Water-Data Report 2007

05580000 KICKAPOO CREEK AT WAYNESVILLE, IL

Lower Illinois Basin
Salt Subbasin

LOCATION.--Lat 40°15′17″, long 89°07′45″ referenced to North American Datum of 1927, in NW ¼ SW ¼ SW ¼ sec.20, T.21 N., R.1 E., De Witt County, IL, Hydrologic Unit 07130009, on left upstream side of bridge on Waynesville Road, 0.5 mi downstream from Rock Creek, 0.7 mi north of Waynesville, and at mile 25.3.

DRAINAGE AREA.--227 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.—
SURFACE-WATER DISCHARGE AND STAGE
DISCHARGE: January 1948 to current year.
STAGE: Water years 1994 to current year.
SURFACE-WATER QUALITY
CHEMICAL: Water years 1978-91.
BIOLOGICAL
ALGAE: Water year 1997.
BENTHIC MACROINVERTEBRATES: Water year 1997.

REVISED RECORDS.--WSP 1175: 1948-49.

GAGE.--Water-stage recorder, phone telemeter, and crest-stage gage. Datum of gage is 620.24 ft above NGVD of 1929 (U.S. Army Corps of Engineers bench mark) (620.01 ft NAVD 1988). Prior to Sept. 8, 1970, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diurnal fluctuation of low flows caused by City of Heyworth pumping station 10 mi. upstream at highway 136. Diurnal fluctuations are also caused by a sewage treatment plant on Little Kickapoo Creek.

EXTREMES FOR PERIOD OF RECORD.--
SURFACE-WATER DISCHARGE AND STAGE: Maximum discharge, 24,600 ft^3/s, Aug. 15, 1981, gage height, 16.91 ft; no flow Sept. 15, 28, 29, 1988.

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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	36	e50	e1,130	713	e175	1,770	1,680	424	228	327	19	6.9
2	35	e38	e1,000	541	e165	3,540	965	364	141	233	17	7.0
3	32	e37	e800	453	e155	794	714	322	118	177	16	6.6
4	32	e37	e650	438	e145	526	591	307	104	145	15	8.9
5	30	e36	503	1,010	e135	437	482	288	91	127	15	12
6	e27	e35	435	814	e130	397	413	239	80	100	15	7.8
7	e24	e35	362	617	e125	337	352	220	76	86	14	17
8	e23	e35	293	518	e120	291	311	208	69	80	14	13
9	e23	e33	279	437	e115	289	284	194	62	73	13	11
10	e24	e32	253	370	e112	394	275	182	59	66	12	9.7
11	e66	e120	280	356	e110	392	338	174	58	57	12	11
12	e52	e54	1,010	331	e105	332	382	153	55	49	12	15
13	e40	e50	1,120	1,010	e120	321	318	139	52	45	11	8.5
14	e33	e58	809	960	e140	307	302	142	50	41	11	6.3
15	e28	e70	629	1,950	e110	263	297	144	48	38	11	5.7
16	e36	e171	509	1,370	e125	222	271	145	45	34	12	6.5
17	e320	e110	429	764	e110	201	258	123	42	51	12	6.0
18	e110	e80	369	614	e95	183	246	109	46	90	12	5.6
19	e85	e70	321	505	e105	215	224	107	52	53	11	4.6
20	e68	e62	302	426	e120	240	197	106	51	46	17	4.9
21	e56	e56	803	391	e140	218	179	101	43	36	18	5.7
22	e66	e52	1,350	358	e170	212	174	93	58	31	14	5.4
23	e52	e49	1,090	317	e300	e600	167	84	140	32	11	5.0
24	e47	e48	754	291	534	e1,300	154	80	275	36	9.8	5.0
25	e41	e46	613	260	2,940	e900	590	84	157	32	12	e5.4
26	e50	e43	512	252	2,610	e700	1,350	91	156	29	17	e5.2
27	e57	e43	438	275	701	e550	1,170	93	214	31	11	e5.1
28	e48	e43	385	236	503	437	786	86	540	35	9.3	e5.0
29	e46	e43	336	e220	---	549	603	79	840	25	9.0	4.9
30	e44	e280	307	e200	---	854	497	73	466	23	8.2	4.7
31	e53	---	429	e185	---	1,500	---	105	---	21	7.4	---
Total	1,684	1,916	18,500	17,182	10,415	19,271	14,570	5,059	4,416	2,249	397.7	225.4
Mean	54.3	63.9	597	554	372	622	486	163	147	72.5	12.8	7.51
Max	320	280	1,350	1,950	2,940	3,540	1,680	424	840	327	19	17
Min	23	32	253	185	95	183	154	73	42	21	7.4	4.6
Cfsm	0.24	0.28	2.63	2.44	1.64	2.74	2.14	0.72	0.65	0.32	0.06	0.03
In.	0.28	0.31	3.03	2.82	1.71	3.16	2.39	0.83	0.72	0.37	0.07	0.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	53.4	92.6	160	177	217	287	324	271	227	125	74.0	55.5
Max	523	877	954	1,042	731	1,294	1,020	976	1,100	713	1,540	1,028
(WY)	(1978)	(1986)	(1991)	(2005)	(1959)	(1979)	(1973)	(1995)	(1974)	(1993)	(1981)	(1993)
Min	0.31	2.07	0.79	3.69	3.76	19.1	47.7	32.1	9.69	2.40	1.33	0.70
(WY)	(1964)	(1964)	(1964)	(1977)	(1963)	(2000)	(1956)	(1963)	(1963)	(1988)	(1963)	(1988)

