Water-Data Report 2013

06470878 JAMES RIVER AT NORTH DAKOTA-SOUTH DAKOTA STATE LINE

James Basin
Upper James Subbasin

LOCATION.--Lat 45°56′11″, long 98°10′26″ referenced to North American Datum of 1927, in SE ¼ SE ¼ sec.34, T.129 N., R.60 W., Brown County, SD, Hydrologic Unit 10160003, at bridge on North Dakota-South Dakota state line road 6.5 mi south and 1 mi west from Ludden.

DRAINAGE AREA.--5,480 mi^2 of which 3,300 mi^2 probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--DAILY DISCHARGE--October 2001 to current year. October 1981 to September 2001 equivalent discharge site formerly published as James River at Dakota Lake Dam near Ludden (06470875).

PERIOD OF RECORD.--DAILY GAGE HEIGHT--November 1981 to September 1999, October 2001 to current year.

GAGE.--Acoustic doppler velocity meter and water-stage recorder. Datum of gage is 1,200 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those below 100 ft^3/s and those for estimated daily discharges, which are poor. Daily discharge is heavily influenced by wind speed and direction. Negative discharge values are generally the result of southerly winds.

REGULATION AND DIVERSION.--Flow regulated by Jamestown Reservoir, capacity, 220,980 acre-ft, since 1953, Pipestem Lake, capacity 147,110 acre-ft, since 1973. Small amounts can be diverted to or from Hyatt Slough, which is 1 mi east of station and is connected by road ditch containing culvert gates.

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 06470878, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/06470878.2013.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	50	46	e39	e39	e26	e31	e33	1,140	1,610	1,670	829	557
2	47	21	e42	e39	e26	e31	e34	1,070	1,380	1,600	802	522
3	122	15	e45	e40	e26	e31	e36	959	1,410	1,520	786	489
4	76	24	e45	e40	e27	e31	e38	886	1,380	1,420	754	473
5	4.3	4.2	e45	e40	e27	e31	e44	785	1,440	1,450	780	410
6	-5.2	54	e46	e39	e27	e31	e60	751	1,410	1,380	770	385
7	1.6	15	e47	e38	e28	e31	e83	720	1,370	1,350	743	393
8	-0.14	64	e45	e38	e28	e31	e116	761	1,370	1,250	725	352
9	20	75	e45	e38	e29	e31	e127	787	1,430	1,260	723	389
10	6.8	38	e40	e38	e29	e31	e129	722	1,390	1,170	701	388
11	11	19	e40	e39	e30	e31	e124	800	1,420	1,030	701	359
12	19	7.3	e40	e38	e31	e31	e115	762	1,440	1,050	698	313
13	8.2	7.5	e40	e36	e31	e31	e111	771	1,370	1,170	693	268
14	13	12	e42	e35	e31	e31	e113	898	1,340	1,140	672	260
15	13	20	e43	e35	e31	e31	e121	864	1,360	1,030	646	304
16	18	e24	e44	e35	e30	e31	e126	950	1,350	971	631	190
17	58	e38	e43	e35	e31	e31	e133	893	1,370	1,060	606	200
18	244	e41	e43	e35	e30	e31	e120	917	1,320	984	597	235
19	91	e40	e43	e34	e30	e31	e107	971	1,300	1,050	659	256
20	13	e47	e43	e33	e31	e31	e100	1,030	1,620	1,020	628	226
21	4.2	e50	e42	e33	e31	e31	e101	1,230	1,710	938	640	176
22	7.4	e50	e41	e32	e31	e31	e109	1,140	1,750	963	604	135
23	3.8	e44	e40	e31	e31	e31	e123	1,060	1,850	921	570	98
24	13	e37	e39	e31	e30	e31	e146	1,070	1,920	895	536	189
25	40	e37	e38	e30	e31	e31	203	1,230	1,900	908	611	157
26	12	e35	e38	e28	e31	e31	344	1,280	2,000	940	611	143
27	6.9	e35	e39	e27	e31	e31	477	1,320	1,970	827	595	189
28	14	e36	e39	e27	e31	e31	618	1,330	1,960	858	574	161
29	5.9	e39	e39	e26	---	e31	771	1,420	1,830	817	575	133
30	9.7	e39	e39	e26	---	e32	998	1,360	1,740	845	567	160
31	20	---	e39	e26	---	e32	---	1,460	---	851	524	---
Total	947.46	1,014.0	1,293	1,061	826	963	5,760	31,337	46,710	34,338	20,551	8,510
Mean	30.6	33.8	41.7	34.2	29.5	31.1	192	1,011	1,557	1,108	663	284
Max	244	75	47	40	31	32	998	1,460	2,000	1,670	829	557
Min	-5.2	4.2	38	26	26	31	33	720	1,300	817	524	98
Ac-ft	1,880	2,010	2,560	2,100	1,640	1,910	11,420	62,160	92,650	68,110	40,760	16,880

