Water-Data Report 2011

05559700 SENACHWINE CREEK AT CHILLICOTHE, IL

Lower Illinois Basin
Lower Illinois-Senachwine Lake Subbasin

LOCATION.--Lat 40°56′25″, long 89°30′02″ referenced to North American Datum of 1983, in NE ¼ SW ¼ NW ¼ sec.17, T.11 N., R.9 E., Peoria County, IL, Hydrologic Unit 07130001, on upstream side of Benedict Road bridge, 1.4 mi. northeast of Chillicothe, and at mile 2.4.

DRAINAGE AREA.--84.50 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.—
SURFACE-WATER DISCHARGE AND STAGE
DISCHARGE: December 2007 to current.
STAGE: December 2007 to current.
SURFACE-WATER QUALITY
CHEMICAL: Water year 2008.
SEDIMENT: December 2007 to September 2010.

GAGE.--Water-stage recorder, satellite telemeter, and a crest-stage gage. Datum of gage is 451.574 ft above NAVD of 1988 (451.651 ft NGVD 1929).

REMARKS.—Discharge records poor.

EXTREMES FOR PERIOD OF RECORD.--
SURFACE-WATER DISCHARGE AND STAGE: Maximum discharge, 9,530 ft^3/s, May 15, 2009, gage height, 19.68 ft; no flow, Aug. 19-Sept. 3, 2008 and Sept. 30, 2011.
SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily, 3,780 mg/L, March 29, 2009; minimum daily, 0 mg/L, Aug. 20 to Sept. 2, 2008.
SUSPENDED-SEDIMENT LOADS: Maximum daily, 23,300 tons, May 15, 2009; minimum daily, 0 tons, Aug. 19 to Sept. 3, 2008.

Suggested citation: U.S. Geological Survey, 2012, Water-resources data for the United States, Water Year 2011: U.S. Geological Survey Water-Data Report WDR-US-2011, site 05559700, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/05559700.2011.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2.7	0.97	2.3	209	e12	180	28	147	163	46	e4.4	e0.18
2	2.3	0.90	3.2	113	e12	129	26	126	141	42	e3.7	e0.17
3	1.3	0.89	1.9	94	e12	104	25	112	126	38	e3.2	e0.16
4	1.5	0.87	2.1	61	e13	96	45	100	107	35	e2.8	e0.19
5	2.0	0.94	3.0	74	e15	99	31	98	220	32	e2.4	e0.16
6	1.5	0.91	1.9	42	e17	87	28	94	142	30	e2.2	e0.14
7	2.3	1.2	1.4	e38	e15	80	27	82	103	28	e2.0	e0.13
8	2.4	0.96	e1.7	e33	e14	74	52	72	87	27	e2.0	e0.12
9	1.3	0.94	e1.8	e29	e13	120	55	69	81	24	e2.7	e0.11
10	0.94	0.90	e1.9	e27	e13	122	50	66	78	21	e2.2	e0.14
11	0.84	1.0	e1.8	e24	e13	101	45	59	67	20	e1.6	e0.11
12	0.95	0.96	e1.6	e21	e15	87	37	56	58	18	e1.2	e0.10
13	2.0	1.00	e1.5	e19	e17	69	35	58	54	17	e1.0	e0.09
14	2.2	0.92	e1.5	e20	e50	62	33	909	53	15	e0.84	e0.08
15	2.5	0.98	e1.6	e22	322	60	39	1,020	342	14	e0.72	e0.08
16	1.6	0.99	e1.6	e24	599	55	88	412	155	13	e0.64	e0.07
17	0.81	1.0	e1.7	e23	743	51	71	292	102	12	e0.59	e0.07
18	0.93	1.1	e1.7	e19	226	46	62	220	81	11	e0.55	e0.06
19	2.1	0.98	e1.8	e17	114	41	346	173	81	10	e0.51	e0.08
20	1.4	0.97	e1.8	e14	365	41	780	144	239	9.8	e0.49	e0.07
21	0.72	1.0	e1.8	e13	338	41	326	126	205	8.3	e0.50	e0.06
22	1.6	1.3	e1.7	e13	191	38	1,210	112	158	7.2	e0.54	e0.05
23	1.1	1.5	e1.7	e14	137	43	647	99	118	6.2	e0.87	e0.05
24	1.5	1.6	e1.7	e15	111	36	356	85	95	9.9	e1.6	e0.04
25	1.5	2.6	e1.6	e14	94	33	293	213	87	10	e0.59	e0.04
26	4.1	2.3	e1.6	e13	84	32	472	1,090	83	7.4	e0.35	e0.10
27	2.6	2.0	e1.7	e12	82	31	335	415	86	5.8	e0.29	e0.35
28	1.7	1.5	e2.1	e13	270	30	262	281	67	7.1	e0.26	e0.05
29	1.3	1.5	e3.0	e16	---	29	206	310	57	e12	e0.23	e0.01
30	1.2	2.2	e11	e15	---	29	174	314	50	e6.7	e0.21	e0.00
31	1.6	---	367	e14	---	28	---	207	---	e5.4	e0.20	---
Total	52.49	36.88	432.7	1,075	3,907	2,074	6,184	7,561	3,486	548.8	41.38	3.06
Mean	1.69	1.23	14.0	34.7	140	66.9	206	244	116	17.7	1.33	0.10
Max	4.1	2.6	367	209	743	180	1,210	1,090	342	46	4.4	0.35
Min	0.72	0.87	1.4	12	12	28	25	56	50	5.4	0.20	0.00
Cfsm	0.02	0.01	0.17	0.41	1.65	0.79	2.44	2.89	1.38	0.21	0.02	0.00
In.	0.02	0.02	0.19	0.47	1.72	0.91	2.72	3.33	1.53	0.24	0.02	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2008 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	41.7	46.9	121	73.3	88.2	172	156	227	152	44.9	11.7	14.3
Max	111	127	190	157	140	357	260	425	330	102	35.6	43.4
(WY)	(2010)	(2010)	(2010)	(2010)	(2011)	(2009)	(2009)	(2009)	(2010)	(2009)	(2009)	(2008)
Min	1.69	1.23	14.0	34.7	58.1	66.9	67.5	46.4	40.2	16.5	1.33	0.10
(WY)	(2011)	(2011)	(2011)	(2011)	(2010)	(2011)	(2008)	(2008)	(2008)	(2008)	(2011)	(2011)

