03338780 NORTH FORK VERMILION RIVER NEAR BISMARCK, IL

Wabash Basin
Vermilion Subbasin

LOCATION.--Lat 40°15′55″, long 87°38′34″ referenced to North American Datum of 1927, in SE ¼ NE ¼ sec.24, T.21 N., R.12 W., Vermilion County, IL, Hydrologic Unit 05120109, on left bank at downstream side of County Road 2750 N, 1.8 mi west of Bismarck, 1.9 mi downstream from Painter Creek, 6.6 mi downstream from Middle Branch of North Fork Vermilion River, and at mile 17.7.

DRAINAGE AREA.--262 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.—
SURFACE-WATER DISCHARGE AND STAGE
DISCHARGE: October 1988 to current year. June 1970 to September 1973, low-flow partial-record station.
STAGE: Water years 1994 to current year.
SURFACE-WATER QUALITY
CHEMICAL: Water years 1978-91.
DISSOLVED OXYGEN: Water years 2001-2003.
PH: Water years 2001-2003.
SPECIFIC CONDUCTANCE: Water years 2001-2003.
TURBIDITY: Water years 2001-2003.
WATER TEMPERATURE: Water years 2001-2003.

REVISED RECORDS.--WDR IL-98: 1997 (P).

GAGE.--Water-stage recorder, phone telemeter, and crest-stage gage. Datum of gage is 594 ft. above NGVD of 1929 (594 ft NAVD 1988), from topographic map.

REMARKS.--Records fair except those for Mar. 2 to Aug. 30 and estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--
SURFACE-WATER DISCHARGE AND STAGE: Maximum discharge, 20,100 ft^3/s, Mar. 11, 1990, gage height, 21.97 ft, on basis of contracted-opening measurement of peak flow, maximum gage height, 22.45 ft, Apr. 12, 1994, discharge, 20,100 ft^3/s; minimum, 2.3 ft^3/s, Sept. 9, 10, 16-19, 1991.

03338780 NORTH FORK VERMILION RIVER NEAR BISMARCK, IL—Continued

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	43	197	2,270	1,320	e175	e850	423	336	166	36	11	7.6
2	39	170	2,270	878	e165	2,660	358	293	148	33	10	7.3
3	126	151	1,000	639	e155	1,120	321	258	141	29	9.6	7.1
4	221	141	648	544	e145	511	296	242	136	28	10	6.8
5	151	135	473	934	e138	381	260	229	168	28	9.7	6.6
6	109	131	385	810	e131	326	243	207	162	26	9.5	6.7
7	89	130	318	596	e125	278	227	195	128	24	8.9	6.8
8	80	130	261	557	e121	259	212	195	111	22	8.6	8.9
9	73	123	258	472	e118	300	200	190	93	21	8.3	9.7
10	68	114	234	377	e115	482	192	180	85	24	8.1	9.2
11	73	162	222	337	e108	478	233	170	79	22	7.7	7.7
12	74	187	283	319	e102	358	484	159	71	20	7.1	7.9
13	63	157	519	1,510	e92	333	383	146	64	18	6.4	7.4
14	58	153	442	1,770	e82	341	337	140	61	17	6.9	7.1
15	54	153	356	3,070	e77	390	389	140	56	16	6.7	6.0
16	57	565	288	3,210	e74	311	359	152	51	16	7.9	6.5
17	822	1,450	263	1,210	e80	253	309	134	46	16	7.3	5.6
18	1,000	916	265	761	e85	220	279	124	42	22	7.1	5.8
19	575	600	258	574	e95	269	248	121	51	30	7.1	5.7
20	371	435	241	451	e102	431	223	120	53	24	23	5.6
21	273	345	699	394	e114	338	209	117	41	17	35	6.1
22	225	295	1,920	348	e125	301	201	111	45	15	20	5.8
23	187	263	2,460	303	e140	1,340	197	106	47	13	14	6.1
24	162	237	1,240	280	e190	2,740	183	101	53	12	13	5.8
25	143	221	815	254	e400	2,550	545	101	47	11	35	6.2
26	160	204	643	241	e1,280	1,290	1,150	101	41	12	40	7.9
27	313	191	497	257	e1,050	853	950	372	48	13	23	15
28	545	183	411	221	e750	713	679	326	46	15	18	8.7
29	392	179	347	e210	---	692	486	301	49	14	14	7.1
30	281	450	312	e198	---	588	391	232	43	12	9.8	6.5
31	239	---	753	e185	---	481	---	191	---	11	8.5	---
Total	7,066	8,768	21,351	23,230	6,334	22,437	10,967	5,790	2,372	617	411.2	217.2
Mean	228	292	689	749	226	724	366	187	79.1	19.9	13.3	7.24
Max	1,000	1,450	2,460	3,210	1,280	2,740	1,150	372	168	36	40	15
Min	39	114	222	185	74	220	183	101	41	11	6.4	5.6
Cfsm	0.87	1.12	2.63	2.86	0.86	2.76	1.40	0.71	0.30	0.08	0.05	0.03
In.	1.00	1.24	3.03	3.30	0.90	3.19	1.56	0.82	0.34	0.09	0.06	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2007, BY WATER YEAR (WY)

