

05586100 ILLINOIS RIVER AT VALLEY CITY, IL

Lower Illinois Basin
Lower Illinois Subbasin

LOCATION.--Lat 39°42'12", long 90°38'43" referenced to North American Datum of 1927, in SE ¼ SE ¼ NW ¼ sec.34, T.15 N., R.14 W., Scott County, IL, Hydrologic Unit 07130011, on upstream side of Norfolk & Southern Corporation Railroad bridge at Flints Creek, 0.4 mile east of Valley City, 1.8 miles downstream from Mauvaise Terre Creek, and at mile 61.3. Auxiliary gage 10.0 miles upstream.

DRAINAGE AREA.--26,743 mi², does not include diversion from Lake Michigan through the Chicago Sanitary and Ship Canal, which has occurred since Jan. 17, 1900.

SURFACE-WATER RECORDS

PERIOD OF RECORD.—

SURFACE-WATER DISCHARGE AND STAGE

DISCHARGE: October 1938 to current year. Prior to October 1960, at site 0.2 mi upstream at same datum. Prior to October 1989, published as "at Meredosia." Records are considered equivalent.

STAGE: Water years 1994 to current year.

PARTIAL RECORD: Annual maximum, water years 1921 to 1938.

SURFACE-WATER QUALITY

CHEMICAL: Water years 1975-93 and 1996-2005.

DISSOLVED OXYGEN: Water years 2001-2003.

PH: Water years 2001-2003.

SEDIMENT: February 1980 to current year

SPECIFIC CONDUCTANCE: Water years 1975-81, 2001-2003.

TURBIDITY: Water years 2001-2003.

WATER TEMPERATURE: Water years 1975-81, 2001-2003.

MISCELLANEOUS: Contaminants in streambed sediments, October 1996; contaminants in fish tissue, October 1996; sediment concentration and particle size, water years 1996-2005.

BIOLOGICAL

ALGAE: Water years 1980-81, 1996-98, and 2002-2005.

BENTHIC MACROINVERTEBRATES: Water years 1997-98, 2002-2005.

FISH: Water years 1998, 2003-2005.

HABITAT: Water years 1997-98, 2003, 2005.

GAGE.--U.S. Army Corps of Engineer's water-stage recorder and satellite telemeter, and crest-stage gage. Datum of gage is 418.00 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers) (417.65 ft NAVD 1988). Prior to Nov. 25, 1992 and Oct. 1, 1994 to current; auxiliary gage (05585500) at site 10.0 mi upstream. Nov. 25, 1992 to Sept. 30, 1994; auxiliary gage operated at this site (05586100).

REMARKS.--Discharge records fair except for estimated daily discharges, which are poor. Occasional regulation at low flow by navigation dam at La Grange. Since Jan. 17, 1900, flow has included diversion from Lake Michigan through Chicago Sanitary and Ship Canal. Suspended-sediment samples were collected by local observers generally twice weekly with additional samples collected during high runoff periods. Since February 1994, samples used to compute sediment record have been collected at upstream side Rt. 106 bridge at Florence at mile 56.

EXTREMES FOR PERIOD OF RECORD.--

SURFACE-WATER DISCHARGE AND STAGE: Maximum discharge, 123,000 ft³/s, May 26-28, 1943; maximum gage height, 28.61 ft, May 26, 1943 (at Meredosia), minimum daily discharge, 1,330 ft³/s, Sept. 2, 1984.

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily, 3,720 mg/L, Apr. 14, 1981; minimum daily, 13 mg/L, Nov. 14-15, 2007.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 410,000 tons, June 4, 1980; minimum daily, 172 tons, Sept. 2, 1984.

