05481000 BOONE RIVER NEAR WEBSTER CITY, IA

Des Moines Basin
Boone Subbasin

LOCATION.--Lat 42°25′57″, long 93°48′20″ referenced to North American Datum of 1927, in NW ¼ SE ¼ sec.18, T.88 N., R.25 W., Hamilton County, IA, Hydrologic Unit 07100005, on right bank 100 ft upstream from bridge on State Highway 17, 2.5 mi south of Webster City, 3.2 mi downstream from Brewers Creek, and 21.2 mi upstream from mouth at Des Moines River.

DRAINAGE AREA.--844 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--March 1940 to current year.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1308: 1940 (M), WSP 1708: 1956.

GAGE.--Water-stage recorder. Datum of gage is 989.57 ft above NGVD of 1929. Prior to June 26, 1940, nonrecording gage at same site and datum.

REMARKS.--Records are considered good, except for those estimated daily discharges, which are poor. U.S. Army Corps of Engineers rain gage and data collection platform with satellite telemetry at station. Precipitation records are available online at the U.S. Army Corps of Engineers website: www2.mvr.usace.army.mil/WaterControl/datamining2.cfm.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1896, 19.1 ft, about June 10, 1918, from floodmarks, from information by local resident, discharge 21,500 ft^3/s. Flood of June 18, 1932 reached a stage of 16.0 ft, discharge 15,000 ft^3/s.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	48	82	e110	e1,050	e136	e105	1,980	2,090	1,530	483	42	1,270
2	63	74	e134	e991	e119	e102	2,400	1,730	1,730	397	41	1,010
3	60	62	e120	885	e117	e91	3,230	1,460	1,440	334	38	821
4	53	59	e113	798	e106	e88	3,140	1,300	1,390	277	56	685
5	49	59	e105	735	e100	e90	2,400	1,190	1,330	235	119	581
6	48	57	e106	673	e107	e80	1,890	1,250	1,380	201	106	504
7	48	60	e91	609	e108	e64	1,440	1,830	1,350	173	135	495
8	43	60	e94	546	e103	e60	1,200	2,100	1,100	149	136	433
9	38	57	e101	473	e111	e52	1,060	1,980	946	128	88	395
10	39	56	103	390	e106	e50	976	1,720	848	129	68	422
11	47	56	91	397	e119	e129	1,030	1,460	796	124	59	502
12	53	58	99	345	e125	e853	1,160	1,280	735	112	50	496
13	58	84	98	182	e104	e3,140	1,370	1,140	667	102	45	470
14	46	96	92	e278	e89	5,600	1,590	1,060	615	93	42	438
15	34	99	90	e265	e89	5,220	1,660	1,020	575	86	40	400
16	57	94	84	e260	e93	4,810	1,560	952	531	79	39	382
17	69	97	82	e301	e101	4,600	1,390	991	517	73	38	375
18	78	87	e73	e317	e94	4,000	1,230	947	503	84	627	374
19	74	80	e63	e261	e107	2,660	1,090	873	519	105	728	438
20	70	75	e91	e233	e108	2,280	987	815	487	93	3,620	528
21	73	75	e121	e245	e113	2,150	917	765	449	79	6,070	630
22	67	73	e158	e224	e107	2,200	896	721	491	67	6,210	659
23	59	67	e172	e205	e119	2,300	989	688	2,240	72	6,900	613
24	50	65	e169	e200	e115	2,040	1,820	2,060	3,340	70	6,810	571
25	48	68	e206	e197	e111	1,910	5,560	4,560	2,190	64	5,800	576
26	62	68	196	e193	e103	1,910	6,440	4,430	1,410	57	e4,000	598
27	73	68	206	e162	e108	1,630	5,740	3,590	1,040	83	2,700	733
28	76	109	221	e156	e105	1,320	4,710	2,710	806	73	1,890	777
29	69	155	e200	e168	---	1,190	3,530	2,040	706	60	2,490	700
30	80	126	e190	e152	---	1,140	2,640	1,720	585	54	2,210	634
31	82	---	e403	e138	---	1,240	---	1,480	---	48	1,660	---
Total	1,814	2,326	4,182	12,029	3,023	53,104	66,025	51,952	32,246	4,184	52,857	17,510
Mean	58.5	77.5	135	388	108	1,713	2,201	1,676	1,075	135	1,705	584
Max	82	155	403	1,050	136	5,600	6,440	4,560	3,340	483	6,900	1,270
Min	34	56	63	138	89	50	896	688	449	48	38	374
Med	58	71	106	265	107	1,320	1,570	1,460	827	93	135	549
Ac-ft	3,600	4,610	8,290	23,860	6,000	105,300	131,000	103,000	63,960	8,300	104,800	34,730
Cfsm	0.07	0.09	0.16	0.46	0.13	2.03	2.61	1.99	1.27	0.16	2.02	0.69
In.	0.08	0.10	0.18	0.53	0.13	2.34	2.91	2.29	1.42	0.18	2.33	0.77