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	250	159	70.0	36.4	36.2	344	1,019	779	693	548	373	293
Max	2,322	1,065	254	131	104	1,607	5,862	4,011	2,821	3,299	2,325	2,305
(WY)	(2012)	(2012)	(2012)	(2012)	(2012)	(2010)	(2009)	(2009)	(2011)	(2011)	(2011)	(2011)
Min	1.86	0.20	0.28	0.06	0.62	26.0	33.4	9.92	2.12	-5.43	0.00	0.01
(WY)	(1989)	(1991)	(1991)	(1991)	(1989)	(1990)	(1990)	(1990)	(1988)	(2006)	(1988)	(1990)

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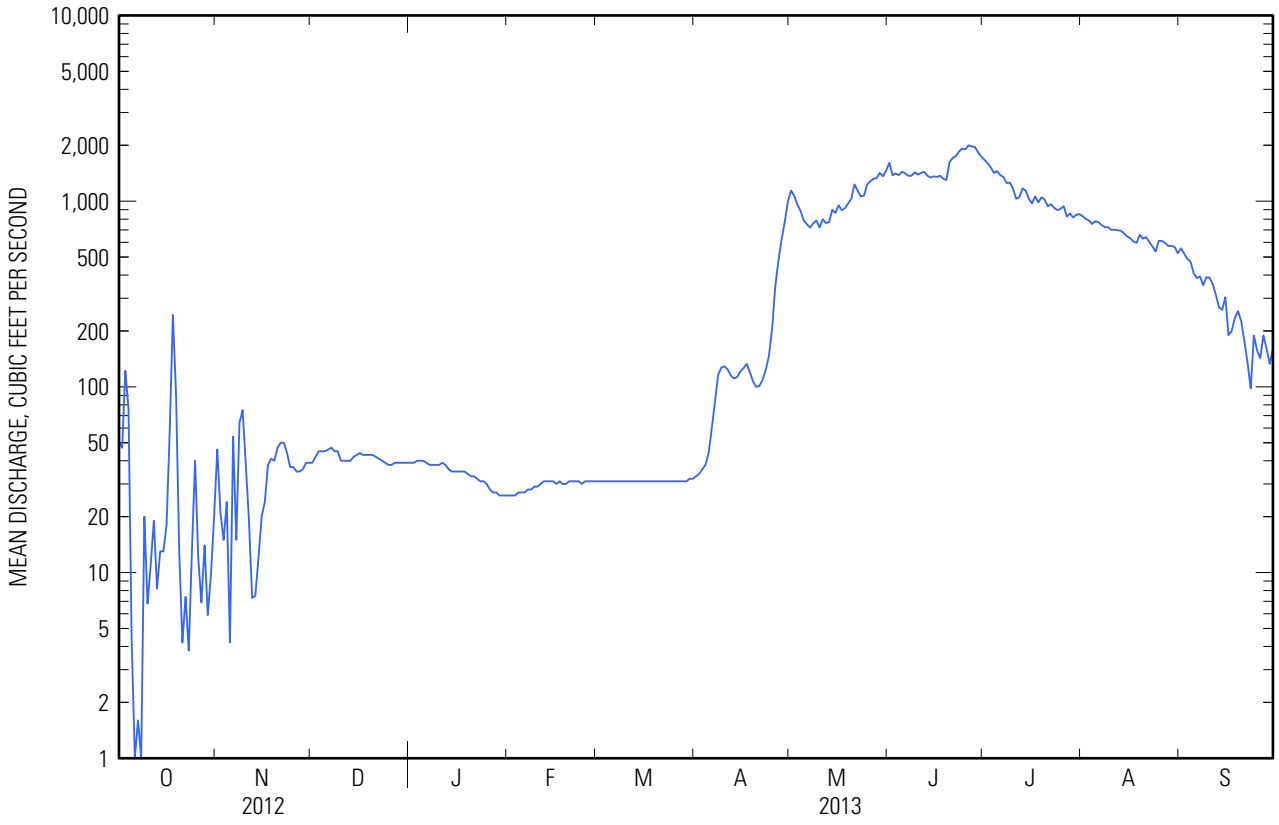
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1982 - 2013	
Annual total	44,279.04		153,310.46			
Annual mean	121		420		[a]384	
Highest annual mean					[a]1,532	2011
Lowest annual mean					[a]10.3	1990
Highest daily mean	542	Apr 15	2,000	Jun 26	11,000	Apr 18, 2009
Lowest daily mean	-5.2	Oct 6	[b]-5.2	Oct 6	[b]-33	Jul 20, 2006
Annual seven-day minimum	5.5	Oct 5	5.5	Oct 5	[b]-22	Jul 20, 2006
Maximum peak flow			2,150	Jun 28	[c]11,800	Apr 18, 2009
Maximum peak stage			[d]93.39	Jun 26	[e]98.04	Apr 6, 1997
Annual runoff (ac-ft)	87,830		304,100		[a]278,400	
10 percent exceeds	323		1,350		1,100	
50 percent exceeds	80		64		105	
90 percent exceeds	12		26		3.3	

