Water-Data Report 2007

05495500 BEAR CREEK NEAR MARCELLINE, IL

Upper Mississippi-Salt Basin
Bear-Wyaconda Subbasin

LOCATION.--Lat 40°08′34″, long 91°20′14″ referenced to North American Datum of 1927, in sec.20, T.2 N., R.8 W., Adams County, IL, Hydrologic Unit 07110001, on right downstream side of bridge on County Road 900 E, 0.9 mi downstream from Grindstone Creek, 2.2 mi northeast of Marcelline, 3.8 mi upstream from State Highway 96, and at mile 12.3.

DRAINAGE AREA.--349 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.—
SURFACE-WATER DISCHARGE AND STAGE
DISCHARGE: March 1944 to current year.
STAGE: Water years 1994 to current year.
SURFACE-WATER QUALITY
CHEMICAL: Water years 1978-91.

REVISED RECORDS.-- WSP 1308: 1944-45(M), 1948(M). WDR IL-75-1: Drainage area. WDR IL-94-1: 1991.

GAGE.-- Water-stage recorder, phone telemeter, and crest-stage gage. Datum of gage is 504.52 ft above NGVD of 1929 (504.31 ft NAVD 1988). Prior to June 24, 1949, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.—
SURFACE-WATER DISCHARGE AND STAGE: Maximum discharge, 35,500 ft^3/s, May 8, 1996, gage height, 28.36 ft; maximum gage height, 28.38 ft, Mar. 4, 1985; no flow for many days in 1953-56, 1962-64, 1976-77, 1988, and part of each day Aug. 17-19, 1989.

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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	e0.28	e0.26	207	21	e9.0	e500	786	78	9.9	18	0.11	0.28
2	e0.26	e0.25	45	25	e8.0	e2,500	319	65	9.8	10	0.10	0.22
3	e0.24	e0.25	24	18	e7.4	e1,000	275	59	13	6.4	0.10	0.20
4	e0.23	e0.23	14	14	e6.9	e500	323	218	12	5.3	0.10	0.18
5	e0.22	e0.21	9.7	50	e6.4	e250	153	310	11	3.9	0.10	0.20
6	e0.21	e0.21	7.9	97	e6.0	e150	103	122	11	2.9	0.10	0.20
7	e0.20	e0.21	6.8	46	e5.7	e90	82	95	12	2.4	0.10	0.21
8	e0.20	e0.20	5.3	28	e5.4	e70	71	88	10	2.0	0.13	0.20
9	e0.23	0.20	4.6	18	e5.0	e60	65	59	8.8	1.8	0.27	0.20
10	e0.30	0.98	4.3	14	e4.7	e140	58	47	8.9	1.7	0.16	0.20
11	e0.40	1.8	6.5	12	e4.5	e200	317	40	8.9	1.5	0.12	0.20
12	e0.30	1.2	38	12	e4.4	e150	587	34	8.1	1.2	0.12	0.17
13	e0.24	0.98	72	11	e4.2	65	246	28	7.2	0.84	0.12	0.17
14	e0.20	0.86	58	12	e3.9	67	151	25	6.3	0.47	0.11	0.16
15	e0.17	0.67	28	38	e3.7	59	137	24	5.8	0.41	0.10	0.15
16	e0.18	0.49	17	42	e3.6	48	108	24	6.2	0.57	0.15	0.17
17	e0.18	0.40	12	36	e4.1	37	88	21	5.9	0.97	0.14	0.18
18	e0.60	0.32	8.9	22	e5.0	32	77	18	5.4	1.0	0.10	0.20
19	e0.50	0.32	6.7	17	e6.3	33	68	15	5.2	1.2	0.21	0.20
20	e0.42	0.30	5.8	14	e40	34	58	13	4.6	0.95	0.29	0.20
21	e0.36	0.25	23	13	e200	43	52	12	4.0	0.71	0.46	0.20
22	e0.27	0.26	54	13	e400	56	47	10	3.7	0.61	0.41	0.20
23	e0.25	0.32	47	12	e300	222	43	9.0	20	0.66	0.42	0.20
24	e0.25	0.32	23	12	e200	414	41	8.3	116	0.54	1.0	0.20
25	e0.26	0.32	16	11	e150	185	357	7.6	57	0.42	1.2	0.34
26	e0.27	0.32	12	11	e130	118	685	7.8	22	0.48	4.3	0.36
27	e0.26	0.34	9.2	e14	e110	155	620	10	12	0.47	12	0.32
28	e0.42	0.40	7.5	e16	e100	126	261	15	11	0.28	4.2	0.31
29	e0.36	12	6.0	e17	---	86	145	13	158	0.23	2.0	0.29
30	e0.32	312	4.9	e12	---	407	99	11	42	0.19	0.76	0.29
31	e0.28	---	10	e10	---	594	---	11	---	0.13	0.48	---
Total	8.86	336.87	794.1	688	1,734.2	8,391	6,422	1,497.7	615.7	68.23	29.96	6.60
Mean	0.29	11.2	25.6	22.2	61.9	271	214	48.3	20.5	2.20	0.97	0.22
Max	0.60	312	207	97	400	2,500	786	310	158	18	12	0.36
Min	0.17	0.20	4.3	10	3.6	32	41	7.6	3.7	0.13	0.10	0.15
Cfsm	0.00	0.03	0.07	0.06	0.18	0.78	0.61	0.14	0.06	0.01	0.00	0.00
In.	0.00	0.04	0.08	0.07	0.18	0.89	0.68	0.16	0.07	0.01	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	113	156	147	156	261	362	402	399	275	257	93.3	146
Max	1,658	2,172	1,485	956	1,237	1,370	2,163	2,679	2,251	1,967	541	1,954
(WY)	(1987)	(1986)	(1983)	(1946)	(1985)	(1985)	(1944)	(1995)	(1990)	(1993)	(1993)	(1970)
Min	0.00	0.00	0.07	0.31	0.68	3.83	9.02	3.26	0.72	0.24	0.17	0.00
(WY)	(1957)	(1957)	(1957)	(1977)	(1989)	(1956)	(1977)	(1989)	(1956)	(1988)	(1988)	(1953)