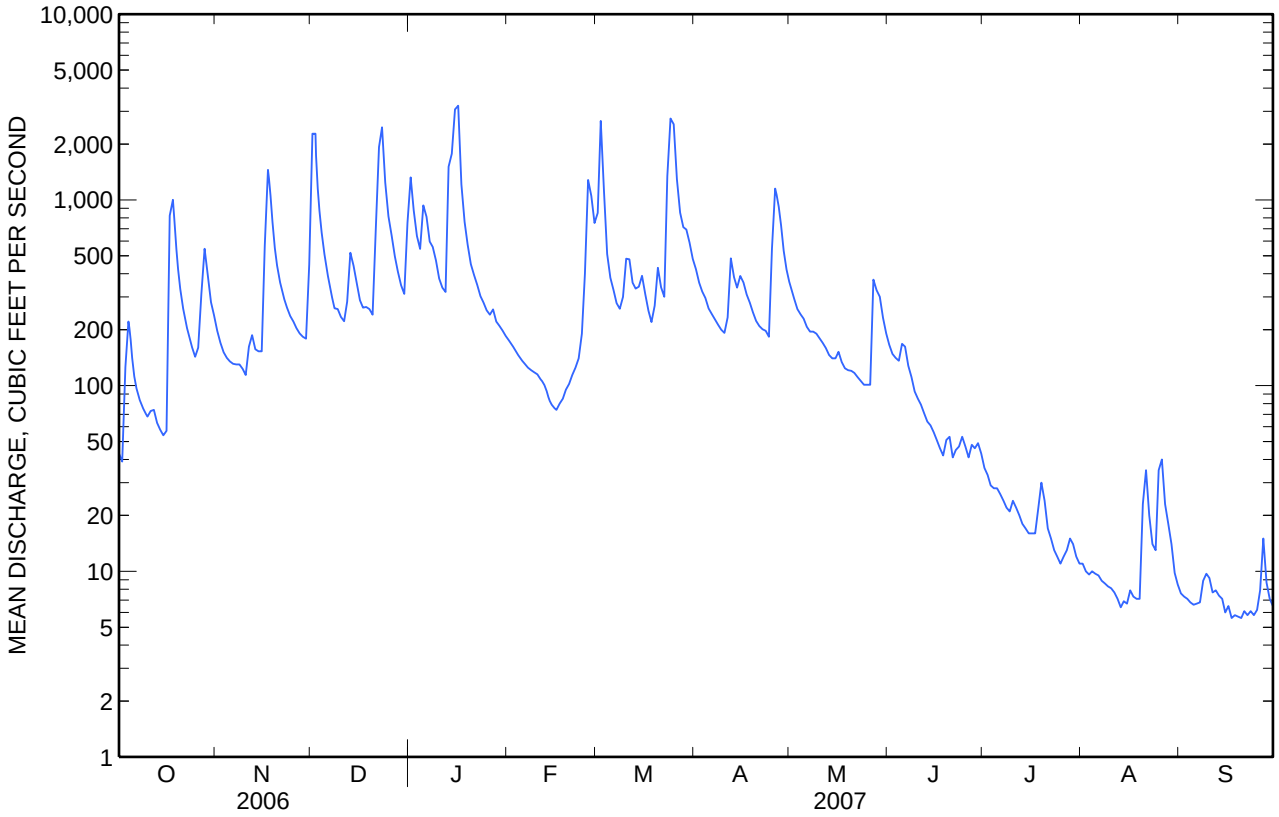
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	173	260	280	404	362	486	450	481	473	253	136	111
Max	1,127	1,162	1,160	1,528	917	1,063	1,728	1,033	2,063	1,281	1,118	902
(WY)	(2002)	(1993)	(1991)	(2005)	(2001)	(1990)	(1994)	(1998)	(2004)	(1993)	(2002)	(2003)
Min	6.73	9.68	13.8	13.4	45.8	59.2	47.6	96.9	79.1	16.3	6.74	3.68
(WY)	(1998)	(1998)	(2000)	(2000)	(2000)	(2000)	(2000)	(1992)	(2007)	(1991)	(1991)	(1991)