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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	11,300	6,230	15,500	15,700	24,300	13,900	15,700	14,800	11,700	6,060	4,700	8,670
2	12,400	6,560	15,300	13,600	24,400	15,000	15,100	15,700	12,100	7,100	5,200	9,090
3	12,300	7,220	15,700	15,000	24,400	15,200	14,400	17,300	11,000	6,700	4,820	8,950
4	11,100	10,400	15,100	16,000	24,500	16,400	14,300	19,300	10,100	6,410	4,560	6,290
5	9,210	10,700	12,800	15,900	24,500	18,400	14,300	e25,000	10,700	6,340	3,740	5,410
6	6,940	9,130	13,200	15,800	24,400	23,100	13,700	28,100	11,900	7,090	4,660	5,590
7	5,860	6,820	14,200	15,200	24,200	20,300	11,400	30,300	12,500	7,050	5,440	5,940
8	7,060	8,760	14,400	15,000	23,100	17,600	8,920	31,100	11,400	6,490	5,480	6,210
9	6,500	10,400	13,300	15,100	20,600	16,500	7,940	32,000	10,500	6,170	5,260	6,830
10	5,460	11,500	12,600	14,400	18,100	17,100	7,590	33,300	9,890	5,590	4,910	5,800
11	5,420	13,500	12,700	12,000	16,100	17,300	7,540	34,500	9,230	5,780	5,470	5,650
12	6,280	15,400	12,000	11,200	15,500	17,500	8,060	35,400	8,380	5,320	6,030	4,980
13	5,550	16,400	11,800	11,200	15,800	17,000	8,360	35,800	8,490	4,930	4,990	4,560
14	5,390	16,100	12,500	11,500	15,000	17,300	9,120	36,000	7,580	4,450	4,500	4,200
15	5,340	17,200	16,400	11,900	13,700	17,500	10,100	36,100	6,900	4,540	4,920	4,680
16	5,870	16,600	21,400	10,500	14,300	17,600	9,760	35,700	6,830	4,290	5,100	5,160
17	5,600	15,900	26,400	9,930	14,800	17,600	11,100	34,900	7,330	4,490	5,490	5,870
18	5,950	15,500	27,700	10,700	15,000	17,600	14,100	33,800	8,010	4,550	6,770	5,730
19	5,350	13,100	28,800	12,200	14,900	17,800	14,700	32,500	9,750	4,170	6,520	5,900
20	6,370	9,750	29,900	12,000	15,100	17,600	14,400	31,100	10,900	4,290	4,900	4,840
21	6,270	10,400	30,500	11,500	14,500	16,200	14,300	29,100	11,400	6,450	4,470	5,460
22	4,520	12,000	30,500	12,200	12,400	16,300	14,900	27,500	11,800	7,370	4,540	5,370
23	5,630	11,000	29,900	12,000	12,900	16,300	14,400	e25,600	12,300	5,430	4,500	5,520
24	7,480	10,500	29,200	12,600	13,300	15,800	13,200	21,800	11,900	4,130	4,270	5,750
25	8,930	8,390	e28,200	13,400	13,500	15,700	12,200	16,300	10,300	4,370	5,000	5,830
26	6,640	8,300	e27,000	17,800	14,900	16,000	10,500	12,900	7,990	4,680	5,380	6,280
27	7,210	8,990	e25,800	22,700	12,900	16,700	10,100	13,100	7,180	4,610	5,430	5,270
28	8,590	11,600	e24,400	23,000	12,700	16,000	10,400	12,600	6,380	5,120	6,950	4,570
29	8,500	12,800	e22,800	23,400	13,800	15,500	10,400	11,000	6,100	6,130	8,600	4,710
30	7,360	14,700	20,900	24,000	---	16,100	13,300	9,520	6,160	5,900	8,930	4,950
31	6,180	---	18,200	24,300	---	15,600	---	9,930	---	5,170	6,490	---
Total	222,560	345,850	629,100	461,730	503,600	524,500	354,290	782,050	286,700	171,170	168,020	174,060
Mean	7,179	11,530	20,290	14,890	17,370	16,920	11,810	25,230	9,557	5,522	5,420	5,802
Max	12,400	17,200	30,500	24,300	24,500	23,100	15,700	36,100	12,500	7,370	8,930	9,090
Min	4,520	6,230	11,800	9,930	12,400	13,900	7,540	9,520	6,100	4,130	3,740	4,200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	12,770	14,940	18,540	21,360	25,110	34,410	37,150	36,980	31,140	21,730	13,610	11,840
Max	54,840	65,340	78,130	63,800	67,060	94,940	93,800	85,360	87,690	60,820	50,850	62,870
(WY)	(1994)	(2010)	(1983)	(2005)	(1974)	(1985)	(1979)	(2009)	(1974)	(1993)	(1981)	(1993)
Min	4,258	5,047	5,923	4,808	4,144	10,070	10,010	11,170	6,207	4,384	5,420	5,164
(WY)	(1965)	(2003)	(1963)	(1963)	(1963)	(2003)	(1956)	(1988)	(1988)	(2005)	(2012)	(1976)

