Water-Data Report 2013

06923950 NIANGUA RIVER AT TUNNEL DAM NEAR MACKS CREEK, MO

Lower Missouri Basin
Osage Subbasin

LOCATION.--Lat 37°56'13.0", long 92°51'04.9" referenced to North American Datum of 1983, in SE ¼ SW ¼ SW ¼ sec.19, T.37 N., R.17 W., Camden County, MO, Hydrologic Unit 10290110, at left end of concrete structure on top of Tunnel Dam, 6.5 mi southeast of Macks Creek.

DRAINAGE AREA.--598 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--September 1995 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 691.57 ft above North American Vertical Datum of 1988.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Lake Niangua, capacity of 2,650 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,700 ft^3/s, Aug. 7, gage height, 14.57 ft; minimum discharge, 173 ft^3/s, Dec. 3, Jan. 29, gage height, 2.01 ft.

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 06923950, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/06923950.2013.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	202	231	185	191	1,110	1,010	2,360	1,470	2,590	427	405	394
2	207	226	182	188	760	851	1,880	1,210	6,550	404	504	386
3	203	222	186	186	624	753	1,390	1,170	3,000	385	452	368
4	197	217	271	183	554	706	1,160	1,670	1,430	371	1,710	355
5	196	217	269	181	503	767	1,030	1,940	1,110	361	4,320	347
6	195	217	251	180	464	828	927	1,470	954	351	9,220	336
7	191	205	243	180	434	759	858	1,210	858	345	13,600	326
8	187	197	246	179	410	674	909	1,060	784	337	4,440	320
9	187	196	235	180	396	637	1,320	960	728	329	5,840	316
10	189	198	225	187	402	1,300	1,900	895	690	338	3,530	315
11	187	209	217	192	401	3,730	5,420	851	656	325	5,460	311
12	200	212	213	194	404	3,650	4,660	802	626	315	3,170	307
13	200	207	209	207	425	1,690	2,090	748	572	309	1,500	299
14	238	200	209	205	425	1,270	1,530	705	531	307	1,230	295
15	242	195	222	205	443	1,040	1,280	673	519	303	1,040	292
16	290	194	214	207	460	909	1,230	643	517	297	914	292
17	383	195	211	209	450	1,780	1,100	620	1,080	292	826	298
18	334	195	205	213	437	5,790	2,540	603	3,790	288	762	290
19	293	198	203	212	425	5,730	3,670	589	1,320	286	713	293
20	273	195	202	211	400	2,170	2,560	604	936	284	669	338
21	268	192	200	208	416	1,530	1,610	754	763	286	631	360
22	265	193	199	205	400	1,270	1,310	1,000	658	309	595	366
23	261	190	197	202	389	1,130	1,240	867	589	310	564	338
24	255	187	196	199	390	1,100	1,440	713	544	334	536	321
25	253	186	192	197	424	1,360	1,530	636	506	321	507	305
26	255	185	191	195	742	1,590	1,310	589	476	325	489	292
27	275	183	191	200	1,270	1,290	2,860	548	452	311	468	281
28	263	181	189	202	1,290	1,160	6,160	523	454	297	446	273
29	253	181	187	227	---	1,110	3,190	502	428	296	437	271
30	242	182	186	424	---	1,820	1,950	493	450	330	417	263
31	235	---	192	1,710	---	1,970	---	514	---	325	403	---
Mean	239	200	210	254	545	1,657	2,080	872	1,152	326	2,123	318
Max	383	231	271	1,710	1,290	5,790	6,160	1,940	6,550	427	13,600	394
Min	187	181	182	179	389	637	858	493	428	284	403	263
In.	0.46	0.37	0.41	0.49	0.95	3.20	3.88	1.68	2.15	0.63	4.09	0.59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	286	346	311	447	548	800	813	798	414	229	311	281
Max	1,758	1,345	613	2,589	1,594	3,339	2,080	2,819	1,152	546	2,123	994
(WY)	(2010)	(1997)	(2005)	(2005)	(2008)	(2008)	(2013)	(2002)	(2013)	(2007)	(2013)	(2008)
Min	59.8	66.8	130	56.9	39.2	47.9	106	28.1	55.4	54.8	43.9	76.0
(WY)	(1998)	(1998)	(1998)	(1997)	(1996)	(1996)	(2000)	(1997)	(1996)	(1997)	(1996)	(2006)

