Water-Data Report 2011

07281977 YALOBUSHA RIVER AT DERMA, MS

Yazoo Basin
Yalobusha Subbasin

LOCATION.--Lat 33°50′17″, long 89°16′33″ referenced to North American Datum of 1983, in NW ¼ NW ¼ sec.26, T.14 S., R.1 W., Calhoun County, MS, Hydrologic Unit 08030205, Chickasaw Meridian, on the right bank at downstream side of bridge on county road, 1.3 mi south of Derma, and 2.4 mi upstream of 07282000 Yalobusha River at Calhoun City.

DRAINAGE AREA.--160 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1998 to 2011, discontinued.

GAGE.--Water-stage recorder. Datum of gage is 226.02 ft above NGVD of 1929. Automatic pumping sediment sampler since May 1998.

REMARKS.--Estimated daily discharge: Aug. 29-31 and Sept. 5-30. Records good except for estimated daily discharge, which is poor. Satellite telemeter at station. Channel rectification was completed in 1967.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,900 ft^3/s, January 23, 1999, maximum gage height, 31.36 ft, minimum discharge, 0 ft^3/s, several days in August and September of 2000.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 1	0600	5,660	25.87
Mar 9	0915	5,390	25.51
Apr 21	0300	*6,250	*26.63

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.24	1.5	141	3,200	228	23	81	93	3.7	2.3	3.5	2.8
2	0.24	1.5	41	774	555	17	51	56	3.4	2.2	3.3	2.8
3	0.23	13	19	197	144	13	32	439	3.2	2.1	3.2	2.7
4	0.21	12	11	95	103	14	650	361	3.0	2.1	15	3.3
5	0.20	7.8	7.1	60	183	1,200	1,790	113	2.9	2.2	99	e162
6	0.21	5.2	5.4	49	118	1,230	379	58	2.6	2.2	24	e100
7	0.22	3.7	4.3	37	87	298	154	34	2.4	2.2	9.8	e27
8	0.25	2.8	3.7	27	73	187	94	22	2.3	2.2	5.5	e15
9	0.30	2.2	3.4	20	50	3,280	60	17	2.1	2.2	4.2	e4.0
10	0.32	1.9	3.1	19	40	1,240	39	14	2.0	2.2	4.1	e2.0
11	0.33	1.8	7.8	21	37	353	26	12	1.9	2.2	4.0	e1.5
12	0.34	1.8	56	21	34	163	22	11	1.8	2.1	3.4	e1.0
13	0.39	1.9	37	18	31	99	16	85	22	2.1	3.2	e0.67
14	0.45	1.9	20	16	26	117	12	118	30	2.3	3.1	e0.65
15	0.44	2.0	13	16	22	291	585	45	7.1	2.4	3.0	e0.64
16	0.44	4.0	10	20	19	127	719	21	3.1	2.8	3.0	e0.63
17	0.47	4.6	8.7	35	17	80	164	14	18	2.6	3.0	e0.62
18	0.49	4.8	7.6	58	15	55	80	11	6.7	2.5	6.5	e0.60
19	0.52	5.0	6.6	45	14	38	47	9.5	2.8	2.5	9.2	e0.59
20	0.58	4.8	5.8	32	13	28	2,100	8.4	2.2	2.6	6.7	e0.58
21	0.61	4.4	5.1	25	13	21	4,460	7.5	2.6	3.1	12	e0.57
22	0.62	4.1	5.1	21	12	16	1,790	7.0	11	3.2	8.9	e0.56
23	0.65	3.8	4.6	18	11	14	468	6.2	35	3.6	5.9	e0.54
24	0.69	3.7	4.1	15	11	12	174	5.9	11	3.3	4.4	e0.52
25	8.7	3.7	3.9	223	82	10	95	5.5	4.6	15	3.7	e0.50
26	3.0	4.1	4.0	559	78	10	305	100	2.9	57	3.4	e0.48
27	2.1	5.3	3.9	163	45	12	2,990	32	2.4	15	3.2	e0.46
28	1.5	5.6	3.9	82	31	78	2,290	11	3.6	7.2	3.1	e0.44
29	1.4	5.7	3.8	51	---	83	727	6.1	4.1	5.4	e3.0	e0.42
30	1.5	354	4.4	35	---	236	186	4.7	2.7	4.4	e2.9	e0.40
31	1.5	---	5.1	27	---	150	---	4.1	---	3.8	e2.9	---
Total	29.14	478.6	459.4	5,979	2,092	9,495	20,586	1,731.9	203.1	167.0	270.1	333.97
Mean	0.94	16.0	14.8	193	74.7	306	686	55.9	6.77	5.39	8.71	11.1
Max	8.7	354	141	3,200	555	3,280	4,460	439	35	57	99	162
Min	0.20	1.5	3.1	15	11	10	12	4.1	1.8	2.1	2.9	0.40
Med	0.45	4.1	5.4	35	35	80	169	14	3.1	2.5	3.7	0.64
Cfsm	0.01	0.10	0.09	1.21	0.47	1.91	4.29	0.35	0.04	0.03	0.05	0.07
In.	0.01	0.11	0.11	1.39	0.49	2.21	4.79	0.40	0.05	0.04	0.06	0.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	128	158	345	427	375	358	368	302	166	45.0	37.0	95.4
Max	887	466	849	1,193	930	789	1,162	1,107	820	234	158	724
(WY)	(2010)	(2002)	(2002)	(1999)	(2003)	(2009)	(2000)	(2003)	(2004)	(2002)	(2005)	(2002)
Min	0.05	2.14	11.5	17.9	46.1	73.0	23.4	14.5	1.02	0.75	0.11	0.07
(WY)	(2001)	(2000)	(2000)	(2000)	(2000)	(2007)	(2007)	(2005)	(2006)	(2000)	(2000)	(2000)