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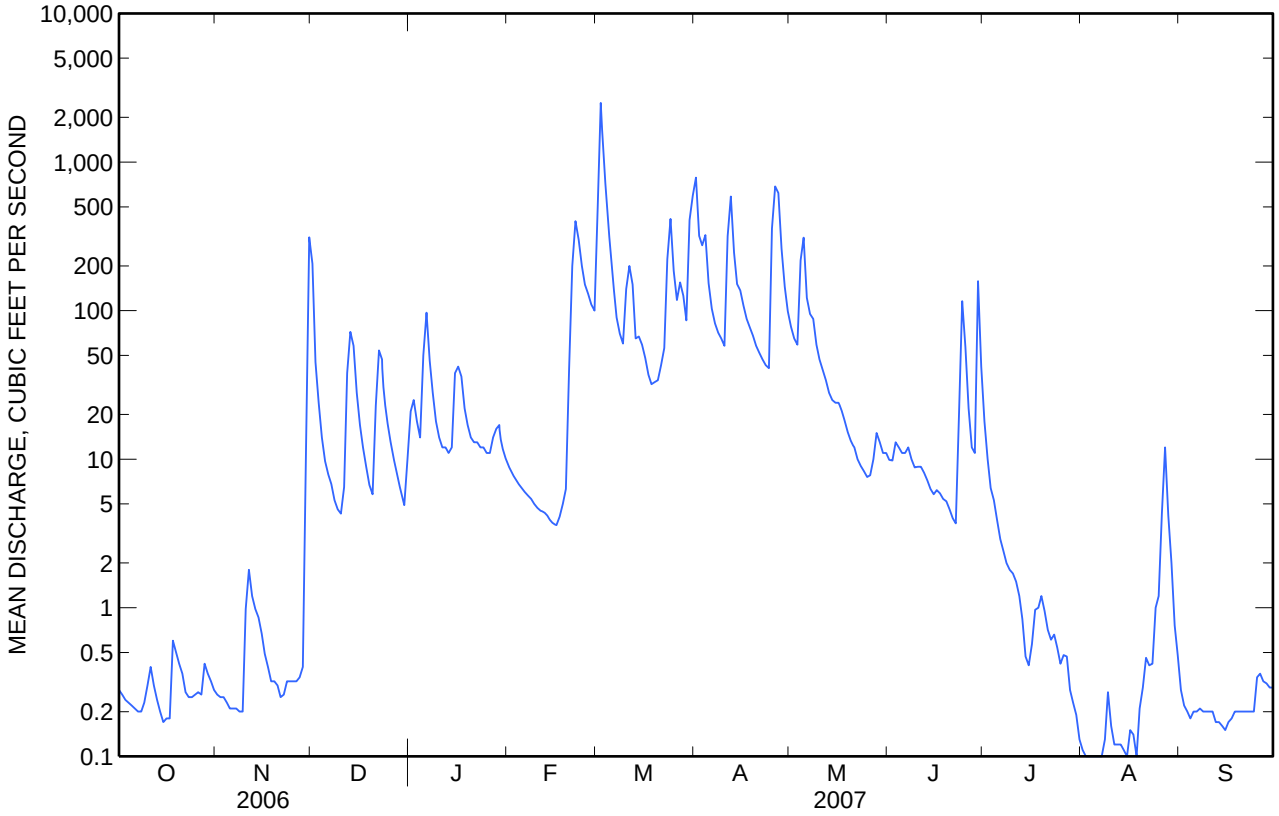
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1944 - 2007	
Annual total	17,066.23		20,593.22			
Annual mean	46.8		56.4		228	
Highest annual mean					711	1993
Lowest annual mean					12.5	1989
Highest daily mean	2,000	Mar 31	[A]2,500	Mar 2	21,300	May 12, 2002
Lowest daily mean	[B]0.12	C	0.10	C	0.00	D
Annual seven-day minimum	0.13	Aug 20	0.10	Aug 1	0.00	D
Maximum peak flow			[A]3,500	Mar 2	[E]35,500	May 8, 1996
Maximum peak stage			[F]14.88	Mar 2	28.38	Mar 4, 1985
Instantaneous low flow			0.10	G		
Annual runoff (cfsm)	0.134		0.162		0.654	
Annual runoff (inches)	1.82		2.20		8.89	
10 percent exceeds	75		150		411	
50 percent exceeds	8.8		7.2		23	
90 percent exceeds	0.18		0.20		1.1	