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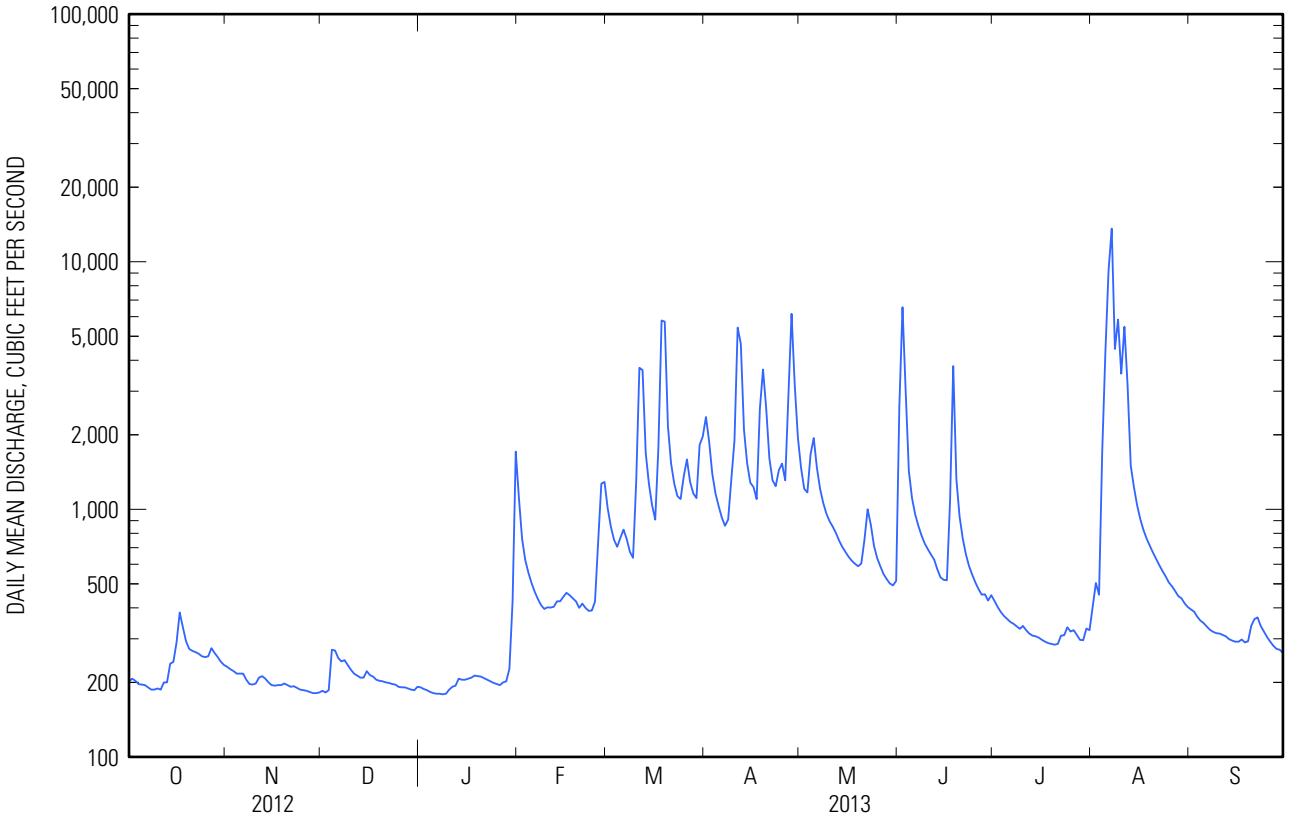
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1995 - 2013	
Annual mean	345		832		473	
Highest annual mean					993	2008
Lowest annual mean					143	2000
Highest daily mean	7,640	Mar 22	13,600	Aug 7	27,700	Mar 20, 2008
Lowest daily mean	11	Jun 19	179	Jan 8	0.00	Oct 18, 1997[a]
Annual seven-day minimum	54	May 23	181	Jan 3	8.1	Sep 25, 1997
Maximum peak flow			20,700	Aug 7	32,600	Mar 19, 2008
Maximum peak stage			14.57	Aug 7	17.06	Mar 19, 2008
Instantaneous low flow			173	Dec 3[b]	0.00	Oct 1, 1997[c]
Annual runoff (inches)	7.86		18.90		10.74	
10 percent exceeds	533		1,700		857	
50 percent exceeds	216		396		218	
90 percent exceeds	136		194		99	