03338780 NORTH FORK VERMILION RIVER NEAR BISMARCK, IL—Continued

SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1989 - 2007	
Annual total	107,586		109,560.4			
Annual mean	295		300		322	
Highest annual mean					698	1993
Lowest annual mean					80.6	2000
Highest daily mean	2,460	Dec 23	3,210	Jan 16	14,500	Apr 12, 1994
Lowest daily mean	21	Sep 9,10	5.6	Sep 17,20	2.5	A
Annual seven-day minimum	25	Sep 5	5.8	Sep 17	2.7	Sep 15, 1991
Maximum peak flow			4,050	Jan 16	20,100	B
Maximum peak stage			13.33	Jan 16	22.45	Apr 12, 1994
Instantaneous low flow			5.1	Aug 13	2.3	C
Annual runoff (cfsm)	1.13		1.15		1.23	
Annual runoff (inches)	15.28		15.56		16.71	
10 percent exceeds	659		705		736	
50 percent exceeds	190		160		126	
90 percent exceeds	42		8.4		15	

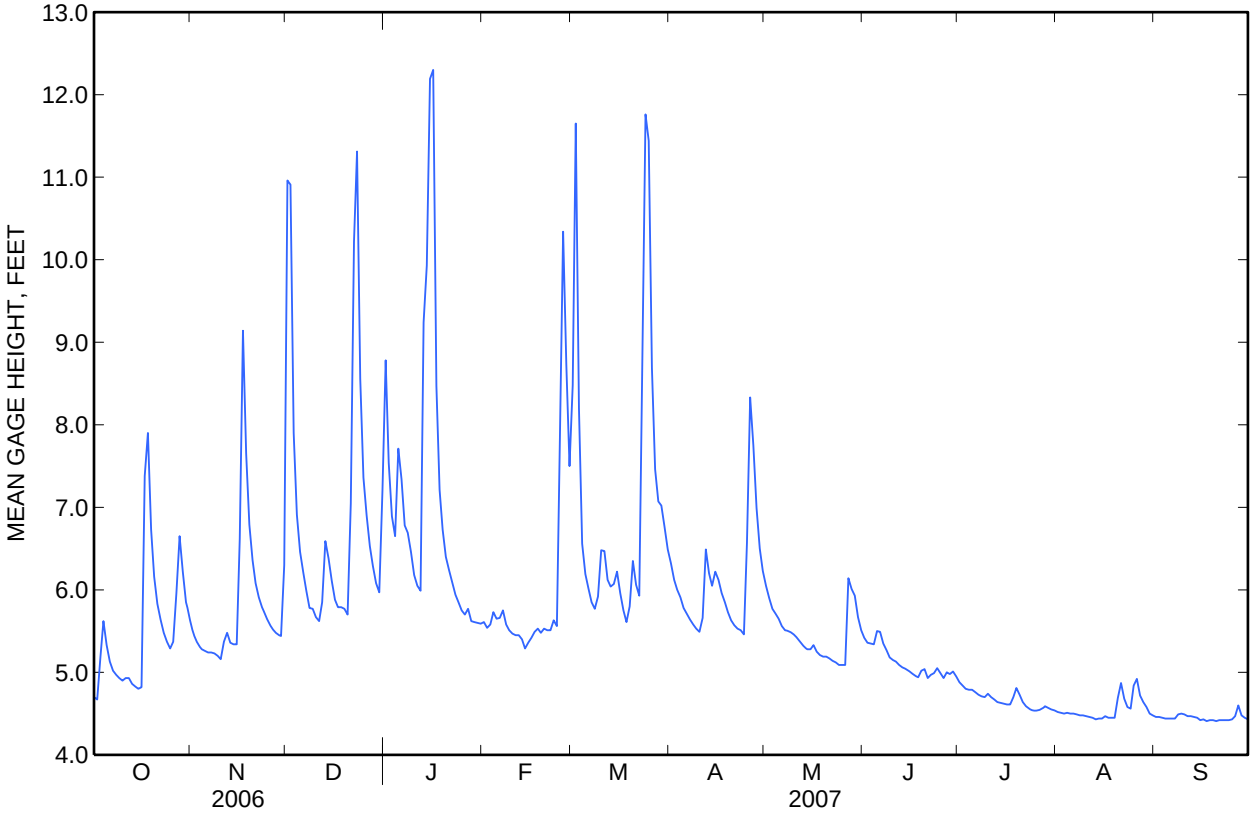
[A] Sept. 10, 16-19, 1991.
[B] Mar. 11, 1990 and Apr. 12, 1994. Mar. 11, 1990 basis of contracted-opening measurement of peak flow.
[C] Sept. 9, 10, 16-19, 1991.



