Water-Data Report 2013

09085000 ROARING FORK RIVER AT GLENWOOD SPRINGS, CO

Colorado Headwaters Basin
Roaring Fork Subbasin

LOCATION.--Lat 39°32′37″, long 107°19′44″ referenced to North American Datum of 1927, in SW ¼ SE ¼ sec.9, T.6 S., R.89 W., Garfield County, CO, Hydrologic Unit 14010004, on left bank at Glenwood Springs, 2,100 ft upstream from mouth.

DRAINAGE AREA.--1,453 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1905 to September 1909, September 1910 to current year. Monthly discharge only for some periods, published in WSP 1313. Prior to October 1960, published as Roaring Fork at Glenwood Springs. Statistical summary computed for 1972 to current year.

REVISED RECORDS.--WDR-US-2011: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Datum of gage is 5,720.73 ft above NGVD of 1929. Prior to Nov. 20, 1915, nonrecording gage on highway bridge 800 ft downstream, at different datum. Nov. 20, 1915 to Oct. 26, 1917, nonrecording gage at present site and datum.

REMARKS.--Records good except for the period from May 16 to June 24, which is fair, and estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 35,000 acres. Transmountain diversions to Arkansas River Basin through Busk-Ivanhoe Tunnel since 1925, Twin Lakes Tunnel since 1935, and Charles H. Boustead Tunnel since 1972. Natural flow of stream affected by storage in Ruedi Reservoir on Fryingpan River (station 09080190) since May 1968.

09085000 ROARING FORK RIVER AT GLENWOOD SPRINGS, CO—Continued

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

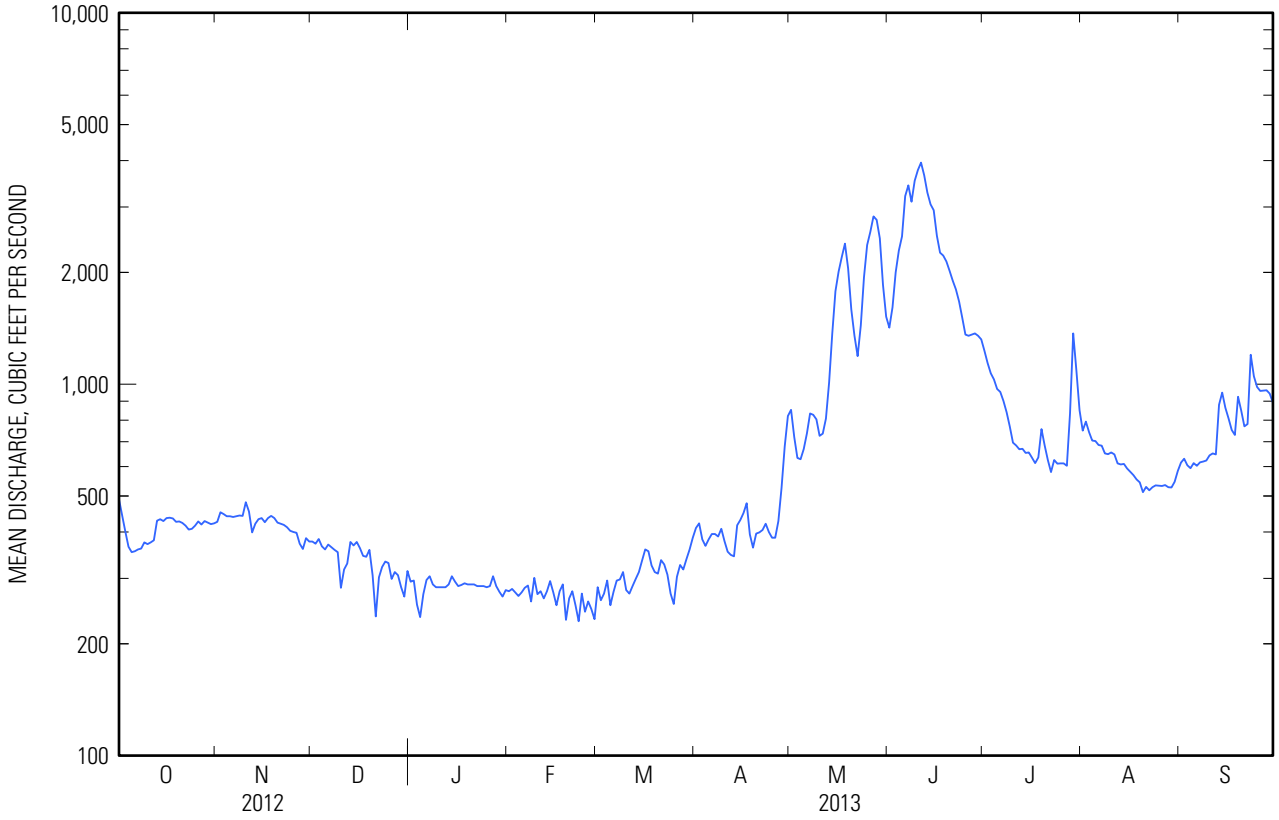
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	490	426	377	e294	e277	284	410	853	1,420	1,230	750	615
2	443	452	372	e296	281	262	422	721	1,610	1,140	793	630
3	401	447	383	e255	275	273	382	633	2,000	1,070	743	605
4	365	441	366	e236	269	296	367	628	2,290	1,030	705	594
5	353	441	359	e272	275	254	382	669	2,500	971	703	613
6	355	439	370	e297	283	276	395	737	3,210	953	686	603
7	359	441	364	e304	287	296	395	834	3,430	901	683	616
8	361	443	358	e289	260	298	389	827	3,100	840	651	619
9	375	442	353	e284	301	312	408	804	3,530	769	648	623
10	371	481	283	e284	272	279	378	726	3,770	696	655	643
11	375	454	317	e284	277	273	354	736	3,950	684	647	651
12	380	399	329	e284	265	286	347	808	3,650	668	612	647
13	429	421	376	e289	277	299	344	1,010	3,280	670	608	880
14	433	433	368	e304	295	312	417	1,370	3,050	653	610	949
15	428	436	376	e294	275	335	431	1,780	e2,940	655	593	864
16	436	425	362	e286	254	359	450	2,010	2,510	634	581	809
17	437	436	345	e288	277	355	478	2,200	2,260	613	569	753
18	435	442	343	e291	289	325	394	2,390	2,220	635	554	730
19	426	436	358	e289	232	312	363	2,050	2,140	757	544	925
20	427	424	306	e289	265	309	396	1,590	2,020	684	512	849
21	423	421	237	e289	277	336	399	1,350	1,900	625	529	770
22	416	418	e302	e286	254	327	405	1,190	1,800	580	518	781
23	406	412	e322	e286	230	307	421	1,440	e1,670	625	528	1,200
24	408	403	e333	e286	273	273	400	1,940	e1,510	611	534	1,050
25	416	400	e330	e284	244	256	386	2,370	1,360	612	533	983
26	427	398	e299	e286	260	303	386	2,570	1,350	612	532	959
27	419	372	e312	e304	248	326	428	2,830	1,360	603	535	961
28	428	360	e306	e286	233	317	526	2,770	1,370	835	528	963
29	424	385	e284	e276	---	338	680	2,470	1,350	1,370	527	943
30	420	377	e268	e268	---	359	821	e1,850	1,320	1,090	546	892
31	422	---	e314	e279	---	386	---	1,520	---	851	584	---
Total	12,688	12,705	10,372	8,839	7,505	9,523	12,754	45,676	69,870	24,667	18,741	23,720
Mean	409	424	335	285	268	307	425	1,473	2,329	796	605	791
Max	490	481	383	304	301	386	821	2,830	3,950	1,370	793	1,200
Min	353	360	237	236	230	254	344	628	1,320	580	512	594
Ac-ft	25,170	25,200	20,570	17,530	14,890	18,890	25,300	90,600	138,600	48,930	37,170	47,050