[a] Historic discharge data, water years 1982-2003, from equivalent station, James River at Dakota Lake Dam near Ludden (06470875).
[b] Wind aided.
[c] Gage height, 96.35 ft, from floodmark.
[d] and June 28.
[e] From floodmark at present location.



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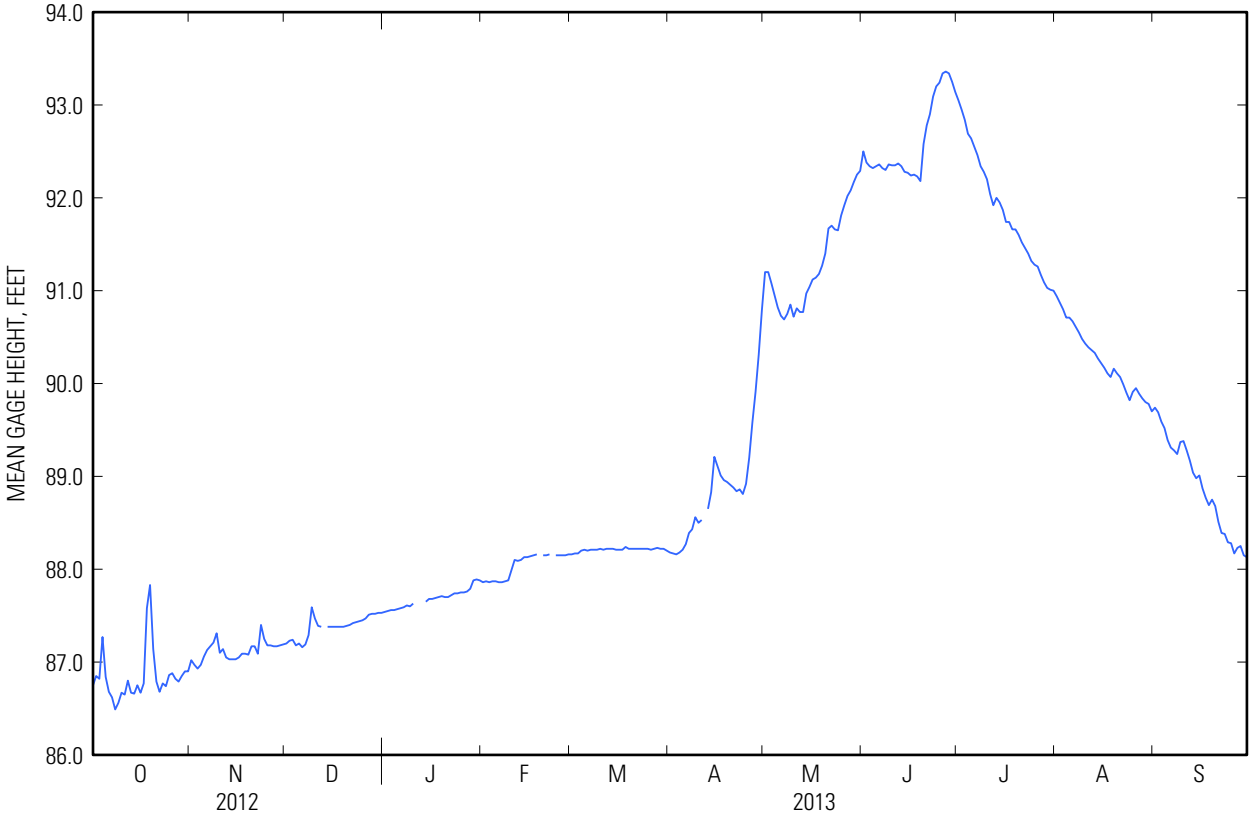
GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	86.75	87.02	87.20	87.54	87.86	88.16	88.18	91.20	92.50	93.05	90.94	89.74
2	86.85	86.97	87.23	87.55	87.87	88.17	88.17	91.20	92.38	92.95	90.87	89.69
3	86.82	86.93	87.24	87.56	87.86	88.17	88.16	91.08	92.34	92.84	90.80	89.59
4	87.27	86.97	87.18	87.56	87.87	88.20	88.18	90.95	92.32	92.69	90.71	89.52
5	86.84	87.06	87.20	87.57	87.87	88.21	88.21	90.82	92.34	92.64	90.71	89.39
6	86.68	87.13	87.16	87.58	87.86	88.20	88.27	90.73	92.36	92.55	90.67	89.31
7	86.62	87.17	87.19	87.59	87.86	88.21	88.39	90.69	92.32	92.46	90.61	89.28
8	86.49	87.21	87.29	87.61	87.87	88.21	88.43	90.75	92.30	92.34	90.55	89.24
9	86.56	87.31	87.59	87.60	87.88	88.21	88.56	90.85	92.36	92.28	90.48	89.37
10	86.67	87.10	87.47	87.63	87.99	88.22	88.50	90.72	92.35	92.20	90.43	89.38
11	86.65	87.14	87.39	---	88.10	88.21	88.53	90.81	92.35	92.04	90.39	89.28
12	86.80	87.05	87.38	---	88.09	88.22	---	90.77	92.37	91.92	90.36	89.17
13	86.67	87.03	---	---	88.10	88.22	88.65	90.77	92.34	92.00	90.33	89.04
14	86.66	87.03	87.38	87.65	88.13	88.22	88.83	90.97	92.28	91.95	90.27	88.98
15	86.75	87.03	87.38	87.68	88.13	88.21	89.21	91.04	92.27	91.87	90.22	89.01
