

# STREAM FLOW DATA for COLORADO



Compiled by  
the Hydrographic  
Branch

Edited by  
Thomas Ley

## Water Year 2008



Executive Director Harris Sherman  
Department of Natural Resources



Governor Bill Ritter  
State of Colorado



Director/State Engineer Dick Wolfe  
Division of Water Resources





# STATEWIDE HYDROGRAPHIC STAFF

Scott Cuthbertson, Ass't. State Engineer—Public Safety

Thomas Ley, Chief, Hydrographic and Satellite Monitoring Branch

## DENVER

Jana Ash  
David Hutchens  
Phil DeArcos

## GREELEY

Robert Cooper  
M. L. Cuning  
Russell Stroud  
Steve Barrett  
Patrick Tyler  
Bob Erosky  
Mike Wild  
Devin Ridnour

## PUEBLO

Bill Tyner  
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Lou Schultz  
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Matt Hardesty  
Jesse Jaminet

## MONTROSE

Jerry Thrush  
Steve Tuck  
Doug Wist

## GLENWOOD SPRINGS

James Kellogg  
Craig Bruner

## STEAMBOAT SPRINGS

Jean Ray

## DURANGO

Brian Boughton  
Cheston Hart  
Jason Morrow



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PLATTE RIVER BASIN

06694650 SOUTH FORK SOUTH PLATTE RIVER BELOW ANTERO RESERVOIR

**LOCATION.**--Lat 38°59'37", long 105°53'40", Park County, Hydrologic Unit 10190001, on left bank about 400 ft below Antero Reservoir.

**DRAINAGE AREA AND PERIOD OF RECORD.**--185 sq. mi.; 1976 to current year.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a concrete shelter and well at a sharp-crested Cipolletti weir with broad-crested concrete overflow walls. Primary reference gage is an electric tape gage. Gage is owned and maintained by the Denver Water Dept.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite data, with chart record backup. Chart data agreed with the satellite data within ±0.01 ft. and were used to fill in for missing satellite data on Oct 28 and March 9, without loss of accuracy. The record is complete and reliable. Record is rated good. Record developed by Mike Wild.

**RATING TABLE.**--MOD10FTCIP USED FROM 01-Oct-2007 TO 30-Sep-2008

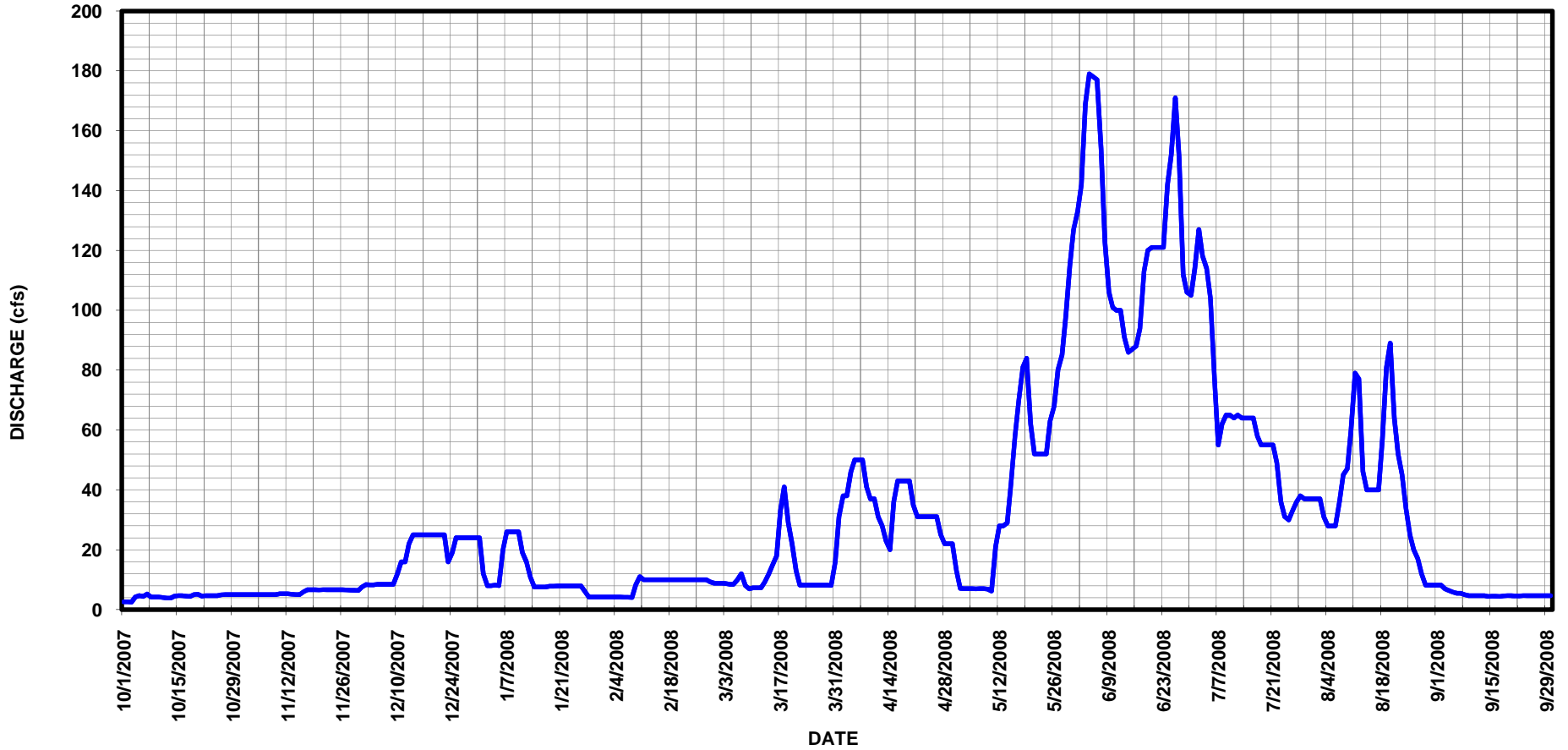
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	5.0	7.6	12	4.2	8.8	31	13	133	114	37	8.2
2	2.6	5.0	8.4	8.0	4.2	8.8	38	7.1	142	127	37	8.2
3	2.5	5.0	8.3	8.0	4.2	8.7	38	7.0	169	118	31	6.9
4	4.2	5.0	8.3	8.2	4.2	8.5	46	7.0	179	114	28	6.4
5	4.7	5.0	8.5	8.0	4.2	8.5	50	7.0	178	104	28	5.8
6	4.4	5.0	8.5	20	4.1	10	50	6.9	177	77	28	5.5
7	5.2	5.0	8.5	26	4.1	12	50	7.0	154	55	36	5.5
8	4.2	5.0	8.5	26	4.0	8.0	41	7.0	123	62	45	5.0
9	4.2	5.0	8.5	26	8.3	6.9	37	6.8	106	65	47	4.7
10	4.2	5.3	12	26	11	7.3	37	6.2	101	65	60	4.7
11	4.0	5.3	16	19	10	7.3	31	21	100	64	79	4.7
12	3.9	5.3	16	16	10	7.3	28	28	100	65	77	4.7
13	3.9	5.1	22	11	10	9.2	23	28	91	64	46	4.7
14	4.5	5.0	25	7.6	10	12	20	29	86	64	40	4.4
15	4.7	5.0	25	7.6	10	15	36	42	87	64	40	4.5
16	4.7	5.9	25	7.6	10	18	43	58	88	64	40	4.5
17	4.5	6.7	25	7.6	10	33	43	70	94	58	40	4.4
18	4.4	6.7	25	7.8	10	41	43	81	113	55	57	4.6
19	5.0	6.7	25	7.8	10	29	43	84	120	55	81	4.7
20	5.1	6.6	25	7.9	10	22	35	62	121	55	89	4.7
21	4.5	6.7	25	7.9	10	13	31	52	121	55	64	4.6
22	4.7	6.7	25	7.9	10	8.2	31	52	121	49	52	4.6
23	4.7	6.7	16	7.9	10	8.2	31	52	121	36	45	4.7
24	4.7	6.7	19	7.9	10	8.2	31	52	142	31	34	4.7
25	4.7	6.7	24	7.9	10	8.2	31	63	152	30	25	4.7
26	4.9	6.7	24	7.9	10	8.2	31	68	171	33	20	4.7
27	5.0	6.6	24	6.0	10	8.2	25	80	151	36	17	4.7
28	5.0	6.5	24	4.2	9.3	8.2	22	85	112	38	12	4.7
29	5.0	6.5	24	4.2	8.8	8.2	22	98	106	37	8.2	4.7
30	5.0	6.4	24	4.2	---	8.1	22	115	105	37	8.2	4.7
31	5.0	---	24	4.2	---	16	---	127	---	37	8.2	---
TOTAL	136.7	174.8	569.1	338.3	240.6	384.0	1040	1422.0	3764	1928	1259.6	153.6
MEAN	4.41	5.83	18.4	10.9	8.30	12.4	34.7	45.9	125	62.2	40.6	5.12
AC-FT	271	347	1130	671	477	762	2060	2820	7470	3820	2500	305
MAX	5.2	6.7	25	26	11	41	50	127	179	127	89	8.2
MIN	2.5	5.0	7.6	4.2	4.0	6.9	20	6.2	86	30	8.2	4.4
CAL YR 2007	TOTAL	9193.5	MEAN	25.2	MAX	184	MIN	2.5	AC-FT	18240		
WTR YR 2008	TOTAL	11410.7	MEAN	31.2	MAX	179	MIN	2.5	AC-FT	22630		

MAX DISCH: 183 CFS AT 17:45 ON Jun. 3, 2008 GH 3.09 FT. SHIFT 0 FT.  
MAX GH: 3.09 FT. AT 17:45 ON Jun. 3, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06694650 SOUTH FORK SOUTH PLATTE RIVER BELOW ANTERO RESERVOIR CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06694920 SOUTH PLATTE RIVER ABOVE SPINNEY MOUNTAIN RESERVOIR, CO

**LOCATION.**--Lat 38°59'10", long 105°40'52" in NE1/4 Sec 21, T. 12S, R. 74W, Park County, 3.3 miles below the confluence of the Middle and South Forks of the South Platte River, and 7 miles southeast of Hartsel, CO.

**DRAINAGE AREA AND PERIOD OF RECORD.**--772 sq. mi.; 1983 to current year.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a at a 25-foot concrete Parshall Flume with a wooden shelter and concrete well. Primary reference gage is an electric tape gage and in-flume staff gage is supplemental. Gage and satellite monitoring equipment are owned and maintained by the city of Aurora.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite data. The record is complete and reliable, except for November 21, 2007 to April 15, 2008, when the gage was shut down for winter; and, October 13, 14, 2007, June 5-13, 2008, and July 5-7, 2008, when intakes were fully or partially plugged. Average daily satellite gage heights agreed with chart data to within ±0.01 ft. Encoder calibration was checked with 39 visits while the gage was open. The record is good, except for periods of no gage height record and when the intakes were fully or partially plugged, which are estimated and poor. Station operated and record developed by Mike Wild.

**RATING TABLE.**--STD25FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

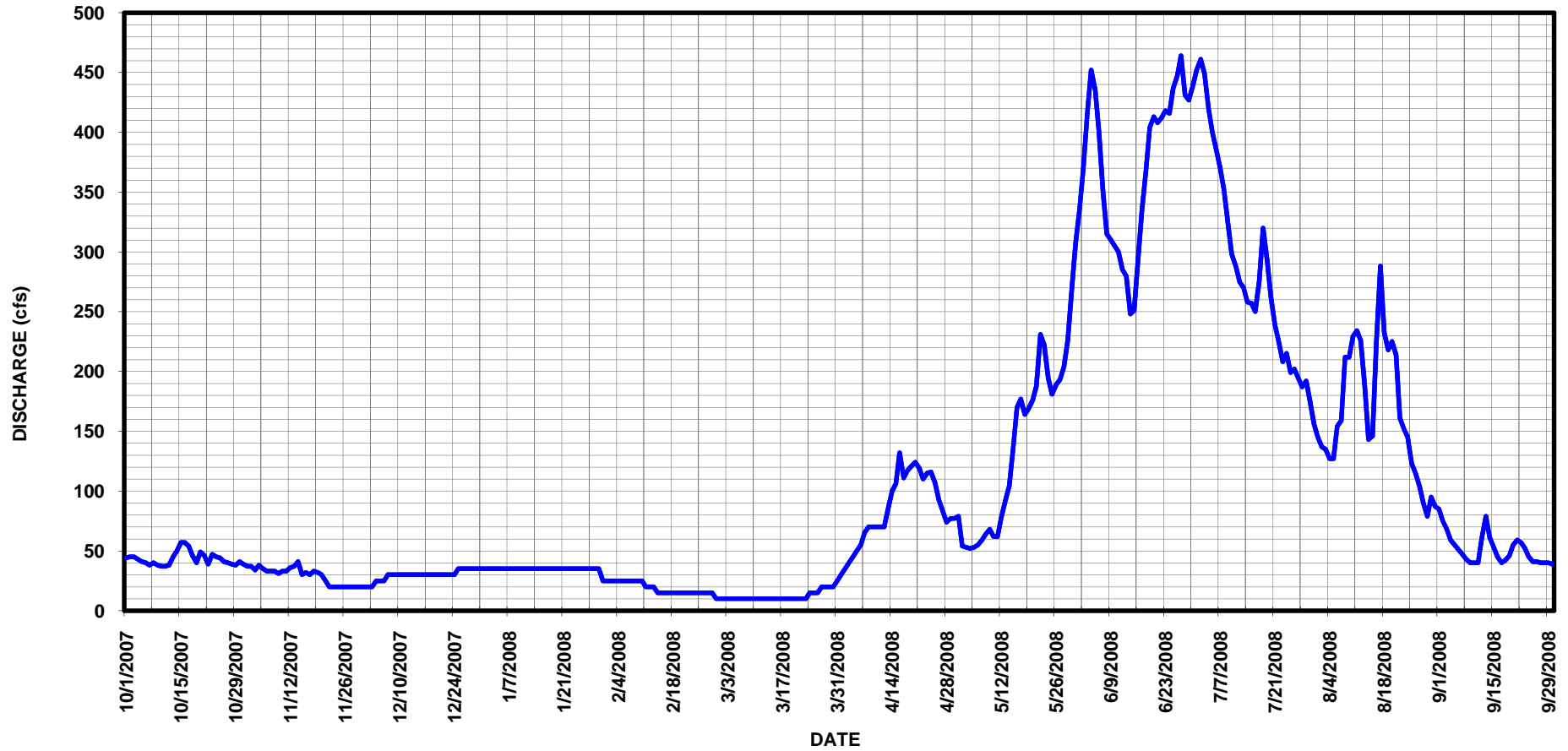
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	37	20	35	25	10	30	79	336	452	145	85
2	45	37	20	35	25	10	35	54	370	461	137	75
3	45	34	20	35	25	10	40	53	417	449	135	68
4	43	38	25	35	25	10	45	52	452	420	127	59
5	41	35	25	35	25	10	50	53	435	400	127	55
6	40	33	25	35	25	10	55	55	400	385	154	51
7	38	33	30	35	25	10	65	59	350	370	159	47
8	40	33	30	35	25	10	70	64	315	352	212	43
9	38	31	30	35	25	10	70	68	310	324	212	40
10	37	33	30	35	25	10	70	62	305	298	229	40
11	37	33	30	35	20	10	70	62	300	288	234	40
12	38	36	30	35	20	10	70	78	285	275	226	61
13	45	37	30	35	20	10	85	91	280	270	188	79
14	50	41	30	35	15	10	100	104	248	258	143	61
15	57	30	30	35	15	10	106	134	251	257	146	53
16	57	32	30	35	15	10	132	170	295	250	224	45
17	54	30	30	35	15	10	111	177	335	276	288	40
18	46	33	30	35	15	10	117	164	368	320	233	42
19	40	32	30	35	15	10	121	169	404	293	218	46
20	49	30	30	35	15	10	124	176	413	262	225	55
21	46	25	30	35	15	10	119	188	408	239	214	59
22	39	20	30	35	15	10	110	231	412	225	161	57
23	47	20	30	35	15	10	115	222	418	208	152	52
24	45	20	30	35	15	15	116	194	416	215	145	45
25	44	20	35	35	15	15	107	181	437	199	123	41
26	41	20	35	35	15	15	93	189	447	202	115	41
27	40	20	35	35	15	20	83	193	464	194	104	40
28	39	20	35	35	15	20	74	204	431	187	90	40
29	38	20	35	35	10	20	77	226	427	192	79	40
30	41	20	35	35	---	20	77	269	439	175	95	39
31	39	---	35	25	---	25	---	307	---	156	87	---
TOTAL	1343	883	920	1075	545	380	2537	4328	11168	8852	5127	1539
MEAN	43.3	29.4	29.7	34.7	18.8	12.3	84.6	140	372	286	165	51.3
AC-FT	2660	1750	1820	2130	1080	754	5030	8580	22150	17560	10170	3050
MAX	57	41	35	35	25	25	132	307	464	461	288	85
MIN	37	20	20	25	10	10	30	52	248	156	79	39

CAL YR	2007	TOTAL	34116	MEAN	93.5	MAX	457	MIN	10	AC-FT	67670
WTR YR	2008	TOTAL	38697	MEAN	106	MAX	464	MIN	10	AC-FT	76760

MAX DISCH: 478 CFS AT 16:00 ON Jun. 27, 2008 GH 2.69 FT. SHIFT 0.06 FT.  
MAX GH: 2.69 FT. AT 16:00 ON Jun. 27, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06694920 SOUTH PLATTE RIVER ABOVE SPINNEY MOUNTAIN RESERVOIR CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06695000 SOUTH PLATTE RIVER ABOVE ELEVENMILE CANYON RESERVOIR NEAR HARTSEL, CO

**LOCATION.**--Lat 38°58'03", long 105°34'51", in NE¼ sec. 32, T.12 S., R.73 W., Park County, Hydrologic Unit 10190001, on left bank 200 ft downstream from highway bridge, 2.5 mi upstream from water line of Elevenmile Canyon Reservoir and 13 mi southeast of Hartsel.

**DRAINAGE AREA AND PERIOD OF RECORD.**--880 mi<sup>2</sup>; 1933 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a wooden shelter at a 25 ft. Parshall Flume. Primary reference is an electric tape gage with a supplementary outside staff gage. Gage is maintained by the City of Aurora. Datum of gage is 8,612.83 ft, (Denver Board of Water Commissioners Datum).

**REMARKS.**--Primary record is hourly averages of 15-minute satellite data with chart back-up. Record is complete and reliable, except for December 9-16, 27, 29, 2007, and January 17-31, 2008 when ice in the downstream channel or ice in the flume affected the stage-discharge relationship. Spinney Reservoir is 2 miles upstream and releases usually keep this gage open year round. Chart record was used to fill in any missing satellite data without loss of accuracy. The record is rated good, with the exception of the ice affected periods, which were estimated from adjacent good record and Spinney release data, and are considered fair. Station operated and record developed by Mike Wild.

