Water-Data Report 2011

05470000 South Skunk River near Ames, IA

Upper Mississippi-Skunk-Wapsipinicon Basin
South Skunk Subbasin

LOCATION.--Lat 42°03'59.5", long 93°37'11.7" referenced to North American Datum of 1927, in NW ¼ SW ¼ SW ¼ sec.23, T.84 N., R.24 W., Story County, IA, Hydrologic Unit 07080105, on left bank 20 ft downstream from bridge on West Riverside Road, at northern edge of Ames, 4.4 mi downstream from Keigley Branch, 5.2 mi upstream from Squaw Creek, 132.7 mi upstream from confluence with the North Skunk River, and 227.4 mi upstream from mouth of Skunk River.

DRAINAGE AREA.--315 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1920 to September 1927, October 1932 to September 1995, October 1996 to current year. August to September 1927 and October 1932 to March 1933, monthly mean discharge published in WSP 1308. Prior to October 1966, published as "Skunk River near Ames".

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1308: 1921, 1925-26, 1934-35 (M), 1937 (M), 1939 (M), 1947-50 (M). WDR IA-67-1: 1965. WDR IA-74-1: 1973 (P).

GAGE.--Water-stage recorder. Concrete control from July 21, 1934, to October 1, 2003. Datum of gage is 888.61 ft above National Geodetic Vertical Datum of 1929. Prior to August 25, 1921, nonrecording gage, and July 21, 1934, to September 30, 2003, water-stage recorder, both at site 0.25 mi upstream at datum 5.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. U.S. Geological Survey data collection platform with satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 17, 1996, reached a stage of 15.89 ft, from floodmark, discharge about 14,000 ft^3/s, from rating curve extension.

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 05470000, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/05470000.2011.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	287	126	e80	e70	e57	177	223	527	380	262	37	20
2	268	125	e126	e73	e57	150	211	438	354	225	32	16
3	250	126	e120	e87	e53	151	210	381	e342	200	30	20
4	241	123	e126	e78	e67	163	200	364	e312	188	27	34
5	233	119	e112	e95	e65	131	186	339	e290	175	25	34
6	227	119	e124	e111	e74	118	186	304	e276	164	25	23
7	218	119	e160	e91	e68	138	174	287	267	169	27	19
8	213	121	e139	e77	e64	125	178	265	258	152	30	17
9	209	121	e147	e64	e71	135	178	254	237	139	29	14
10	202	119	e140	e96	e58	145	181	251	629	132	27	9.5
11	199	115	e124	e87	e69	141	168	233	717	137	31	8.0
12	189	128	e89	e70	e72	187	157	234	529	123	36	7.0
13	179	403	e60	e67	e75	187	153	236	443	112	34	4.3
14	174	813	e80	e77	e80	159	147	251	397	98	34	2.9
15	172	555	e88	e72	e287	154	148	265	536	91	34	2.1
16	171	424	e80	e67	e477	160	197	294	547	85	34	2.2
17	165	363	e71	e76	e726	179	269	291	425	79	25	2.3
18	161	319	e64	e59	e694	209	276	272	358	70	20	6.1
19	156	299	e56	e54	e454	213	351	255	328	65	16	5.9
20	155	274	e79	e53	481	217	940	274	309	58	13	8.6
21	152	260	e63	e52	1,090	344	896	357	398	50	10	8.1
22	150	246	e76	e64	557	378	678	404	454	61	8.8	6.1
23	152	226	e93	e57	352	386	565	383	385	66	9.8	5.2
24	153	213	e64	e64	263	461	473	332	337	55	9.2	5.2
25	153	e197	e69	e53	184	374	432	526	304	49	7.2	6.8
26	152	e142	e72	e61	179	331	1,110	1,290	283	44	8.3	11
27	143	e161	e57	e65	183	302	1,460	1,070	384	41	8.6	5.1
28	134	e174	e70	e73	186	270	1,060	776	385	50	9.3	3.8
29	130	e152	e86	e65	---	247	787	596	327	63	9.2	2.9
30	133	e125	e103	e62	---	235	651	510	293	48	14	2.3
31	130	---	e89	e61	---	227	---	438	---	40	17	---
Total	5,651	6,807	2,907	2,201	7,043	6,794	12,845	12,697	11,484	3,291	677.4	312.4
Mean	182	227	93.8	71.0	252	219	428	410	383	106	21.9	10.4
Max	287	813	160	111	1,090	461	1,460	1,290	717	262	37	34
Min	130	115	56	52	53	118	147	233	237	40	7.2	2.1
Ac-ft	11,210	13,500	5,770	4,370	13,970	13,480	25,480	25,180	22,780	6,530	1,340	620
Cfsm	0.58	0.72	0.30	0.23	0.80	0.70	1.36	1.30	1.22	0.34	0.07	0.03
In.	0.67	0.80	0.34	0.26	0.83	0.80	1.52	1.50	1.36	0.39	0.08	0.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	105	105	72.0	53.4	122	330	303	316	411	231	130	96.4
Max	785	726	537	320	623	1,604	1,208	1,193	2,095	2,628	1,804	577
(WY)	(2008)	(1973)	(1983)	(2007)	(1984)	(2010)	(1965)	(1944)	(2008)	(1993)	(2010)	(1926)
Min	0.12	0.14	0.00	0.00	0.31	6.35	5.44	2.28	0.01	0.02	0.09	0.08
(WY)	(1954)	(1956)	(1977)	(1977)	(1956)	(1981)	(2000)	(1934)	(1977)	(1977)	(1934)	(1976)