16	86.67	87.05	87.38	87.68	88.14	88.21	89.11	91.12	92.24	91.74	90.17	88.87
17	86.77	87.09	87.38	87.69	88.15	88.21	89.01	91.14	92.25	91.74	90.11	88.77
18	87.58	87.09	87.38	87.70	88.16	88.24	88.96	91.18	92.23	91.66	90.07	88.69
19	87.83	87.08	87.38	87.71	---	88.22	88.94	91.27	92.18	91.66	90.16	88.75
20	87.14	87.17	87.39	87.70	88.15	88.22	88.91	91.40	92.58	91.60	90.11	88.68
21	86.79	87.17	87.40	87.70	88.15	88.22	88.88	91.67	92.78	91.52	90.07	88.51
22	86.68	87.09	87.42	87.72	88.16	88.22	88.84	91.70	92.90	91.46	89.99	88.39
23	86.77	87.40	87.43	87.74	---	88.22	88.86	91.66	93.09	91.40	89.90	88.38
24	86.74	87.25	87.44	87.74	88.15	88.22	88.81	91.65	93.20	91.32	89.82	88.29
25	86.86	87.18	87.45	87.75	88.15	88.22	88.92	91.81	93.24	91.28	89.91	88.28
26	86.88	87.18	87.47	87.75	88.15	88.21	89.20	91.92	93.34	91.26	89.95	88.17
27	86.82	87.17	87.51	87.76	88.15	88.22	89.58	92.02	93.36	91.17	89.89	88.23
28	86.79	87.17	87.52	87.79	88.16	88.23	89.91	92.08	93.34	91.09	89.84	88.25
29	86.85	87.18	87.52	87.88	---	88.22	90.31	92.17	93.25	91.03	89.80	88.15
30	86.90	87.19	87.53	87.89	---	88.22	90.79	92.25	93.14	91.01	89.78	88.13
31	86.90	---	87.53	87.88	---	88.20	---	92.29	---	91.00	89.70	---
Mean	86.84	87.12	---	---	---	88.21	---	91.31	92.61	91.86	90.25	88.88
Max	87.83	87.40	---	---	---	88.24	---	92.29	93.36	93.05	90.94	89.74
Min	86.49	86.93	---	---	---	88.16	---	90.69	92.18	91.00	89.70	88.13

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