**RATING TABLE.**--STD25FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

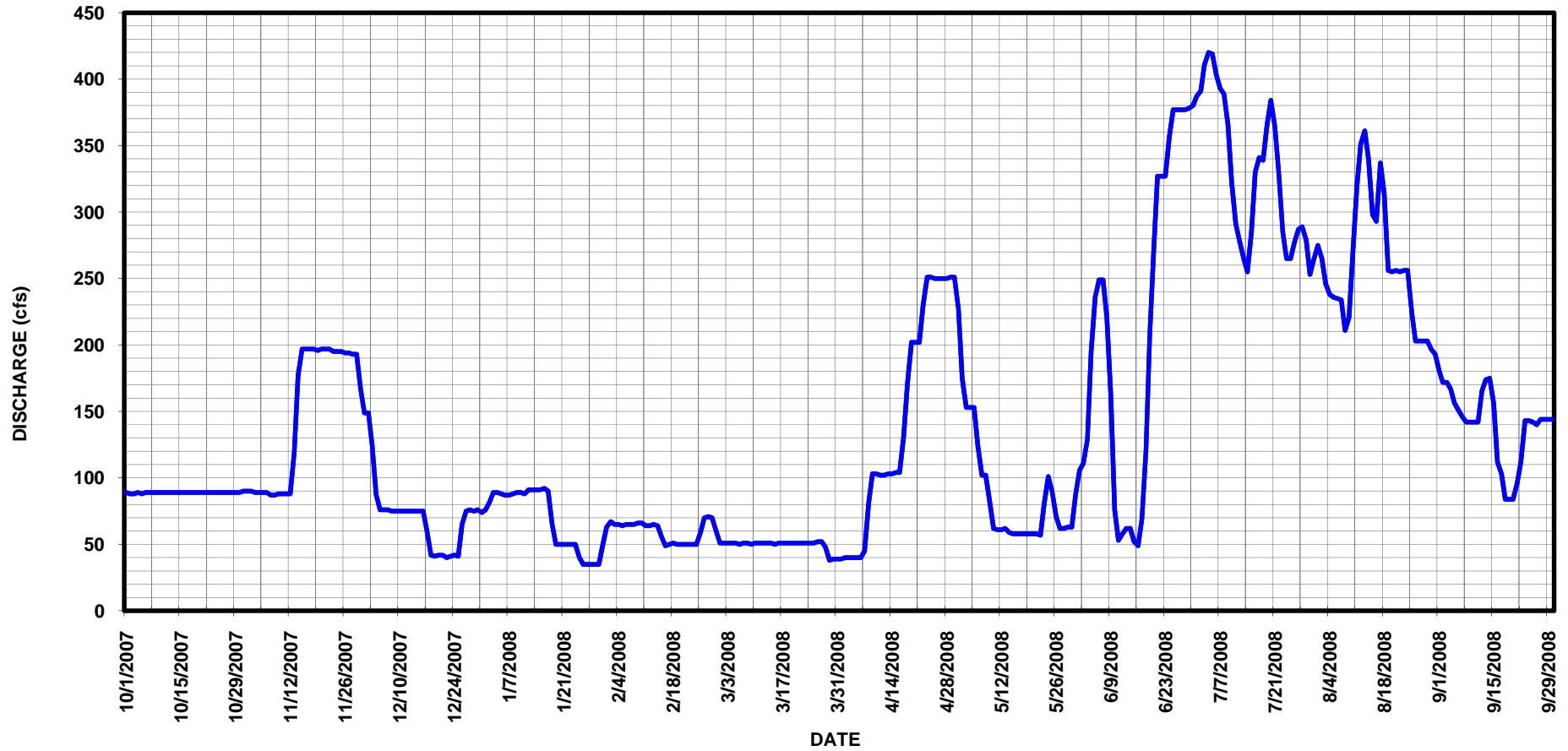
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	90	149	76	63	51	39	227	106	387	275	181
2	88	90	149	82	67	51	40	175	111	391	265	172
3	88	89	124	89	65	51	40	153	129	411	246	172
4	89	89	87	89	65	51	40	153	195	420	238	167
5	88	89	76	88	64	51	40	153	236	419	236	156
6	89	89	76	87	65	50	40	124	249	403	235	151
7	89	87	76	87	65	51	45	102	249	393	234	146
8	89	87	75	88	65	51	81	102	221	389	211	142
9	89	88	75	89	66	50	103	82	161	366	221	142
10	89	88	75	89	66	51	103	62	76	322	269	142
11	89	88	75	88	64	51	102	61	53	291	319	142
12	89	88	75	91	64	51	102	61	58	278	351	165
13	89	119	75	91	65	51	103	62	62	265	361	174
14	89	177	75	91	64	51	103	59	62	255	340	175
15	89	197	75	91	56	50	104	58	52	285	298	156
16	89	197	75	92	49	51	104	58	49	330	293	112
17	89	197	60	90	50	51	131	58	69	341	337	103
18	89	197	42	65	51	51	171	58	120	339	314	84
19	89	196	41	50	50	51	202	58	207	366	256	84
20	89	197	42	50	50	51	202	58	271	384	255	84
21	89	197	42	50	50	51	202	58	327	364	256	96
22	89	197	40	50	50	51	230	57	327	330	255	112
23	89	195	41	50	50	51	251	81	327	285	256	143
24	89	195	42	50	50	51	251	101	357	265	256	143
25	89	195	41	40	59	51	250	90	377	265	225	142
26	89	194	65	35	70	52	250	71	377	277	203	140
27	89	194	75	35	71	52	250	62	377	287	203	144
28	89	193	76	35	70	48	250	62	377	289	203	144
29	89	193	75	35	60	38	251	63	378	279	203	144
30	89	167	76	35	---	39	251	63	380	253	197	144
31	90	---	74	50	---	39	---	87	---	265	193	---
TOTAL	2757	4459	2244	2128	1744	1540	4331	2719	6340	10194	8004	4202
MEAN	88.9	149	72.4	68.6	60.1	49.7	144	87.7	211	329	258	140
AC-FT	5470	8840	4450	4220	3460	3050	8590	5390	12580	20220	15880	8330
MAX	90	197	149	92	71	52	251	227	380	420	361	181
MIN	88	87	40	35	49	38	39	57	49	253	193	84
CAL YR 2007	TOTAL	43414	MEAN	119	MAX	385	MIN	36	AC-FT	86110		
WTR YR 2008	TOTAL	50662	MEAN	138	MAX	420	MIN	35	AC-FT	100500		

MAX DISCH: 426 CFS AT 19:00 ON Jul. 3, 2008 GH 2.52 FT. SHIFT 0.04 FT.  
MAX GH: 2.52 FT. AT 19:00 ON Jul. 3, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06695000 SOUTH PLATTE RIVER ABOVE ELEVENMILE CANYON RESERVOIR NEAR HARTSEL CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06696000 SOUTH PLATTE RIVER BELOW ELEVENMILE RESERVOIR NEAR LAKE GEORGE, CO

**LOCATION.**--Lat 38°54'19", long 105°28'22". in SW¼ sec. 20, T.13 S., R.72 W., Park County, Hydrologic Unit 10190001, on left bank 700 ft downstream from Elevenmile Canyon Reservoir and 8.2 mi southwest of town of Lake George.

**DRAINAGE AREA AND PERIOD OF RECORD.**--963 mi². October 1929 to current year. Monthly data only for some periods.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a concrete shelter at a 15-ft. Parshall Flume. Primary reference is an electric tape gage with supplemental outside staff gage in the flume. A 10-foot rectangular bypass channel is located beside the upper right wingwall of the 15-foot Parshall flume. The bypass channel is normally kept closed by boards. At a gage height of 3.26 in the Parshall, water reaches the floor of the bypass channel. Elevation of gage is 8,458 ft from topographic map. Gage is owned and maintained by the Denver Water Dept.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite data with chart backup. The record is complete and reliable for the water year. Chart record was used to fill in any missing satellite data without loss of accuracy. The record is good. Station operated and record developed by Mike Wild.

**RATING TABLE.**--STD15FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

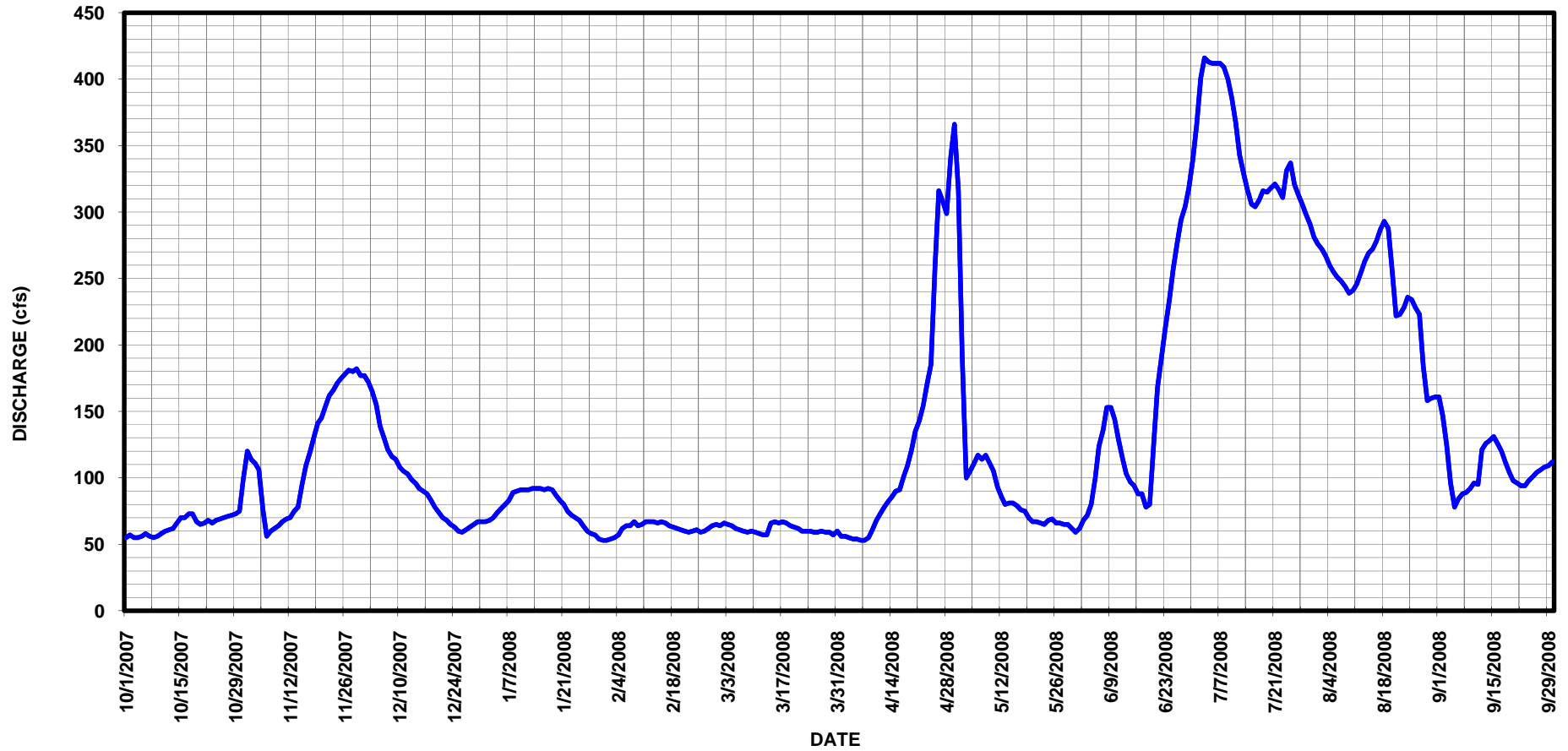
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	120	177	67	53	64	56	316	62	366	276	161
2	57	114	172	68	54	66	56	192	68	401	272	147
3	55	111	165	70	55	65	55	100	72	416	267	124
4	55	106	155	74	57	64	54	105	80	413	260	96
5	56	76	139	77	62	62	54	111	100	412	255	78
6	58	56	130	80	64	61	53	117	124	412	251	84
7	56	60	121	83	64	60	53	114	136	412	248	88
8	55	62	116	89	67	59	55	117	153	409	244	89
9	56	64	114	90	64	60	61	111	153	400	239	92
10	58	67	108	91	65	59	68	105	144	386	241	96
11	60	69	105	91	67	58	73	93	129	367	246	95
12	61	70	103	91	67	57	78	86	115	343	254	121
13	62	75	99	92	67	57	82	80	103	329	263	126
14	66	78	96	92	66	66	86	81	97	317	269	128
15	70	95	92	92	67	67	90	81	94	306	272	131
16	70	109	90	91	66	66	91	79	88	304	278	126
17	73	119	88	92	64	67	101	76	88	309	287	120
18	73	130	83	91	63	66	109	75	78	316	293	112
19	67	141	78	87	62	64	121	70	80	315	288	104
20	65	145	74	83	61	63	135	67	126	318	257	98
21	66	154	70	80	60	62	143	67	168	321	222	96
22	68	162	68	75	59	60	154	66	191	317	223	94
23	66	166	65	72	60	60	171	65	213	311	228	94
24	68	171	63	70	61	60	185	68	234	331	236	98
25	69	175	60	68	59	59	259	69	257	337	234	101
26	70	178	59	64	60	59	316	66	277	321	228	104
27	71	181	61	60	62	60	308	66	294	313	223	106
28	72	180	63	58	64	59	299	65	304	306	184	108
29	73	182	65	57	65	59	341	65	318	298	158	109
30	75	177	67	54	---	57	366	62	340	291	160	112
31	99	---	67	53	---	60	---	59	---	281	161	---
TOTAL	2025	3593	3013	2402	1805	1906	4073	2894	4686	10678	7517	3238
MEAN	65.3	120	97.2	77.5	62.2	61.5	136	93.4	156	344	242	108
AC-FT	4020	7130	5980	4760	3580	3780	8080	5740	9290	21180	14910	6420
MAX	99	182	177	92	67	67	366	316	340	416	293	161
MIN	55	56	59	53	53	57	53	59	62	281	158	78
CAL YR 2007	TOTAL	42585	MEAN	117	MAX	385	MIN	36	AC-FT	84470		
WTR YR 2008	TOTAL	47830	MEAN	131	MAX	416	MIN	53	AC-FT	94870		

MAX DISCH: 846 CFS AT 11:30 ON May. 2, 2008 GH 5.35 FT. SHIFT 0.02 FT.  
MAX GH: 5.35 FT. AT 11:30 ON May. 2, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.



06696000 SOUTH PLATTE RIVER BELOW ELEVENMILE RESERVOIR NEAR LAKE GEORGE CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06699005 TARRYALL CREEK AT BORDEN DITCH NEAR JEFFERSON, CO

**LOCATION.**--Lat. 39°17'13", Long. 105°41'43", in the NW ¼ of the NW ¼ of Sec. 8, T. 9 S., R. 74 W., Park County, Hydrologic unit 10190001, on left bank 1800 ft. downstream from Rock Creek, 9 mi. southeast of Jefferson and 1.0 mi. northwest of Bordenville.

**DRAINAGE AREA AND PERIOD OF RECORD.**--230 mi<sup>2</sup>. Apr. 26, 1983 (no previous gage at this site). Operation discontinued by USGS 9-30-97. Taken over by Colorado Division of Water Resources.

**GAGE.**--Data Collection Platform (DCP) and shaft encoder in a metal shelter on an 18-inch metal well. Well is connected to stream by one 2-in. intake. Primary reference gage is a drop tape to a shelf mounted RP. Elevation of gage is 9020 ft, from USGS topographic map. Gage and satellite monitoring equipment are owned and maintained by the City of Aurora.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite data. The record is complete and reliable, except for the following periods: October 22, 2007 partial (shut-down) day; October 23, 2007 to April 15, 2008, when the station was closed for winter; April 16, 2008 partial (start-up) day; and October 18-21, 2007, April 16-22, 27, 28, May 2, 3, 2008, when ice affected the stage-discharge relationship. The record is good for the entire period of operation, except for periods of partial and ice affected record, which are estimated and considered poor. The station is operated on a seasonal basis. Station operated and record developed by Mike Wild.

**RATING TABLE.**--TARBORCO06 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

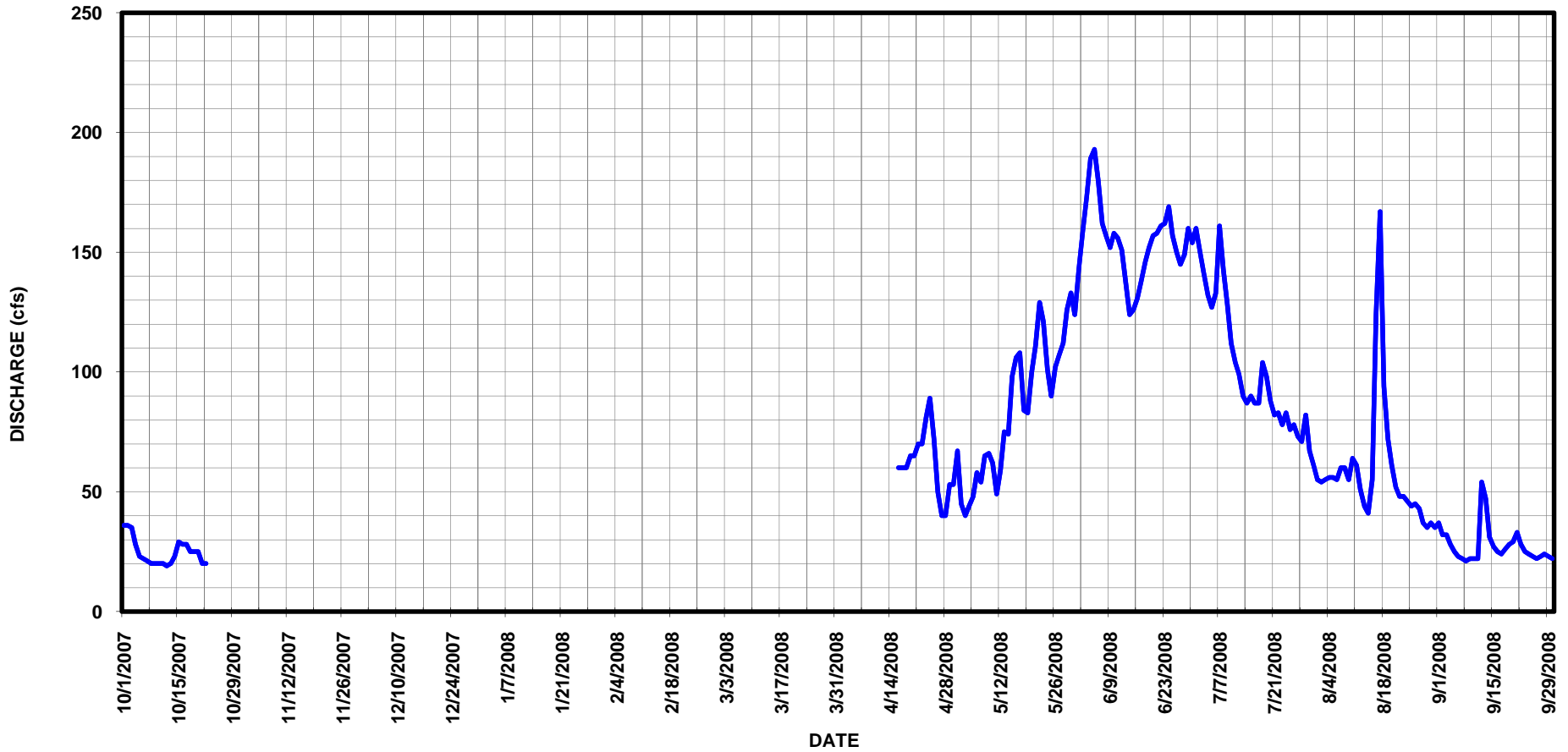
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	---	---	---	---	---	---	67	143	160	55	37
2	36	---	---	---	---	---	---	45	158	150	54	32
3	35	---	---	---	---	---	---	40	173	141	55	32
4	28	---	---	---	---	---	---	44	189	132	56	28
5	23	---	---	---	---	---	---	48	193	127	56	25
6	22	---	---	---	---	---	---	58	180	133	55	23
7	21	---	---	---	---	---	---	54	162	161	60	22
8	20	---	---	---	---	---	---	65	157	143	60	21
9	20	---	---	---	---	---	---	66	152	128	55	22
10	20	---	---	---	---	---	---	62	158	112	64	22
11	20	---	---	---	---	---	---	49	156	104	61	22
12	19	---	---	---	---	---	---	59	151	99	51	54
13	20	---	---	---	---	---	---	75	138	90	44	47
14	23	---	---	---	---	---	---	74	124	87	41	31
15	29	---	---	---	---	---	---	98	126	90	55	27
16	28	---	---	---	---	---	60	106	131	87	124	25
17	28	---	---	---	---	---	60	108	138	87	167	24
18	25	---	---	---	---	---	60	84	146	104	94	26
19	25	---	---	---	---	---	65	83	152	98	72	28
20	25	---	---	---	---	---	65	100	157	88	61	29
21	20	---	---	---	---	---	70	111	158	82	52	33
22	20	---	---	---	---	---	70	129	161	83	48	28
23	---	---	---	---	---	---	81	121	162	78	48	25
24	---	---	---	---	---	---	89	101	169	83	46	24
25	---	---	---	---	---	---	72	90	157	76	44	23
26	---	---	---	---	---	---	50	102	150	78	45	22
27	---	---	---	---	---	---	40	107	145	73	43	23
28	---	---	---	---	---	---	40	112	149	71	37	24
29	---	---	---	---	---	---	53	126	160	82	35	23
30	---	---	---	---	---	---	53	133	154	67	37	22
31	---	---	---	---	---	---	---	124	---	61	35	---
TOTAL	543	---	---	---	---	---	928	2641	4649	3155	1810	824
MEAN	24.7	---	---	---	---	---	61.9	85.2	155	102	58.4	27.5
AC-FT	1080	---	---	---	---	---	1840	5240	9220	6260	3590	1630
MAX	36	---	---	---	---	---	89	133	193	161	167	54
MIN	19	---	---	---	---	---	40	40	124	61	35	21

