

Water-Data Report 2013

06827500 South Fork Republican River near Benkelman, Nebr.

Republican Basin
South Fork Republican Subbasin

LOCATION.--Lat 40°00'37", long 101°32'31" referenced to North American Datum of 1983, in SE ¼ NW ¼ sec.31, T.1 N., R.37 W., Dundy County, NE, Hydrologic Unit 10250003, 1 mi downstream from Kansas-Nebraska State line, 2.5 mi southwest of Benkelman, and 3.4 mi upstream from mouth.

DRAINAGE AREA.--2,740 mi² of which 550 mi² probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--DAILY DISCHARGE--October 1894 to September 1895, October 1902 to November 1906, October 1930 to September 1932, August 1937 to current year. Published as South Fork of Republican River at Benkelman prior to 1906 and as Republican River at Benkelman 1931-32. Monthly discharge only for some periods, published in WSP 1310.

PERIOD OF RECORD.--DAILY GAGE HEIGHT--October 2009 to current year.

REVISED RECORDS.--WSP 1310: 1904-6, 1931. WSP 1390: 1940, 1945, 1947. WSP 1919: 1951-52, 1954-56. WSP 2119: Drainage area. WDR NE-97: 1995 (M).

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 2,989.91 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 10, 1947, non-recording gages at several sites within 3.5 mi of present site at various datums. Dec.10, 1947 to Sept. 28, 1966, water-stage recorder 170 ft upstream at datum 3.00 ft higher; and Sept. 29, 1966 to Mar. 7, 1968, at site 300 ft upstream at datum 3.00 ft higher. Mar. 8, 1968 to May 29, 1991, at site 300 ft upstream at datum 1.0 ft higher. May 30, 1991 to Sept. 30, 1998, at present site at datum 1.0 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow affected by irrigation development above station. Natural flow was affected by storage in Bonny Reservoir from July 6, 1950 to September 2011.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1923, 10.1 ft, May 31, 1935, from floodmark at site 0.26 mi downstream, at datum 2.00 ft higher, discharge 150,000 ft³/s, by slope-area measurement.

06827500 South Fork Republican River near Benkelman, Nebr.—Continued

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

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ac-ft	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	13.8	18.8	18.0	20.3	33.9	44.3	48.7	60.7	60.9	48.0	29.1	20.1
Max	160	113	77.0	77.5	121	227	158	396	455	616	383	335
(WY)	(1966)	(1970)	(1943)	(1943)	(1949)	(1942)	(1958)	(1957)	(1948)	(1946)	(1958)	(1951)
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1940)	(1953)	(1953)	(1977)	(2003)	(2004)	(2004)	(2004)	(2002)	(1943)	(1940)	(1939)

06827500 South Fork Republican River near Benkelman, Nebr.—Continued

SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1938 - 2013	
Annual total	3,247.34		0.00			
Annual mean	8.87		0.00		35.1	
Highest annual mean					121	1951
Lowest annual mean					0.00	2004
Highest daily mean	31	Jan 1	0.00	Oct 1	6,220	Aug 16, 1958
Lowest daily mean	0.00	Jun 25	0.00	Oct 1	0.00	Jul 3, 1938
Annual seven-day minimum	0.00	Jun 25	0.00	Oct 1	0.00	Aug 1, 1938
Maximum peak flow			0.00	Oct 1	19,600	Aug 16, 1958
Maximum peak stage					^a 8.70 Aug 16, 1958	
Annual runoff (ac-ft)	6,440		0.00		25,460	
10 percent exceeds	26		0.00		76	
50 percent exceeds	0.00		0.00		15	
90 percent exceeds	0.00		0.00		0.00	

^a May have been higher during flood of June 24, 1945, site and datum then in use.