Water-Data Report 2012

05481950 Beaver Creek near Grimes, IA

Des Moines Basin
Middle Des Moines Subbasin

LOCATION.--Lat 41°41′18″, long 93°44′07″ referenced to North American Datum of 1927, in SW ¼ SW ¼ SW ¼ sec.35, T.80 N., R.25 W., Polk County, IA, Hydrologic Unit 07100004, on left bank 10 ft upstream from bridge on Northwest 70th Avenue in Johnston, 2.5 mi east of Grimes, 0.5 mi downstream from Little Beaver Creek, and 6.3 mi upstream from mouth.

DRAINAGE AREA.--358 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge records from April 1960 to current year.

REVISED RECORDS.--WDR IA-77-1: 1974 (P). WDR IA-95-1: Location.

GAGE.--Water-stage recorder. Datum of gage is 806.98 ft above National Geodetic Vertical Datum of 1929. Prior to August 31, 1966, non-recording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. U.S. Army Corps of Engineers rain gage and U.S. Geological Survey data collection platform with satellite telemetry at station.

05481950 Beaver Creek near Grimes, IA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	5.5	6.2	14	e21	e21	153	136	214	137	28	1.0	1.0
2	4.9	7.6	13	e20	e20	146	126	287	129	24	0.87	1.2
3	5.0	11	29	e21	e20	125	117	397	122	20	0.79	1.2
4	4.9	9.7	39	e22	e20	108	109	413	116	16	8.3	1.5
5	4.4	11	e25	e22	e22	98	103	368	109	14	3.3	1.9
6	3.6	9.0	e22	e23	e21	96	96	590	103	13	1.6	1.2
7	3.6	8.8	e22	e22	e20	98	93	1,020	96	10	1.2	0.80
8	3.8	14	e21	e22	e20	88	91	715	92	8.3	1.7	0.85
9	3.1	53	e21	e21	e23	80	85	501	89	8.5	4.0	0.99
10	3.0	45	e21	e22	e22	75	82	411	84	6.9	1.3	1.2
11	3.5	32	e21	e22	e31	73	80	356	83	5.8	1.1	0.89
12	4.5	27	e21	e20	e21	80	79	311	75	5.0	1.0	0.75
13	5.9	22	25	e20	e21	79	89	281	67	5.1	1.2	3.6
14	6.1	20	41	e20	e22	75	173	263	62	9.0	1.0	1.8
15	5.0	18	54	e21	e23	71	805	248	67	9.9	0.93	0.99
16	9.4	17	51	e21	e23	69	1,010	231	78	5.5	3.5	1.0
17	9.1	16	51	e20	e25	69	731	213	78	3.9	2.0	1.3
18	6.9	16	55	e20	e25	68	507	206	68	3.3	1.1	1.6
19	6.0	15	51	e20	e25	70	414	197	58	2.7	1.1	1.2
20	5.9	15	47	e20	e27	118	370	188	50	2.3	1.1	0.94
21	6.6	15	41	e20	e35	188	385	179	64	2.0	0.87	1.0
22	5.6	16	e21	e20	e34	204	380	172	60	1.7	0.76	1.1
23	5.9	15	e20	e20	e43	190	326	167	58	1.4	0.61	1.3
24	6.4	14	e20	e21	52	180	293	165	55	1.2	0.70	1.4
25	5.0	15	e20	e21	44	169	274	162	51	1.4	1.4	1.5
26	4.7	15	e20	e21	47	152	247	154	43	1.7	4.7	0.50
27	5.4	14	e20	e21	52	144	215	148	37	0.92	2.0	0.73
28	6.0	14	e20	e20	56	137	239	143	33	1.1	1.3	0.58
29	6.9	13	e21	e20	91	126	227	132	33	2.8	1.0	0.65
30	5.8	14	e25	e20	---	141	219	122	34	2.2	0.93	0.77
31	6.3	---	e23	e21	---	146	---	139	---	1.3	1.0	---
Total	168.7	518.3	895	645	906	3,616	8,101	9,093	2,231	218.92	53.36	35.44
Mean	5.44	17.3	28.9	20.8	31.2	117	270	293	74.4	7.06	1.72	1.18
Max	9.4	53	55	23	91	204	1,010	1,020	137	28	8.3	3.6
Min	3.0	6.2	13	20	20	68	79	122	33	0.92	0.61	0.50
Ac-ft	335	1,030	1,780	1,280	1,800	7,170	16,070	18,040	4,430	434	106	70
Cfsm	0.02	0.05	0.08	0.06	0.09	0.33	0.75	0.82	0.21	0.02	0.00	0.00
In.	0.02	0.05	0.09	0.07	0.09	0.38	0.84	0.94	0.23	0.02	0.01	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2012, BY WATER YEAR (WY)