CAL YR 2007 TOTAL 18238 MEAN 50.0 MAX 291 MIN 19 AC-FT 36180 (PARTIAL YEAR RECORD)  
WTR YR 2008 TOTAL 14550 MEAN 76.6 MAX 193 MIN 19 AC-FT 28860 (PARTIAL YEAR RECORD)

MAX DISCH: 199 CFS AT 14:15 ON Jun. 4, 2008 GH 3.48 FT. SHIFT 0 FT.  
MAX GH: 3.48 FT. AT 14:15 ON Jun. 4, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06699005 TARRYALL CREEK AT BORDEN DITCH NEAR JEFFERSON CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

TARRYALL CREEK BELOW TARRYALL RESERVOIR, CO

**LOCATION.**--Lat. 39° 13' 18", Long. 105° 36' 07"; in SW1/4 of sec 31, T. 9S, R. 73W, Park County, about 500 ft. downstream from Tarryall Reservoir.

**DRAINAGE AREA AND PERIOD OF RECORD.**--355 sq. mi., from DWR Dam Safety Section database. Age of the gage is not known, although the reservoir was built in 1929. DWR first ran levels in June of 1975, and installation in 1970's is consistent with the type of materials used. The gage has been operated infrequently and records have never been kept prior to 2005. The gage was activated with satellite monitoring in WY2005.

**GAGE.**--Data Collection Platform (DCP) and shaft encoder in a 36-in. CMP shelter and cast iron well, located on the right downstream abutment of a bridge on Park County Road 77. The primary reference gage is a drop tape with a supplemental staff gage on the center abutment of the bridge. Gage is operated and equipment is maintained by the Colorado Div. of Water Resources under a cooperative agreement with the CO Div. of Wildlife, the owner of Tarryall Reservoir. Elevation of gage is 8800 ft. from topographic map.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite data. Record is complete and reliable, except for November 23, 2007 to April 1, 2008, when the station was closed for the winter; November 23, 2007 and April 1, 2008 were partial record days; and April 1-4, 2008, when there were problems with the DCP. Encoder calibration was checked with 34 visits by DWR personnel while the gage was open. The record is good, except for periods of partial day record and DCP problems, which are poor. The station is operated on a seasonal basis. Station operated and record developed by Mike Wild.

**RATING TABLE.**--TARTARCO02 USED FROM 01-Oct-2007 to 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

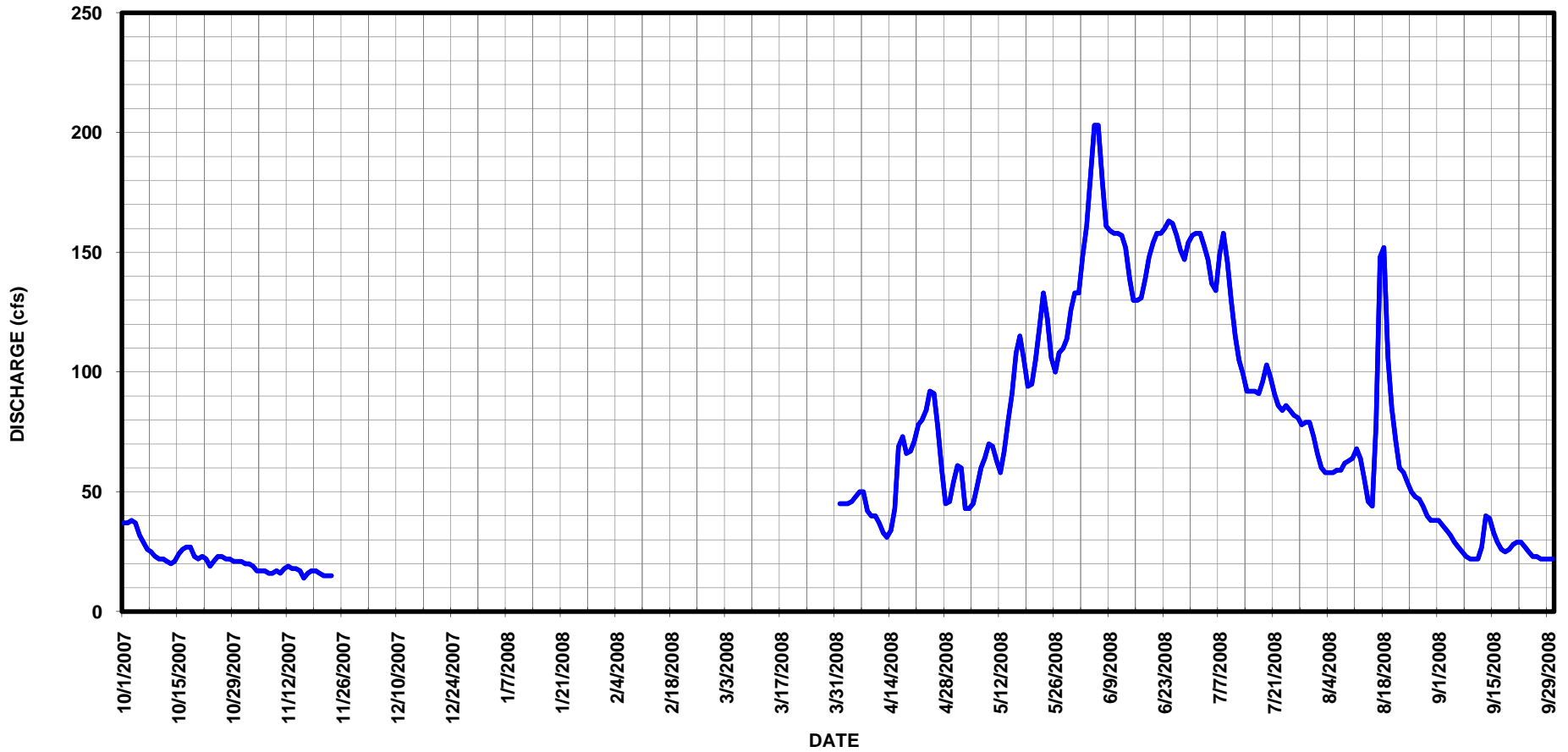
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	20	---	---	---	---	45	61	133	158	66	38
2	37	20	---	---	---	---	45	60	148	158	60	36
3	38	19	---	---	---	---	45	43	161	153	58	34
4	37	17	---	---	---	---	46	43	181	147	58	32
5	32	17	---	---	---	---	48	45	203	137	58	29
6	29	17	---	---	---	---	50	52	203	134	59	27
7	26	16	---	---	---	---	50	60	180	149	59	25
8	25	16	---	---	---	---	42	64	161	158	62	23
9	23	17	---	---	---	---	40	70	159	146	63	22
10	22	16	---	---	---	---	40	69	158	130	64	22
11	22	18	---	---	---	---	37	63	158	115	68	22
12	21	19	---	---	---	---	33	58	157	105	64	27
13	20	18	---	---	---	---	31	67	152	99	55	40
14	21	18	---	---	---	---	34	80	139	92	46	39
15	24	17	---	---	---	---	43	91	130	92	44	33
16	26	14	---	---	---	---	69	108	130	92	78	29
17	27	16	---	---	---	---	73	115	131	91	148	26
18	27	17	---	---	---	---	66	105	139	96	152	25
19	23	17	---	---	---	---	67	94	148	103	106	26
20	22	16	---	---	---	---	71	95	154	98	85	28
21	23	15	---	---	---	---	78	105	158	91	71	29
22	22	15	---	---	---	---	80	119	158	86	60	29
23	19	15	---	---	---	---	84	133	160	84	58	27
24	21	---	---	---	---	---	92	122	163	86	54	25
25	23	---	---	---	---	---	91	106	162	84	50	23
26	23	---	---	---	---	---	77	100	157	82	48	23
27	22	---	---	---	---	---	59	108	151	81	47	22
28	22	---	---	---	---	---	45	110	147	78	44	22
29	21	---	---	---	---	---	46	114	154	79	40	22
30	21	---	---	---	---	---	54	126	157	79	38	22
31	21	---	---	---	---	---	---	133	---	73	38	---
TOTAL	777	390	---	---	---	---	1681	2719	4692	3356	2001	827
MEAN	25.1	17.0	---	---	---	---	56.0	87.7	156	108	64.5	27.6
AC-FT	1540	774	---	---	---	---	3330	5390	9310	6660	3970	1640
MAX	38	20	---	---	---	---	92	133	203	158	152	40
MIN	19	14	---	---	---	---	31	43	130	73	38	22

CAL YR 2007 TOTAL 21560 MEAN 59.1 MAX 303 MIN 14 AC-FT 42760 (PARTIAL YEAR RECORD)  
WTR YR 2008 TOTAL 16443 MEAN 69.4 MAX 203 MIN 14 AC-FT 32610 (PARTIAL YEAR RECORD)

MAX DISCH: 212 CFS AT 16:45 ON Jun. 5, 2008 GH 3.67 FT. SHIFT -0.12 FT.  
MAX GH: 3.67 FT. AT 16:45 ON Jun. 5, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

TARRYALL CREEK BELOW TARRYALL RESERVOIR CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06701500 SOUTH PLATTE RIVER BELOW CHEESMAN LAKE, CO

**LOCATION.**--Lat 39°12'33", long 105°16'06", in SE<sup>1</sup>NW<sup>4</sup> sec.6, T.10 S., R.70 W., Jefferson County, Hydrologic Unit 10190002, on left bank 1,400 ft downstream from toe of Cheesman Dam and 3.8 mi southwest of Deckers.

**DRAINAGE AREA AND PERIOD OF RECORD.**--1,752 mi<sup>2</sup>. Oct.1, 1924-May 13, 1956 at site 370 feet upstream and 0.50 ft. higher. May 14, 1956 to present at current site. Unreliable record from 1909 to 1924 unpublished.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a wooden shelter at a 30 ft Parshall flume. Gage is owned and maintained by the Denver Water Dept. Datum of gage is 6,609 ft.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite monitoring data with chart back up. Satellite data agreed with the recorder data within ±0.02 foot. The record is complete and reliable. Any missing satellite data were filled in using the chart data without loss of accuracy. The record is considered good. Station maintained by Steve Barrett and Mike Wild and record developed Mike Wild.

**RATING TABLE.**--PLACHECO11 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

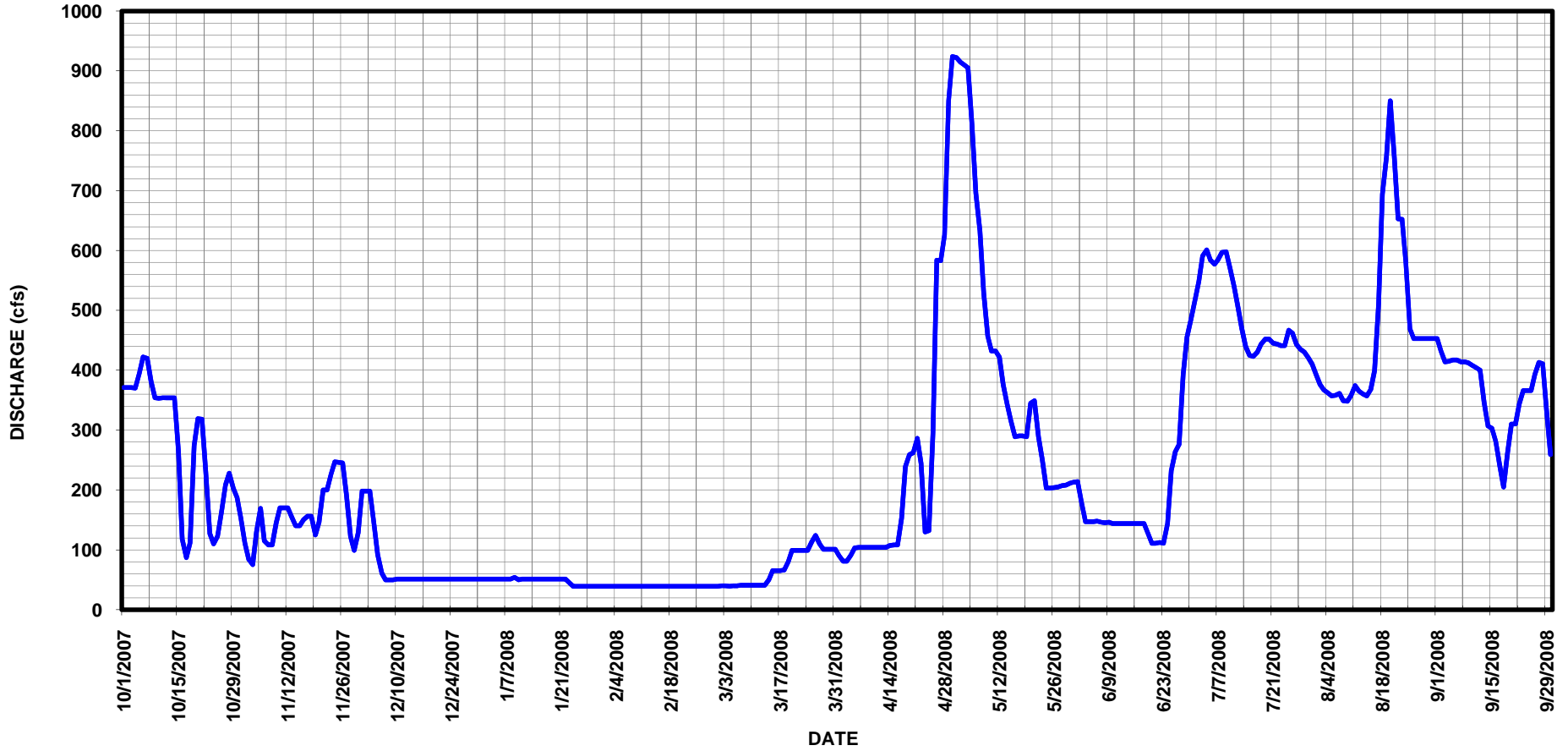
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	371	111	198	51	39	39	90	922	214	515	393	453
2	371	84	198	51	39	40	81	915	180	548	376	432
3	371	75	198	51	39	40	81	910	147	591	367	414
4	370	130	144	51	39	39	91	905	147	601	362	415
5	395	169	92	51	39	40	103	808	147	584	357	417
6	422	115	61	51	39	40	104	696	148	577	358	417
7	420	108	50	51	39	41	104	633	146	585	361	414
8	382	108	50	51	39	41	104	529	145	597	349	414
9	354	145	50	54	39	41	104	457	146	598	348	412
10	353	170	51	50	39	41	104	432	144	571	358	408
11	354	170	51	51	39	41	104	432	144	541	374	404
12	354	170	51	51	39	41	104	422	144	508	365	400
13	354	154	51	51	39	41	104	376	144	470	360	346
14	354	140	51	51	39	50	107	343	144	440	357	307
15	265	140	51	51	39	65	108	315	144	425	368	303
16	117	150	51	51	39	65	108	289	144	423	399	281
17	87	156	51	51	39	65	153	290	144	430	511	240
18	112	156	51	51	39	66	239	290	144	444	694	205
19	274	125	51	51	39	80	259	289	128	452	756	263
20	319	147	51	51	39	99	262	345	111	452	850	310
21	318	200	51	51	39	99	286	349	111	445	756	310
22	230	200	51	51	39	99	244	289	112	444	653	343
23	127	226	51	45	39	99	130	251	111	441	652	366
24	110	247	51	39	39	99	132	203	144	441	579	366
25	123	246	51	39	39	113	296	203	233	467	469	366
26	162	245	51	39	39	124	584	204	264	462	453	393
27	208	192	51	39	39	110	583	205	276	443	453	413
28	228	123	51	39	39	101	626	207	393	435	453	411
29	203	99	51	39	39	101	850	208	455	430	453	329
30	187	129	51	39	---	101	924	211	485	421	453	259
31	153	---	51	39	---	101	---	213	---	410	453	---
TOTAL	8448	4630	2163	1481	1131	2162	7169	13141	5539	15191	14490	10811
MEAN	273	154	69.8	47.8	39.0	69.7	239	424	185	490	467	360
AC-FT	16760	9180	4290	2940	2240	4290	14220	26070	10990	30130	28740	21440
MAX	422	247	198	54	39	124	924	922	485	601	850	453
MIN	87	75	50	39	39	39	81	203	111	410	348	205
CAL YR 2007	TOTAL	109172	MEAN	299	MAX	719	MIN	47	AC-FT	216500		
WTR YR 2008	TOTAL	86356	MEAN	236	MAX	924	MIN	39	AC-FT	171300		

MAX DISCH: 926 CFS AT 13:00 ON Apr. 29, 2008 GH 3.65 FT. SHIFT 0.13 FT.

