Water-Data Report 2007

05584500 LA MOINE RIVER AT COLMAR, IL

Lower Illinois Basin
La Moine Subbasin

LOCATION.--Lat 40°19′49″, long 90°53′46″ referenced to North American Datum of 1927, in SE ¼ SW ¼ sec.18, T.4 N., R.4 W., McDonough County, IL, Hydrologic Unit 07130010, on right bank at downstream side of bridge on State Highway 61, 0.2 mi downstream from a railroad bridge, 1 mi southwest of Colmar, 1.8 mi upstream from Troublesome Creek, and at mile 61.8.

DRAINAGE AREA.--655 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.—
SURFACE-WATER DISCHARGE AND STAGE
DISCHARGE: October 1944 to current year.
STAGE: Water years 1994 to current year.
SURFACE-WATER QUALITY
CHEMICAL: Water years 1975-91 and 1998.
MISCELLANEOUS: Contaminants in streambed sediments, July 1997; contaminants in fish tissue, July 1997; streambank sediment size, October 1997; streambed sediment size, October 1997; water chemistry and chlorophyll-a in algae, June-September 2007.
BIOLOGICAL
ALGAE: Water years 1996-98.
BENTHIC MACROINVERTEBRATES: Water years 1996-98.
FISH: Water years 1997-98.
HABITAT: Water years 1996-98, 2003.

GAGE.--Water-stage recorder, U.S. Army Corps of Engineers satellite telemeter and crest-stage gage. Datum of gage is 491.53 ft above NGVD of 1929 (491.27 ft NAVD 1988). Prior to July 13, 1945, 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, 38,900 ft^3/s, Mar. 5, 1985, gage height, 26.61 ft; maximum gage height, 27.03 ft, Jan. 3, 1965, ice jam; no flow part of each day Dec. 8, 9, 12, 13, 17, 21, 1955, due to temporary dam upstream; no flow Oct. 19, 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	5.1	7.9	517	82	e76	2,090	1,910	649	222	330	26	16
2	5.3	7.8	218	92	e70	3,610	1,570	563	208	278	23	13
3	5.4	8.5	137	89	e65	3,020	1,050	490	199	238	21	12
4	5.4	9.3	129	77	e62	886	864	469	194	207	19	10
5	e4.8	9.5	80	169	e58	475	659	490	186	191	53	9.5
6	e4.4	9.5	52	356	e56	377	542	443	164	184	38	9.2
7	e4.2	9.7	38	305	e54	296	474	392	144	154	24	11
8	e4.0	10	35	211	e52	257	414	375	134	131	22	17
9	e4.5	10	32	171	e50	234	379	350	131	118	26	12
10	5.6	12	29	148	e49	240	348	325	114	154	35	16
11	5.9	17	30	123	e49	261	452	304	105	111	29	19
12	5.3	43	52	114	e48	267	924	281	106	96	30	13
13	4.7	30	154	119	e47	267	827	255	103	86	24	10
14	4.1	17	215	109	e44	269	632	236	94	73	18	9.1
15	3.6	15	202	162	e39	275	570	229	89	66	15	7.9
16	3.9	18	139	172	e35	267	490	237	86	59	14	7.5
17	5.3	13	107	219	e40	251	423	228	83	60	14	7.3
18	7.3	11	85	180	e46	226	387	201	79	88	12	7.2
19	17	8.1	73	212	e54	211	351	185	82	108	12	7.2
20	6.4	6.5	62	169	e80	208	312	182	75	85	12	7.3
21	4.5	7.3	66	147	e200	216	284	183	74	72	13	7.0
22	6.5	7.6	119	131	e500	245	267	172	996	64	14	6.6
23	6.2	7.7	157	131	e600	607	259	161	3,630	50	14	6.2
24	7.1	7.8	147	125	e600	1,490	253	151	4,510	43	19	6.2
25	7.8	7.7	115	112	e2,000	1,190	1,330	142	6,080	39	344	6.2
26	7.2	7.8	95	107	e2,300	894	1,860	141	3,530	35	328	6.4
27	6.7	8.7	86	95	e3,500	707	2,210	198	954	34	147	6.1
28	8.0	8.3	80	e100	1,950	587	1,530	345	619	34	66	7.7
29	9.4	15	74	e105	---	497	1,030	334	487	35	39	6.8
30	11	384	69	e92	---	584	782	274	393	35	27	6.0
31	9.1	---	69	e82	---	1,430	---	237	---	30	20	---
Total	195.7	734.7	3,463	4,506	12,724	22,434	23,383	9,222	23,871	3,288	1,498	286.4
Mean	6.31	24.5	112	145	454	724	779	297	796	106	48.3	9.55
Max	17	384	517	356	3,500	3,610	2,210	649	6,080	330	344	19
Min	3.6	6.5	29	77	35	208	253	141	74	30	12	6.0
Cfsm	0.01	0.04	0.17	0.22	0.69	1.10	1.19	0.45	1.21	0.16	0.07	0.01
In.	0.01	0.04	0.20	0.26	0.72	1.27	1.33	0.52	1.36	0.19	0.09	0.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	258	272	281	346	530	690	806	755	688	432	161	242
Max	3,502	2,693	2,686	2,077	2,384	3,734	3,193	4,471	3,081	4,194	899	4,024
(WY)	(1987)	(1986)	(1983)	(1974)	(2001)	(1985)	(1973)	(1995)	(1974)	(1993)	(1993)	(1961)
Min	0.67	2.61	2.54	3.33	5.70	30.5	22.9	20.8	21.1	3.89	2.82	1.75
(WY)	(1989)	(1990)	(1990)	(1956)	(1989)	(1956)	(1956)	(1956)	(1988)	(1988)	(1988)	(1988)

