

07077000 WHITE RIVER AT DEVALLS BLUFF, AR

White Basin
Lower White-Bayou Des Arc Subbasin

LOCATION.--Lat 34°47'25", long 91°26'45" referenced to North American Datum of 1927, in NE ¼ SE ¼ sec.17, T.2 N., R.4 W., Prairie County, AR, Hydrologic Unit 08020301, near center of span on downstream side of bridge on U.S. Highway 70, 1.0 mi northeast of DeValls Bluff, 7.5 mi downstream from Wattensaw Bayou, 24.1 mi upstream from Cache River, at mile 125.3.

DRAINAGE AREA.--23,431 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Oct 1927 to Sep 1945 (large part of floodflow above station overflowed into Cache River and was not included in the records), Oct 1949 to Sep 1970, Oct 1988 to current year. Monthly discharge only for some periods, published in WSP 1311. Daily stages for the period Oct 1970 to date published in reports from the U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is 152.93 ft above NGVD of 1929. Prior to Dec 22, 1933, nonrecording gage at same site and datum.

COOPERATION.--Gage-height record was provided by the U.S. Army Corps of Engineers.

REMARKS.--Water-discharge records fair except estimated daily discharges, which are poor. Some regulation since 1943 by Norfolk Lake, capacity 1,983,000 acre-ft, since 1948 by Clearwater Lake (Missouri), capacity 413,700 acre-ft, since Jul 24, 1951, by Bull Shoals Lake, capacity 5,408,000 acre-ft, since Sep 9, 1956, by Table Rock Lake (Missouri), capacity 3,567,500 acre-ft, since Mar 30, 1962, by Greers Ferry Lake, capacity 2,926,500 acre-ft, and since Dec 26, 1963, by Beaver Lake, capacity 1,951,500 acre-ft. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr 23, 1927, reached a stage of 34.6 ft. Flood of Feb 3, 1949, reached a stage of 31.35 ft, discharge, 220,000 ft³/s by current-meter measurement, furnished by the U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40,100 ft³/s, May 8, gage height, 18.85 ft; minimum discharge, 2,620 ft³/s, Nov 12, gage height, 0.12 ft.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	10,400	3,760	9,280	5,010	8,250	10,200	21,900	14,300	15,000	e8,560	11,400	9,800
2	9,640	3,830	11,300	4,950	8,530	9,540	20,200	18,400	14,700	e8,570	11,000	9,430
3	8,850	3,780	12,800	5,170	9,220	8,790	19,100	22,200	14,400	e8,630	10,900	9,110
4	8,050	3,630	14,200	5,220	10,100	8,160	18,100	28,200	13,900	e8,020	11,300	8,840
5	7,310	3,400	14,900	5,000	10,900	7,590	17,200	34,200	13,200	e7,930	11,900	8,280
6	6,900	3,960	15,000	4,670	11,700	7,190	16,400	38,100	12,600	7,820	12,600	7,860
7	7,310	4,480	14,500	4,410	12,200	6,940	15,900	39,700	12,200	7,600	12,800	7,710
8	8,350	4,690	13,900	4,400	12,100	6,520	15,700	40,000	11,500	e7,580	12,100	7,370
9	8,850	4,390	13,200	4,660	11,900	6,520	15,200	39,400	11,000	7,280	11,100	7,170
10	8,530	4,000	12,800	4,940	12,000	7,670	14,400	39,100	10,900	7,040	10,100	7,080
11	7,520	3,400	13,100	5,040	12,400	9,390	13,600	39,700	10,800	6,770	9,540	6,990
12	6,430	e2,830	13,400	4,870	12,400	13,000	13,000	39,700	10,800	6,610	9,450	6,800
13	5,580	3,210	13,500	4,840	12,000	17,000	12,600	38,700	10,300	6,910	9,860	6,900
14	5,040	3,370	12,800	5,090	11,600	19,500	12,200	37,400	e10,000	7,370	10,400	6,880
15	5,020	3,650	11,800	5,800	11,200	21,100	11,900	35,700	e9,560	9,030	10,900	6,490
16	5,140	4,040	10,700	6,430	10,600	22,400	11,500	33,900	e8,750	11,000	11,200	e5,930
17	5,080	4,060	10,600	6,920	10,700	23,500	11,600	32,200	e8,690	12,300	10,800	e5,680
18	5,150	3,950	11,300	7,020	10,800	24,000	11,700	30,300	e8,760	12,900	10,500	e5,670
19	5,310	4,420	11,800	6,730	10,600	24,600	11,900	28,500	e9,010	13,300	10,900	e6,050
20	5,070	6,150	11,700	6,560	9,980	26,100	12,000	26,700	e9,140	13,900	11,900	e6,390
21	4,880	9,020	10,800	6,720	9,370	28,800	11,800	25,000	e9,990	13,700	12,500	e6,400
22	4,920	11,500	9,550	7,130	9,080	30,700	11,800	23,600	e10,900	13,400	12,700	e6,300
23	5,340	12,300	8,480	8,720	9,220	31,600	11,900	22,900	e11,100	13,400	12,500	e5,890
24	6,170	11,800	8,540	9,500	10,200	32,000	11,500	21,700	e11,200	13,100	11,900	e5,260
25	6,120	11,300	8,640	9,160	10,900	32,000	10,800	20,200	e11,500	12,200	11,200	e5,500
26	5,350	10,800	8,230	8,960	11,300	31,800	10,200	18,900	e11,500	11,600	10,800	e8,230
27	4,500	10,300	7,480	8,890	11,300	30,900	9,830	18,200	e10,900	11,100	10,600	e14,100
28	3,940	9,830	7,210	8,590	10,900	29,900	9,750	17,600	e9,720	11,200	10,400	e17,500
29	3,770	9,160	6,600	8,670	---	28,200	10,200	16,900	e8,930	11,700	9,920	e19,200
30	3,710	8,620	6,020	8,510	---	25,900	11,100	16,100	e8,680	11,900	9,890	e20,400
31	3,590	---	5,550	8,340	---	23,700	---	15,500	---	11,800	9,970	---
Total	191,820	183,630	339,680	200,920	301,450	605,210	404,980	873,000	329,630	314,220	343,030	255,210
Mean	6,188	6,121	10,960	6,481	10,770	19,520	13,500	28,160	10,990	10,140	11,070	8,507
Max	10,400	12,300	15,000	9,500	12,400	32,000	21,900	40,000	15,000	13,900	12,800	20,400
Min	3,590	2,830	5,550	4,400	8,250	6,520	9,750	14,300	8,680	6,610	9,450	5,260
Ac-ft	380,500	364,200	673,800	398,500	597,900	1,200,000	803,300	1,732,000	653,800	623,300	680,400	506,200