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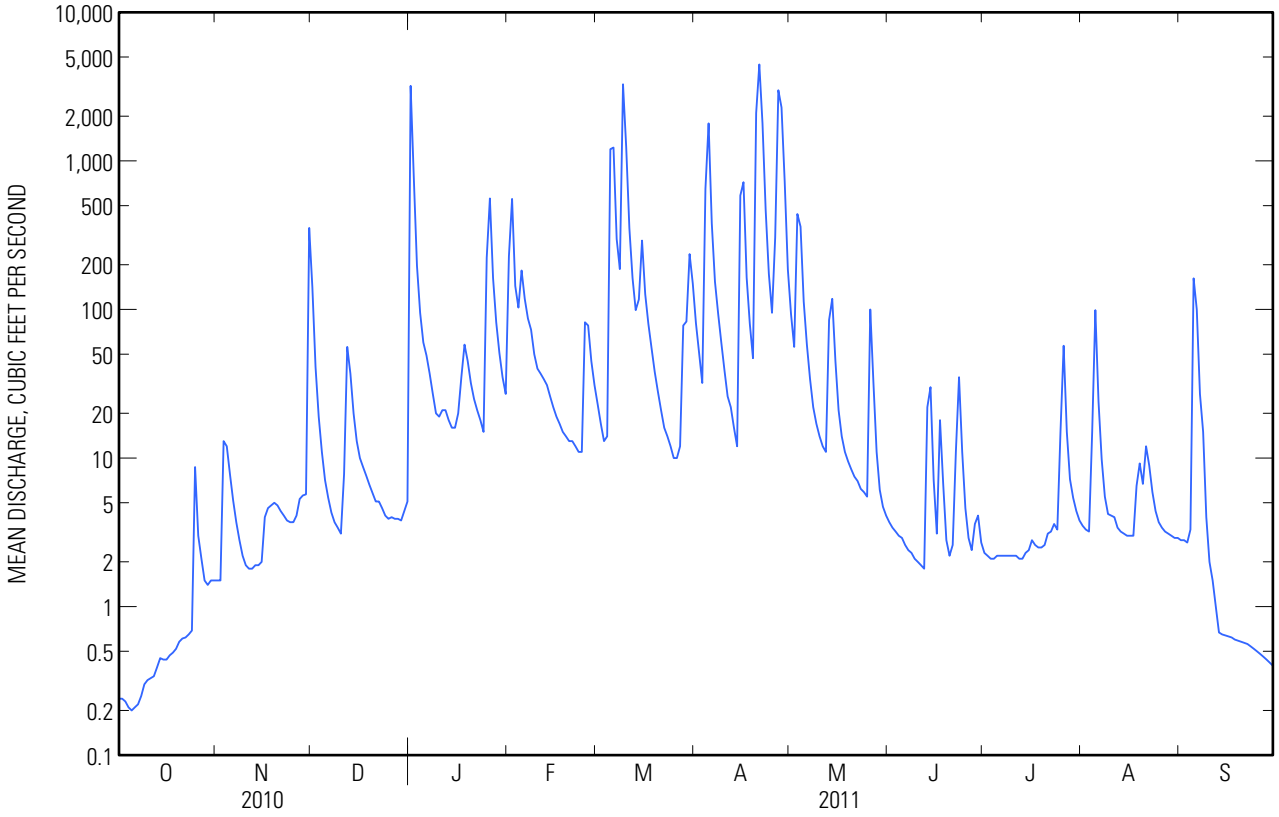
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1998 - 2011	
Annual total	46,705.92		41,825.21			
Annual mean	128		115		234	
Highest annual mean					416	2002
Lowest annual mean					94.5	2008
Highest daily mean	3,900	May 3	4,460	Apr 21	13,200	Jan 23, 1999
Lowest daily mean	0.20	Oct 5	0.20	Oct 5	0.000	Aug 30, 2000
Annual seven-day minimum	0.22	Oct 1	0.22	Oct 1	0.000	Aug 30, 2000
Maximum peak flow			6,250	Apr 21	15,900	Jan 23, 1999
Maximum peak stage			26.63	Apr 21	31.36	Jan 23, 1999
Annual runoff (cfsm)	0.800		0.716		1.46	
Annual runoff (inches)	10.86		9.72		19.87	
10 percent exceeds	242		163		512	
50 percent exceeds	8.7		7.1		24	
90 percent exceeds	0.49		0.63		0.99	



