	2,450	1,210	934	108	1,480
17	e51	e8.0	209	54	1,470	595	792	2,410	1,060	875	100	1,960
18	e49	e7.8	211	52	1,470	405	521	2,350	811	740	102	2,150
19	e47	e7.8	381	52	e1,450	270	689	2,280	484	450	132	2,230
20	e45	e7.7	784	47	1,400	188	1,040	2,210	264	231	201	2,270
21	e43	e7.4	863	41	1,310	133	1,160	2,120	141	264	270	2,240
22	e42	e7.3	705	38	1,140	101	1,150	2,030	81	1,050	277	2,210
23	e41	e7.1	487	56	880	86	1,090	1,920	55	1,300	259	2,160
24	e39	e7.1	575	49	699	80	940	1,790	45	1,390	206	2,200
25	e38	e7.0	966	32	592	641	595	1,880	39	1,390	148	2,200
26	e37	e6.8	1,080	23	440	1,090	339	1,930	38	1,370	111	2,150
27	e35	e6.6	986	40	322	1,420	222	1,920	40	1,320	98	2,070
28	e33	e6.6	1,000	636	292	1,570	856	1,850	44	1,220	105	1,980
29	e32	e6.3	1,090	1,060	---	1,610	1,400	e1,780	43	1,050	112	1,890
30	e30	e6.2	1,080	1,270	---	1,630	1,580	e1,700	40	931	129	1,730
31	e29	---	855	1,350	---	1,610	---	1,650	---	1,180	129	---
Total	1,590	377.0	13,838.7	8,352	27,056	17,134	22,904	65,780	23,157	18,018.3	15,205	35,213
Mean	51.3	12.6	446	269	966	553	763	2,122	772	581	490	1,174
Max	74	28	1,090	1,350	1,470	1,630	1,580	2,660	1,600	1,390	1,400	2,270
Min	29	6.2	5.8	23	292	80	101	1,650	38	1.3	98	114
Ac-ft	3,150	748	27,450	16,570	53,670	33,990	45,430	130,500	45,930	35,740	30,160	69,840
Cfs/m	0.12	0.03	1.06	0.64	2.30	1.31	1.81	5.04	1.83	1.38	1.17	2.79
In.	0.14	0.03	1.22	0.74	2.39	1.51	2.02	5.81	2.05	1.59	1.34	3.11

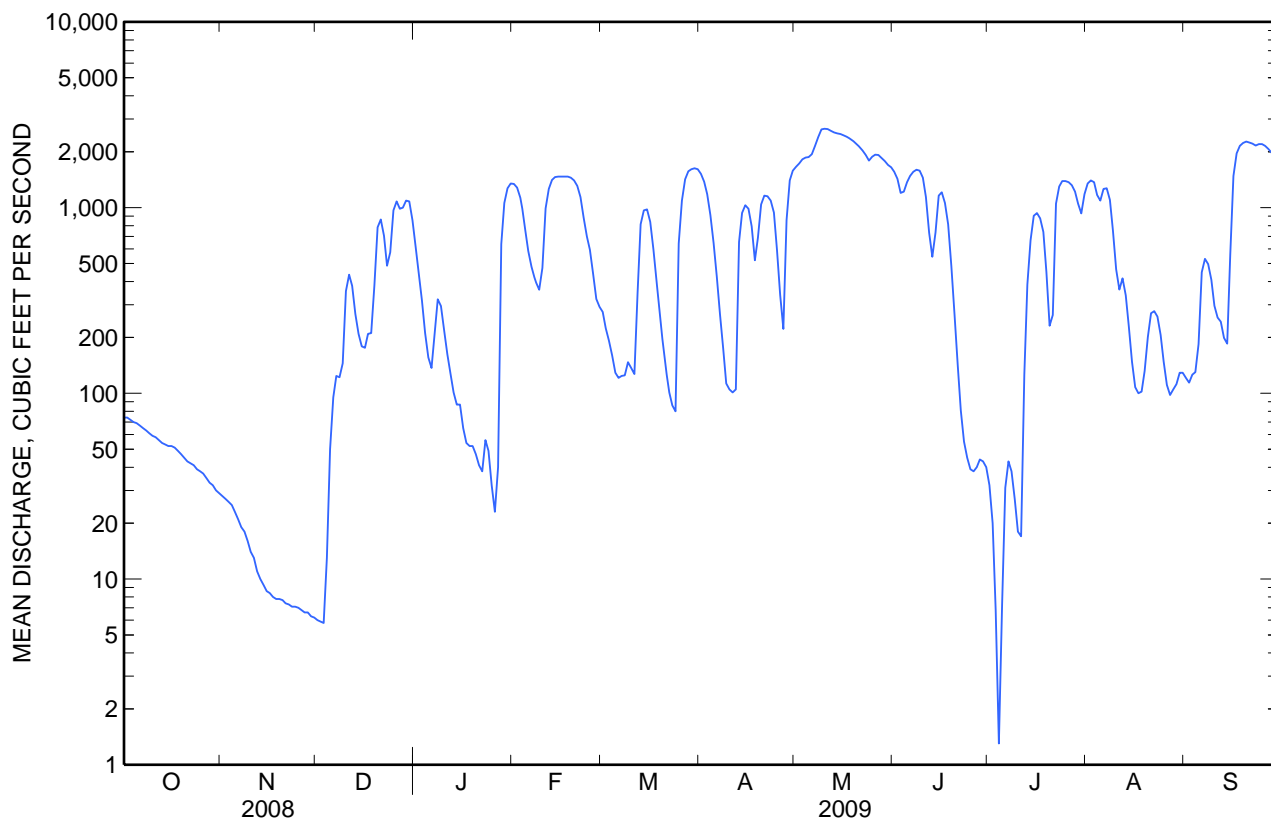
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	126	349	641	849	969	952	756	571	296	172	209	234
Max	1,798	2,811	2,515	3,917	3,837	2,658	2,139	2,389	2,173	682	1,020	1,174
(WY)	(1950)	(1958)	(2002)	(1950)	(1956)	(1945)	(2008)	(1958)	(1945)	(1967)	(1966)	(2009)
Min	0.00	0.00	0.00	12.8	2.96	44.2	24.2	5.55	4.47	0.00	0.06	0.00
(WY)	(1957)	(1954)	(1963)	(1964)	(1963)	(1941)	(1963)	(1948)	(1941)	(1954)	(1947)	(1943)