03338780 NORTH FORK VERMILION RIVER NEAR BISMARCK, IL—Continued

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	4.70	5.52	10.96	8.78	5.61	8.48	6.32	6.05	5.42	4.88	4.52	4.46
2	4.67	5.41	10.91	7.54	5.54	11.65	6.12	5.90	5.36	4.84	4.51	4.46
3	5.18	5.33	7.90	6.89	5.58	8.20	6.00	5.77	5.35	4.80	4.50	4.45
4	5.62	5.28	6.91	6.65	5.73	6.56	5.91	5.71	5.34	4.79	4.51	4.44
5	5.33	5.26	6.46	7.71	5.65	6.19	5.78	5.65	5.50	4.79	4.50	4.44
6	5.13	5.24	6.21	7.34	5.66	6.01	5.71	5.56	5.49	4.76	4.50	4.44
7	5.02	5.24	5.99	6.78	5.75	5.85	5.64	5.51	5.35	4.73	4.49	4.44
8	4.97	5.23	5.78	6.69	5.58	5.77	5.58	5.50	5.27	4.71	4.48	4.49
9	4.93	5.20	5.77	6.46	5.51	5.92	5.53	5.48	5.18	4.70	4.48	4.50
10	4.90	5.16	5.67	6.18	5.47	6.48	5.49	5.45	5.15	4.74	4.47	4.49
11	4.93	5.37	5.62	6.05	5.45	6.47	5.66	5.41	5.13	4.70	4.46	4.47
12	4.93	5.48	5.85	5.99	5.45	6.12	6.49	5.36	5.09	4.67	4.45	4.47
13	4.86	5.36	6.59	9.24	5.40	6.04	6.20	5.31	5.06	4.64	4.43	4.46
14	4.83	5.34	6.38	9.93	5.29	6.07	6.05	5.28	5.04	4.63	4.44	4.45
15	4.80	5.34	6.11	12.19	5.36	6.22	6.22	5.28	5.02	4.62	4.44	4.42
16	4.82	6.62	5.88	12.30	5.42	5.96	6.12	5.33	4.99	4.61	4.47	4.43
17	7.38	9.14	5.79	8.47	5.49	5.75	5.96	5.25	4.96	4.61	4.45	4.41
18	7.90	7.65	5.79	7.21	5.53	5.61	5.85	5.21	4.94	4.70	4.45	4.42
19	6.73	6.79	5.77	6.73	5.48	5.80	5.73	5.19	5.02	4.81	4.45	4.42
20	6.16	6.36	5.70	6.40	5.53	6.35	5.63	5.19	5.04	4.73	4.69	4.41
21	5.83	6.08	7.05	6.24	5.51	6.06	5.57	5.17	4.93	4.64	4.87	4.42
22	5.64	5.91	10.22	6.09	5.51	5.93	5.53	5.14	4.97	4.59	4.68	4.42
23	5.48	5.79	11.31	5.94	5.63	8.76	5.51	5.12	4.99	4.56	4.58	4.42
24	5.37	5.69	8.56	5.85	5.56	11.76	5.46	5.09	5.05	4.54	4.56	4.42
25	5.29	5.62	7.36	5.75	7.85	11.44	6.57	5.09	4.99	4.54	4.84	4.43
26	5.37	5.55	6.90	5.70	10.34	8.69	8.33	5.09	4.93	4.54	4.92	4.47
27	5.96	5.49	6.53	5.77	8.73	7.46	7.75	6.14	5.00	4.56	4.72	4.60
28	6.65	5.46	6.29	5.62	7.50	7.07	6.99	6.01	4.98	4.59	4.64	4.48
29	6.22	5.44	6.08	5.61	---	7.02	6.50	5.93	5.01	4.57	4.58	4.45
30	5.85	6.30	5.97	5.60	---	6.76	6.23	5.67	4.95	4.55	4.50	4.43
31	5.69	---	7.21	5.59	---	6.49	---	5.51	---	4.54	4.48	---
Mean	5.52	5.79	6.95	7.07	5.97	7.06	6.08	5.46	5.12	4.67	4.55	4.45
Max	7.90	9.14	11.31	12.30	10.34	11.76	8.33	6.14	5.50	4.88	4.92	4.60
Min	4.67	5.16	5.62	5.59	5.29	5.61	5.46	5.09	4.93	4.54	4.43	4.41

	Water Year 2007
Mean	5.73
Max	12.30
Min	4.41

03338780 NORTH FORK VERMILION RIVER NEAR BISMARCK, IL—Continued