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GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	7.93	8.19	11.94	21.19	11.18	9.41	11.25	11.44	8.60	8.46	8.42	8.26
2	7.93	8.17	10.42	15.07	14.17	9.11	10.68	10.80	8.57	8.41	8.39	8.26
3	7.92	9.70	9.60	12.14	11.62	8.89	10.15	13.17	8.55	8.38	8.36	8.24
4	7.92	9.72	9.10	11.04	11.14	8.90	12.58	13.53	8.54	8.35	8.76	8.36
5	7.91	9.27	8.75	10.47	12.04	15.30	18.16	11.69	8.54	8.36	11.62	---
6	7.90	8.92	8.52	10.24	11.35	16.55	13.63	10.82	8.50	8.36	10.05	---
7	7.88	8.63	8.35	9.92	10.93	12.92	12.17	10.22	8.46	8.35	9.23	---
8	7.91	8.40	8.23	9.57	10.71	12.04	11.45	9.78	8.45	8.33	8.75	---
9	7.95	8.23	8.17	9.28	10.25	21.49	10.87	9.52	8.44	8.32	8.56	---
10	7.96	8.10	8.12	9.21	10.0	16.64	10.37	9.33	8.43	8.30	8.53	---
11	7.95	8.01	8.44	9.31	9.90	13.40	9.94	9.19	8.42	8.28	8.52	---
12	7.94	7.98	10.79	9.31	9.82	12.09	9.77	9.12	8.40	8.26	8.41	---
13	7.97	7.99	10.31	9.17	9.70	11.44	9.46	10.71	9.35	8.25	8.36	---
14	8.02	7.97	9.67	9.07	9.53	11.55	9.22	11.74	10.74	8.27	8.33	---
15	7.98	7.99	9.27	9.08	9.35	13.20	12.93	10.53	9.45	8.29	8.31	---
16	7.95	8.39	9.07	9.26	9.20	11.87	14.92	9.74	8.81	8.39	8.30	---
17	7.95	8.51	8.92	9.81	9.09	11.25	12.24	9.34	10.30	8.32	8.31	---
18	7.94	8.52	8.80	10.41	9.00	10.78	11.23	9.15	9.38	8.29	8.73	---
19	7.95	8.53	8.68	10.14	8.94	10.34	10.59	9.02	8.73	8.27	9.18	---
20	7.98	8.49	8.59	9.74	8.89	10.04	17.46	8.94	8.55	8.28	8.92	---
21	7.98	8.43	8.49	9.50	8.85	9.74	23.92	8.87	8.65	8.40	9.41	---
22	7.96	8.37	8.48	9.32	8.79	9.49	18.23	8.84	9.37	8.42	9.16	---
23	7.96	8.32	8.40	9.14	8.71	9.34	14.06	8.77	10.87	8.47	8.82	---
24	7.96	8.30	8.31	9.02	8.71	9.22	12.34	8.76	9.73	8.41	8.60	---
25	9.49	8.30	8.28	11.26	10.76	9.05	11.47	8.73	9.02	8.94	8.47	---
26	8.86	8.38	8.31	14.21	10.77	9.05	13.14	11.64	8.67	10.93	8.40	---
27	8.53	8.57	8.29	11.82	10.12	9.19	20.67	10.35	8.54	9.62	8.36	---
28	8.32	8.61	8.27	10.85	9.72	11.07	19.51	9.36	8.73	8.98	8.32	---
29	8.23	8.62	8.25	10.26	---	11.29	14.97	8.91	8.88	8.75	---	---
30	8.23	13.17	8.37	9.86	---	12.76	12.45	8.73	8.56	8.59	---	---
31	8.21	---	8.42	9.58	---	12.11	---	8.65	---	8.47	---	---
Mean	8.08	8.63	8.89	10.59	10.12	11.60	13.33	9.98	8.94	8.53	---	---
Max	9.49	13.17	11.94	21.19	14.17	21.49	23.92	13.53	10.87	10.93	---	---
Min	7.88	7.97	8.12	9.02	8.71	8.89	9.22	8.65	8.40	8.25	---	---
Med	7.96	8.39	8.49	9.81	9.86	11.25	12.29	9.36	8.63	8.36	---	---