[A] Estimated due to backwater from ice.
[B] Estimated.
[C] Several days.
[D] Many occurences in several years.
[E] Gage height, 28.36 ft.
[F] Ice jam.
[G] Many days.



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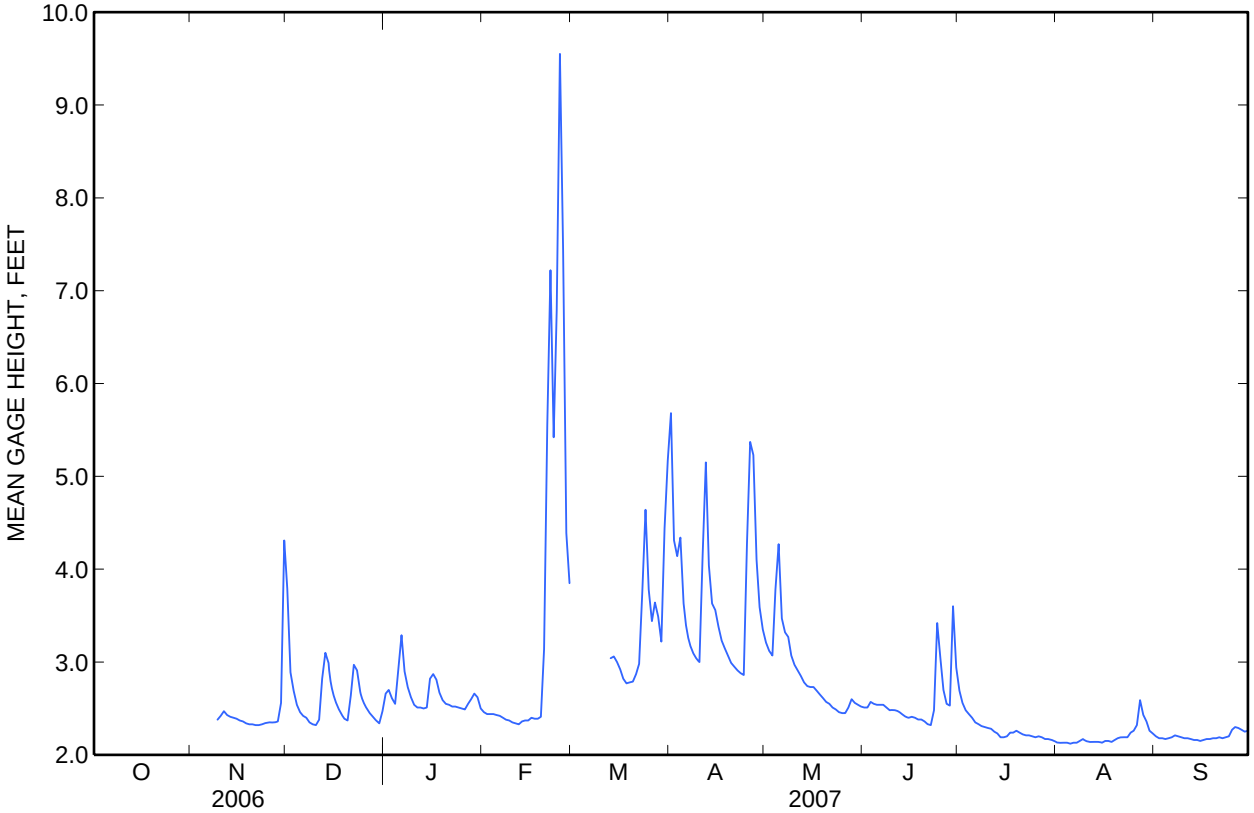
GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	---	---	3.79	2.66	2.46	---	5.68	3.21	2.51	2.69	2.13	2.20
2	---	---	2.89	2.70	2.44	---	4.31	3.12	2.51	2.56	2.13	2.18
3	---	---	2.69	2.61	2.44	---	4.14	3.07	2.57	2.48	2.13	2.18
4	---	---	2.54	2.55	2.44	---	4.34	3.78	2.55	2.44	2.13	2.17
5	---	---	2.46	2.92	2.43	---	3.63	4.27	2.54	2.40	2.12	2.18
6	---	---	2.42	3.29	2.42	---	3.34	3.47	2.54	2.35	2.13	2.19
7	---	---	2.40	2.90	2.40	---	3.19	3.32	2.54	2.33	2.13	2.21
8	---	---	2.35	2.73	2.38	---	3.10	3.27	2.51	2.31	2.15	2.20
9	---	2.38	2.33	2.62	2.37	---	3.04	3.07	2.48	2.30	2.17	2.19
10	---	2.42	2.32	2.54	2.35	---	3.00	2.97	2.48	2.29	2.15	2.18
11	---	2.47	2.38	2.51	2.34	---	4.15	2.91	2.48	2.28	2.14	2.18
12	---	2.43	2.82	2.51	2.33	---	5.15	2.85	2.46	2.25	2.14	2.17
13	---	2.41	3.10	2.50	2.36	3.04	4.04	2.78	2.44	2.23	2.14	2.16
14	---	2.40	2.99	2.51	2.37	3.06	3.63	2.74	2.41	2.19	2.14	2.16
15	---	2.39	2.73	2.82	2.37	3.00	3.56	2.73	2.40	2.19	2.13	2.15
