

Water-Data Report 2010

06899500 THOMPSON RIVER AT TRENTON, MO

Lower Missouri Basin
Grand Subbasin

LOCATION.--Lat 40°04'09.5", long 93°38'16.9" referenced to North American Datum of 1983, in SW ¼ NE ¼ sec.19, T.61 N., R.24 W., Grundy County, MO, Hydrologic Unit 10280102, at downstream side of bridge pier in Trenton, 2.6 mi downstream from Weldon River, and at mile 25.2.

DRAINAGE AREA.--1,720 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--June 1921 to September 1923, August 1928 to current year. June 1921 to September 1923, published as "near Hickory". Monthly discharge only for some periods, published in WSP 1310. Gage-height records collected in vicinity 1910-14 and since 1925 in reports of the National Weather Service.

REVISED RECORDS.--WSP 1116: 1945(M); WDR US 2009: 1981.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 710.26 ft above National Geodetic Vertical Datum of 1929. June 25, 1921, to Aug. 26, 1923, nonrecording gage at two sites 12 mi downstream (by old channel route) at different datums; Aug. 23, 1928, to Sept. 15, 1930, nonrecording gage at site 0.8 mi upstream from current site at datum of 721.87; Sept. 16, 1930, to May 31 1945, nonrecording gage at site 0.7 mi downstream at datum 3.46 ft lower; June 1, 1945, to Dec. 7, 1959, nonrecording gage at same site and datum; Dec. 8, 1959 to Oct. 27, 1998 at site 0.8 mi upstream from current site at datum 721.87 ft. Oct. 28, 1998 to Sept. 10, 2003 at current site at datum 720.26 ft. Datum lowered 10 ft. on Sept. 10, 2003.

REMARKS.--Records fair except for the periods Dec. 9 to Feb. 3 and Aug. 15 to Sept. 19, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 30.7 ft, July 6, 1909, present site and datum, from information by local residents; discharge, 50,000 ft³/s, determined by the U.S. Army Corps of Engineers, occurred before new channel was dredged.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15,000 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 23	0545	16,100	22.78
Oct 30	0600	22,800	25.47
Mar 10	0645	22,000	25.14
Mar 11	1300	23,800	25.82
Apr 25	1115	28,000	27.26
May 11	0930	26,600	26.80
May 13	1845	35,100	29.42
Jun 6	0915	*68,400	*32.28
Jun 8	1800	24,600	26.10
Jun 12	1815	18,600	23.83
Jun 14	1615	32,800	28.79
Jun 15	2345	29,900	27.89
Jul 20	2330	16,900	23.11
Sep 19	1945	29,500	27.77
Sep 22	1445	35,200	29.45
Sep 24	0945	24,200	25.97