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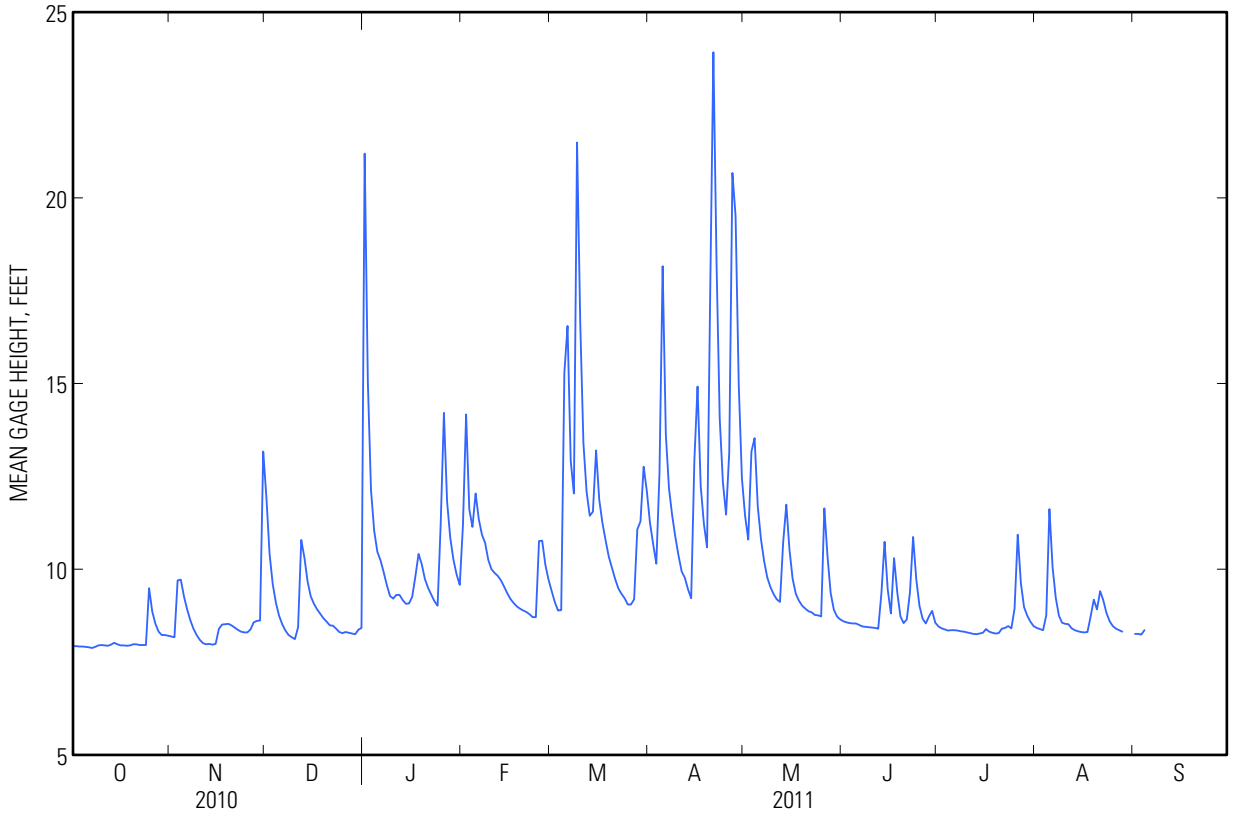

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1998 to 2011, discontinued.

PERIOD OF DAILY RECORD.--
SUSPENDED SEDIMENT CONCENTRATION: May 1998 to September 2003.
SUSPENDED SEDIMENT DISCHARGE: May 1998 to September 2003.

INSTRUMENTATION.--Automatic pumping sediment sampler since May 1998.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
[ft, feet; ft^3/s, cubic feet per second; mg/L, milligrams per liter]

Date	Sample start time	Discharge, instantaneous, ft^3/s (00061)	Gage height, ft (00065)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons per day (80155)
10-05-2010	**1500**	.21	7.88	100	.06
11-19-2010	**1030**	5.0	8.53	30	.41
12-28-2010	**1400**	3.9	8.28	23	.24
02-08-2011	**1455**	69	10.64	60	11
03-09-2011	**1530**	3,660	22.82	6,660	65,800
03-09-2011	**1545**	3,580	22.67	2,560	24,700
03-09-2011	**1645**	3,270	21.85	576	5,090
03-09-2011	**1700**	3,200	21.88	2,510	21,700
03-31-2011	**1400**	134	12.00	98	35
05-18-2011	**0845**	12	9.16	61	1.9
06-15-2011	**1615**	5.3	9.26	76	1.1
07-26-2011	**1705**	34	8.25	788	72
09-13-2011	**1440**	.67	8.25	13	.02