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SUMMARY STATISTICS

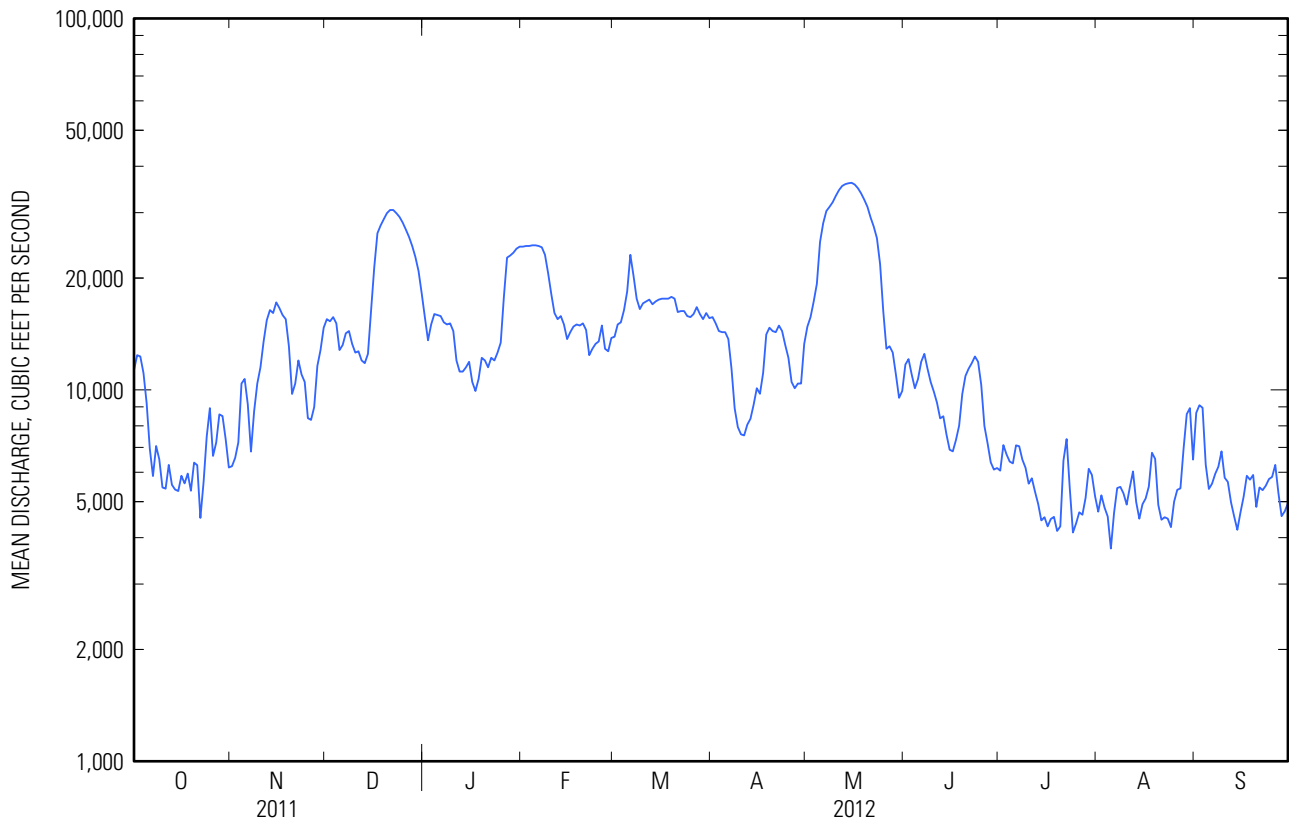
	Calendar Year 2011		Water Year 2012		Water Years 1939 - 2012	
Annual total	10,958,330		4,623,630			
Annual mean	30,020		12,630		23,280	
Highest annual mean					46,810	1993
Lowest annual mean					8,977	1940
Highest daily mean	75,400	Jun 28	36,100	May 15	123,000	May 27, 1943
Lowest daily mean	4,410	Sep 17	3,740	Aug 5	1,330	Sep 2, 1984
Annual seven-day minimum	5,050	Sep 13	4,400	Jul 14	2,290	Oct 8, 1964
Maximum peak flow			A ^A 36,600	May 15	B ^B 123,000	C ^C
Maximum peak stage			D ^D 9.82	May 15	B ^B 28.61	May 26, 1943
Instantaneous low flow			3,340	Aug 5		
10 percent exceeds	65,800		24,300		49,600	
50 percent exceeds	21,400		11,400		16,300	
90 percent exceeds	6,610		5,070		6,490	

^A Gage height, 9.76 ft.