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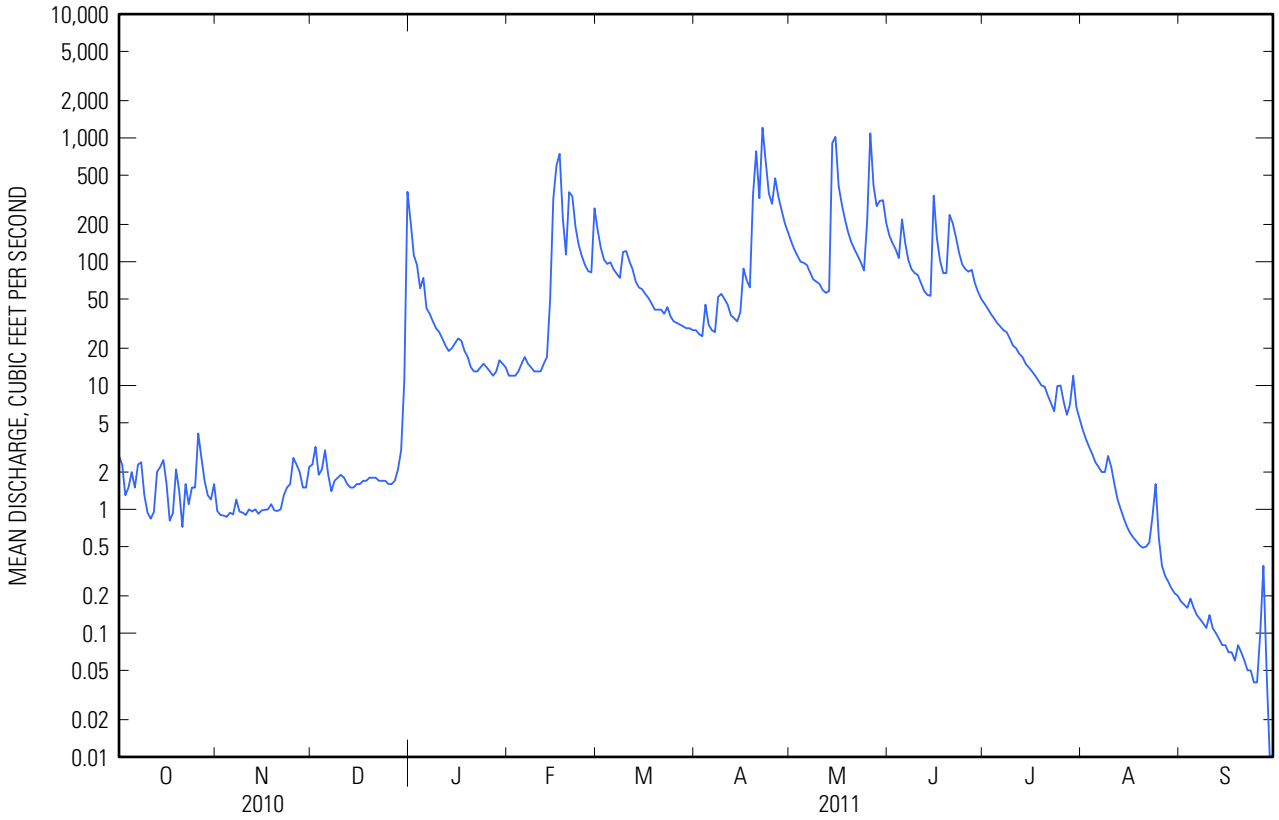
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 2008 - 2011	
Annual total	33,094.87		25,402.31			
Annual mean	90.7		69.6			
Highest annual mean						
Lowest annual mean						
Highest daily mean	1,730	Jun 19	1,210	Apr 22	3,420	May 15, 2009
Lowest daily mean	0.72	Oct 21	[A]0.00	Sep 30	0.00	[B]
Annual seven-day minimum	0.95	Nov 2	0.06	Sep 19	0.00	Aug 19, 2008
Maximum peak flow			2,780	Apr 22	9,530	May 15, 2009
Maximum peak stage			13.45	Apr 22	19.68	May 15, 2009
Annual runoff (cfsm)	1.07		0.824		1.31	
Annual runoff (inches)	14.57		11.18		17.74	
10 percent exceeds	205		197		243	
50 percent exceeds	50		14		53	
90 percent exceeds	1.5		0.43		1.6	