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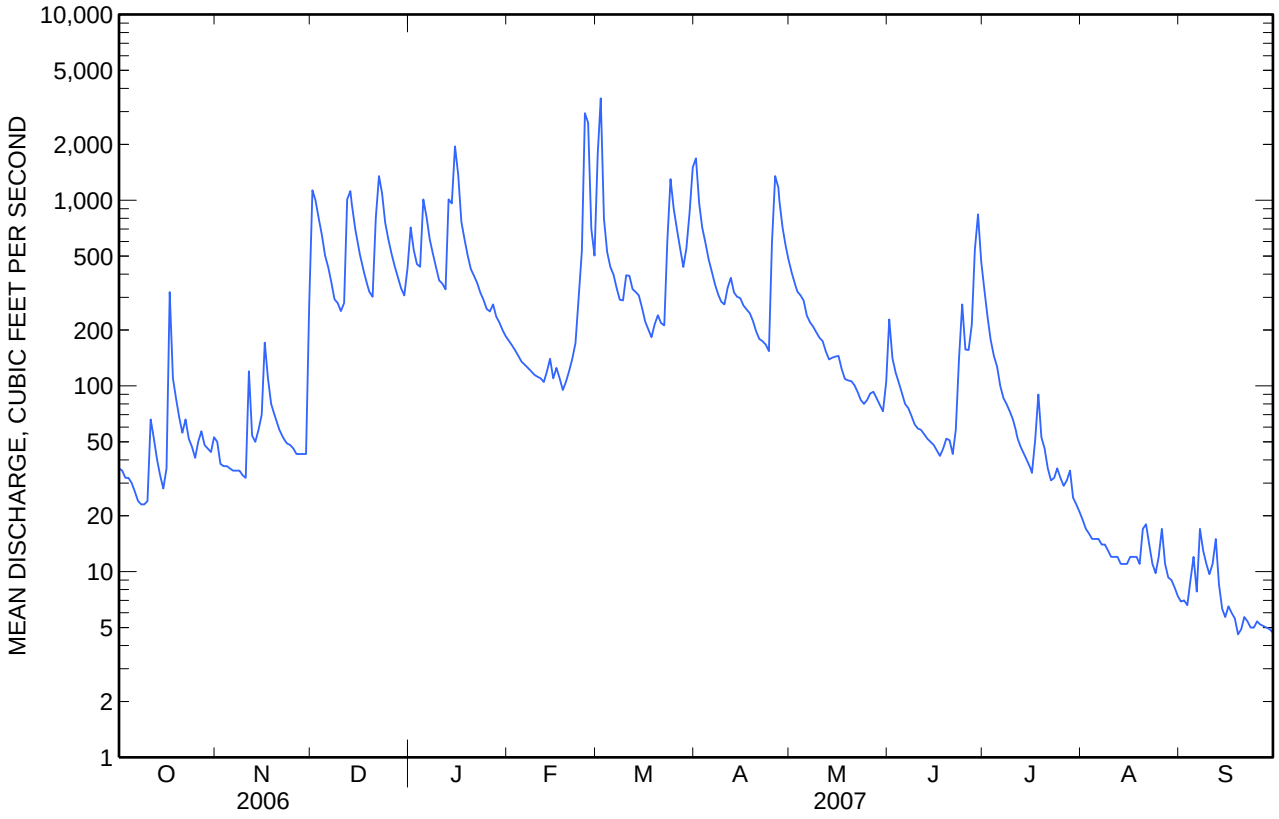
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1948 - 2007	
Annual total	56,162		95,885.1			
Annual mean	154		263		172	
Highest annual mean					518	1993
Lowest annual mean					38.5	1954
Highest daily mean	1,350	Dec 22	3,540	Mar 2	16,100	Aug 15, 1981
Lowest daily mean	20	Jan 11	4.6	Sep 19	0.00	A
Annual seven-day minimum	23	Jan 6	5.0	Sep 24	0.20	Oct 21, 1963
Maximum peak flow			4,950	Mar 2	24,600	Aug 15, 1981
Maximum peak stage			13.64	Mar 2	16.91	Aug 15, 1981
Instantaneous low flow			3.5	Sep 20		
Annual runoff (cfsm)	0.678		1.16		0.759	
Annual runoff (inches)	9.20		15.71		10.32	
10 percent exceeds	373		670		400	
50 percent exceeds	67		110		63	
90 percent exceeds	35		11		5.1	