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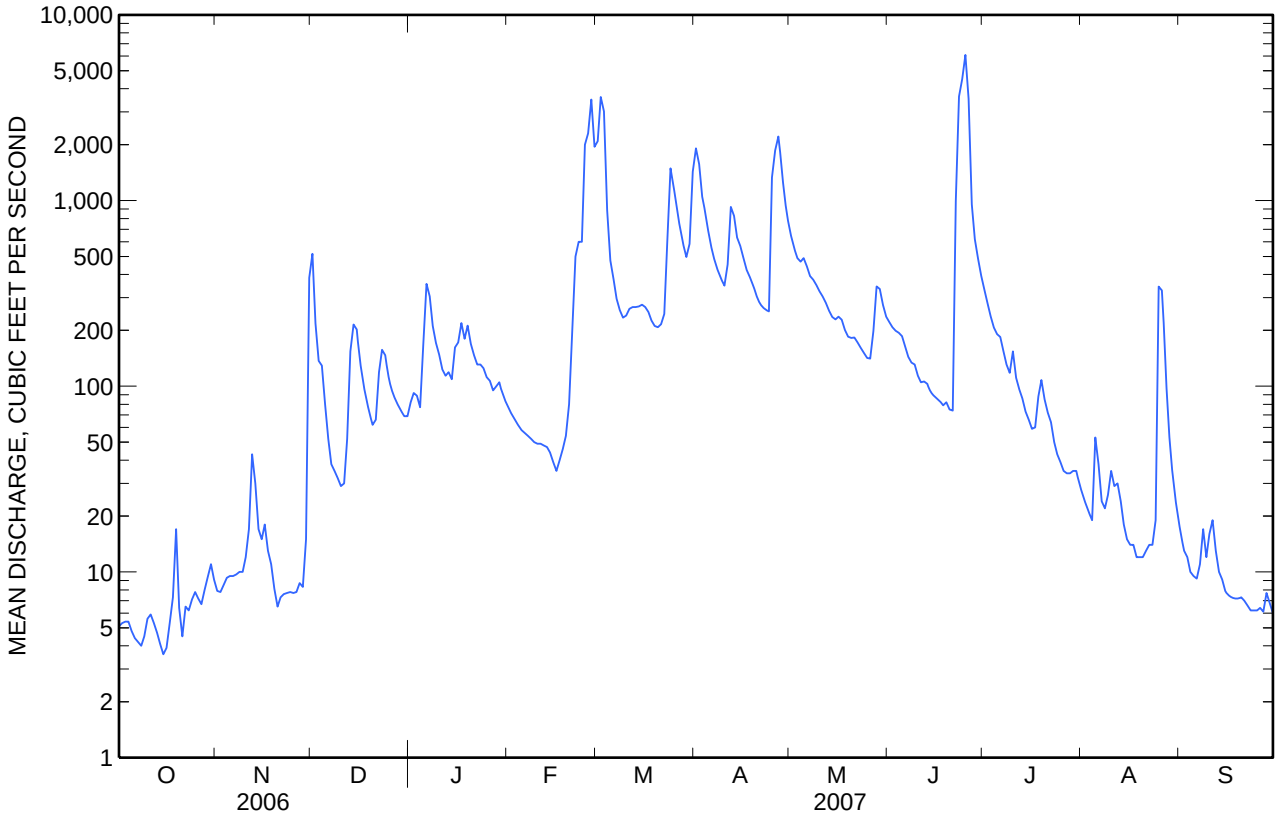
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1945 - 2007	
Annual total	46,443.3		105,605.8			
Annual mean	127		289		454	
Highest annual mean					1,347	1993
Lowest annual mean					23.1	1989
Highest daily mean	3,510	Apr 7	6,080	Jun 25	35,600	Mar 5, 1985
Lowest daily mean	3.6	Oct 15	3.6	Oct 15	0.00	Oct 19, 1988
Annual seven-day minimum	4.5	Sep 24	4.7	Oct 3	0.12	Oct 16, 1988
Maximum peak flow			6,450	Jun 25	[A]38,900	Mar 5, 1985
Maximum peak stage			21.42	Jun 25	[B]27.03	Jan 3, 1965
Instantaneous low flow			3.4	Oct 15,16		
Annual runoff (cfsm)	0.194		0.442		0.693	
Annual runoff (inches)	2.64		6.00		9.42	
10 percent exceeds	270		603		1,000	
50 percent exceeds	29		89		125	
90 percent exceeds	5.6		7.3		10	

[A] Gage height, 26.61 ft.
[B] Ice jam.