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	719	644	546	485	458	518	825	2,217	3,866	2,191	953	740
Max	1,159	969	790	677	689	861	1,602	4,663	7,383	7,483	2,676	1,160
(WY)	(1985)	(1985)	(1985)	(1996)	(1986)	(1986)	(1985)	(1984)	(1984)	(1995)	(1995)	(1995)
Min	384	411	335	285	266	293	352	593	1,100	422	316	363
(WY)	(1978)	(1978)	(2013)	(2013)	(2003)	(2003)	(1977)	(1977)	(2002)	(1977)	(1977)	(1977)

09085000 ROARING FORK RIVER AT GLENWOOD SPRINGS, CO—Continued

SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1972 - 2013	
Annual total	219,645		257,060			
Annual mean	600		704		[a]1,182	
Highest annual mean					2,092	1984
Lowest annual mean					485	1977
Highest daily mean	1,870	Jun 2	3,950	Jun 11	[b]11,800	Jul 12, 1995
Lowest daily mean	237	Dec 21	230	Feb 23	[c,d]180	Feb 7, 2003
Annual seven-day minimum	302	Dec 25	249	Feb 22	234	Feb 4, 2003
Maximum peak flow			5,060	Jun 11	[f]13,000	Jul 13, 1995
Maximum peak stage			5.65	Jun 11	[g]8.31	Jul 13, 1995
Annual runoff (ac-ft)	435,700		509,900		856,200	
10 percent exceeds	1,010		1,510		2,790	
50 percent exceeds	515		428		664	
90 percent exceeds	375		278		420	

[a] Average discharge for 65 years (water years 1906-09, 1911-71), 1,368 ft³/s; 991,100 acre-ft/yr, prior to diversion through Charles H. Boustead Tunnel.
[b] Maximum daily discharge for period of record, 17,300 ft³/s (estimated), Jun 14, 1921.
[c] Minimum daily discharge for period of record, 179 ft³/s, Jan 21, 1935; minimum discharge during the day of Jan 21, 1935, 145 ft³/s, gage height, 0.65 ft.
[d] Also occurred Aug 12, 1977.
[f] Maximum discharge for period of record, 19,000 ft³/s, Jul 1, 1957, gage height, 8.65 ft.
[g] Maximum gage height for period of record, 8.7 ft, Jun 14, 1921, from floodmarks.