[a] Also Oct 19, 1997
[b] Also Jan 29
[c] Also Oct 17-19, 29, 1997, Mar 7, Apr 18, 1998



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GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
OBSERVATION AT 0800

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2.09	2.17	2.04	2.06	3.67	3.47	4.79	4.13	3.70	2.39	2.15	2.36
2	2.11	2.16	2.03	2.05	3.09	3.22	4.54	3.76	8.62	2.35	2.57	2.35
3	2.10	2.15	2.06	2.05	2.82	3.04	3.80	3.60	5.89	2.30	2.49	2.31
4	2.09	2.14	2.25	2.04	2.66	2.93	3.52	4.09	4.11	2.27	2.45	2.29
5	2.07	2.13	2.26	2.03	2.57	3.02	3.30	4.81	3.60	2.24	6.42	2.27
6	2.08	2.14	2.23	2.03	2.49	3.17	3.16	4.13	3.36	2.22	8.68	2.25
7	2.06	2.12	2.19	2.02	2.42	3.06	3.06	3.77	3.21	2.20	13.73	2.23
8	2.05	2.08	2.21	2.03	2.38	2.91	3.11	3.54	3.08	2.19	7.00	2.22
9	2.04	2.08	2.19	2.02	2.34	2.84	3.77	3.36	2.96	2.17	8.04	2.22
10	2.06	2.08	2.16	2.05	2.36	3.09	3.58	3.24	2.92	2.21	6.63	2.21
11	2.05	2.11	2.14	2.06	2.35	5.49	7.92	3.19	2.83	2.16	6.78	2.21
12	2.08	2.13	2.12	2.03	2.34	7.05	8.42	3.11	2.81	2.13	5.91	2.21
13	2.07	2.11	2.12	2.10	2.40	4.28	4.83	3.01	2.69	2.12	4.20	2.19
14	2.18	2.09	2.11	2.10	2.39	3.64	4.03	2.94	2.60	2.12	3.82	2.18
15	2.19	2.07	2.16	2.11	2.43	3.33	3.66	2.88	2.55	2.11	3.50	2.18
16	2.21	2.07	2.13	2.10	2.48	3.13	3.57	2.82	2.55	2.09	3.30	2.19
17	2.50	2.07	2.12	2.11	2.45	3.14	3.41	2.78	2.60	2.08	3.14	2.19
18	2.42	2.07	2.11	2.12	2.42	8.05	4.08	2.74	8.26	2.07	3.03	2.19
19	2.33	2.09	2.09	2.12	2.41	9.57	6.33	2.71	3.95	2.07	2.94	2.20
20	2.27	2.08	2.08	2.12	2.35	4.94	5.45	2.75	3.36	2.06	2.87	2.30
21	2.26	2.07	2.09	2.11	2.39	4.03	4.14	2.91	3.06	2.05	2.80	2.35
22	2.25	2.07	2.08	2.10	2.36	3.64	3.74	3.22	2.86	2.13	2.74	2.39
23	2.25	2.04	2.07	2.09	2.32	3.44	3.51	3.25	2.72	2.13	2.68	2.32
24	2.22	2.05	2.08	2.09	2.32	3.36	3.71	2.96	2.64	2.19	2.62	2.28
25	2.23	2.05	2.06	2.08	2.36	3.53	4.03	2.81	2.56	2.15	2.58	2.25
26	2.21	2.04	2.07	2.07	2.88	4.14	3.66	2.72	2.50	2.11	2.54	2.23
27	2.28	2.04	2.06	2.09	3.60	3.66	4.12	2.64	2.44	2.14	2.50	2.20
28	2.25	2.03	2.05	2.08	3.90	3.48	9.24	2.59	2.46	2.09	2.46	2.19
29	2.22	2.03	2.05	2.08	---	3.38	6.35	2.55	2.40	2.09	2.44	2.19
30	2.20	2.03	2.05	2.60	---	4.09	4.81	2.51	2.43	2.20	2.41	2.17
31	2.18	---	2.07	4.41	---	4.51	---	2.56	---	2.15	2.38	---
Mean	2.18	2.09	2.11	2.17	2.61	4.02	4.52	3.16	3.39	2.16	4.12	2.24
Max	2.50	2.17	2.26	4.41	3.90	9.57	9.24	4.81	8.62	2.39	13.73	2.39
Min	2.04	2.03	2.03	2.02	2.32	2.84	3.06	2.51	2.40	2.05	2.15	2.17