[A] Sept. 15, 28, and 29, 1988.



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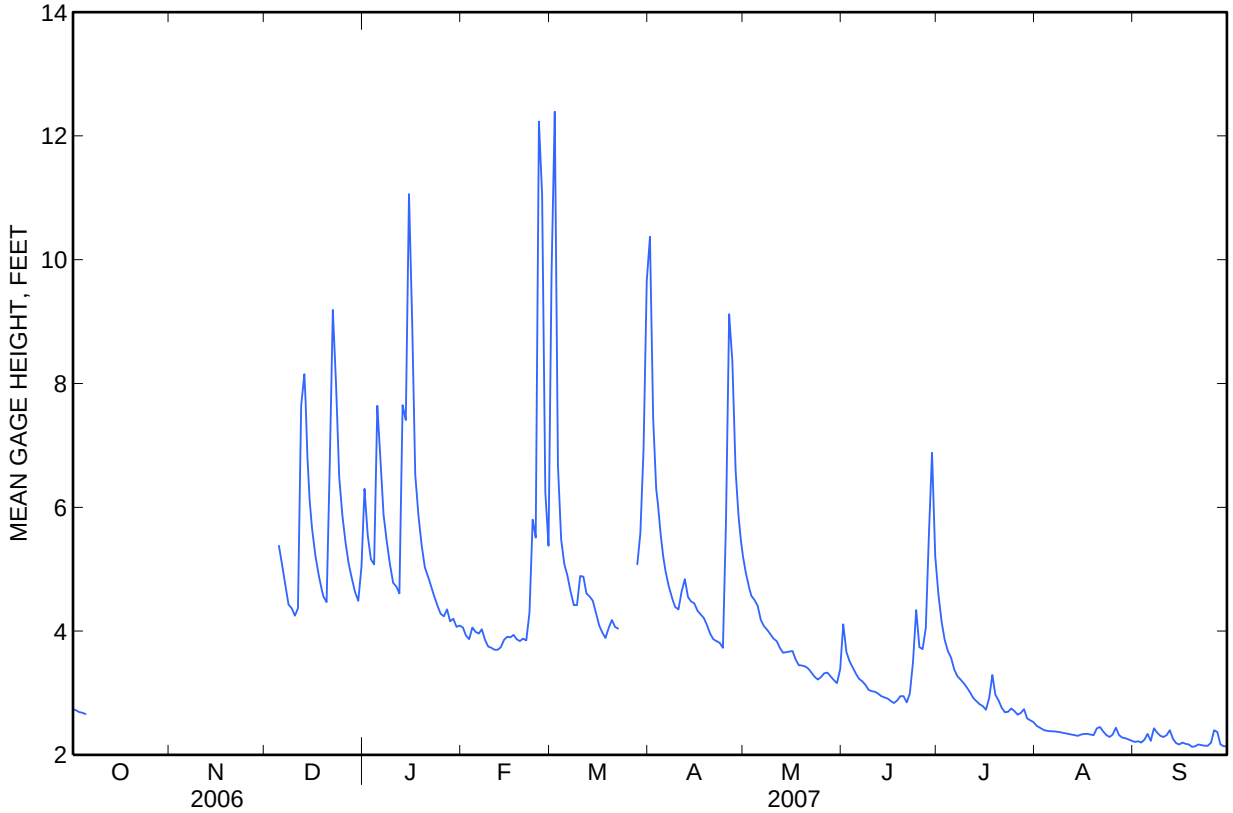
GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2.74	---	---	6.30	4.06	9.78	10.37	5.02	4.11	4.59	2.47	2.21
2	2.72	---	---	5.55	3.93	12.39	7.44	4.76	3.66	4.15	2.44	2.22
3	2.69	---	---	5.16	3.87	6.67	6.30	4.57	3.51	3.86	2.41	2.20
4	2.68	---	---	5.08	4.06	5.48	5.77	4.50	3.41	3.68	2.39	2.25
5	2.66	---	5.38	7.64	3.99	5.08	5.29	4.41	3.31	3.57	2.39	2.34
6	---	---	5.07	6.75	3.96	4.90	4.97	4.18	3.23	3.38	2.38	2.23
7	---	---	4.75	5.88	4.03	4.64	4.70	4.08	3.19	3.27	2.38	2.43
8	---	---	4.43	5.45	3.86	4.42	4.52	4.02	3.13	3.22	2.37	2.36
9	---	---	4.37	5.08	3.75	4.42	4.39	3.95	3.05	3.16	2.36	2.31
10	---	---	4.25	4.78	3.73	4.89	4.35	3.88	3.03	3.09	2.35	2.29
11	---	---	4.37	4.72	3.70	4.88	4.64	3.84	3.02	3.01	2.34	2.32
12	---	---	7.64	4.61	3.70	4.61	4.84	3.73	2.99	2.92	2.33	2.40
13	---	---	8.15	7.65	3.74	4.56	4.55	3.65	2.95	2.87	2.32	2.26
14	---	---	6.73	7.41	3.86	4.49	4.48	3.66	2.93	2.82	2.31	2.19
15	---	---	5.93	11.06	3.91	4.29	4.45	3.67	2.91	2.79	2.33	2.17
16	---	---	5.41	8.98	3.90	4.09	4.33	3.68	2.87	2.73	2.34	2.20