MAX GH: 3.65 FT. AT 13:00 ON Apr. 29, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06701500 SOUTH PLATTE RIVER BELOW CHEESMAN LAKE CO  
WY2008 HYDROGRAPH





PLATTE RIVER BASIN

06706000 NORTH FORK SOUTH PLATTE RIVER BELOW GENEVA CREEK AT GRANT, CO

**LOCATION.**--Lat 39°27'26", long 105°39'29" in NW¼ sec. 10, T.7 S., R.74 W., Park County, Hydrologic Unit 10190002, on left bank at Grant, 1,550 ft downstream from Geneva Creek, and 1.3 mi downstream from east portal of Harold D. Roberts tunnel.

**DRAINAGE AREA AND PERIOD OF RECORD.**--127 mi<sup>2</sup>; 1948 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a wooden shelter over a concrete well at a concrete trapezoidal channel section and spillway. The gage has electric power and is equipped with heat lamps and tapes to prevent freezing of the stilling well and intakes. Gage is owned and maintained by the Denver Water Dept.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart back up. The record is complete and reliable, except for periods when Roberts's Tunnel was off and the gage was affected by ice: November 3-9, 14, 15, 17, 20-29, 2007, March 18-25, 28, April 1, 2, 4, 5, 8, 11-13, 17, 18, 25, 27, May 2, 3, 2008. Rapid changes in stage are caused by the regulation of Roberts Tunnel located ½ mile upstream. When Roberts Tunnel is operating, the gage is free from ice. The record is good, except during periods of ice affected record, which are estimated and fair. Station maintained and record developed by Mike Wild.

**RATING TABLE.**--PLAGRACO12 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

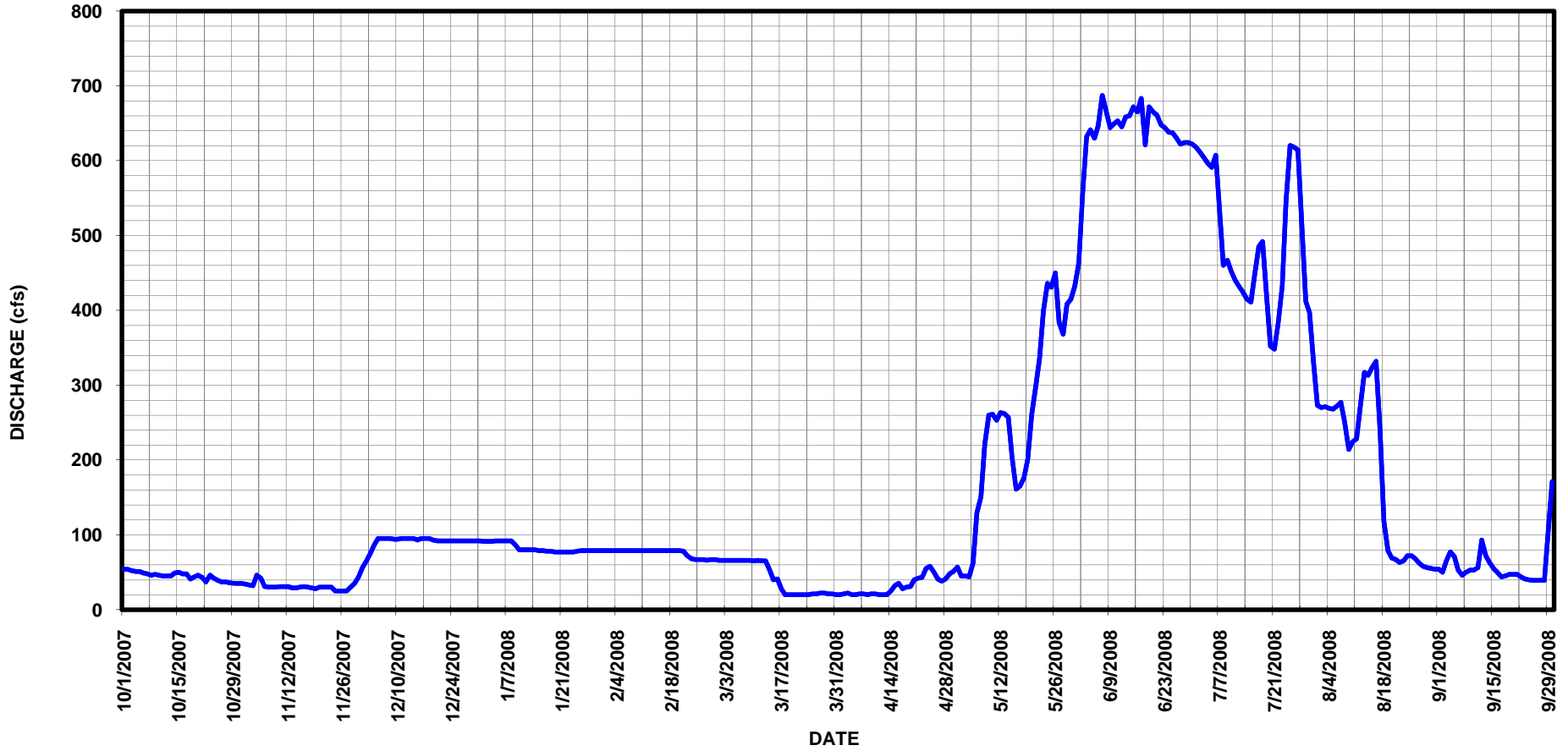
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	34	56	91	79	66	20	57	463	618	273	54
2	54	33	65	91	79	66	21	45	554	611	270	50
3	52	32	75	91	79	66	22	45	632	604	271	66
4	51	46	87	92	79	66	20	44	641	596	269	77
5	51	42	95	92	79	66	20	63	630	591	268	71
6	49	31	95	92	79	66	21	130	647	607	272	53
7	48	30	95	92	79	66	21	151	687	534	277	46
8	46	30	95	92	79	66	20	221	666	460	250	50
9	47	30	94	87	79	66	21	260	644	467	214	53
10	46	31	94	80	79	65	21	261	649	452	224	53
11	45	31	95	80	79	66	20	253	653	440	228	56
12	45	31	95	80	79	65	20	263	645	432	272	93
13	45	29	95	80	79	65	20	262	658	424	317	72
14	49	29	95	80	79	53	25	257	660	415	313	63
15	50	30	93	79	79	40	32	204	672	411	324	55
16	48	31	95	79	79	41	35	161	665	448	332	50
17	48	30	95	78	79	28	28	165	683	485	238	44
18	41	29	95	78	79	20	30	176	621	492	118	45
19	44	28	93	77	79	20	31	201	672	418	79	47
20	46	30	92	77	79	20	40	261	665	352	69	47
21	43	30	92	77	78	20	42	296	661	348	67	47
22	37	30	92	77	72	20	43	336	648	383	63	44
23	46	30	92	77	68	20	55	399	644	433	65	41
24	42	25	92	77	67	20	58	436	638	545	72	40
25	39	25	92	78	67	21	50	431	637	620	72	39
26	37	25	92	79	67	21	41	450	630	618	68	39
27	37	25	92	79	66	22	38	384	622	614	62	39
28	36	30	92	79	67	22	41	368	624	517	58	39
29	35	35	92	79	67	21	48	408	624	412	56	108
30	35	44	92	79	---	21	51	415	622	397	55	171
31	35	---	92	79	---	20	---	432	---	329	54	---
TOTAL	1381	936	2806	2548	2199	1305	955	7835	19157	15073	5570	1752
MEAN	44.5	31.2	90.5	82.2	75.8	42.1	31.8	253	639	486	180	58.4
AC-FT	2740	1860	5570	5050	4360	2590	1890	15540	38000	29900	11050	3480
MAX	54	46	95	92	79	66	58	450	687	620	332	171
MIN	35	25	56	77	66	20	20	44	463	329	54	39

CAL YR	2007	TOTAL	50031	MEAN	137	MAX	621	MIN	10	AC-FT	99236
WTR YR	2008	TOTAL	61517	MEAN	168	MAX	687	MIN	20	AC-FT	122000

MAX DISCH: 725 CFS AT 00:15 ON Jun. 18, 2008 GH 1.95 FT. SHIFT 0.01 FT.  
MAX GH: 1.95 FT. AT 22:45 ON Jun. 6, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06706000 NORTH FORK SOUTH PLATTE RIVER BELOW GENEVA CREEK AT GRANT CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06707500 SOUTH PLATTE RIVER AT SOUTH PLATTE, CO

**LOCATION.**--Lat 39°24'32", long 105°10'12", SE¼ sec. 25, T.7 S., R.70 W., Jefferson County, Hydrologic Unit 10190002, on left bank at South Platte, 200 ft downstream from bridge on State Highway 75, and 400 ft downstream from North Fork.

**DRAINAGE AREA AND PERIOD OF RECORD.**--2,579 mi<sup>2</sup>; Jan. 1896 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a concrete shelter and 60-inch CMP well. The primary reference gage is an electric tape gage mounted on the equipment shelf. A cableway is used for high water measurement. The gage is on Denver Water Dept. property, but is owned and operated by Colorado Div. of Water Resources.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart back up. The primary record agrees with the chart to within ±0.02 ft. The record is complete and reliable, except for the following days when ice affected the stage-discharge relationship: December 26, 2007 through February 28, 2008. These time periods were compared to Denver Water Dept. Inflows into Strontia Reservoir and also compared to trends in releases from Cheeseman Reservoir added to flows at the station at Grant. The record is good, except for the periods of ice affected record, which are estimated and considered poor. Station maintained by Steve Barrett and Mike Wild and record developed by Mike Wild.

**RATING TABLE.**--PLASPLCO16 USED FROM 01-Oct-2007 TO 30-Sep-2008

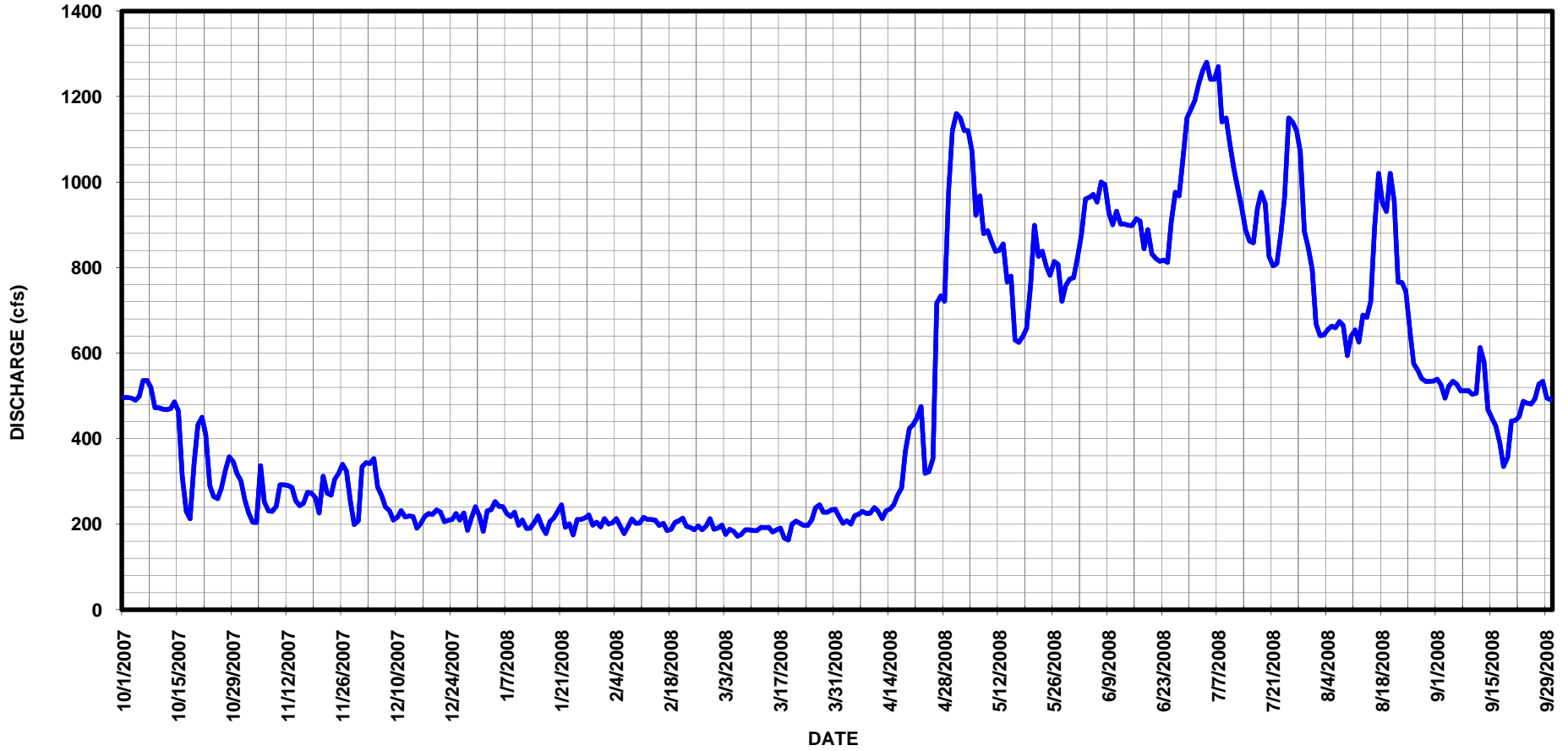
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	497	256	334	183	213	191	218	1160	825	1190	669	539
2	496	226	344	231	200	198	202	1150	877	1230	641	526
3	495	205	342	234	203	176	208	1120	960	1260	642	495
4	490	204	353	253	213	188	200	1120	964	1280	655	523
5	499	337	286	242	196	184	220	1070	971	1240	663	534
6	536	252	266	241	178	172	224	922	953	1240	659	528
7	536	231	240	225	194	176	230	968	1000	1270	674	512
8	519	230	231	218	212	187	225	879	994	1140	664	512
9	472	242	210	228	202	187	226	886	927	1150	594	512
10	472	292	216	198	203	185	239	861	900	1090	639	504
11	469	292	232	210	216	185	230	838	932	1030	654	506
12	468	291	217	190	211	193	213	840	902	986	626	613
13	470	286	219	191	211	192	231	855	902	940	689	578
14	486	255	218	204	209	193	236	766	899	888	683	468
15	464	243	191	219	197	182	246	780	898	862	722	448
16	312	249	202	194	202	187	268	631	914	858	892	430
17	230	274	218	178	185	191	285	625	909	938	1020	389
18	213	273	225	206	188	168	371	639	844	976	951	335
19	344	262	223	214	204	163	424	658	889	949	931	356
20	432	226	233	230	208	200	433	760	832	826	1020	441
21	450	312	229	245	214	207	450	899	822	804	955	443
22	409	273	206	193	195	202	475	826	815	809	766	452
23	290	268	209	201	192	197	319	838	817	880	765	487
24	265	305	211	175	187	197	323	803	812	967	744	483
25	260	320	225	211	196	210	353	782	907	1150	653	481
26	285	340	210	211	187	238	717	814	976	1140	575	493
27	327	325	226	215	196	245	734	808	968	1120	560	528
28	358	252	186	222	213	228	721	721	1060	1070	541	534
29	346	199	216	198	188	228	978	758	1150	884	534	495
30	318	208	241	205	---	233	1120	773	1170	847	534	491
31	302	---	219	194	---	235	---	776	---	796	535	---
TOTAL	12510	7928	7378	6559	5813	6118	11319	26326	27789	31810	21850	14636
MEAN	404	264	238	212	200	197	377	849	926	1026	705	488
AC-FT	24810	15730	14630	13010	11530	12140	22450	52220	55120	63100	43340	29030
MAX	536	340	353	253	216	245	1120	1160	1170	1280	1020	613
MIN	213	199	186	175	178	163	200	625	812	796	534	335
CAL YR 2007	TOTAL	244941	MEAN	671	MAX	1850	MIN	152	AC-FT	485800		
WTR YR 2008	TOTAL	180036	MEAN	492	MAX	1280	MIN	163	AC-FT	357100		

MAX DISCH: 1330 CFS AT 04:45 ON Jul. 7, 2008 GH 4.5 FT. SHIFT -0.06 FT.  
MAX GH: 4.5 FT. AT 04:45 ON Jul. 7, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06707500 SOUTH PLATTE RIVER AT SOUTH PLATTE CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06707501 SOUTH PLATTE RIVER BELOW STRONTIA SPRINGS RESERVOIR, CO

**LOCATION.**--Lat 39°26'00", long 105°07'30", SW¼SW¼ sec. 16, T.7 S., R.69 W., Douglas County, on right bank 1/4 mi downstream from Strontia Springs Dam.

**DRAINAGE AREA AND PERIOD OF RECORD.**--2,596 mi<sup>2</sup>; 1983 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a formed concrete shelter and stilling well. The primary reference gage is a drop tape with adjustable reference point. A supplemental outside staff gage is present. A cableway is used for high water measurement. The gage is owned and operated by the Denver Water Department.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite data. Chart data are used for backup. Record is complete and reliable, except for Dec. 26, 2007 - Jan 5, 2008; Jan. 10-28, 31; Feb 3, 5-10; and March 3 and 6, 2008, when ice affected the stage-discharge relationship. The record is good, except for periods of ice affected record, which were estimated and are considered fair. Station maintained by Jana Ash and Patrick Tyler and record developed by Jana Ash.

