

Water-Data Report 2013

**08330000 RIO GRANDE AT ALBUQUERQUE, NM**

Rio Grande-Elephant Butte Basin  
Rio Grande-Albuquerque Subbasin

LOCATION.--Lat 35°05'21", long 106°40'50.5" referenced to North American Datum of 1983, Bernalillo County, NM, Hydrologic Unit 13020203, in Atrisco Grant, on downstream side of Central Avenue Bridge in Albuquerque, and at mi 1,540.0.

DRAINAGE AREA.--17,440 mi<sup>2</sup> of which 2,940 mi<sup>2</sup> probably is noncontributing, from the closed basin in San Luis Valley, Colorado.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--October 1941 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1312: 1946(M).

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 4,946.16 ft above NGVD of 1929. Prior to Sept. 18, 1947, at various sites at datum about 2.00 ft higher; Sept. 15, 1982, to Sept. 20, 1983, at site 1.0 mi upstream at different datum.

COOPERATION.--Records for Albuquerque Riverside drain and Arenal, Armijo, and Atrisco canals provided by Middle Rio Grande Conservancy District. Data were not provided by time of printing.

Water Quality Cooperation: Bureau of Reclamation funds the Total Load and Turbidity samples. The Army Corps of Engineers funds the Daily suspended sediment concentration samples.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated since Nov. 1973 by Cochiti Dam (station 08317300), 50 mi upstream. Some regulation by operation of reservoirs on Rio Chama and by flood- and silt-detention reservoirs on Galisteo Creek and Jemez River (stations 08285000, 08286900, 08317900, 08328500). Since May 1971, flow affected by release of transmountain water from Heron Reservoir (station 08284510). Diversions upstream from station for irrigation of about 718,000 acres, several hundred of which are downstream from station.

## 08330000 RIO GRANDE AT ALBUQUERQUE, NM—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	145	166	696	289	480	335	435	617	612	620	305	86
2	133	153	698	253	470	294	428	617	617	579	301	146
3	133	151	699	253	489	327	400	604	651	484	361	115
4	137	142	691	247	480	286	407	691	669	218	230	158
5	137	145	686	243	472	274	447	697	705	300	479	106
6	141	147	682	231	585	286	436	682	696	504	312	88
7	151	140	695	227	531	262	514	669	652	388	295	66
8	153	151	741	234	485	297	514	662	529	363	432	53
9	116	150	744	290	470	301	537	663	564	229	377	53
10	109	152	746	336	484	344	561	651	527	240	378	123
11	117	157	741	337	460	326	560	624	494	209	452	856
12	117	157	741	332	443	351	589	631	478	160	430	593
13	133	161	610	342	439	354	549	620	477	326	388	2,260
14	172	165	e567	352	440	353	543	589	524	145	287	2,250
15	233	173	637	366	445	358	542	565	554	189	233	2,590
16	253	222	637	373	437	361	504	573	538	126	179	1,810
17	242	285	631	322	454	401	486	561	532	89	160	1,180
18	194	302	718	316	444	401	472	543	499	89	155	688
19	141	301	791	377	440	404	481	550	477	201	143	933
20	127	378	801	362	457	399	469	555	438	535	130	836
21	128	439	783	341	466	421	461	554	408	358	197	741
22	135	507	621	344	464	446	464	583	457	269	104	819
23	136	547	611	344	444	448	456	608	491	139	81	1,260
24	130	542	608	378	455	472	465	589	507	111	75	856
25	130	545	620	392	445	449	499	590	519	143	89	716
26	131	574	620	444	436	391	500	580	568	773	118	880
27	131	655	618	490	435	361	537	577	592	2,270	128	721
28	139	682	462	467	416	362	565	580	564	758	118	605
29	143	680	363	477	---	377	628	620	568	519	107	546
30	143	688	347	472	---	423	603	545	565	470	102	541
31	158	---	350	479	---	442	---	606	---	399	88	---
<b>Total</b>	4,588	9,657	19,955	10,710	12,966	11,306	15,052	18,796	16,472	12,203	7,234	22,675
<b>Mean</b>	148	322	644	345	463	365	502	606	549	394	233	756
<b>Max</b>	253	688	801	490	585	472	628	697	705	2,270	479	2,590
<b>Min</b>	109	140	347	227	416	262	400	543	408	89	75	53
<b>Ac-ft</b>	9,100	19,150	39,580	21,240	25,720	22,430	29,860	37,280	32,670	24,200	14,350	44,980