17	---	---	5.05	6.53	3.94	3.98	4.27	3.54	2.84	2.92	2.34	2.18
18	---	---	4.78	5.87	3.87	3.89	4.21	3.45	2.88	3.29	2.33	2.17
19	---	---	4.56	5.39	3.84	4.05	4.10	3.44	2.95	2.97	2.32	2.13
20	---	---	4.47	5.03	3.88	4.18	3.96	3.43	2.95	2.88	2.43	2.14
21	---	---	6.72	4.88	3.85	4.07	3.87	3.39	2.85	2.76	2.45	2.17
22	---	---	9.19	4.73	4.30	4.04	3.84	3.33	2.99	2.69	2.38	2.16
23	---	---	7.99	4.55	5.80	---	3.81	3.26	3.50	2.70	2.32	2.15
24	---	---	6.48	4.42	5.51	---	3.73	3.22	4.34	2.75	2.29	2.15
25	---	---	5.86	4.28	12.23	---	5.75	3.26	3.74	2.71	2.33	2.20
26	---	---	5.42	4.24	11.05	---	9.12	3.32	3.71	2.65	2.44	2.40
27	---	---	5.09	4.35	6.25	---	8.36	3.33	4.05	2.68	2.32	2.37
28	---	---	4.85	4.16	5.38	5.08	6.62	3.27	5.53	2.74	2.28	2.17
29	---	---	4.63	4.20	---	5.58	5.82	3.21	6.88	2.59	2.27	2.14
30	---	---	4.49	4.07	---	6.94	5.35	3.16	5.21	2.56	2.25	2.14
31	---	---	5.04	4.09	---	9.66	---	3.39	---	2.53	2.23	---
Mean	---	---	---	5.58	4.71	---	5.27	3.73	3.52	3.05	2.35	2.23
Max	---	---	---	11.06	12.23	---	10.37	5.02	6.88	4.59	2.47	2.43
Min	---	---	---	4.07	3.70	---	3.73	3.16	2.84	2.53	2.23	2.13

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