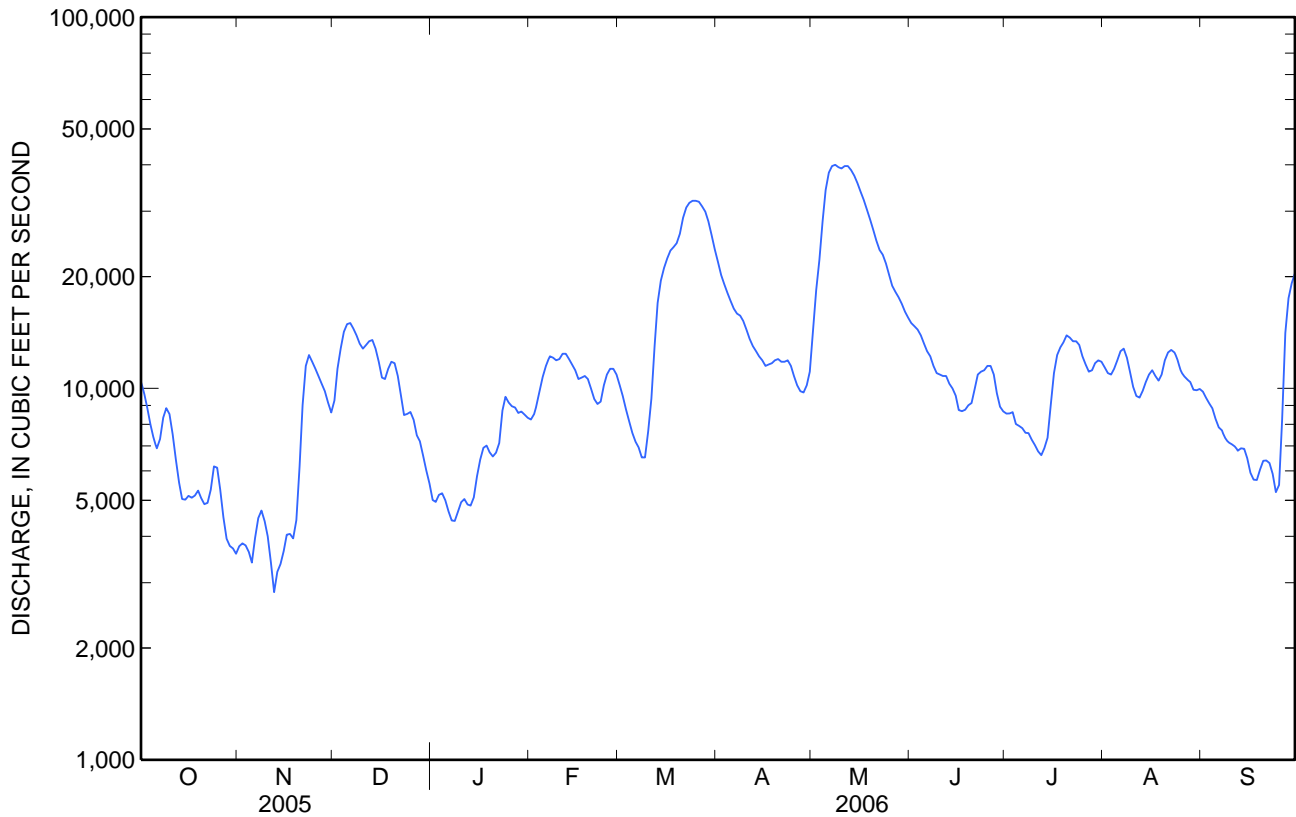
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2006, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	11,570	15,490	24,270	30,160	35,570	39,160	40,520	39,990	25,520	19,240	15,980	12,860
Max	30,100	48,890	67,180	110,000	107,100	73,060	75,360	90,730	73,590	48,560	48,900	36,450
(WY)	(1950)	(1958)	(1952)	(1950)	(1950)	(1989)	(1957)	(1957)	(1957)	(1951)	(1957)	(1950)
Min	3,715	3,831	5,260	6,042	7,974	13,240	13,230	7,448	6,676	7,822	7,112	4,276
(WY)	(1955)	(1955)	(1955)	(1964)	(1964)	(1996)	(1963)	(2001)	(2001)	(1954)	(1954)	(1954)