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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	1.91	2.39	7.17	3.65	3.68	14.37	14.07	7.71	4.71	5.95	2.85	2.63
2	1.93	2.38	5.03	3.78	3.63	19.20	12.38	7.19	4.59	5.56	2.80	2.56
3	1.93	2.42	4.32	3.74	3.67	17.76	9.93	6.72	4.51	5.25	2.75	2.53
4	1.94	2.45	4.24	3.58	3.59	9.08	9.02	6.58	4.47	4.98	2.71	2.49
5	1.94	2.46	3.63	4.58	3.44	6.92	7.99	6.72	4.40	4.84	3.25	2.46
6	1.95	2.46	3.21	6.13	3.31	6.27	7.33	6.41	4.20	4.77	3.06	2.45
7	1.95	2.47	2.99	5.76	3.26	5.70	6.91	6.04	3.99	4.50	2.81	2.51
8	1.95	2.49	2.93	5.01	3.33	5.40	6.53	5.92	3.90	4.26	2.76	2.65
9	1.95	2.49	2.88	4.66	3.38	5.21	6.29	5.73	3.86	4.13	2.86	2.54
10	1.95	2.54	2.81	4.44	3.42	5.26	6.08	5.55	3.68	4.49	3.03	2.63
11	2.00	2.65	2.83	4.17	3.45	5.43	6.74	5.38	3.59	4.05	2.90	2.70
12	2.00	3.15	3.20	4.07	3.50	5.48	9.31	5.19	3.59	3.88	2.93	2.57
13	1.99	2.92	4.49	4.12	3.56	5.48	8.84	4.98	3.55	3.76	2.80	2.49
14	1.99	2.66	5.04	4.01	3.59	5.49	7.84	4.83	3.46	3.59	2.69	2.44
15	2.00	2.62	4.93	4.56	3.60	5.54	7.49	4.77	3.39	3.49	2.61	2.39
16	2.07	2.68	4.35	4.67	3.54	5.48	7.01	4.84	3.35	3.40	2.59	2.37
17	2.21	2.57	3.98	5.08	3.56	5.35	6.59	4.76	3.31	3.42	2.58	2.35
18	2.31	2.50	3.70	4.74	3.63	5.15	6.35	4.53	3.27	3.78	2.55	2.35
19	2.65	2.39	3.51	5.03	3.70	5.02	6.10	4.39	3.30	4.02	2.54	2.35
20	2.29	2.30	3.36	4.64	3.97	4.99	5.82	4.36	3.22	3.75	2.54	2.35
21	2.15	2.36	3.41	4.42	6.90	5.06	5.61	4.37	3.20	3.58	2.56	2.34
22	2.30	2.38	4.12	4.27	10.70	5.30	5.48	4.27	8.78	3.47	2.58	2.31
23	2.28	2.38	4.53	4.26	10.94	7.49	5.42	4.16	19.19	3.27	2.58	2.29
24	2.34	2.39	4.43	4.20	11.66	12.02	5.37	4.06	20.16	3.15	2.71	2.29
25	2.39	2.38	4.08	4.04	19.95	10.59	11.17	3.97	21.21	3.08	5.84	2.31
26	2.35	2.39	3.82	3.98	19.77	9.17	13.80	3.97	17.93	3.03	5.93	2.34
27	2.32	2.43	3.70	3.83	19.99	8.24	15.60	4.50	9.44	3.01	4.40	2.33
28	2.39	2.41	3.62	4.18	14.06	7.59	12.20	5.69	7.77	3.00	3.49	2.44
29	2.46	2.59	3.53	4.10	---	7.06	9.71	5.61	6.99	3.02	3.09	2.41
30	2.50	6.02	3.46	4.02	---	7.51	8.45	5.13	6.38	3.01	2.86	2.38
31	2.44	---	3.46	3.77	---	11.71	---	4.83	---	2.93	2.73	---
Mean	2.16	2.62	3.90	4.37	6.60	7.75	8.38	5.26	6.58	3.88	3.04	2.44
Max	2.65	6.02	7.17	6.13	19.99	19.20	15.60	7.71	21.21	5.95	5.93	2.70
Min	1.91	2.30	2.81	3.58	3.26	4.99	5.37	3.97	3.20	2.93	2.54	2.29