**RATING TABLE.**--PLASTRCO04 USED FROM 01-Oct-2007 TO 30-Sept-2008

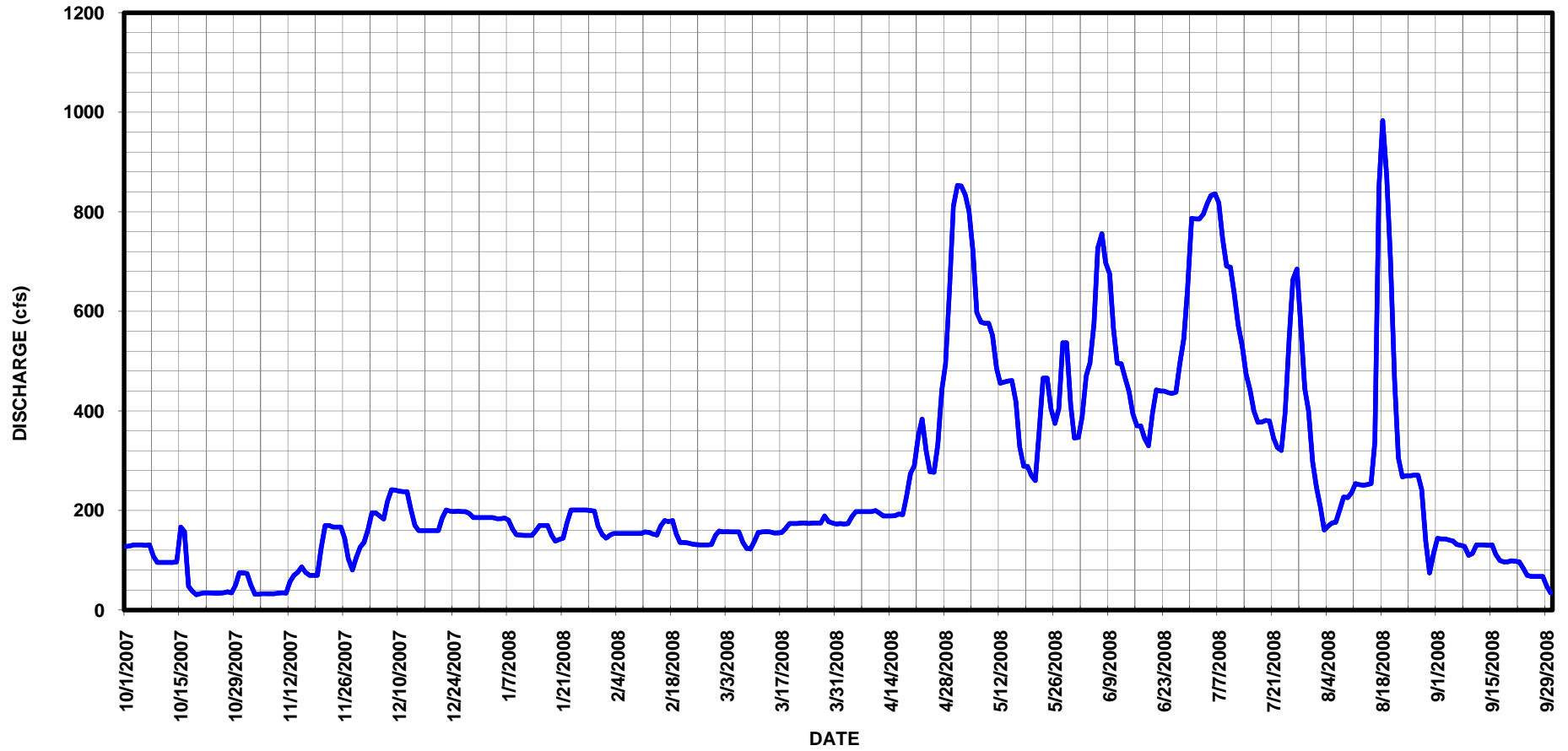
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	74	136	186	145	159	174	853	347	786	248	144
2	129	51	162	186	151	157	173	852	389	786	207	143
3	131	32	195	186	154	158	174	834	471	795	161	143
4	131	32	195	184	154	157	188	801	497	817	169	141
5	131	33	189	184	154	157	198	719	576	833	175	139
6	130	33	183	185	154	157	198	597	728	836	177	132
7	131	33	219	181	154	137	198	579	756	818	202	130
8	109	33	242	163	154	124	198	576	698	747	227	128
9	96	34	241	152	154	123	198	576	675	691	226	110
10	96	35	239	151	154	139	200	552	566	689	235	114
11	96	34	238	150	157	156	195	486	496	633	254	131
12	96	57	238	150	156	157	189	456	495	572	252	131
13	96	70	203	150	153	158	189	458	467	530	251	131
14	97	76	170	160	151	157	189	460	439	474	252	130
15	167	87	160	170	169	155	190	461	394	442	254	131
16	158	76	160	170	180	155	193	419	370	400	338	112
17	48	70	160	170	178	156	192	328	370	377	848	100
18	38	70	160	151	180	164	229	289	344	378	983	97
19	31	70	160	139	153	174	275	289	330	381	870	97
20	33	124	160	142	136	174	290	270	397	380	702	99
21	35	170	185	145	136	174	350	260	442	346	462	98
22	35	170	201	175	135	175	384	363	440	327	307	97
23	34	167	199	201	133	175	320	466	440	321	268	84
24	34	167	198	201	132	174	278	466	437	397	270	70
25	34	167	199	201	131	175	277	405	435	544	270	68
26	35	145	198	201	131	175	332	375	438	664	271	68
27	37	103	198	201	131	175	442	404	494	685	271	68
28	35	81	194	200	132	189	495	537	545	573	241	68
29	50	105	186	199	150	178	646	537	646	445	138	48
30	75	127	186	168	---	175	811	413	787	400	75	35
31	75	---	186	152	---	173	---	346	---	298	114	---
TOTAL	2551	2526	5940	5354	4352	5012	8365	15427	14909	17365	9718	3187
MEAN	82.3	84.2	192	173	150	162	279	498	497	560	313	106
AC-FT	5060	5010	11780	10620	8630	9940	16590	30600	29570	34440	19280	6320
MAX	167	170	242	201	180	189	811	853	787	836	983	144
MIN	31	32	136	139	131	123	173	260	330	298	75	35
CAL YR 2007	TOTAL	151321	MEAN	415	MAX	1820	MIN	27	AC-FT	300100		
WTR YR 2008	TOTAL	94706	MEAN	259	MAX	983	MIN	31	AC-FT	187800		

MAX DISCH: 1150 CFS AT 10:15 ON Jul. 3, 2008 GH 5.41 FT. SHIFT 0 FT.  
MAX GH: 5.41 FT. AT 10:15 ON Jul. 3, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06707501 SOUTH PLATTE RIVER BELOW STRONTIA SPRINGS RESERVOIR CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06708000 SOUTH PLATTE RIVER AT WATERTON, CO

**LOCATION.**--Lat 39°29'18", long 105°05'32", in NE¼ sec. 34, T.6 S., R.69 W., Jefferson County, Hydrologic Unit 10190002, on left bank 168 ft downstream from bridge on State Highway 221, 0.4 mi south of Waterton, 4.7 mi west of Louviers, and 6 mi upstream from Plum Creek.

**DRAINAGE AREA AND PERIOD OF RECORD.**--2,621 mi<sup>2</sup>; 1926 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a 60-inch galvanized, corrugated steel shelter and well at a concrete control (an armored pipeline crossing). The primary reference is an electric tape gage. The gage has electric power and is equipped with heat lamps to prevent the well from freezing. The gage has a bank operated cableway for high water measurement. Satellite telemetry equipment owned and maintained by the Colorado Div. of Water Resources. The gage is owned and maintained by Denver Water Dept. Datum of gage 5,484.43 ft National Geodetic Vertical Datum, adjustment of 1912.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart back up. The record is complete and reliable, except for December 15-18, 22-24, 29-31, 2007, January 1-31, February 1-19, 26-28, March 2-3, 2008, when ice affected the stage-discharge relationship. The record is rated good, except for periods of ice affected record, December 15-18, 22-24, 2007, March 2-3, 2008 which are fair, and December 29, 2007 to February 19, 2008, which are poor. Station maintained by Jana Ash and Patrick Tyler and record developed by Jana Ash.

**RATING TABLE.**--PLAWATCO10 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	69	45	76	62	68	44	355	177	700	196	83
2	14	53	50	76	62	68	43	381	213	754	166	82
3	16	28	48	76	69	68	45	387	279	669	114	82
4	17	27	39	68	69	115	46	360	343	585	102	80
5	15	28	34	60	69	161	45	371	399	521	74	80
6	15	29	32	63	69	162	45	317	552	531	74	72
7	16	28	65	56	69	146	46	294	581	575	95	70
8	18	27	105	54	69	125	46	287	515	566	125	67
9	16	28	106	54	69	124	46	285	485	533	143	69
10	16	30	103	55	69	136	50	268	401	580	163	67
11	16	30	104	55	69	158	51	207	396	532	106	68
12	16	31	102	55	69	158	49	176	440	468	75	84
13	16	31	77	60	66	158	54	182	419	426	75	96
14	18	33	46	67	61	106	60	181	388	381	76	97
15	92	33	33	77	75	42	61	231	352	359	80	83
16	148	31	36	84	88	41	63	302	324	328	158	52
17	32	28	37	79	85	43	61	274	348	299	602	37
18	23	28	36	48	85	42	57	237	348	303	802	34
19	16	27	35	53	67	39	84	238	329	303	684	33
20	25	51	34	53	47	38	95	221	390	302	511	34
21	32	92	51	54	48	39	147	109	438	272	287	35
22	30	91	70	110	48	39	182	158	399	248	129	33
23	28	91	70	109	47	39	125	280	363	243	84	40
24	27	91	70	110	48	38	55	264	362	313	84	35
25	27	89	67	110	48	38	47	212	361	429	140	32
26	27	88	66	110	48	39	74	186	359	521	153	32
27	31	67	69	100	48	39	149	219	391	551	143	32
28	29	42	71	108	48	47	210	354	438	451	114	32
29	37	44	75	109	56	41	230	367	507	300	100	37
30	68	45	76	89	---	47	312	258	655	303	72	31
31	68	---	76	60	---	45	---	175	---	258	88	---
TOTAL	963	1410	1928	2338	1827	2449	2622	8136	11952	13604	5815	1709
MEAN	31.1	47.0	62.2	75.4	63.0	79.0	87.4	262	398	439	188	57.0
AC-FT	1910	2800	3820	4640	3620	4860	5200	16140	23710	26980	11530	3390
MAX	148	92	106	110	88	162	312	387	655	754	802	97
MIN	14	27	32	48	47	38	43	109	177	243	72	31

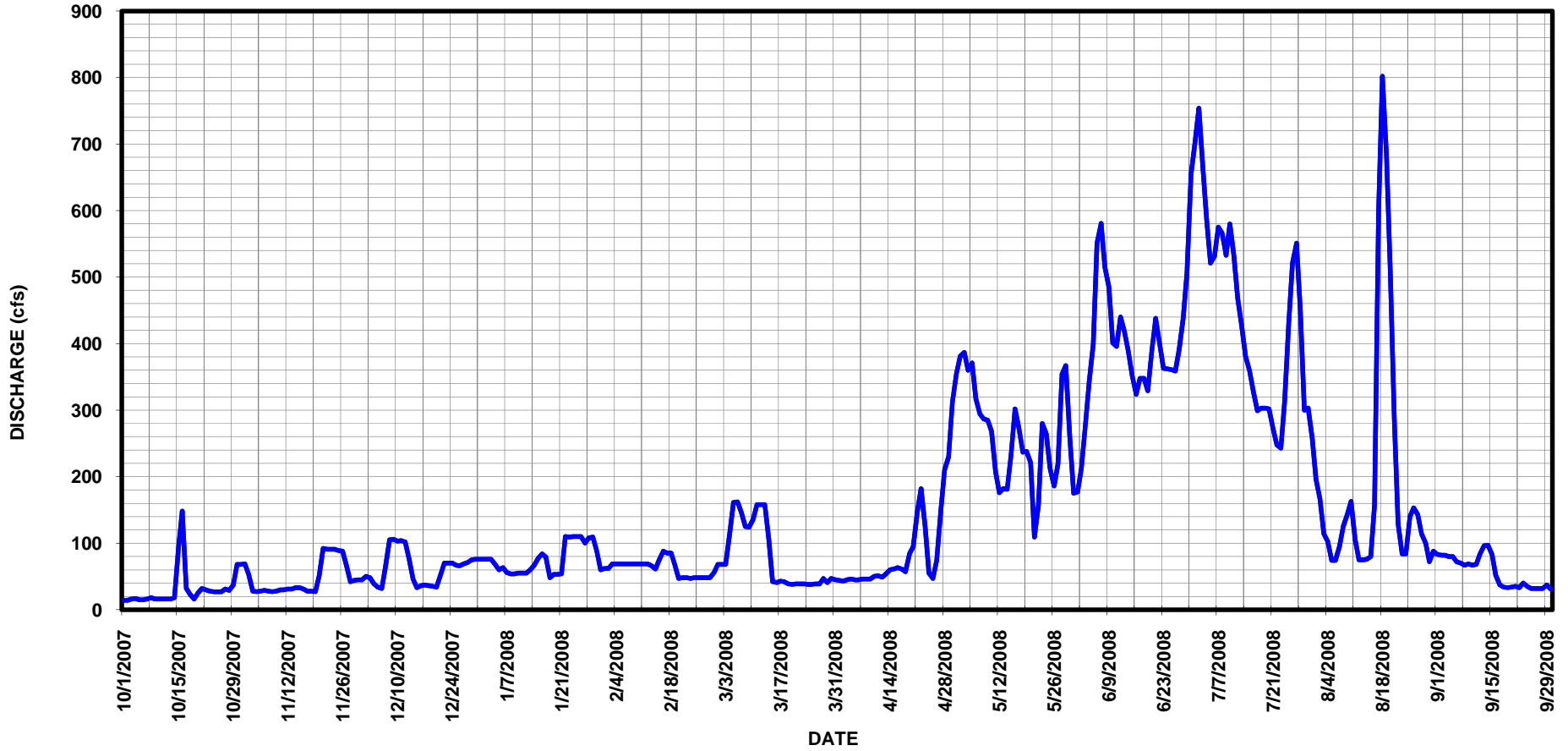
CAL YR	2007	TOTAL	121142	MEAN	332	MAX	1610	MIN	13	AC-FT	240300
WTR YR	2008	TOTAL	54753	MEAN	150	MAX	802	MIN	14	AC-FT	108600

MAX DISCH: 1210 CFS AT 19:30 ON Jul. 2, 2008 GH 2.51 FT. SHIFT -0.08 FT.  
MAX GH: 2.51 FT. AT 19:30 ON Jul. 2, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.



06708000 SOUTH PLATTE RIVER AT WATERTON CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06709610 SOUTH PLATTE RIVER BELOW CHATFIELD RESERVOIR, CO

**LOCATION.**--Lat 39°33'26", long 105°03'27", SE¼, sec. 1, T.6 S., R.69 W., Jefferson County, Hydrologic Unit 10190002, 800 ft below the outlet of Chatfield Reservoir.

**DRAINAGE AREA AND PERIOD OF RECORD.**--3,018 mi<sup>2</sup>; Jan. 1, 1985 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a formed concrete well and shelter at a concrete broad crested weir. The primary reference gage is an electric tape gage, with no supplemental outside gage. A cableway is used for high water measurement.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart back up. Daily max and min values agreed with the corrected chart values to within ±0.02 foot. The record is complete and reliable. Station maintained by Jana Ash and Patrick Tyler and record developed by Jana Ash.

**RATING TABLE.**--PLACHACO03 USED FROM 01-Oct-2007 TO 30-Sept-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

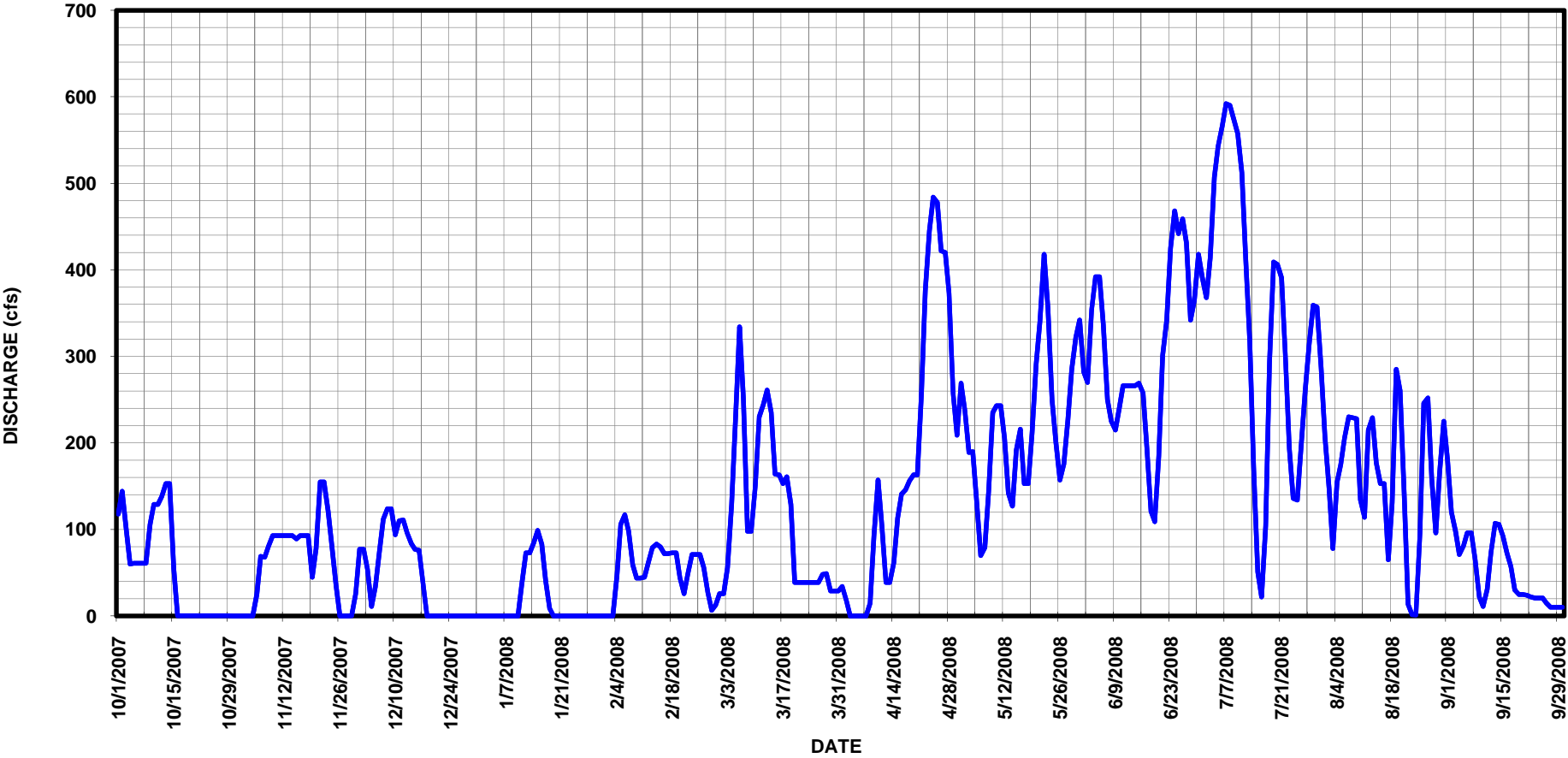
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	118	.13	77	.04	.08	26	34	269	282	391	207	180
2	144	.13	77	.08	.08	26	18	237	270	368	148	120
3	100	.12	54	.11	.08	56	.12	189	354	414	78	98
4	60	.12	11	.11	46	129	.10	190	392	507	154	71
5	61	25	34	.10	106	226	.09	129	392	543	175	81
6	61	69	75	.10	117	334	.09	70	336	566	206	96
7	61	68	112	.10	98	252	.09	79	250	592	230	96
8	61	81	124	.09	59	98	15	144	225	590	229	65
9	106	93	124	.09	44	98	93	235	215	573	228	22
10	129	93	94	.09	44	151	157	243	240	557	134	11
11	129	93	110	37	45	230	104	243	266	512	114	31
12	138	93	111	73	63	244	39	205	266	413	215	74
13	153	93	96	73	79	261	39	142	266	316	229	107
14	153	93	84	85	83	235	62	127	266	172	177	106
15	55	89	77	99	80	164	113	192	269	51	153	92
16	.27	93	76	83	72	163	141	216	258	22	153	73
17	.25	93	39	41	72	153	146	153	194	104	65	57
18	.25	93	.05	8.5	73	161	156	153	121	293	131	30
19	.25	45	.03	.10	73	129	163	211	109	409	285	25
20	.21	78	.01	.09	44	39	163	291	185	406	261	25
21	.26	155	.03	.09	26	39	257	341	301	391	141	24
22	.25	155	.03	.09	49	39	376	418	342	302	14	22
23	.19	121	.03	.09	71	39	445	356	425	193	1.5	21
24	.19	80	.03	.08	71	39	484	250	468	136	1.2	21
25	.19	35	.04	.08	71	39	478	201	442	134	96	21
26	.19	.08	.03	.08	56	39	422	157	459	196	246	15
27	.19	0	.04	.08	27	48	420	175	431	261	252	10
28	.19	0	.03	.08	6.5	49	373	227	342	313	159	10
29	.16	.39	.04	.08	13	29	257	285	365	359	96	10
30	.13	26	.04	.08	---	29	209	322	418	357	166	10
31	.13	---	.04	.08	---	29	---	342	---	287	225	---
TOTAL	1532.30	1864.97	1375.47	501.51	1588.74	3593	5164.49	6792	9149	10728	4969.7	1624
MEAN	49.4	62.2	44.4	16.2	54.8	116	172	219	305	346	160	54.1
AC-FT	3040	3700	2730	995	3150	7130	10240	13470	18150	21280	9860	3220
MAX	153	155	124	99	117	334	484	418	468	592	285	180
MIN	.13	0	.01	.04	.08	26	.09	70	109	22	1.2	10

CAL YR	2007	TOTAL	140062	MEAN	384	MAX	2480	MIN	0	AC-FT	277800
WTR YR	2008	TOTAL	48883.18	MEAN	134	MAX	592	MIN	0	AC-FT	96960

MAX DISCH: 592 CFS AT 12:45 ON Jul. 6, 2008 GH 3.37 FT. SHIFT -0.05 FT.  
MAX GH: 3.37 FT. AT 12:45 ON Jul. 6, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06709610 SOUTH PLATTE RIVER BELOW CHATFIELD RESERVOIR CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06710500 BEAR CREEK AT MORRISON, CO

**LOCATION.**--Lat 39°39'11", long 105°11'44", in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 35, T.4 S., R.70 W., Jefferson County, Hydrologic Unit 10190002, on left bank at Morrison, 180 ft upstream from bridge on State Highway 8 and 0.2 mi upstream from Mount Vernon Creek.