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SUMMARY STATISTICS

	Calendar Year 2005		Water Year 2006		Water Years 1950 - 2006	
Annual total	8,130,130		4,342,780			
Annual mean	22,270		11,900		25,810	
Highest annual mean					51,270	1950
Lowest annual mean					11,900	2006
Highest daily mean	67,800	Jan 27	40,000	May 8	154,000	Jan 19, 1950
Lowest daily mean	2,830	Nov 12	2,830	Nov 12	2,830	Nov 12, 2005
Annual seven-day minimum	3,500	Nov 10	3,500	Nov 10	3,290	Sep 26, 1954
Maximum peak flow			40,100	May 8	154,000	Jan 19, 1950
Maximum peak stage			18.85	May 8	28.42	Jan 20, 1950
Instantaneous low flow			2,620	Nov 12	2,620	Nov 12, 2005
Annual runoff (ac-ft)	16,130,000		8,614,000		18,700,000	
10 percent exceeds	52,200		22,300		53,100	
50 percent exceeds	12,000		10,400		18,800	
90 percent exceeds	5,570		5,020		7,860	



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946-60, 1968-70, 1974-95, and 2001 to current year.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 1 of 3

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

Date	Time	Agency ana- lyzing sample, code (00028)	Instan- taneous dis- charge, cfs (00061)	Sam- pling method, code (82398)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)
Oct 26...	0815	80020	5,520	30	774	7.8	78	8.3	329	15.9	180	40.6	19.3
Dec 06...	0815	80020	15,100	10	768	11.4	94	7.8	259	7.5	130	28.3	14.9
Mar 29...	0945	80020	28,400	10	778	10.3	91	6.8	204	10.8	87	20.1	9.02
May 10...	0900	80020	38,800	10	760	7.4	72	7.1	212	14.2	110	26.0	10.1
Jul 17...	0745	80020	12,200	70	771	7.0	90	7.8	310	28.9	150	32.9	16.8
Sep 17...	0800	80020	10,900	30	771	7.6	96	8.1	286	27.7	120	28.1	12.8

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 2 of 3

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

Date	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)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (71851)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)
Oct 26...	1.53	.1	5	4.14	5.86	E.1	6.6	179	.28	<.04	--	--	<.06
Dec 06...	1.69	.1	3	2.08	3.12	E.1	5.0	144	.47	E.03	--	--	.28
Mar 29...	1.69	.1	5	2.12	3.34	.1	5.7	129	.48	<.04	--	--	.16
May 10...	1.80	.1	4	2.10	2.90	E.1	4.7	129	.43	<.04	--	--	.26
Jul 17...	1.43	.1	4	3.21	4.79	E.1	5.8	164	.33	E.005	.368	.08	.09
Sep 17...	1.57	.1	6	3.48	5.49	E.1	5.9	151	.40	E.005	--	--	<.06

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 3 of 3

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

Date	Nitrite water, fltrd, mg/L (71856)	Nitrite water, fltrd, mg/L as N (00613)	Total nitro- gen, water, unfltrd mg/L (00600)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)	Sus- pended sedi- ment concentra- tion mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)	Sampler type, code (84164)
Oct													
26...	--	<.008	--	--	<.02	<.04	E.04	E6	E3	96	49	730	3070
Dec													
06...	--	<.008	.75	--	E.01	E.02	.13	E10	110	97	171	6,970	3052
Mar													
29...	--	<.008	.65	--	E.01	<.04	.12	E19	E29	84	101	7,740	3058
May													
10...	--	E.006	.69	.061	.02	<.04	.09	E80	80	80	99	10,400	3052
Jul													
17...	.009	.003	.42	.052	.017	E.03	.08	42	36	95	62	2,040	3070
Sep													
17...	.009	.003	--	.031	.010	E.03	.07	E7	E13	83	52	1,530	3070