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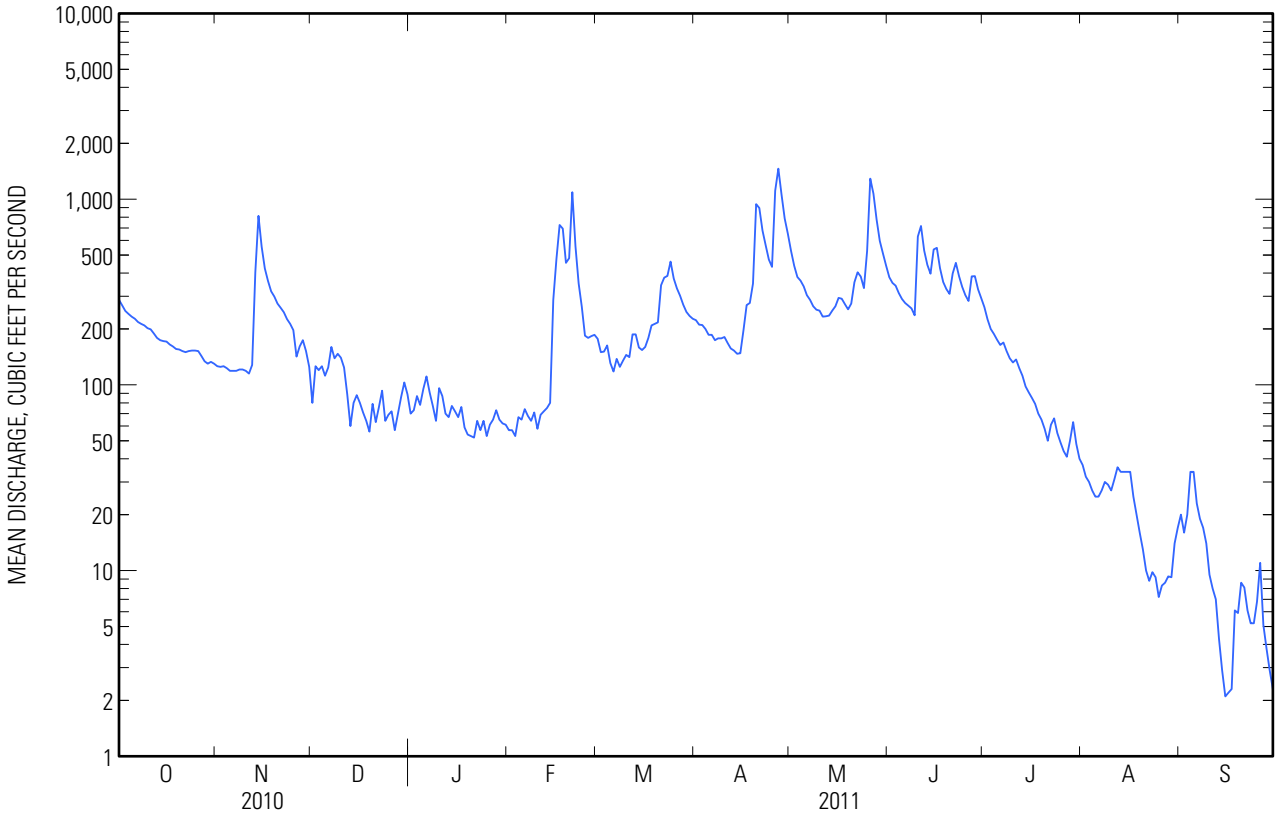
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1921 - 2011	
Annual total	224,454		72,709.8			
Annual mean	615		199		190	
Highest annual mean					752	1993
Lowest annual mean					5.58	1956
Highest daily mean	12,400	Aug 11	1,460	Apr 27	12,400	Aug 11, 2010
Lowest daily mean	40	Jan 9	2.1	Sep 15	0.00	Jun 20, 1934[a]
Annual seven-day minimum	64	Jan 8	3.7	Sep 13	0.00	Jun 20, 1934
Maximum peak flow			1,620	Apr 27	14,800	Aug 11, 2010
Maximum peak stage			7.03	Apr 27	19.04	Aug 11, 2010
Instantaneous low flow			1.3	Sep 30	0.00	Jun 20, 1934
Annual runoff (ac-ft)	445,200		144,200		137,400	
Annual runoff (cfsm)	1.95		0.632		0.602	
Annual runoff (inches)	26.51		8.59		8.18	
10 percent exceeds	1,240		434		455	
50 percent exceeds	262		143		63	
90 percent exceeds	112		17		2.9	

[a] Many days in 1934, 1953-1956, 1976-1977.