**DRAINAGE AREA AND PERIOD OF RECORD.**--164 mi<sup>2</sup>. Sporadic, incomplete data Sep. 1881 to Feb. 1902. Good data October 1919 to current year. Monthly data for some periods only. Some early years published as near Morrison, at Starbuck, at Idledale. Water quality data from Oct. 1976 to Sep. 1981.

**GAGE.**--Data Collection Platform (DCP) with phone modem, shaft encoder and a continuous chart recorder in a 60-inch metal shelter over a 48-inch stilling well. Primary reference gage is a metal drop tape within the well referenced to an adjustable RP on the instrument shelf. There is no outside gage. Control is a compound weir and forms gage pool. A bank-operated cableway at the gage is used for high flow measurements.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite data with chart back-up. Accuracy was maintained by 35 visits to the gage. The record is complete and reliable, except for the following periods: Nov. 22, 2007 - Feb. 25, 2008, when the gage height was ice affected. The record is good, except for periods of ice affected record, which were estimated and are considered poor. Station maintained by Steve Barrett and Patrick Tyler and record developed by Patrick Tyler.

**RATING TABLE.**-- BCRMORCO23 USED FROM 01-Oct-2007 TO 30-Sep-2008

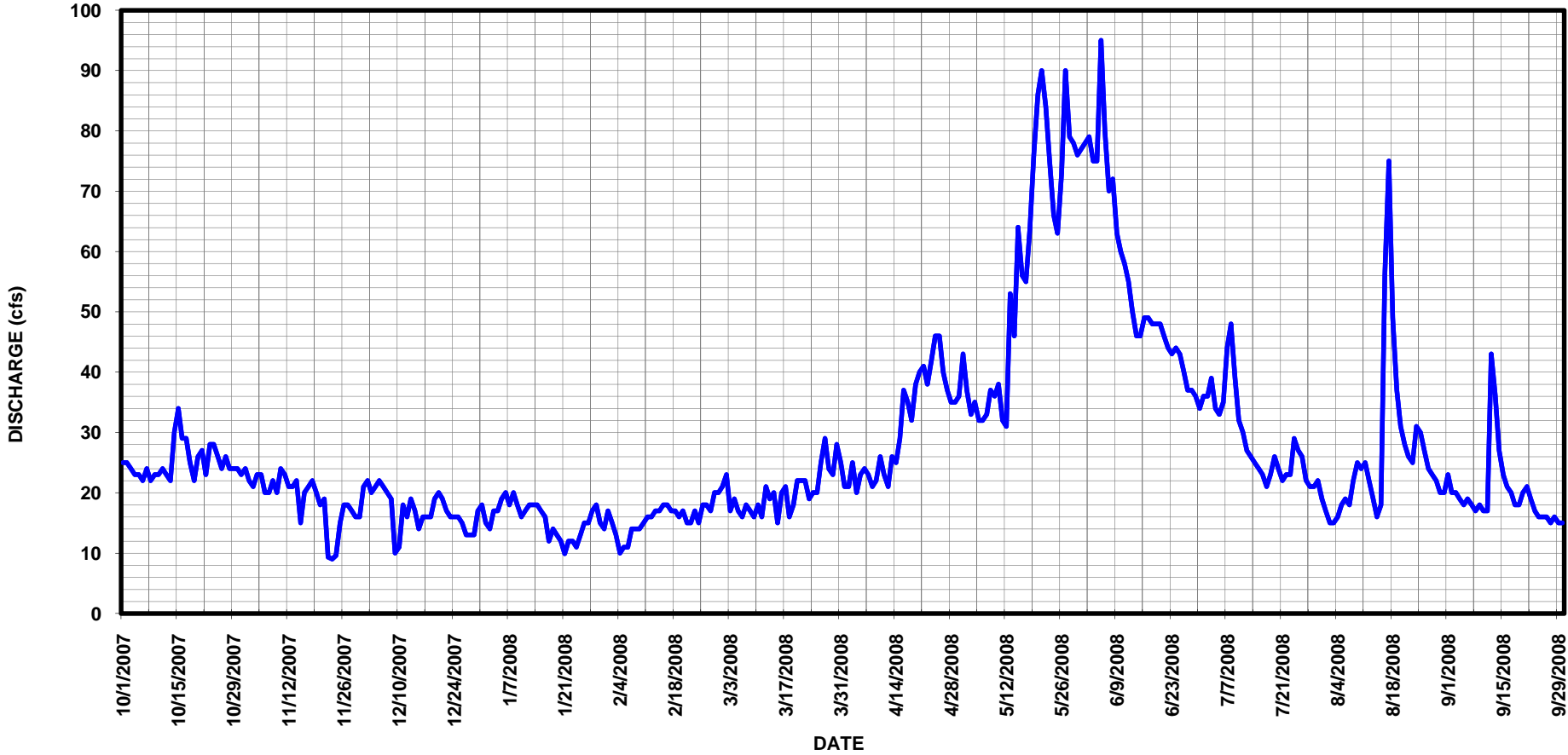
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	24	21	15	17	21	21	43	78	36	17	23
2	25	22	22	14	15	23	21	37	79	36	15	20
3	24	21	20	17	13	17	25	33	75	39	15	20
4	23	23	21	17	10	19	20	35	75	34	16	19
5	23	23	22	19	11	17	23	32	95	33	18	18
6	22	20	21	20	11	16	24	32	80	35	19	19
7	24	20	20	18	14	18	23	33	70	44	18	18
8	22	22	19	20	14	17	21	37	72	48	22	17
9	23	20	10	18	14	16	22	36	63	39	25	18
10	23	24	11	16	15	18	26	38	60	32	24	17
11	24	23	18	17	16	16	23	32	58	30	25	17
12	23	21	16	18	16	21	21	31	55	27	22	43
13	22	21	19	18	17	19	26	53	50	26	19	36
14	30	22	17	18	17	20	25	46	46	25	16	27
15	34	15	14	17	18	15	29	64	46	24	18	23
16	29	20	16	16	18	20	37	56	49	23	56	21
17	29	21	16	12	17	21	35	55	49	21	75	20
18	25	22	16	14	17	16	32	64	48	23	49	18
19	22	20	19	13	16	18	38	76	48	26	37	18
20	26	18	20	12	17	22	40	86	48	24	31	20
21	27	19	19	9.9	15	22	41	90	46	22	28	21
22	23	9.3	17	12	15	22	38	84	44	23	26	19
23	28	9.0	16	12	17	19	42	75	43	23	25	17
24	28	9.6	16	11	15	20	46	66	44	29	31	16
25	26	15	16	13	18	20	46	63	43	27	30	16
26	24	18	15	15	18	25	40	73	40	26	27	16
27	26	18	13	15	17	29	37	90	37	22	24	15
28	24	17	13	17	20	24	35	79	37	21	23	16
29	24	16	13	18	20	23	35	78	36	21	22	15
30	24	16	17	15	---	28	36	76	34	22	20	15
31	23	---	18	14	---	25	---	77	---	19	20	---
TOTAL	775	568.9	531	480.9	458	627	928	1770	1648	880	813	598
MEAN	25.0	19.0	17.1	15.5	15.8	20.2	30.9	57.1	54.9	28.4	26.2	19.9
AC-FT	1540	1130	1050	954	908	1240	1840	3510	3270	1750	1610	1190
MAX	34	24	22	20	20	29	46	90	95	48	75	43
MIN	22	9.0	10	9.9	10	15	20	31	34	19	15	15
CAL YR 2007	TOTAL	27111.3	MEAN	74.3	MAX	350	MIN	7.4	AC-FT	53780		
WTR YR 2008	TOTAL	10077.8	MEAN	27.5	MAX	95	MIN	9	AC-FT	19990		

MAX DISCH: 129 CFS AT 11:00 ON Jun. 5, 2008 GH 6.8 FT. SHIFT 0 FT.  
MAX GH: 6.8 FT. AT 11:00 ON Jun. 5, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06710500 BEAR CREEK AT MORRISON CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06711500 BEAR CREEK AT MOUTH, AT SHERIDAN, CO

**LOCATION.**--Lat 39°39'09", long 105°01'59", in NW¼NW¼ sec. 5, T,5 S., R.68 W., Arapahoe County, Hydrologic Unit 10190002 on left bank just downstream from bridge on South Lowell Blvd., at Highway Department maintenance building at northwest city limits of Sheridan, 1.3 mi upstream from mouth, and 2.1 mi west of city hall in Englewood.

**DRAINAGE AREA AND PERIOD OF RECORD.**--260 mi². April to Nov. 1914, March 1927 to current year. Monthly data only prior to Oct. 1933.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a 42-inch corrugated metal shelter and well at a formed concrete control. The primary reference is an electric tape gage.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart back-up. The record is complete and reliable, except for the following days: December 12, 15, 17, 26, 28-31, 2007, January 1-2, 17, 19, 22 - 25, 30-31, February 6-7, 2008, when ice affected the stage-discharge relationship; and, October 12-16, November 1 - 13, 21-26, 2007, February 23-25, September 17-30, 2008, when debris on the control affected recorded gage heights. The record is rated as good, except for periods of ice affected record and periods when debris on the control affected the record, which are poor. Station maintained by Steve Barrett and Patrick Tyler and record developed by Patrick Tyler.

**RATING TABLE.**--BCRSHECO32 USED FROM 01-Oct-2007 TO 30-Sept-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

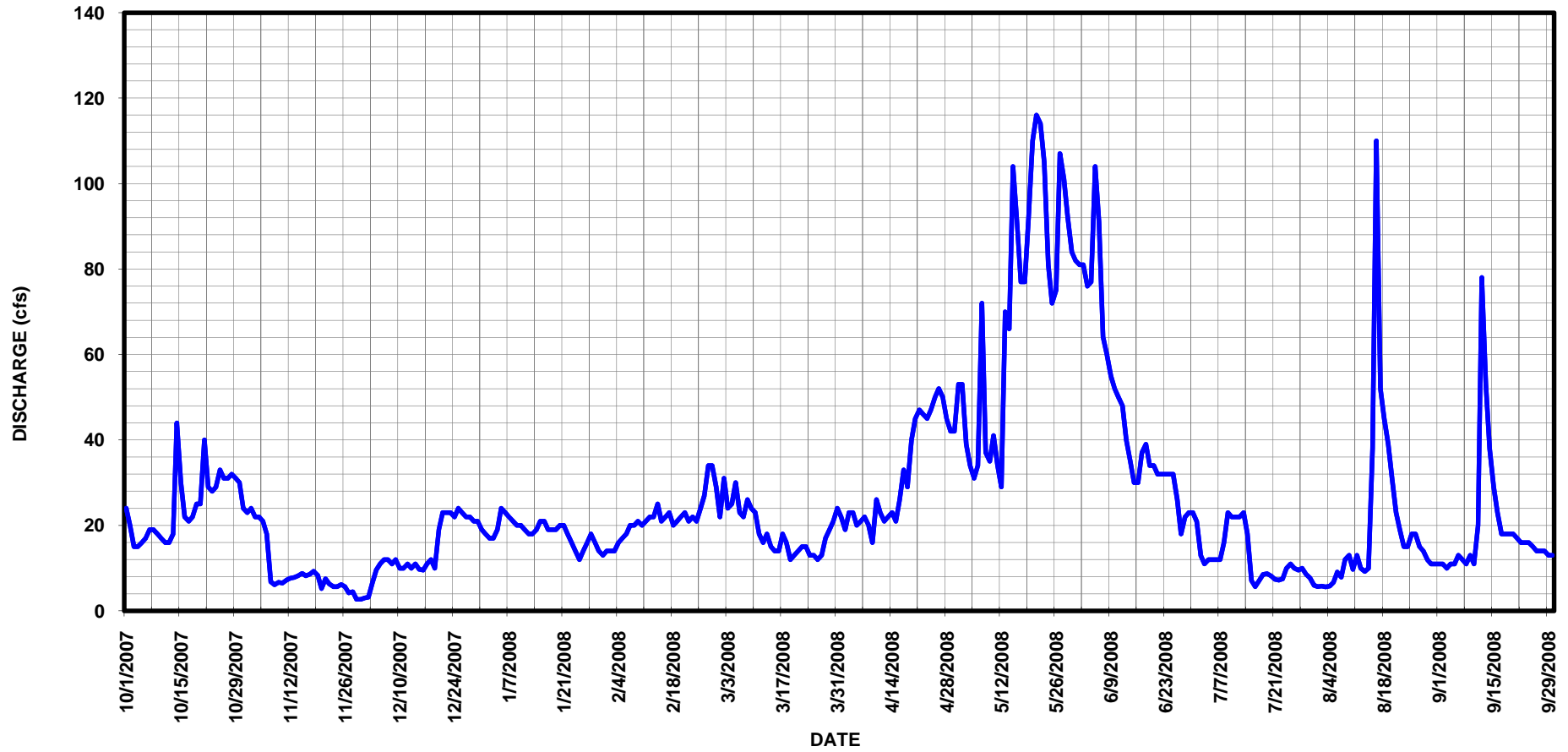
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	23	3.0	18	14	22	22	53	81	21	5.7	11
2	20	24	3.2	17	14	31	19	53	81	13	5.8	11
3	15	22	6.4	17	14	24	23	39	76	11	5.6	10
4	15	22	9.6	19	16	25	23	34	77	12	5.8	11
5	16	21	11	24	17	30	20	31	104	12	6.7	11
6	17	18	12	23	18	23	21	34	91	12	9.1	13
7	19	6.8	12	22	20	22	22	72	64	12	7.9	12
8	19	6.1	11	21	20	26	20	37	60	16	12	11
9	18	6.7	12	20	21	24	16	35	55	23	13	13
10	17	6.5	10	20	20	23	26	41	52	22	9.7	11
11	16	7.2	10	19	21	18	23	34	50	22	13	20
12	16	7.6	11	18	22	16	21	29	48	22	10	78
13	18	7.8	10	18	22	18	22	70	40	23	9.2	53
14	44	8.2	11	19	25	15	23	66	35	18	10	38
15	30	8.8	9.7	21	21	14	21	104	30	7.1	38	29
16	22	8.2	9.5	21	22	14	26	91	30	5.7	110	23
17	21	8.6	11	19	23	18	33	77	37	7.1	52	18
18	22	9.3	12	19	20	16	29	77	39	8.5	45	18
19	25	8.3	10	19	21	12	40	92	34	8.7	39	18
20	25	5.2	19	20	22	13	45	110	34	8.2	31	18
21	40	7.5	23	20	23	14	47	116	32	7.4	23	17
22	29	6.3	23	18	21	15	46	114	32	7.2	19	16
23	28	5.7	23	16	22	15	45	105	32	7.5	15	16
24	29	5.7	22	14	21	13	47	81	32	10	15	16
25	33	6.2	24	12	24	13	50	72	32	11	18	15
26	31	5.7	23	14	27	12	52	75	26	10	18	14
27	31	4.2	22	16	34	13	50	107	18	9.5	15	14
28	32	4.5	22	18	34	17	45	101	22	10	14	14
29	31	2.7	21	16	29	19	42	92	23	8.5	12	13
30	30	2.7	21	14	---	21	42	84	23	7.7	11	13
31	24	---	19	13	---	24	---	82	---	6.0	11	---
TOTAL	757	286.5	446.4	565	628	580	961	2208	1390	379.1	609.5	575
MEAN	24.4	9.55	14.4	18.2	21.7	18.7	32.0	71.2	46.3	12.2	19.7	19.2
AC-FT	1500	568	885	1120	1250	1150	1910	4380	2760	752	1210	1140
MAX	44	24	24	24	34	31	52	116	104	23	110	78
MIN	15	2.7	3.0	12	14	12	16	29	18	5.7	5.6	10

CAL YR	2007	TOTAL	34106	MEAN	93.4	MAX	547	MIN	2.7	AC-FT	67650
WTR YR	2008	TOTAL	9386	MEAN	25.6	MAX	116	MIN	2.7	AC-FT	18620

MAX DISCH: 654 CFS AT 05:15 ON May. 7, 2008 GH 4.69 FT. SHIFT 0.01 FT.  
MAX GH: 4.69 FT. AT 05:15 ON May. 7, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06711500 BEAR CREEK AT MOUTH AT SHERIDAN CO  
WY2008 HYDROGRAPH





PLATTE RIVER BASIN

06714000 SOUTH PLATTE RIVER AT DENVER, CO

**LOCATION.**--Lat 39°45'35", long 105°00'10", in NW¼SE¼ sec. 28, T.3 S., R.68 W., Denver County, Hydrologic Unit 10190003, on right bank 90 ft Upstream from Nineteenth Street Bridge in Denver CO and 0.4 mi downstream from mouth of Cherry Creek.

**DRAINAGE AREA AND PERIOD OF RECORD.**--3,861 mi<sup>2</sup>. May 1889 to Oct. 1890 sporadic record. July 1895 to current year continuous. Monthly data only for some periods.

**GAGE.**--Data Collection Platform (DCP), with telephone modem, shaft encoder and a continuous chart recorder in a 72-inch by 72-inch precast concrete structure with a 48-inch corrugated steel well at a grouted rock grade control structure. The primary reference gage is an electric tape gage with a supplemental outside wire weight. A city water line is plumbed to the gage for flushing the inlets.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart backup. Daily maximum and minimum stages for the satellite record were within ±0.02 ft of the chart record. The record is complete and reliable. The record is considered good. Station maintained by Jana Ash and Patrick Tyler and record developed by Jana Ash.