07077700 BAYOU DEVIEW NEAR MORTON, AR—Continued

SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1939 - 2009	
Annual total	192,766.05		248,625.0			
Annual mean	527		681		498	
Highest annual mean					1,312	1950
Lowest annual mean					132	2006
Highest daily mean	2,630	Apr 10	2,660	May 10	6,640	Nov 23, 1957
Lowest daily mean	0.00	Jun 6	1.3	Jul 4	0.00	Aug 7, 1943 ^a
Annual seven-day minimum	0.00	Jun 6	6.2	Nov 27	0.00	Aug 7, 1943
Maximum peak flow			2,690	May 10	6,700	Nov 23, 1957
Maximum peak stage			18.45	May 10	18.79	Dec 25, 2001
Instantaneous low flow			0.00	Jul 4 ^b	0.00	Jan 1, 1966 ^a
Annual runoff (ac-ft)	382,400		493,100		360,900	
Annual runoff (cfsm)	1.25		1.62		1.18	
Annual runoff (inches)	17.03		21.97		16.08	
10 percent exceeds	1,850		1,850		1,700	
50 percent exceeds	158		349		114	
90 percent exceeds	8.5		23		0.00	

^a Occurred on several days^b Also Jul 5

07077700 BAYOU DEVIEW NEAR MORTON, AR—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Oct 1973 to current year.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 1 of 4

[Remark codes: <, less than; E, estimated.]

Date	Time	Baro- metric pres- sure, mm Hg (00025)	Instan- taneous dis- charge, ft ³ /s (00061)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd std units (00400)	Specif- ic conduc- tance, wat unf μS/cm @ 25 degC (00095)	Temper- ature, deg C (00010)	Stream width, feet (00004)	Vel- city at point in stream, ft/s (81904)	Sampler type, code (84164)
Nov 13...	1250	763	E10	5.6	52	7.8	443	12.3	100	<1.50	Grab sample
Jan 26...	1450	770	22	10.1	75	6.4	311	3.3	100	<1.50	Grab sample
Mar 04...	1345	771	156	10.7	88	7.1	193	7.2	100	<1.50	Grab sample
Apr 13...	1115	758	679	7.9	74	7.3	109	12.1	100	<1.50	Grab sample

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 2 of 4

[Remark codes: <, less than; E, estimated.]

Date	Sam- pling method, code (82398)	Dis- solved solids dried @ 180degC wat flt mg/L (70300)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium adsorp- tion ratio (00931)	Sodium frac- tion of cations percent (00932)	Sodium, water, fltrd, mg/L (00930)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)
Nov 13...	Grab sample(dip)	254	150	38.9	13.5	6.61	.7	22	20.5	24.1	.23
Jan 26...	Grab sample(dip)	209	97	25.2	8.26	8.74	.7	24	15.5	21.0	.18
Mar 04...	Grab sample(dip)	140	62	16.1	5.40	5.72	.6	25	10.6	11.3	.14
Apr 13...	Grab sample(dip)	76	33	8.83	2.77	3.51	.3	19	4.17	4.33	.11

07077700 BAYOU DEVIEW NEAR MORTON, AR—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 3 of 4

[Remark codes: <, less than; E, estimated.]

Date	Ammonia + org-N, water, unfltrd			Nitrate + nitrite water, fltrd			Nitrate water, fltrd			Nitrite water, fltrd		Organic nitro-gen, water, unfltrd	Ortho-phos-phate, water, fltrd	Ortho-phos-phate, water, fltrd	Phos-phorus, water, fltrd
	Sulfate water, fltrd, mg/L (00945)	mg/L as N (00625)	Ammonia water, fltrd, mg/L (71846)	Ammonia water, fltrd, mg/L as N (00608)	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)	Nitrite water, fltrd, mg/L as N (00613)	mg/L (00605)	mg/L (00660)	mg/L as P (00671)	mg/L as P (00666)		
Nov 13...	33.5	.89	--	<.020	.44	1.91	.43	.015	.004	--	.376	.123	.13		
Jan 26...	34.0	1.1	E.02	E.016	.39	1.70	.38	.025	.008	E1.1	.399	.130	.15		
Mar 04...	11.3	1.2	.11	.087	.22	.933	.21	.027	.008	1.1	.328	.107	.12		
Apr 13...	7.76	1.5	.06	.046	.33	1.41	.32	.034	.010	1.5	.361	.118	.13		

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 4 of 4

[Remark codes: <, less than; E, estimated.]

Date	Phos-phorus, water, unfltrd mg/L as P (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)	Suspnd. sedimnt sieve diametr percent <0.0625 mm (70331)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
Nov 13...	.23	1.3	140	120	97	28	E.76
Jan 26...	.29	1.5	83	93	97	37	2.2
Mar 04...	.30	1.4	52	E44	97	57	24
Apr 13...	.45	1.9	1,400	E1,100	99	185	339