	Water Year 2007
Mean	4.73
Max	21.21
Min	1.91

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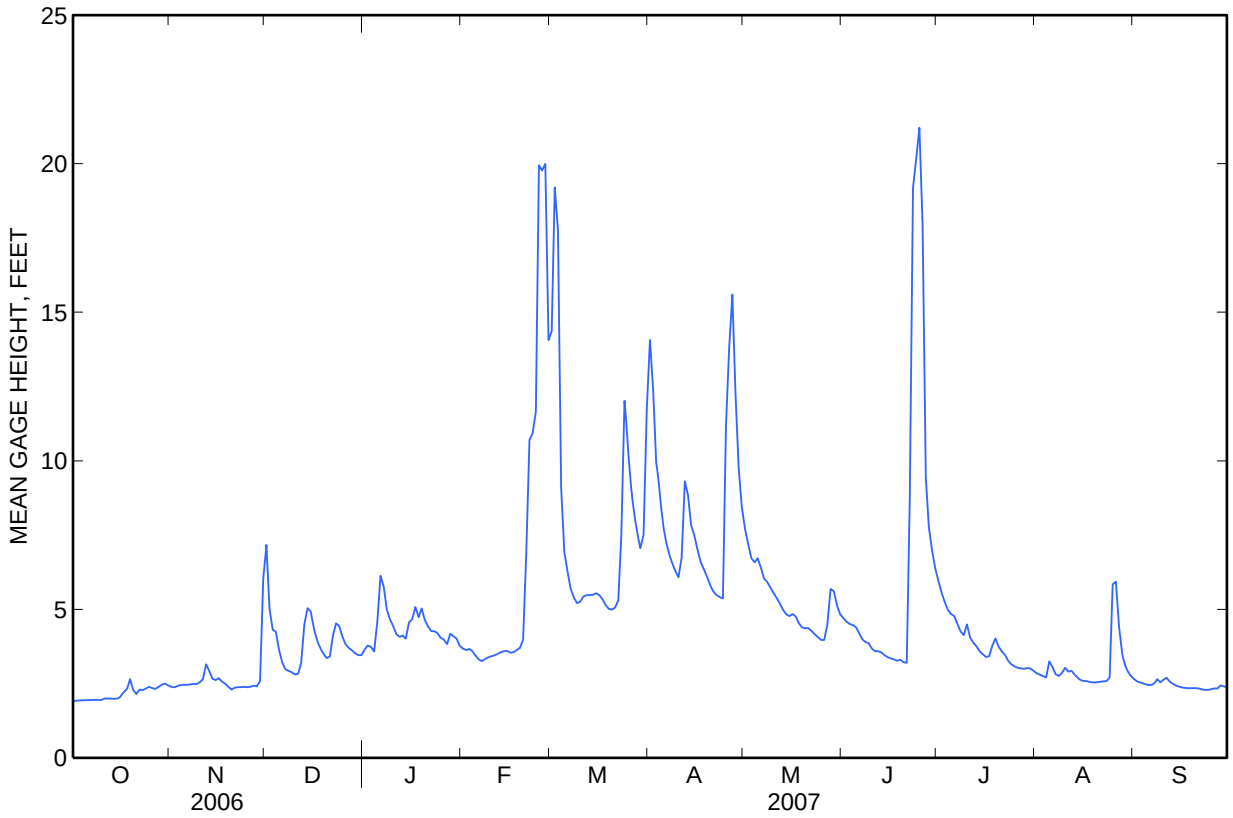

WATER-QUALITY RECORDS

PERIOD OF RECORD.—
SURFACE-WATER QUALITY
MISCELLANEOUS: Water chemistry and chlorophyll-a in algae, June-September 2007.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
Part 1 of 2
[Remark codes: <, less than.]

Date	Time	Drainage area, mi2 (81024)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite water, fltrd, mg/L as N (00613)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Nitrate + nitrite water fltrd, mg/L as N (00631)	Total nitrogen, water, unfltrd mg/L (00600)	Total nitrogen, wat unf by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Chlorophyll a fluorometric method, corrctd µg/L (32209)	Chlorophyll a peripht FL meth corrctd mg/m2 (32242)	Sampling method, code (82398)
Jun													
13...	1145	655	<.020	.024	--	6.75	--	7.17	.065	.128	--	--	40
Jul													
09...	1030	655	<.100	--	--	7.44	7.9	--	--	.181	50.8	1.9	10
Sep													
06...	1045	655	<.100	--	.32	.274	.59	--	--	.155	23.0	16	10

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
Part 2 of 2
[Remark codes: <, less than.]

Date	Sampler type, code (84164)
Jun	
13...	3071
Jul	
09...	3071
Sep	
06...	3071