**RATING TABLE.**--PLADENCO33 USED FROM 01-Oct-2007 TO 30-Sept-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

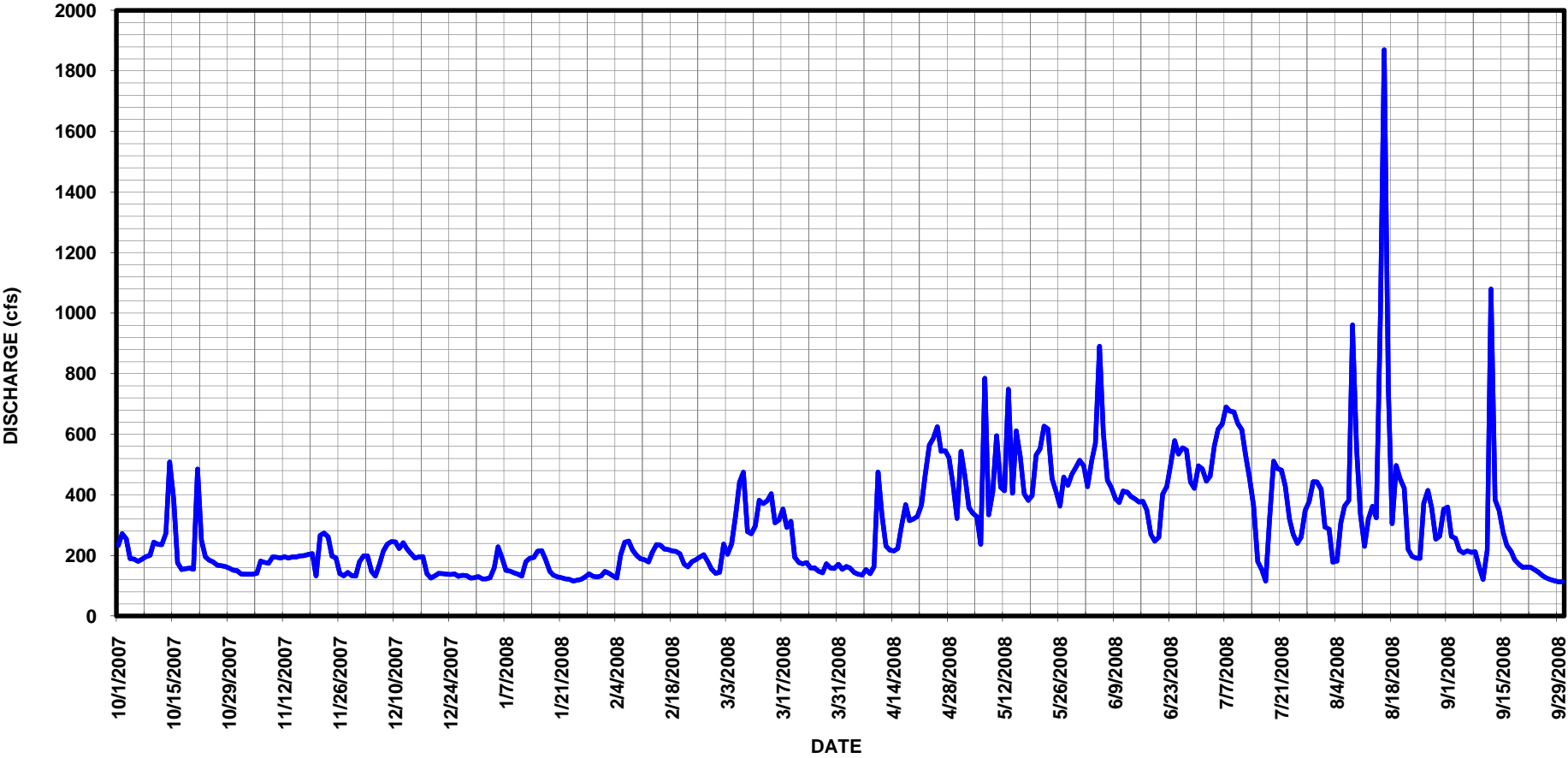
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	233	139	180	123	147	145	155	544	496	486	294	360
2	272	138	199	123	141	238	164	463	427	445	287	263
3	255	138	199	127	133	204	158	358	512	463	178	257
4	190	138	147	159	126	239	144	340	572	561	182	218
5	188	141	132	229	202	328	138	328	891	617	308	209
6	181	182	171	192	244	442	136	237	604	634	363	215
7	188	177	214	151	248	475	154	785	448	690	381	211
8	196	174	238	148	217	279	140	334	425	677	961	212
9	201	195	246	143	201	272	163	411	388	674	556	161
10	244	194	245	138	189	298	475	595	375	636	338	121
11	237	192	223	132	186	382	334	426	413	614	230	217
12	236	196	242	180	179	371	231	414	409	529	320	1080
13	273	192	221	191	211	380	218	749	395	450	362	384
14	509	195	205	193	236	404	215	406	387	362	324	351
15	382	195	192	214	234	308	223	612	377	180	990	277
16	175	199	195	216	221	318	298	525	379	155	1870	233
17	154	200	196	187	220	353	368	404	350	116	755	214
18	156	203	139	148	215	293	315	382	269	316	305	185
19	158	206	126	135	213	313	321	398	248	511	497	171
20	155	133	133	129	205	194	329	532	260	487	454	161
21	485	267	141	127	172	177	367	552	402	482	423	162
22	252	274	140	123	163	173	468	627	427	428	221	161
23	195	261	138	121	180	176	565	618	500	321	197	153
24	184	198	137	116	186	159	586	454	579	269	192	145
25	178	192	139	118	195	159	625	413	535	240	191	133
26	168	140	131	121	202	148	544	363	556	261	373	126
27	166	133	135	129	179	143	546	459	548	350	415	120
28	164	144	134	139	155	173	522	432	443	378	355	117
29	158	134	126	131	141	159	432	467	422	444	254	113
30	152	132	127	129	---	157	323	491	496	443	264	114
31	150	---	130	132	---	171	---	514	---	419	353	---
TOTAL	6835	5402	5321	4644	5541	8031	9657	14633	13533	13638	13193	6844
MEAN	220	180	172	150	191	259	322	472	451	440	426	228
AC-FT	13560	10710	10550	9210	10990	15930	19150	29020	26840	27050	26170	13580
MAX	509	274	246	229	248	475	625	785	891	690	1870	1080
MIN	150	132	126	116	126	143	136	237	248	116	178	113

CAL YR	2007	TOTAL	248900	MEAN	682	MAX	3610	MIN	119	AC-FT	493800
WTR YR	2008	TOTAL	107272	MEAN	293	MAX	1870	MIN	113	AC-FT	212800

MAX DISCH: 5880 CFS AT 22:15 ON Aug. 8, 2008 GH 8.52 FT. SHIFT 0.07 FT.  
MAX GH: 8.52 FT. AT 22:15 ON Aug. 8, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06714000 SOUTH PLATTE RIVER AT DENVER CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

FALL RIVER AT THE MOUTH NEAR IDAHO SPRINGS, CO

**LOCATION.**--Lat 39°45'20", long 105°33'24", in SE1/4, Sec. 28, T.3 S., R.73W., Clear Creek County. Gage is located on right upstream bank of the box culvert under I70 near the Fall River Road Exit (238) approximately 20 ft. past Fall River Road.

**DRAINAGE AREA AND PERIOD OF RECORD.**--Not determined. Gage established July 2007 at present site and datum to monitor minimum stream flow reach and aid in the administration of water rights.

**GAGE.**--Data Collection platform (DCP) and Sutron Acububbler stage sensor in a 12" x 30" x 36" NEMA4 shelter at a concrete box culvert with a steel sill plate. A staff gage located on the right edge of water is the primary reference with an additional staff gage located on the left edge of water wing wall of the culvert as backup. There is no backup recording device. A single orifice line in 2-inch ridge conduit extends from the NEMA4 enclosure and terminates in a gravel packed muffler buried in the stream bed approximately 5-feet upstream from the steel sill plate. Clear Creek Count is a cooperator.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite data. Record is complete and reliable for the period of operation Oct 1-Dec 6, 2007 and April 4-Sept. 30, 2008, except for November 22 through December 6, 2007, April 4-6, 8, 12 and 13, 2008 when the gage was ice affected; and, Aug 14-Sept 30, 2008, when the bubbler was not functioning properly. During this period, the bubbler was producing erratic 15-minute values ranging from very low to high values. The gage is a seasonal gage only and no record is kept during winter periods. Record is fair, except for periods of ice affected and no gage height record; and the period when the bubbler was not functioning properly, which are poor. The instantaneous peak of June 1, 2009 is estimated and poor. Station maintained and record developed by Div 1 Hydrographic Staff.

**RATING TABLE.**--FALIDACO02 USED FROM 01-Oct-2007 TO 30-Sep-2008

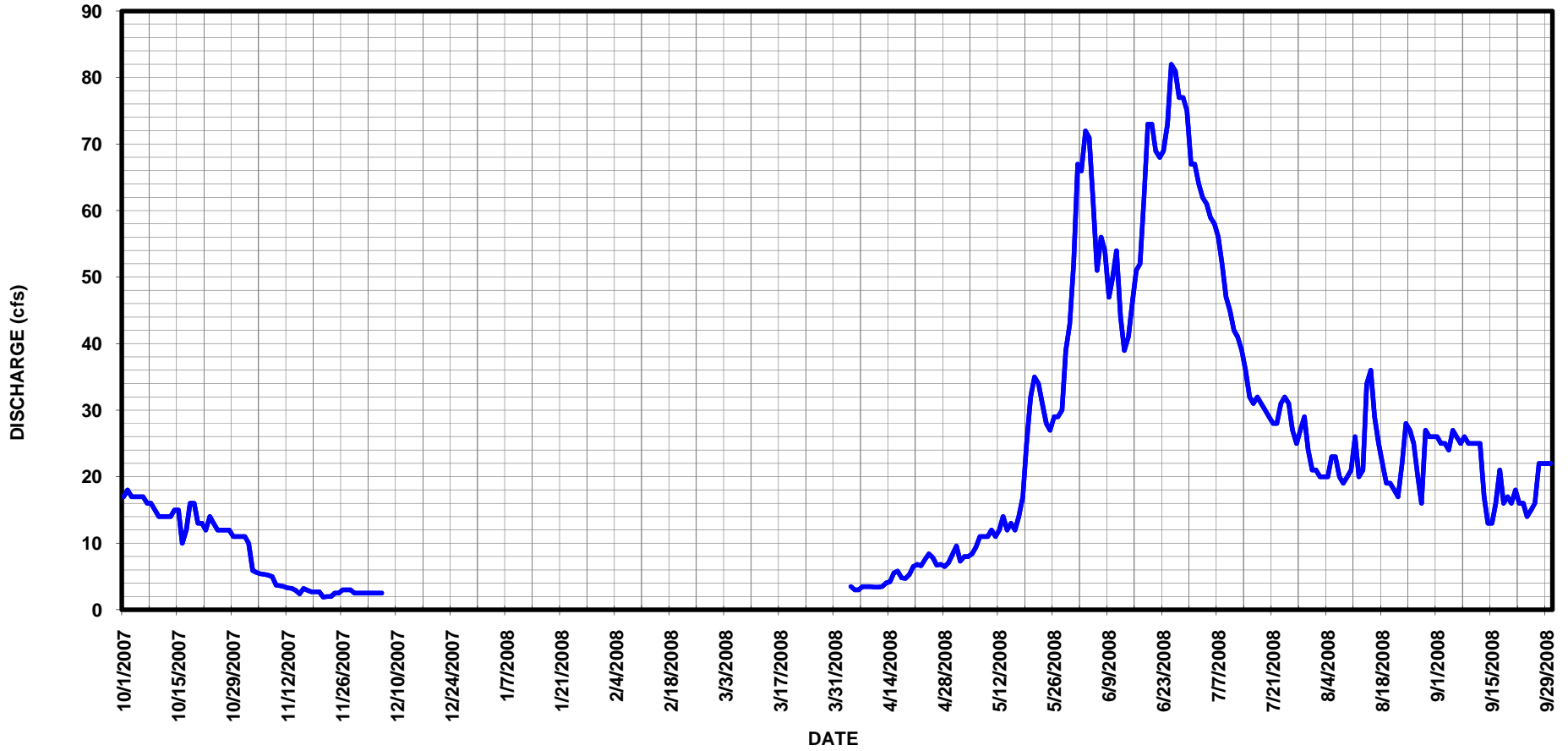
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	11	2.5	---	---	---	---	9.6	67	67	21	26
2	18	10	2.5	---	---	---	---	7.3	66	64	20	25
3	17	5.9	2.5	---	---	---	---	8.0	72	62	20	25
4	17	5.6	2.5	---	---	---	3.5	8.0	71	61	20	24
5	17	5.4	2.5	---	---	---	3.0	8.4	61	59	23	27
6	17	5.3	2.5	---	---	---	3.0	9.4	51	58	23	26
7	16	5.2	---	---	---	---	3.5	11	56	56	20	25
8	16	5.0	---	---	---	---	3.5	11	54	52	19	26
9	15	3.7	---	---	---	---	3.5	11	47	47	20	25
10	14	3.6	---	---	---	---	3.4	12	50	45	21	25
11	14	3.5	---	---	---	---	3.4	11	54	42	26	25
12	14	3.3	---	---	---	---	3.5	12	44	41	20	25
13	14	3.2	---	---	---	---	4.0	14	39	39	21	17
14	15	2.9	---	---	---	---	4.2	12	41	36	34	13
15	15	2.4	---	---	---	---	5.5	13	46	32	36	13
16	10	3.2	---	---	---	---	5.8	12	51	31	29	16
17	12	2.9	---	---	---	---	4.8	14	52	32	25	21
18	16	2.7	---	---	---	---	4.7	17	62	31	22	16
19	16	2.7	---	---	---	---	5.3	25	73	30	19	17
20	13	2.7	---	---	---	---	6.5	32	73	29	19	16
21	13	1.9	---	---	---	---	6.8	35	69	28	18	18
22	12	2.0	---	---	---	---	6.6	34	68	28	17	16
23	14	2.0	---	---	---	---	7.6	31	69	31	22	16
24	13	2.5	---	---	---	---	8.4	28	73	32	28	14
25	12	2.5	---	---	---	---	7.8	27	82	31	27	15
26	12	3.0	---	---	---	---	6.7	29	81	27	25	16
27	12	3.0	---	---	---	---	6.8	29	77	25	20	22
28	12	3.0	---	---	---	---	6.5	30	77	27	16	22
29	11	2.5	---	---	---	---	7.1	39	75	29	27	22
30	11	2.5	---	---	---	---	8.3	43	67	24	26	22
31	11	---	---	---	---	---	---	52	---	21	26	---
TOTAL	436	115.1	15.0	---	---	---	143.7	634.7	1868	1217	710	616
MEAN	14.1	3.84	2.50	---	---	---	5.32	20.5	62.3	39.3	22.9	20.5
AC-FT	865	228	30	---	---	---	285	1260	3710	2410	1410	1220
MAX	18	11	2.5	---	---	---	8.4	52	82	67	36	27
MIN	10	1.9	2.5	---	---	---	3.0	7.3	39	21	16	13

CAL YR	2007	TOTAL	2272.0	MEAN	15.9	MAX	31	MIN	1.9	AC-FT	4506 (PARTIAL YEAR RECORD)
WTR YR	2008	TOTAL	5755.5	MEAN	23.3	MAX	82	MIN	1.9	AC-FT	11420 (PARTIAL YEAR RECORD)

MAX DISCH: 99.4 CFS AT 21:00 ON Jun. 1, 2008 GH 1.87 FT. SHIFT -0.03 FT.  
MAX GH: 1.87 FT. AT 21:00 ON Jun. 1, 2008

FALL RIVER AT THE MOUTH NEAR IDAHO SPRINGS CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06720000 CLEAR CREEK AT DERBY, CO

**LOCATION.**--Lat 39°49'39", long 104°57'21", in SW¼SW¼ sec. 36, T.2 S., R.68 W., Adams County, Hydrologic Unit 10190004, on right bank 975 ft downstream from York Street bridge, 0.5 mi upstream from mouth, and 2.5 mi west of Derby.

**DRAINAGE AREA AND PERIOD OF RECORD.**--575 mi<sup>2</sup>; April-Nov. 1914, 1927 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a 60-inch corrugated metal shelter and well at a rock and concrete control built to armor a sewer line crossing. The primary reference gage is electric tape gaeg in the shelter. Station at this datum since June 26, 1992.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart backup. Daily satellite maximum and minimum stages were within ± 0.02 ft the chart record. The record is complete and reliable, except for January 19-27, 2008, due to ice affecting float movement in the well. The record is good, except for period of ice affected record, which is estimated and poor. Station maintained by Steve Barrett and Patrick Tyler and record developed by Patrick Tyler.