16	---	2.37	2.59	2.87	2.40	2.92	3.38	2.73	2.41	2.20	2.15	2.16
17	---	2.36	2.51	2.81	2.39	2.82	3.23	2.69	2.40	2.24	2.15	2.17
18	---	2.34	2.45	2.67	2.39	2.77	3.15	2.65	2.38	2.24	2.14	2.17
19	---	2.33	2.39	2.59	2.41	2.78	3.07	2.61	2.38	2.26	2.16	2.18
20	---	2.33	2.37	2.55	3.14	2.79	2.99	2.57	2.36	2.24	2.18	2.18
21	---	2.32	2.64	2.54	5.55	2.87	2.95	2.55	2.33	2.22	2.19	2.19
22	---	2.32	2.97	2.52	7.22	2.98	2.91	2.51	2.32	2.21	2.19	2.18
23	---	2.33	2.91	2.52	5.42	3.76	2.88	2.49	2.48	2.21	2.19	2.19
24	---	2.34	2.68	2.51	6.79	4.64	2.86	2.46	3.42	2.20	2.24	2.20
25	---	2.35	2.57	2.50	9.55	3.78	4.27	2.45	3.04	2.19	2.26	2.27
26	---	2.35	2.50	2.49	7.43	3.44	5.37	2.45	2.70	2.20	2.32	2.30
27	---	2.35	2.45	2.55	4.39	3.64	5.23	2.51	2.55	2.19	2.59	2.29
28	---	2.36	2.41	2.60	3.85	3.49	4.10	2.60	2.53	2.17	2.43	2.27
29	---	2.56	2.37	2.66	---	3.22	3.59	2.56	3.60	2.17	2.36	2.25
30	---	4.31	2.34	2.62	---	4.44	3.35	2.54	2.94	2.16	2.26	2.26
31	---	---	2.47	2.50	---	5.17	---	2.52	---	2.15	2.23	---
Mean	---	---	2.61	2.64	3.53	---	3.72	2.85	2.58	2.28	2.20	2.20
Max	---	---	3.79	3.29	9.55	---	5.68	4.27	3.60	2.69	2.59	2.30
Min	---	---	2.32	2.49	2.33	---	2.86	2.45	2.32	2.15	2.12	2.15

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