[A]Estimated.
[B]Aug. 19 - Sept. 3, 2008 and Sept. 30, 2011.



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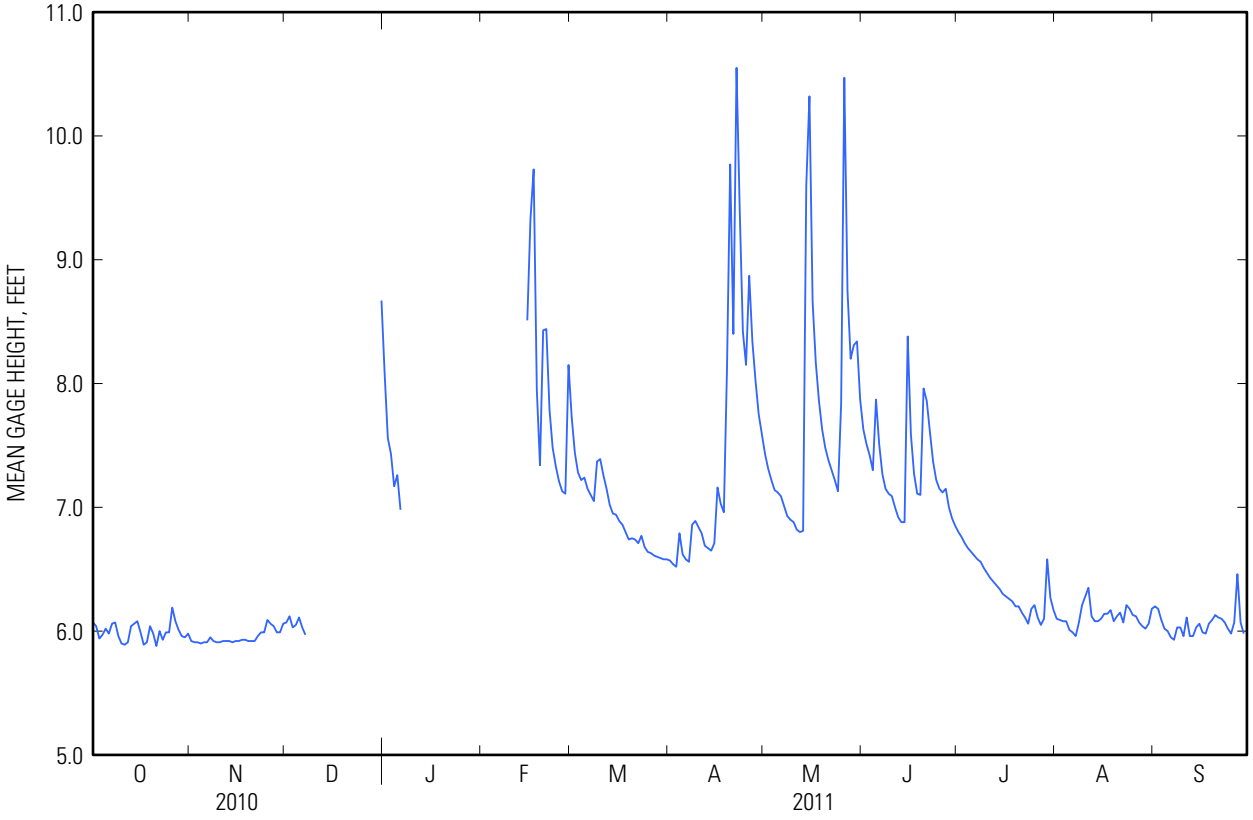
GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	6.07	5.92	6.07	8.08	---	7.73	6.57	7.43	7.63	6.80	6.10	6.20
2	6.04	5.91	6.12	7.56	---	7.44	6.54	7.31	7.51	6.76	6.09	6.18
3	5.94	5.91	6.03	7.43	---	7.28	6.52	7.22	7.42	6.71	6.08	6.09
4	5.97	5.90	6.05	7.17	---	7.22	6.79	7.14	7.30	6.67	6.08	6.02
5	6.02	5.91	6.11	7.26	---	7.24	6.62	7.12	7.87	6.64	6.01	6.00
6	5.98	5.91	6.03	6.98	---	7.15	6.58	7.09	7.51	6.61	5.99	5.95
7	6.06	5.95	5.97	---	---	7.10	6.56	7.01	7.27	6.58	5.96	5.93
8	6.07	5.92	---	---	---	7.05	6.86	6.93	7.15	6.56	6.07	6.03
9	5.96	5.91	---	---	---	7.37	6.89	6.90	7.11	6.51	6.21	6.03
10	5.90	5.91	---	---	---	7.39	6.84	6.88	7.09	6.47	6.28	5.96
11	5.89	5.92	---	---	---	7.26	6.79	6.82	7.00	6.43	6.35	6.11
12	5.91	5.92	---	---	---	7.15	6.69	6.80	6.92	6.40	6.12	5.96
13	6.04	5.92	---	---	---	7.02	6.67	6.81	6.88	6.37	6.08	5.96
14	6.06	5.91	---	---	---	6.95	6.65	9.60	6.88	6.34	6.08	6.03
15	6.08	5.92	---	---	8.51	6.94	6.71	10.32	8.38	6.30	6.10	6.06
16	5.99	5.92	---	---	9.33	6.89	7.16	8.66	7.59	6.28	6.14	5.99