Minimum discharge, 133 ft³/s, Sept. 10, gage height, 10.42 ft.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	263	3,360	805	954	1,200	494	1,610	2,340	922	1,180	891	219
2	403	1,920	735	582	1,060	468	1,490	2,540	1,340	935	554	329
3	277	1,350	673	533	877	438	1,940	1,910	3,940	803	485	261
4	216	1,070	615	e700	779	443	1,960	1,520	2,620	715	436	186
5	186	891	552	644	758	501	1,490	1,280	27,900	4,230	378	157
6	207	770	509	564	699	815	1,310	1,100	57,400	3,330	996	151
7	231	693	507	576	676	3,150	1,400	6,030	22,700	3,340	1,100	146
8	195	620	493	549	719	8,220	2,090	3,600	18,700	4,300	657	144
9	191	560	e420	562	557	14,200	1,670	1,930	12,400	2,860	503	139
10	176	522	e300	590	580	18,300	1,340	2,680	6,030	1,570	428	134
11	166	470	e400	568	723	19,700	1,150	20,500	8,030	1,100	418	306
12	163	425	e470	531	741	13,200	1,030	11,000	10,800	1,130	354	488
13	149	394	e430	499	735	10,400	951	27,800	11,300	904	301	220
14	148	376	e410	454	661	9,220	891	18,000	25,400	714	283	1,230
15	163	354	e400	437	572	5,920	837	9,120	22,500	1,210	549	1,290
16	179	1,080	e400	427	570	4,470	862	5,600	18,700	883	501	412
17	179	11,500	e370	427	576	3,630	884	8,050	7,160	842	347	268
18	168	6,670	329	442	522	3,070	777	6,610	3,980	539	280	217
19	157	3,710	302	518	487	2,640	726	3,280	3,330	496	243	14,600
20	148	2,130	317	1,350	473	2,330	693	4,030	7,110	5,040	235	11,900
21	149	1,420	314	3,340	500	2,300	666	11,400	4,750	9,230	284	4,080
22	5,080	1,110	295	3,430	529	3,830	650	7,520	3,290	5,420	249	30,700
23	11,600	953	321	7,500	523	3,580	705	3,740	3,050	3,840	255	11,400
24	4,110	863	1,180	11,700	437	2,680	5,920	2,390	4,000	2,270	369	17,400
25	2,590	3,970	e5,000	7,110	463	7,560	24,000	1,790	3,030	1,700	259	5,870
26	1,910	3,790	3,050	4,100	501	8,840	13,300	1,750	2,070	1,270	211	5,550
27	1,490	1,940	1,810	2,500	543	4,340	5,950	1,720	1,480	917	185	4,110
28	1,040	1,340	1,290	1,630	559	2,880	3,730	2,410	1,600	727	171	2,730
29	1,980	1,060	972	1,250	---	2,310	2,720	1,930	1,980	595	158	1,910
30	16,200	904	2,150	1,210	---	2,080	2,220	1,310	1,860	1,310	152	1,420
31	5,070	---	1,870	1,460	---	1,810	---	1,080	---	3,770	158	---
Mean	1,780	1,874	893	1,843	644	5,284	2,832	5,676	9,979	2,167	400	3,932
Max	16,200	11,500	5,000	11,700	1,200	19,700	24,000	27,800	57,400	9,230	1,100	30,700
Min	148	354	295	427	437	438	650	1,080	922	496	152	134
In.	1.19	1.22	0.60	1.24	0.39	3.54	1.84	3.81	6.47	1.45	0.27	2.55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	580	639	475	458	890	1,638	1,756	1,906	1,981	1,111	571	713
Max	4,678	6,280	4,209	3,682	4,378	5,765	5,591	8,757	16,460	18,860	3,990	8,443
(WY)	(1974)	(1962)	(1983)	(1946)	(1962)	(1979)	(2008)	(1995)	(1947)	(1993)	(1959)	(1992)
Min	11.1	9.53	6.48	4.74	13.0	17.6	10.7	10.2	13.9	6.00	9.32	12.9
(WY)	(1957)	(1956)	(1956)	(1956)	(1956)	(1938)	(1956)	(1956)	(1956)	(1934)	(1936)	(1955)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1929 - 2010	
Annual mean	2,041		3,112		1,059	
Highest annual mean					3,576	1993
Lowest annual mean					116	2006
Highest daily mean	46,300	May 16	57,400	Jun 6	73,800	Jun 6, 1947
Lowest daily mean	148	Oct 14 ^a	134	Sep 10	1.0	Jun 17, 1956
Annual seven-day minimum	163	Oct 14	151	Sep 4	1.7	Aug 4, 1934
Maximum peak flow			68,400	Jun 6	95,000	Jun 6, 1947
Maximum peak stage			32.28	Jun 6	32.28	Jun 6, 2010
Instantaneous low flow			133	Sep 10	1.0	Jun 17, 1956
Annual runoff (inches)	16.11		24.57		8.36	
10 percent exceeds	4,490		8,120		2,420	
50 percent exceeds	710		1,060		220	
90 percent exceeds	204		247		30	

^a Also Oct 20