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2013, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	450	842	923	846	938	1,152	1,850	2,866	2,463	1,240	727	550
<b>Max</b>	1,802	2,302	2,276	2,159	3,562	2,790	6,343	6,203	6,113	5,439	3,452	1,554
<b>(WY)</b>	(1998)	(1987)	(1987)	(1986)	(1986)	(1986)	(1985)	(1980)	(1983)	(1979)	(1986)	(1986)
<b>Min</b>	38.4	145	441	345	463	365	137	148	336	287	233	51.4
<b>(WY)</b>	(1978)	(1990)	(2003)	(2013)	(2013)	(2013)	(1977)	(1977)	(1989)	(1974)	(2013)	(1974)

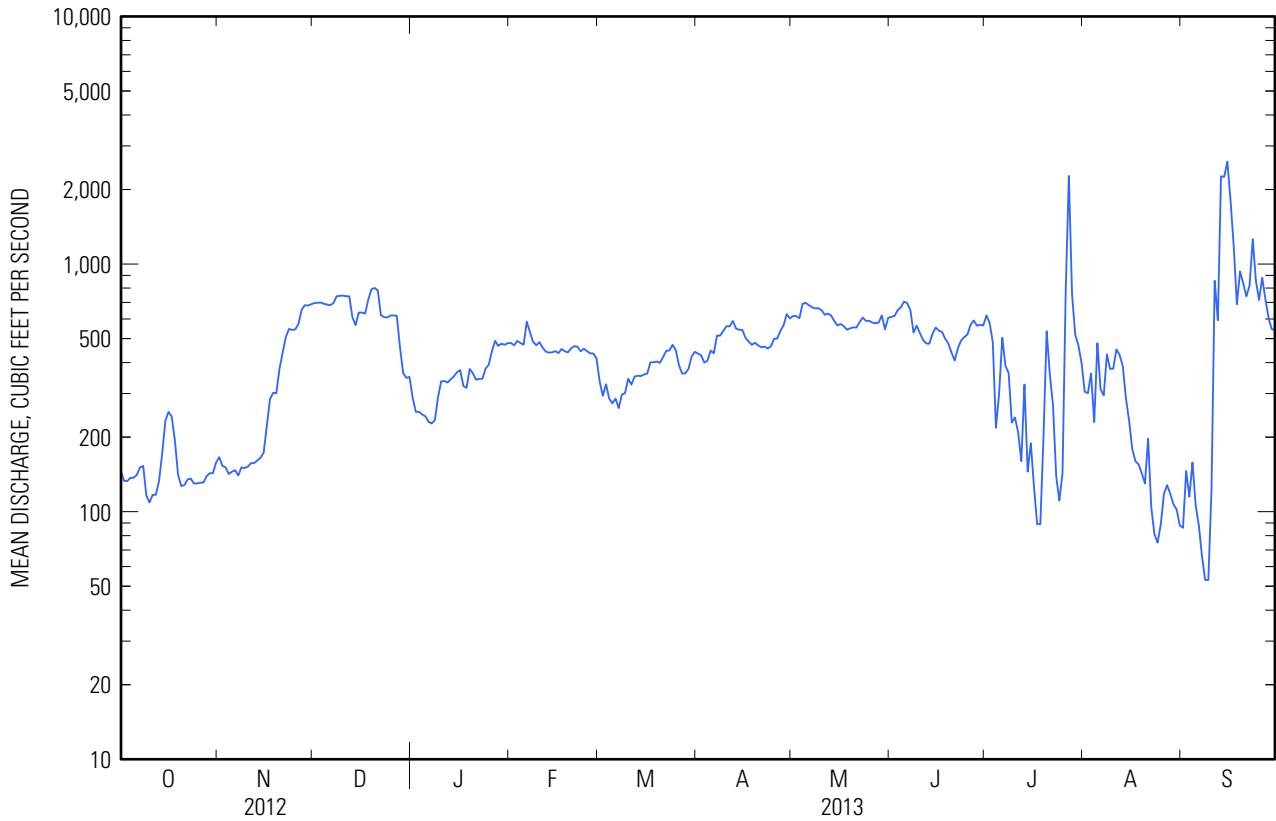
08330000 RIO GRANDE AT ALBUQUERQUE, NM—Continued

SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1974 - 2013	
<b>Annual total</b>	197,178		161,614			
<b>Annual mean</b>	539		443		a1,237	
<b>Highest annual mean</b>					2,486	1987
<b>Lowest annual mean</b>					356	1977
<b>Highest daily mean</b>	2,070	Apr 3	2,590	Sep 15	8,650	Apr 24, 1985
<b>Lowest daily mean</b>	109	Sep 7	53	Sep 8	0.00	May 30, 1977
<b>Annual seven-day minimum</b>	113	Sep 18	91	Sep 3	0.00	May 30, 1977
<b>Maximum peak flow</b>			4,350	Sep 13	b25,000Apr 24, 1942	
<b>Maximum peak stage</b>			5.74	Sep 13	7.82	Aug 10, 1967
<b>Instantaneous low flow</b>			45	Sep 9	0.00	May 30, 1977
<b>Annual runoff (ac-ft)</b>	391,100		320,600		896,400	
<b>10 percent exceeds</b>	944		689		3,180	
<b>50 percent exceeds</b>	557		444		744	
<b>90 percent exceeds</b>	137		134		307	

a Average discharge for 33 years (water years 1942-74), 1,440 ft<sup>3</sup>/s, 1,043,000 acre-ft, prior to closure of Cochiti Dam.

b From rating curve extended above 13,900 ft<sup>3</sup>/s.



**08330000 RIO GRANDE AT ALBUQUERQUE, NM—Continued**

**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1969 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: May 1969 to September 1969 (partial-record station), October 1969 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 45,500 mg/L, July 21, 1971; minimum daily mean, no flow on many days.

SEDIMENT LOAD: Maximum daily, 275,000 tons, July 27, 1971; minimum daily, 0 tons on many days.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION: Maximum daily mean, 43,700 mg/L, Sept. 17; minimum daily mean, 65 mg/L, Jan. 04.

SEDIMENT LOAD: Maximum daily 218,000 tons, Sept. 15; minimum daily, 44 tons, Jan. 04.

## 08330000 RIO GRANDE AT ALBUQUERQUE, NM—Continued

**SUSPENDED-SEDIMENT**  
**WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013**

[e, estimated]

Day	Mean	Sediment	Mean	Sediment	Mean	Sediment	Mean	Sediment	Mean	Sediment	Mean	Sediment
	concentration (mg/L)	discharge (tons/day)	concentration (mg/L)	discharge (tons/day)	concentration (mg/L)	discharge (tons/day)	concentration (mg/L)	discharge (tons/day)	concentration (mg/L)	discharge (tons/day)	concentration (mg/L)	discharge (tons/day)
	October		November		December		January		February		March	
1	e238	e93	233	105	1,380	2,590	116	90	234	304	161	149
2	e227	e82	208	87	627	1,180	105	72	288	365	160	127
3	e216	e78	169	69	425	801	72	49	397	522	182	161
4	e210	e78	177	68	383	714	65	44	516	669	187	145
5	e217	e80	188	74	387	716	76	50	635	810	165	122
6	e225	e86	181	71	422	777	86	54	922	1,470	233	180
7	e233	e95	201	76	347	650	97	59	888	1,280	179	127
8	e228	e94	197	80	358	717	107	68	775	1,020	184	148
9	e190	e60	194	79	314	631	112	88	743	942	239	196
10	e181	e53	190	78	179	360	135	123	695	908	339	313
11	e190	e60	375	159	224	447	130	118	625	778	307	270
12	e200	e63	367	156	296	592	275	246	561	671	315	299
13	e229	e83	267	116	292	478	435	402	526	623	303	289
14	e295	e138	259	115	e328	e502	389	369	495	588	291	277
15	e315	e199	276	129	293	504	297	293	462	556	171	166
16	e315	e215	361	225	307	527	212	214	532	627	176	172
17	e304	e199	552	425	1,880	3,180	189	165	1,050	1,290	376	404
18	e288	e152	600	489	3,300	6,430	177	151	759	909	480	520
19	e248	e94	585	474	2,140	4,530	131	134	606	720	436	476
20	e223	e76	871	913	1,250	2,700	100	98	760	939	398	429
21	e216	e74	1,050	1,240	1,130	2,390	79	73	760	957	339	384
22	224	81	1,250	1,720	1,010	1,690	82	76	747	936	305	367
23	230	85	1,250	1,840	887	1,460	116	107	652	782	394	475
24	214	75	1,520	2,220	761	1,250	214	219	650	800	352	450
25	191	67	1,210	1,780	378	636	320	338	328	395	582	703
26	182	65	1,010	1,560	182	304	343	412	336	395	611	645
27	169	60	1,100	1,950	216	360	320	423	300	352	854	829
28	163	61	1,110	2,050	171	220	322	406	260	293	982	959
29	167	64	1,440	2,640	130	127	271	349	---	---	827	842
30	164	64	1,970	3,660	123	116	227	289	---	---	810	923
31	201	86	---	---	112	106	224	290	---	---	583	700
<b>Total</b>	---	2,860	---	24,648	---	37,685	---	5,869	---	20,901	---	12,247