17	5.89	5.93	---	---	9.73	6.86	7.03	8.17	7.27	6.26	6.14	5.98
18	5.91	5.93	---	---	7.95	6.80	6.96	7.86	7.11	6.24	6.17	6.06
19	6.04	5.92	---	---	7.34	6.74	8.13	7.63	7.10	6.20	6.08	6.09
20	5.98	5.92	---	---	8.43	6.75	9.77	7.48	7.96	6.20	6.12	6.13
21	5.88	5.92	---	---	8.44	6.74	8.40	7.38	7.86	6.15	6.15	6.11
22	6.00	5.96	---	---	7.79	6.71	10.55	7.30	7.61	6.11	6.07	6.10
23	5.93	5.99	---	---	7.48	6.77	9.41	7.22	7.37	6.06	6.21	6.07
24	5.99	5.99	---	---	7.33	6.68	8.42	7.13	7.22	6.18	6.18	6.02
25	5.99	6.09	---	---	7.21	6.64	8.15	7.84	7.15	6.21	6.13	5.98
26	6.19	6.06	---	---	7.13	6.63	8.87	10.47	7.12	6.11	6.12	6.07
27	6.08	6.04	---	---	7.11	6.61	8.34	8.75	7.15	6.05	6.07	6.46
28	6.01	5.99	---	---	8.15	6.60	8.02	8.20	7.00	6.10	6.04	6.07
29	5.96	5.99	---	---	---	6.59	7.75	8.31	6.91	6.58	6.02	5.98
30	5.95	6.06	---	---	---	6.58	7.59	8.34	6.85	6.27	6.06	---
31	5.98	---	8.67	---	---	6.58	---	7.87	---	6.17	6.18	---
Mean	5.99	5.95	---	---	---	6.95	7.49	7.74	7.31	6.37	6.11	---
Max	6.19	6.09	---	---	---	7.73	10.55	10.47	8.38	6.80	6.35	---
Min	5.88	5.90	---	---	---	6.58	6.52	6.80	6.85	6.05	5.96	---

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