

Water-Data Report 2011

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 mi² (revised).

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.--WSP 2124: 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 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 Fryingspan River (station 09080190) since May 1968.

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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	501	644	537	e389	e386	442	516	1,020	3,630	8,200	1,600	805
2	501	633	546	e362	e348	457	549	971	4,340	7,440	1,490	794
3	508	627	546	e451	e333	467	683	938	5,110	7,400	1,500	837
4	508	625	544	e482	e369	467	656	913	4,920	7,030	1,480	820
5	501	623	540	e482	e417	435	612	952	5,520	6,640	1,440	814
6	507	615	532	e478	e450	452	648	1,070	6,320	7,360	1,340	832
7	526	617	531	e461	e423	445	677	1,320	7,150	7,000	1,300	978
8	559	613	504	e468	e426	438	706	1,830	6,580	6,980	1,230	950
9	567	630	518	e497	e410	417	763	2,170	6,500	7,200	1,120	929
10	555	612	516	e485	e388	436	772	1,910	6,250	7,050	1,070	926
11	544	592	521	e437	e415	497	729	1,950	6,240	6,290	1,020	916
12	545	584	499	e490	e442	518	742	1,760	6,390	5,850	983	897
13	549	567	501	e528	e448	535	745	1,530	6,400	5,420	920	896
14	560	576	509	493	e453	527	807	1,630	6,480	4,880	950	898
15	568	586	508	471	464	527	756	1,760	6,520	4,290	999	968
16	544	580	500	460	455	547	747	2,290	7,100	3,770	896	1,040
17	543	573	465	470	480	589	784	2,620	8,100	3,480	861	1,050
18	547	554	496	467	468	585	875	2,340	6,980	3,540	836	1,080
19	547	571	508	459	477	566	1,090	2,120	6,560	3,700	835	1,040
20	540	577	569	e418	520	548	996	1,880	6,220	3,220	834	1,020
21	533	588	632	442	470	540	1,090	1,760	5,410	2,940	836	1,030
22	557	579	556	445	447	566	1,120	1,640	5,470	2,670	838	1,020
23	574	536	551	e434	457	540	1,060	1,790	6,230	2,410	818	993
24	593	579	547	443	468	532	1,080	1,980	7,120	2,240	793	961
25	677	e497	503	e395	455	520	1,110	1,950	7,620	2,040	792	943
26	706	e466	489	e440	449	520	1,060	2,140	7,530	2,040	802	921
27	643	e520	531	e418	442	514	982	2,490	7,220	2,010	845	904
28	622	561	488	e406	444	515	963	2,970	7,070	1,860	839	895
29	631	558	456	e415	---	503	1,040	3,950	7,430	1,730	842	894
30	643	e512	517	427	---	506	1,050	4,840	8,120	1,650	852	881
31	650	---	e485	428	---	487	---	3,650	---	1,580	806	---
Total	17,549	17,395	16,145	13,941	12,204	15,638	25,408	62,134	192,530	139,910	31,767	27,932
Mean	566	580	521	450	436	504	847	2,004	6,418	4,513	1,025	931
Max	706	644	632	528	520	589	1,120	4,840	8,120	8,200	1,600	1,080
Min	501	466	456	362	333	417	516	913	3,630	1,580	792	794
Ac-ft	34,810	34,500	32,020	27,650	24,210	31,020	50,400	123,200	381,900	277,500	63,010	55,400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	725	649	551	489	463	523	839	2,263	3,973	2,266	973	744
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	348	305	266	293	352	593	1,100	422	316	363
(WY)	(1978)	(1978)	(2003)	(2003)	(2003)	(2003)	(1977)	(1977)	(2002)	(1977)	(1977)	(1977)

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SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1972 - 2011	
Annual total	396,600		572,553			
Annual mean	1,087		1,569		^a 1,206	
Highest annual mean					2,092	1984
Lowest annual mean					485	1977
Highest daily mean	8,710	Jun 10	8,200	Jul 1	^b 11,800	Jul 12, 1995
Lowest daily mean	355	Feb 23	333	Feb 3	^{c,d} 180	Feb 7, 2003
Annual seven-day minimum	380	Feb 9	387	Jan 29	234	Feb 4, 2003
Maximum peak flow			9,220	Jul 1	^f 13,000	Jul 13, 1995
Maximum peak stage			7.18	Jul 1	^g 8.31	Jul 13, 1995
Annual runoff (ac-ft)	786,700		1,136,000		874,000	
10 percent exceeds	2,380		5,490		2,880	
50 percent exceeds	613		648		672	
90 percent exceeds	402		449		425	

^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.

