Water-Data Report 2012

05421000 Wapsipinicon River at Independence, IA

Upper Mississippi-Skunk-Wapsipinicon Basin
Upper Wapsipinicon Subbasin

LOCATION.--Lat 42°27′49″, long 91°53′42″ referenced to North American Datum of 1927, in NW ¼ NE ¼ SE ¼ sec.4, T.88 N., R.9 W., Buchanan County, IA, Hydrologic Unit 07080102, on right bank at end of 6th Street in Independence, 1,800 ft downstream from dam at abandoned hydroelectric plant, 4.9 mi downstream from Otter Creek, 9.7 mi upstream from Pine Creek, and 158 mi upstream from mouth.

DRAINAGE AREA.--1,048 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge records from July 1933 to current year.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1508: 1938-39, 1940 (M), 1947.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 882.85 ft above National Geodetic Vertical Datum of 1929. Prior to May 24, 1941, non-recording gage in tailrace of power plant, 1,800 ft upstream, at datum 80.00 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are poor. U.S. Army Corps of Engineers rain gage and U.S. Geological Survey data collection platform with satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Since at least 1901, no flood outside the period of record exceeded the June 14, 1947, stage of 18.74 ft.

Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 05421000, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/05421000.2012.pdf

05421000 Wapsipinicon River at Independence, IA—Continued

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	162	148	256	e656	274	895	662	1,060	811	145	57	36
2	154	174	238	e598	304	1,020	638	1,300	750	135	54	35
3	148	214	288	e372	329	1,050	610	1,950	698	124	51	35
4	142	250	608	486	348	992	559	2,190	644	118	55	34
5	137	261	970	639	362	841	523	2,190	585	110	54	31
6	128	263	944	666	384	903	488	2,170	525	103	48	28
7	122	249	808	558	388	896	466	2,290	491	99	46	33
8	116	251	685	443	365	912	447	2,420	445	89	44	37
9	110	363	559	400	311	919	433	2,500	403	86	44	36
10	106	864	329	416	363	881	404	2,500	370	78	44	33
11	107	1,020	402	e289	251	821	384	2,430	382	76	50	32
12	123	957	551	e192	270	836	375	2,180	396	73	58	32
13	166	823	542	e210	316	859	368	1,820	375	78	70	33
14	294	696	530	259	325	922	390	1,390	334	112	66	34
15	337	595	725	332	310	968	482	1,130	308	107	60	34
16	287	513	817	353	314	924	540	965	283	89	67	34
17	252	450	777	334	314	859	590	847	265	77	58	34
18	233	417	697	278	350	800	683	761	267	68	53	32
19	216	405	648	264	362	753	728	690	242	64	52	31
20	202	372	577	249	381	749	1,220	637	220	60	51	30
21	190	340	555	218	434	754	2,070	573	217	58	46	29
22	185	329	520	236	463	735	2,270	525	210	58	43	30
23	177	315	433	243	476	731	2,360	488	197	59	41	27
24	171	305	354	240	486	729	2,300	481	217	54	40	27
25	170	299	404	237	395	699	2,170	488	224	54	39	27
26	165	311	387	240	354	641	1,780	587	207	85	41	25
27	159	291	390	245	435	656	1,320	630	191	114	40	22
28	153	278	366	247	480	635	1,110	893	181	82	38	22
29	145	271	359	246	595	586	992	1,050	173	71	37	23
30	148	253	407	241	---	637	975	1,010	164	67	37	22
31	149	---	556	248	---	672	---	908	---	62	37	---
Total	5,354	12,277	16,682	10,635	10,739	25,275	28,337	41,053	10,775	2,655	1,521	918
Mean	173	409	538	343	370	815	945	1,324	359	85.6	49.1	30.6
Max	337	1,020	970	666	595	1,050	2,360	2,500	811	145	70	37
Min	106	148	238	192	251	586	368	481	164	54	37	22
Ac-ft	10,620	24,350	33,090	21,090	21,300	50,130	56,210	81,430	21,370	5,270	3,020	1,820
Cfsm	0.16	0.39	0.51	0.33	0.35	0.78	0.90	1.26	0.34	0.08	0.05	0.03
In.	0.19	0.44	0.59	0.38	0.38	0.90	1.01	1.46	0.38	0.09	0.05	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	410	434	305	240	373	1,431	1,438	1,111	1,131	793	546	361
Max	2,541	2,280	1,962	1,411	1,698	3,580	5,960	4,436	7,491	5,175	5,443	1,940
(WY)	(2008)	(1992)	(1992)	(1946)	(1984)	(2010)	(2008)	(2004)	(2008)	(2010)	(1993)	(1981)
Min	29.3	42.2	26.9	12.6	19.0	68.4	198	45.3	12.4	18.9	21.5	20.5
(WY)	(1989)	(1977)	(1977)	(1977)	(1956)	(1934)	(1957)	(1934)	(1934)	(1936)	(1934)	(1976)