## 08330000 RIO GRANDE AT ALBUQUERQUE, NM—Continued

**SUSPENDED-SEDIMENT**  
**WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013**

[e, estimated]

Day	Mean concentration (mg/L)	Sediment discharge (tons/day)	Mean concentration (mg/L)	Sediment discharge (tons/day)	Mean concentration (mg/L)	Sediment discharge (tons/day)	Mean concentration (mg/L)	Sediment discharge (tons/day)	Mean concentration (mg/L)	Sediment discharge (tons/day)	Mean concentration (mg/L)	Sediment discharge (tons/day)
	April		May		June		July		August		September	
1	330	388	214	356	523	869	241	405	619	512	371	86
2	435	502	218	364	276	456	234	367	1,850	1,750	e2,380	e1,050
3	335	362	223	363	350	617	205	267	16,100	16,700	e1,890	e605
4	313	343	225	419	328	591	368	209	7,480	4,860	e3,160	e1,570
5	196	238	222	418	241	456	630	525	18,700	29,100	1,190	342
6	233	275	219	403	547	1,040	996	1,320	12,100	11,000	958	231
7	303	421	216	390	496	882	1,860	2,330	4,080	3,220	717	127
8	225	313	213	380	291	416	4,400	4,430	11,600	16,100	661	94
9	210	305	210	376	235	358	838	530	5,360	5,430	606	87
10	283	430	207	363	211	301	680	438	1,800	1,830	774	434
11	334	505	204	343	177	237	628	355	2,580	3,220	12,500	34,100
12	400	634	201	342	159	205	707	328	2,670	3,080	7,360	10,700
13	262	390	198	331	193	249	13,800	12,500	1,300	1,380	17,500	124,000
14	194	286	195	310	170	241	7,170	2,820	728	585	24,000	145,000
15	178	260	239	364	180	270	1,930	1,020	793	500	30,500	218,000
16	163	223	438	679	179	261	1,290	437	1,220	587	38,000	200,000
17	145	189	476	723	181	260	1,370	331	1,350	584	43,700	146,000
18	144	183	252	367	175	235	1,460	350	1,320	552	23,100	43,400
19	180	234	264	392	194	250	2,320	2,640	1,280	495	e14,700	e41,000
20	174	221	420	630	171	202	11,900	20,500	1,240	434	e11,300	e27,200
21	151	189	543	813	142	156	24,400	28,900	e4,490	e2,580	e8,400	e16,800
22	155	194	573	901	189	236	23,300	17,700	e2,070	e592	e8,790	e19,400
23	174	214	655	1,080	222	294	9,020	3,680	1,310	290	e18,800	e65,900
24	174	218	555	881	195	268	2,800	841	988	201	e6,530	e15,500
25	180	243	511	815	193	271	2,370	915	1,280	309	1,340	2,600
26	189	255	142	221	279	432	9,850	25,000	1,420	452	3,010	7,390
27	196	285	241	374	248	396	27,900	181,000	1,450	501	3,570	7,010
28	201	306	582	915	190	289	10,600	23,600	1,260	403	1,650	2,700
29	205	348	421	701	202	310	3,550	5,020	725	212	1,280	1,880
30	210	341	493	727	190	289	1,280	1,630	499	138	1,050	1,520
31	---	---	359	584	---	---	791	860	418	99	---	---
<b>Total</b>	---	9,295	---	16,325	---	11,337	---	341,248	---	107,696	---	1,134,726

**Total  
suspended  
sediment  
discharge  
(tons)**

**Year** 1,724,837