^B At Meredosia.

^C May 26-28, 1943.

^D Discharge, 36,100 ft³/s.



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GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	3.34	2.01	4.36	4.71	6.93	4.23	4.70	4.48	3.40	2.11	1.86	2.86
2	3.62	2.10	4.32	4.15	6.95	4.53	4.56	4.71	3.54	2.38	2.04	2.96
3	3.59	2.27	4.42	4.53	6.97	4.59	4.36	5.14	3.22	2.29	1.91	2.91
4	3.27	3.09	4.26	4.78	7.09	4.88	4.35	5.65	2.95	2.22	1.81	2.17
5	2.79	3.17	3.71	4.75	7.05	5.41	4.35	7.43	3.15	2.21	1.42	1.89
6	2.20	2.76	3.80	4.73	6.96	6.62	4.19	8.40	3.50	2.40	1.85	1.96
7	1.91	2.17	4.06	4.59	6.90	5.93	3.56	8.81	3.68	2.40	2.12	2.07
8	2.23	2.67	4.10	4.54	6.62	5.22	2.84	8.91	3.36	2.26	2.13	2.15
9	2.08	3.10	3.84	4.56	6.00	4.93	2.55	8.90	3.11	2.18	2.06	2.32
10	1.78	3.37	3.66	4.36	5.35	5.09	2.46	9.13	2.94	2.03	1.95	2.03
11	1.77	3.87	3.69	3.70	4.81	5.13	2.44	9.37	2.78	2.08	2.13	1.97
12	2.02	4.35	3.50	3.48	4.67	5.17	2.59	9.56	2.57	1.96	2.30	1.73
13	1.81	4.62	3.46	3.48	4.73	5.05	2.67	9.70	2.61	1.82	1.96	1.57
14	1.76	4.53	3.63	3.56	4.52	5.14	2.89	9.77	2.39	1.64	1.78	1.43
15	1.74	4.87	4.61	3.68	4.19	5.17	3.18	9.79	2.23	1.68	1.95	1.61
16	1.90	4.68	6.06	3.27	4.34	5.22	3.07	9.75	2.22	1.58	2.00	1.79
17	1.83	4.46	7.48	3.12	4.49	5.21	3.45	9.63	2.35	1.67	2.14	2.05
18	1.93	4.37	7.72	3.35	4.53	5.22	4.29	9.43	2.52	1.70	2.49	2.00
19	1.75	3.78	7.92	3.76	4.51	5.27	4.46	9.17	2.97	1.54	2.43	2.06
20	2.05	2.93	8.22	3.71	4.56	5.21	4.36	8.85	3.29	1.60	1.93	1.67
21	2.01	3.10	8.39	3.57	4.39	4.84	4.33	8.46	3.45	2.33	1.77	1.90
22	1.48	3.50	8.35	3.76	3.84	4.86	4.50	8.04	3.56	2.57	1.80	1.87
23	1.83	3.25	8.22	3.73	3.96	4.87	4.36	7.48	3.71	2.03	1.79	1.93
24	2.34	3.11	8.09	3.90	4.07	4.73	4.05	6.26	3.62	1.56	1.67	2.01
25	2.71	2.57	7.90	4.09	4.12	4.71	3.77	4.71	3.17	1.67	1.94	2.04
26	2.12	2.55	7.71	5.25	4.49	4.79	3.28	3.75	2.56	1.81	2.05	2.17
27	2.26	2.73	7.49	6.51	3.97	4.97	3.17	3.83	2.37	1.79	2.05	1.83
28	2.62	3.40	7.30	6.60	3.91	4.79	3.26	3.67	2.17	1.99	2.46	1.57
29	2.60	3.72	6.84	6.71	4.22	4.67	3.27	3.17	2.11	2.29	2.89	1.62
30	2.30	4.17	6.07	6.84	---	4.82	4.06	2.77	2.13	2.24	2.96	1.71
31	2.00	---	5.36	6.92	---	4.67	---	2.88	---	2.01	2.28	---
Mean	2.25	3.38	5.76	4.47	5.14	5.03	3.65	7.15	2.92	2.00	2.06	2.00
Max	3.62	4.87	8.39	6.92	7.09	6.62	4.70	9.79	3.71	2.57	2.96	2.96
Min	1.48	2.01	3.46	3.12	3.84	4.23	2.44	2.77	2.11	1.54	1.42	1.43

Water Year 2012	
Mean	3.82
Max	9.79
Min	1.42

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