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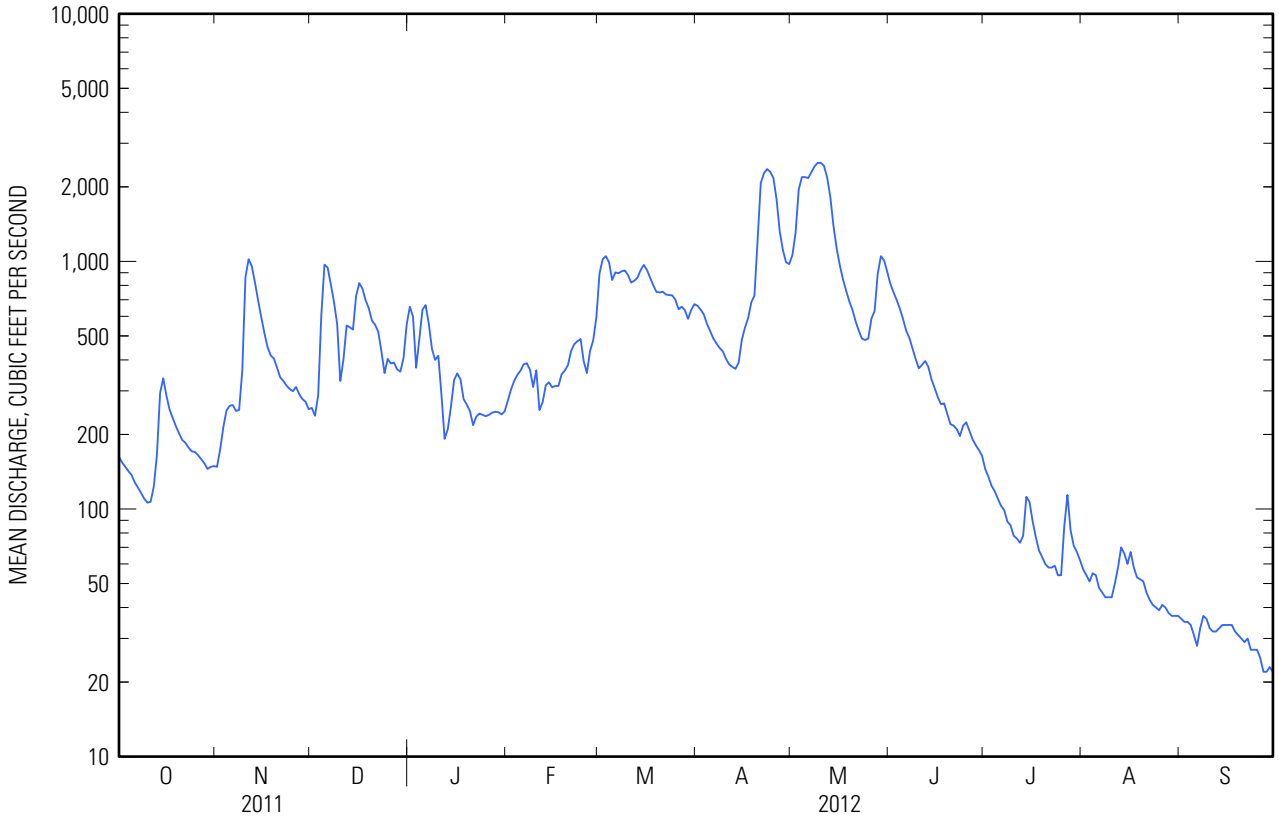
SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1934 - 2012	
Annual total	356,508		166,221			
Annual mean	977		454		716	
Highest annual mean					2,304	1993
Lowest annual mean					74.5	1934
Highest daily mean	6,580	Mar 25	2,500	May 9	28,000	May 18, 1999
Lowest daily mean	106	Oct 10	22	Sep 27[a]	7.0	Oct 1, 1933[b]
Annual seven-day minimum	116	Oct 6	24	Sep 24	7.1	Jan 24, 1977
Maximum peak flow			2,520	May 9	31,100	May 18, 1999
Maximum peak stage			6.84	May 9	22.35	May 18, 1999
Instantaneous low flow			20	Sep 28		
Annual runoff (ac-ft)	707,100		329,700		518,400	
Annual runoff (cfsm)	0.932		0.433		0.683	
Annual runoff (inches)	12.65		5.90		9.28	
10 percent exceeds	2,390		948		1,760	
50 percent exceeds	534		316		290	
90 percent exceeds	167		40		56	

[a] Also Sep 28, 30.
[b] Many days in 1933 and 1934 when power plant shut down; Jan 25-30, 1977.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968-1970, 2012.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Daily instantaneous values collected in conjunction with suspended-sediment samples, October 1968 to September 1970.
WATER TEMPERATURE: Daily instantaneous values collected in conjunction with suspended-sediment samples, October 1967 to September 1970.
SUSPENDED-SEDIMENT CONCENTRATION AND DISCHARGE: December 1967 to September 1970.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 840 mg/L, July 17, 1968; minimum daily mean, 1 mg/L, many days in January and February of 1969, July 18, 1970.
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 31,100 tons/day, July 17, 1968; minimum daily, 0.4 tons/day, January 21, 1968, January 26, 1968.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 1 of 2

[N, nitrogen; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter]

Sample date-time	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Discharge, instantaneous, ft³/s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, µS/cm at 25°C (00095)	Temperature, water, °C (00010)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)
08-06-2012 0930	745	22.7	50	6.0	7.9	386	24.7	0.176	0.199

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 2 of 2

[N, nitrogen; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter]

Sample date-time	Nitrite, water, filtered, mg/L as N (00613)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L as P (00665)	Total nitrogen, water, unfiltered, analytically determined, mg/L (62855)
08-06-2012 0930	0.016	0.076	0.226	1.49