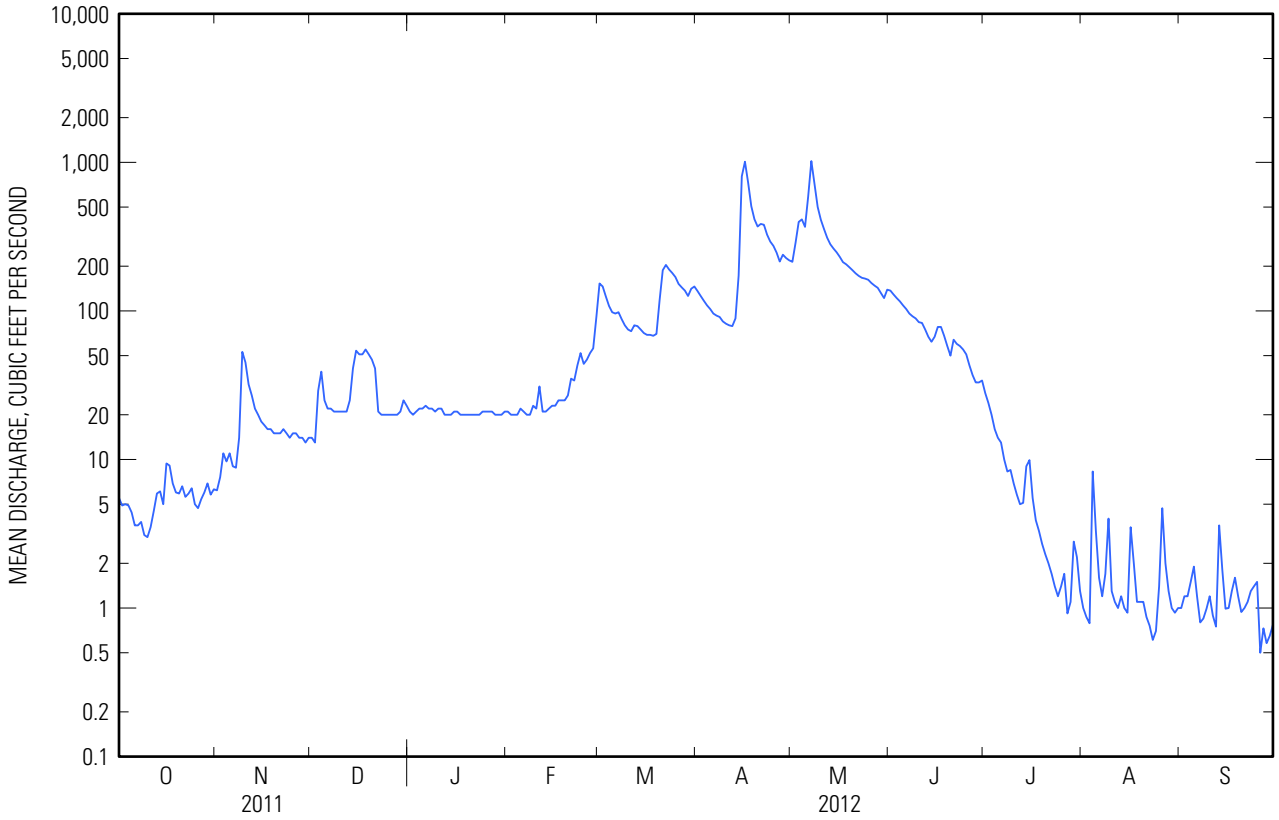
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	113	122	96.6	65.9	123	360	393	468	519	287	134	87.3
Max	724	655	486	372	526	1,357	1,409	1,419	2,577	2,160	1,773	692
(WY)	(1974)	(1973)	(1983)	(2007)	(1973)	(2010)	(2007)	(1974)	(2008)	(1993)	(2010)	(2006)
Min	0.06	0.63	0.77	0.00	0.35	3.98	3.26	1.11	1.41	0.24	0.73	0.26
(WY)	(1989)	(1967)	(1977)	(1977)	(1977)	(1981)	(1981)	(1981)	(1977)	(1977)	(1988)	(1988)

05481950 Beaver Creek near Grimes, IA—Continued

SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1961 - 2012	
Annual total	73,217.9		26,481.72			
Annual mean	201		72.4		231	
Highest annual mean					711	2010
Lowest annual mean					17.3	1981
Highest daily mean	1,470	Jun 14	1,020	May 7	11,500	Jul 10, 1993
Lowest daily mean	3.0	Oct 10	0.50	Sep 26	0.00	Sep 8, 1970 [a]
Annual seven-day minimum	3.6	Oct 5	0.88	Sep 24	0.00	Oct 7, 1971
Maximum peak flow			1,070	May 7	14,300	Jul 10, 1993
Maximum peak stage			7.58	May 7	16.58	Jul 10, 1993
Instantaneous low flow			0.10	Sep 12 [b]		
Annual runoff (ac-ft)	145,200		52,530		167,300	
Annual runoff (cfsm)	0.560		0.202		0.645	
Annual runoff (inches)	7.61		2.75		8.76	
10 percent exceeds	596		192		584	
50 percent exceeds	83		21		80	
90 percent exceeds	7.9		1.2		2.7	

[a] Many days during 1970, 1971, 1977.
[b] Also Sep 13, 26.



05481950 Beaver Creek near Grimes, IA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 2008, 2012.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

[N, nitrogen; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; °C, degrees Celsius]

Sample date-time	Temperature, air, °C (00020)	Discharge, instantaneous, ft³/s (00061)	Temperature, water, °C (00010)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrite, water, filtered, mg/L as N (00613)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L as P (00665)	Total nitrogen, water, unfiltered, analytically determined, mg/L (62855)
08-21-2012 0900	22.7	1.2	18.6	0.033	7.49	0.064	0.888	0.985	8.34