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	232	210	143	103	247	788	963	914	1,078	582	275	207
Max	1,771	1,395	1,181	568	1,847	2,826	4,307	4,315	4,239	4,715	2,942	2,501
(WY)	(1987)	(1993)	(1983)	(1983)	(1984)	(1973)	(1965)	(1991)	(1984)	(1993)	(1993)	(1965)
Min	6.66	11.0	4.62	0.32	3.60	32.5	33.7	46.0	14.1	8.66	9.79	6.48
(WY)	(1950)	(1950)	(1977)	(1977)	(1950)	(1968)	(1957)	(1968)	(1977)	(1977)	(1949)	(1976)

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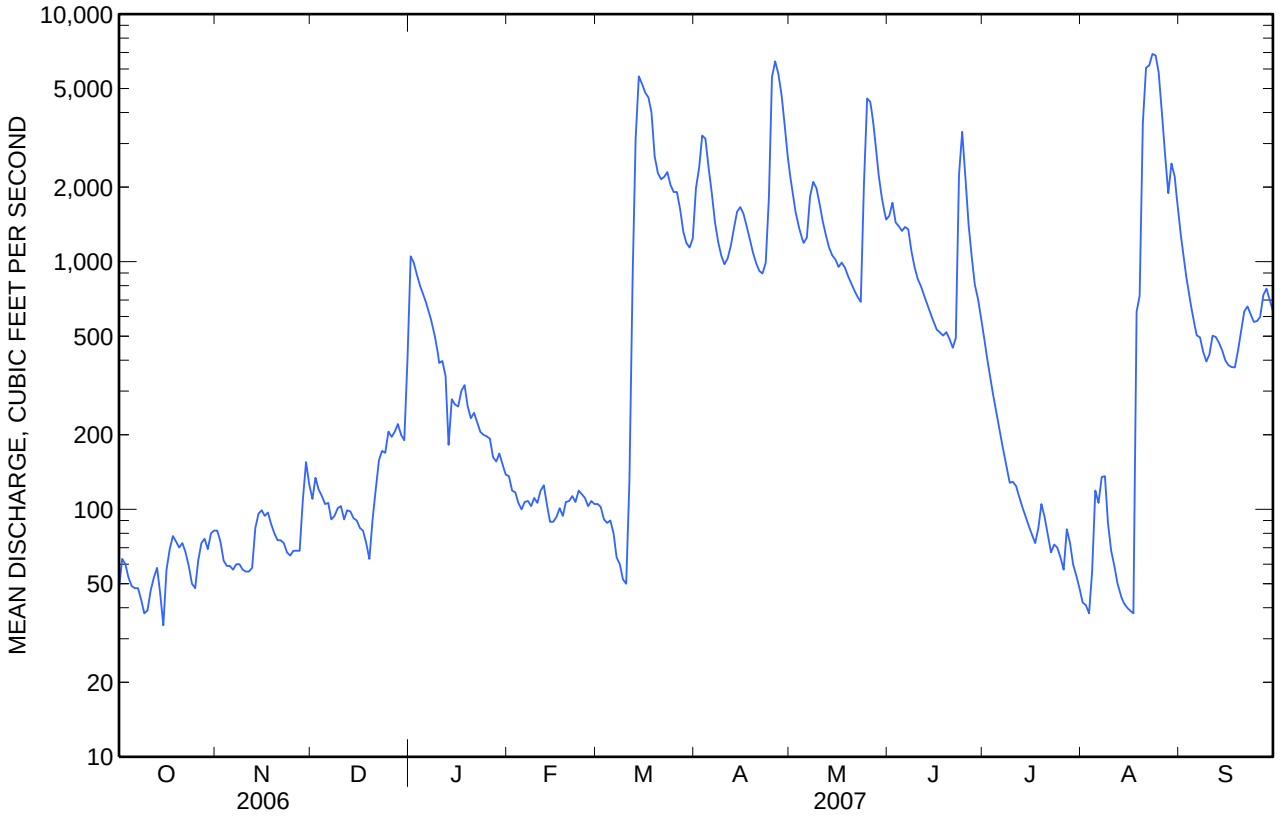
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1941 - 2007	
Annual total	146,944		301,252			
Annual mean	403		825		479	
Highest annual mean					1,861	1993
Lowest annual mean					36.1	1956
Highest daily mean	3,260	Apr 4	6,900	Aug 23	19,500	Jun 22, 1954
Lowest daily mean	20	Aug 26	34	Oct 15	0.00	Feb 7, 1977
Annual seven-day minimum	24	Aug 21	45	Oct 5	0.01	Feb 1, 1977
Maximum peak flow			7,090	Aug 23	20,300	Jun 22, 1954
Maximum peak stage			10.41	Aug 23	18.55	Jun 22, 1954
Instantaneous low flow			33	Oct 15	0.00	Feb 7, 1977
Annual runoff (ac-ft)	291,500		597,500		346,900	
Annual runoff (cfsm)	0.477		0.978		0.567	
Annual runoff (inches)	6.48		13.28		7.71	
10 percent exceeds	1,010		2,190		1,230	
50 percent exceeds	202		221		140	
90 percent exceeds	43		59		17