**RATING TABLE.**--CLEDERCO34 USED FROM 01-Oct-2007 TO 01-Oct-2008

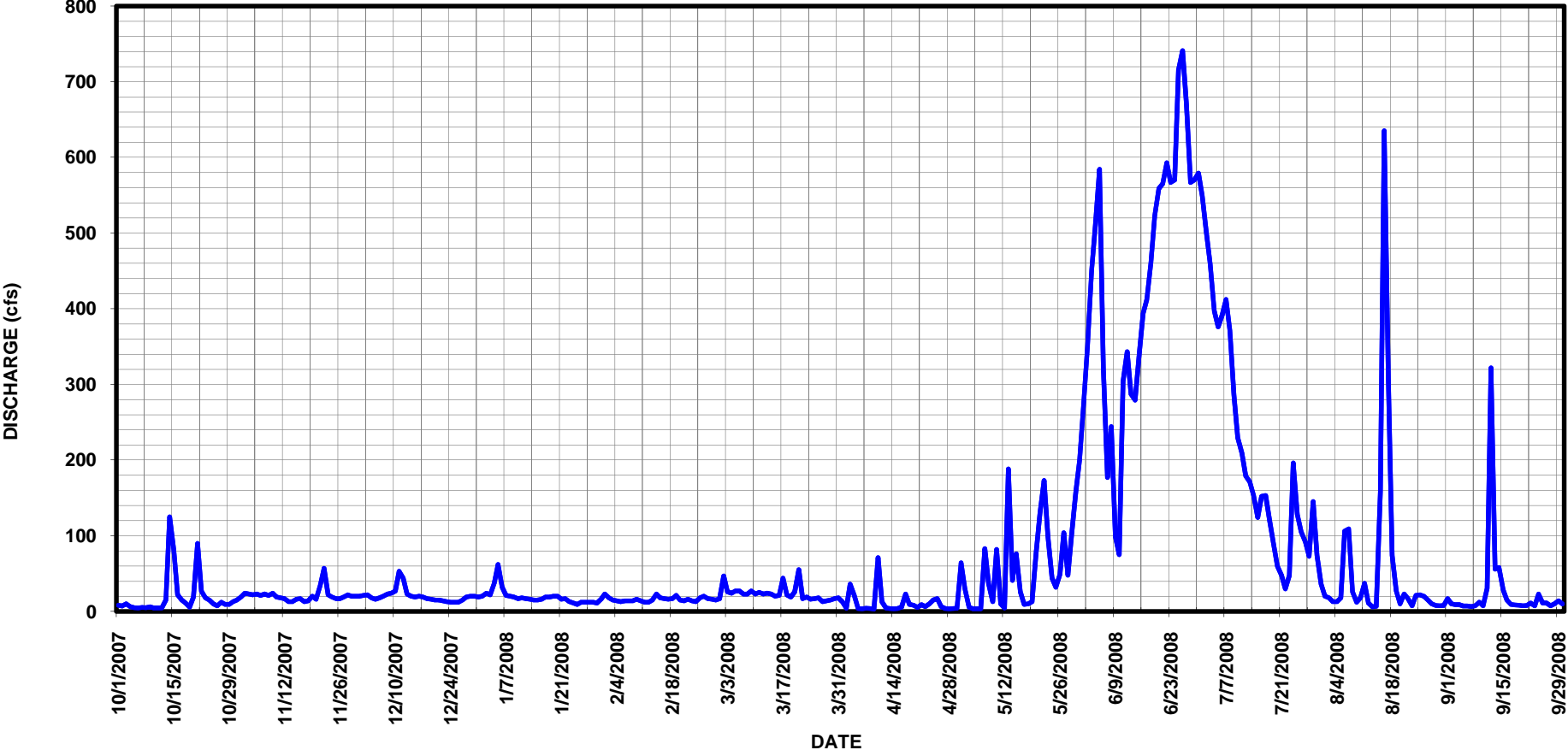
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	19	20	20	23	17	13	64	276	549	20	17
2	6.9	24	21	24	18	47	4.3	30	351	500	18	10
3	10	23	22	22	15	26	36	5.6	451	459	13	8.8
4	6.2	22	18	37	14	24	21	3.4	511	397	13	8.8
5	4.9	23	16	62	13	27	4.0	3.4	584	376	18	7.2
6	4.6	21	18	32	14	27	3.4	3.4	321	392	106	7.0
7	5.1	23	20	21	14	23	4.2	83	177	412	109	6.5
8	4.9	21	23	20	14	23	4.0	36	244	371	26	7.6
9	6.1	24	24	19	16	27	3.1	13	98	286	12	12
10	4.6	19	27	17	14	23	71	82	75	229	18	7.4
11	4.6	18	53	18	12	25	13	10	304	209	37	31
12	4.4	17	44	17	12	23	4.5	4.7	343	179	11	322
13	15	13	23	16	15	24	3.9	188	287	171	5.9	56
14	125	13	20	15	23	23	3.3	41	279	153	6.6	58
15	81	16	19	15	18	20	3.8	76	336	124	158	29
16	22	17	20	16	17	21	5.6	26	393	152	635	15
17	15	13	19	19	16	44	23	9.1	412	153	310	9.3
18	11	14	17	19	17	22	9.1	10	461	121	74	8.7
19	5.5	20	16	20	21	19	8.3	13	523	89	27	8.0
20	19	16	15	20	15	26	5.4	78	559	60	10	7.5
21	90	34	15	16	14	55	8.8	130	565	48	23	7.7
22	27	57	14	17	16	17	6.4	173	593	30	17	11
23	18	22	13	13	14	19	10	99	567	48	7.3	7.4
24	15	19	12	11	13	16	15	44	570	196	21	23
25	9.8	17	12	9.3	18	17	17	32	716	128	22	11
26	7.5	17	12	12	20	18	6.3	49	741	105	20	11
27	12	19	15	12	17	13	4.0	104	670	92	15	7.4
28	9.4	22	19	12	16	14	3.6	48	567	73	9.8	10
29	9.2	20	20	12	15	15	3.7	103	570	145	7.8	14
30	13	20	20	11	---	17	4.2	158	579	74	7.4	9.9
31	15	---	19	16	---	18	---	200	---	36	7.8	---
TOTAL	589.9	623	626	590.3	464	730	322.9	1919.6	13123	6357	1785.6	749.2
MEAN	19.0	20.8	20.2	19.0	16.0	23.5	10.8	61.9	437	205	57.6	25.0
AC-FT	1170	1240	1240	1170	920	1450	640	3810	26030	12610	3540	1490
MAX	125	57	53	62	23	55	71	200	741	549	635	322
MIN	4.4	13	12	9.3	12	13	3.1	3.4	75	30	5.9	6.5
CAL YR 2007	TOTAL	58686.2	MEAN	160.8	MAX	1100	MIN	4.4	AC-FT	116400		
WTR YR 2008	TOTAL	27880.5	MEAN	76.2	MAX	741	MIN	3.1	AC-FT	55300		

MAX DISCH: 1570 CFS AT 13:15 ON Aug. 16, 2008 GH 3.44 FT. SHIFT -0.06 FT.  
MAX GH: 3.44 FT. AT 13:15 ON Aug. 16, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06720000 CLEAR CREEK AT DERBY CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06720500 SOUTH PLATTE RIVER AT HENDERSON, CO

**LOCATION** --Lat 39°55'19", long 104°52'00", in SE¼NE¼ sec. 34, T.1 S., R.67 W., Adams County, Hydrologic Unit 10190003, on right bank 500 ft upstream from the 124<sup>th</sup> St. bridge and 0.2 mi northwest of Henderson.

**PERIOD OF RECORD AND DRAINAGE AREA** --4,768 mi<sup>2</sup>. May 1926 to current year. Monthly data only prior to 1933. Periodic water quality data available starting in 1955.

**GAGE** --Data Collection Platform (DCP) with a shaft encoder and a continuous chart recorder in a 42-inch metal pipe shelter and well at a grouted rock grade control structure. The primary reference gage is an electric tape gage with a supplemental outside wire weight gage. Water quality instrumentation installed by other agencies. Datum of gage, formerly 4999.12 ft. MSL, (NAVD 1929), revised by survey to 5001.25 ft MSL (NAVD 1988).

**REMARKS** --The primary record is hourly averages of 15-minute satellite data with chart backup. The shaft encoder remained in good calibration verified by 24 visits and requiring one minor adjustment. The record is complete and reliable. Record is good. Station maintained Jana Ash and Patrick Tyler and record developed by Jana Ash.

**RATING TABLE** --PLAHENCO33 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

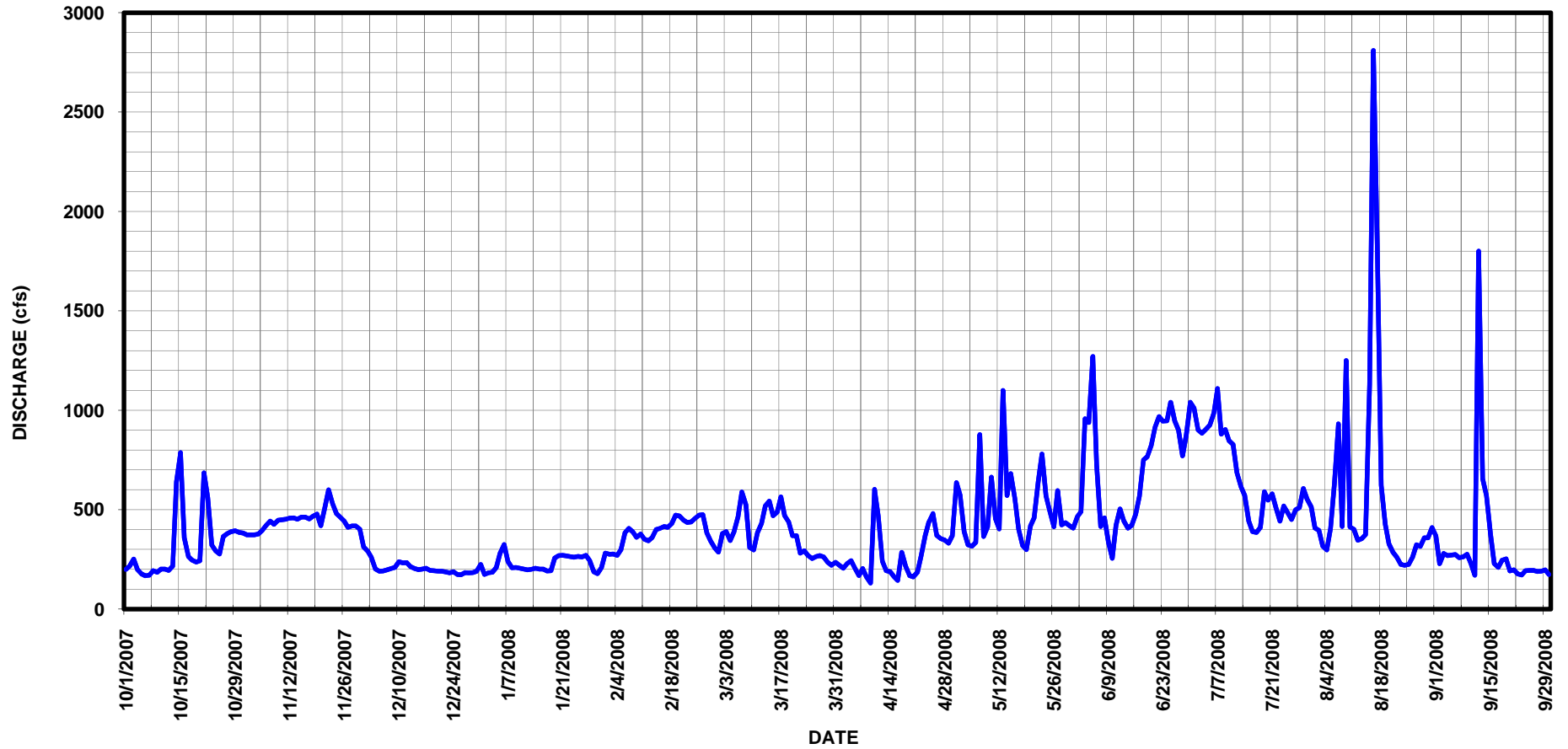
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	373	313	175	281	287	220	637	464	1010	408	369
2	216	373	292	182	276	381	206	572	490	901	395	229
3	251	374	260	185	277	390	228	388	958	884	316	280
4	199	378	201	210	271	345	243	324	939	905	297	269
5	177	396	190	281	299	388	206	317	1270	925	406	272
6	168	421	192	325	385	464	169	335	726	983	631	274
7	170	443	197	240	406	589	204	877	415	1110	932	258
8	193	427	204	208	389	525	160	365	459	880	416	263
9	185	447	209	210	362	310	131	414	335	903	1250	276
10	201	449	238	205	377	298	602	663	256	847	413	230
11	202	452	232	201	352	385	469	455	423	827	400	170
12	195	457	234	198	344	430	241	403	503	686	346	1800
13	217	459	214	200	360	519	194	1100	443	616	355	654
14	641	452	204	206	400	543	188	571	408	571	375	570
15	787	463	199	202	406	470	163	681	421	443	1130	379
16	357	463	202	201	416	487	145	558	478	390	2810	228
17	265	454	205	192	411	565	286	402	569	386	1780	210
18	246	467	195	194	431	470	217	320	750	410	623	246
19	237	478	194	257	472	438	169	299	767	591	427	253
20	243	420	190	269	469	369	162	418	824	549	328	192
21	685	512	190	271	448	369	185	460	915	579	286	197
22	560	600	186	268	436	282	266	641	969	510	261	177
23	322	529	183	264	439	293	370	780	945	443	224	172
24	293	481	188	261	456	269	438	568	947	518	221	193
25	277	461	174	265	473	254	480	491	1040	483	224	195
26	365	442	173	263	475	264	371	414	947	451	260	195
27	381	412	184	270	383	269	354	596	901	499	324	189
28	390	418	183	244	343	263	348	424	770	510	315	191
29	394	418	184	188	309	235	331	435	876	607	359	198
30	386	402	191	179	---	220	370	419	1040	552	358	175
31	383	---	224	210	---	235	---	408	---	514	410	---
TOTAL	9786	13321	6425	7024	11146	11606	8116	15735	21248	20483	17280	9304
MEAN	316	444	207	227	384	374	271	508	708	661	557	310
AC-FT	19410	26420	12740	13930	22110	23020	16100	31210	42150	40630	34270	18450
MAX	787	600	313	325	475	589	602	1100	1270	1110	2810	1800
MIN	168	373	173	175	271	220	131	299	256	386	221	170

CAL YR	2007	TOTAL	300303	MEAN	823	MAX	4410	MIN	168	AC-FT	595700
WTR YR	2008	TOTAL	151474	MEAN	414	MAX	2810	MIN	131	AC-FT	300400

MAX DISCH: 5690 CFS AT 18:00 ON Aug. 16, 2008 GH 8.37 FT. SHIFT 0.07 FT.  
MAX GH: 8.37 FT. AT 18:00 ON Aug. 16, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06720500 SOUTH PLATTE RIVER AT HENDERSON CO  
WY2008 HYDROGRAPH





PLATTE RIVER BASIN

MIDDLE ST. VRAIN CREEK NEAR PEACEFUL VALLEY, CO

**LOCATION.**--Lat 40 07' 55", long 105 31' 00", NE1/4 NW1/4 Sec. 24, T.2 N., R.73 W.

**PERIOD OF RECORD AND DRAINAGE AREA.**--Gage established on May 14, 1998 by State of Colorado, Division of Water Resources personnel. The record at this gage is partial year record only.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in 48-inch diameter metal pipe shelter and well. The primary reference gage is a metal drop tape and adjustable reference point (RP) located on the equipment shelf of the shelter. Gage is not equipped with a supplemental outside staff gage.

**REMARKS.**--The primary record is hourly averages of 15-minute DCP data with chart as backup. The record is complete and reliable, except for October 8, 18-19, 2007, when the gage was affected by ice; October 19, 2007 to May 19, 2008, when the gage was off for winter; and, May 28, 2008 to June 4, 2008 the gage was experiencing drawdown conditions, presumably due to movement of rocks in the gage pool area. The record is good, except for periods when the stage-discharge relationship was affected by ice, which is estimated and fair; and period of drawdown effect, which is fair. The peak occurred while the gage was experiencing drawdown conditions and is therefore rated fair. Record for Oct. 19, 2007 and May 19, 2008 estimated based on partial day record and considered fair. Partial year record only. Station maintained and record developed by Russell Stroud.

**RATING TABLE.**--MIDSTECO04 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

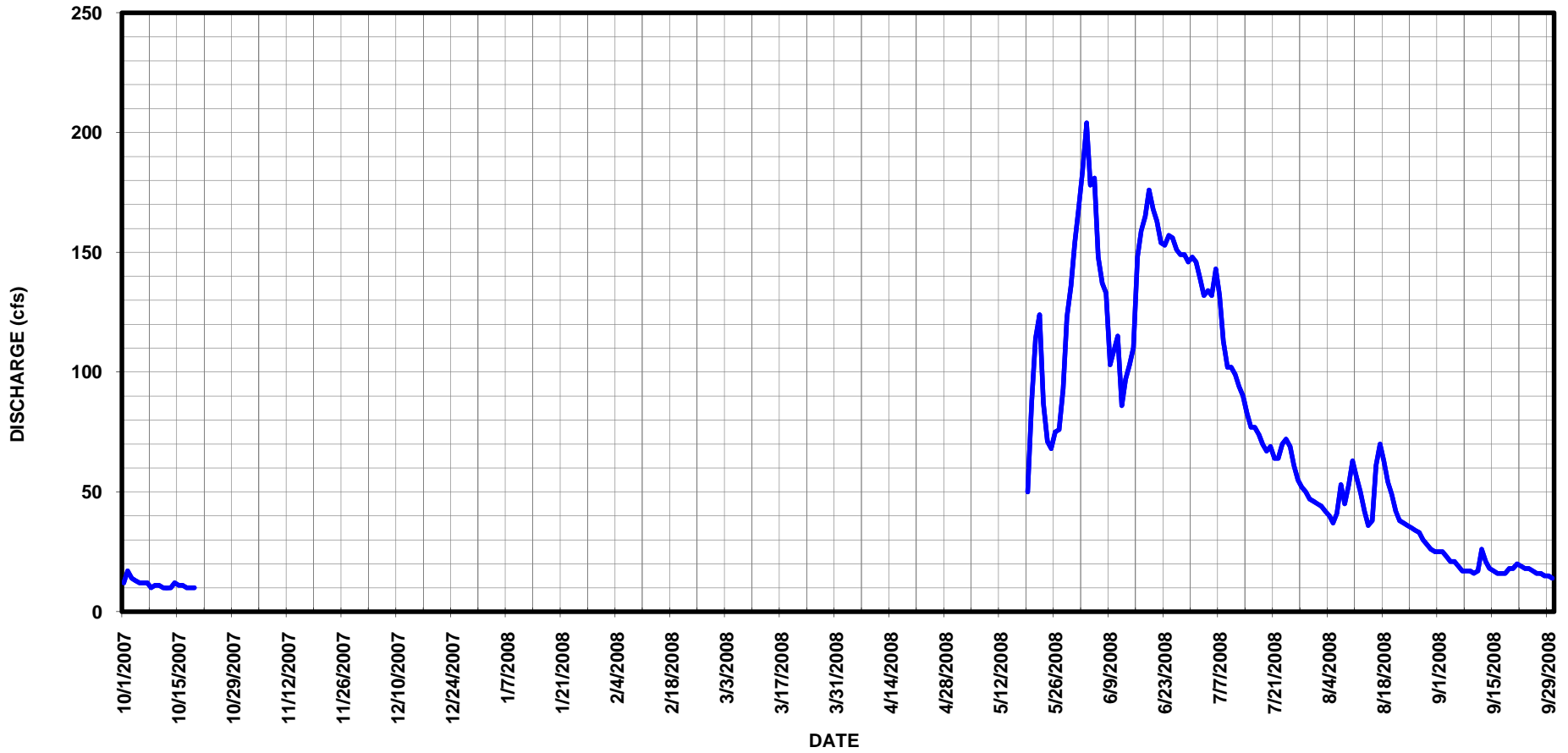
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	---	---	---	---	---	---	---	169	146	45	25
2	17	---	---	---	---	---	---	---	184	139	44	25
3	14	---	---	---	---	---	---	---	204	132	42	23
4	13	---	---	---	---	---	---	---	178	134	40	21
5	12	---	---	---	---	---	---	---	181	132	37	21
6	12	---	---	---	---	---	---	---	148	143	41	19
7	12	---	---	---	---	---	---	---	137	132	53	17
8	10	---	---	---	---	---	---	---	133	113	45	17
9	11	---	---	---	---	---	---	---	103	102	53	17
10	11	---	---	---	---	---	---	---	109	102	63	16
11	10	---	---	---	---	---	---	---	115	99	56	17
12	9.9	---	---	---	---	---	---	---	86	94	50	26
13	10	---	---	---	---	---	---	---	97	90	42	21
14	12	---	---	---	---	---	---	---	103	83	36	18
15	11	---	---	---	---	---	---	---	110	77	38	17
16	11	---	---	---	---	---	---	---	148	77	61	16
17	10	---	---	---	---	---	---	---	159	74	70	16
18	10	---	---	---	---	---	---	---	165	70	63	16
19	10	---	---	---	---	---	---	50	176	67	54	18
20	---	---	---	---	---	---	---	88	168	69	49	18
21	---	---	---	---	---	---	---	114	163	64	42	20
22	---	---	---	---	---	---	---	124	154	64	38	19
23	---	---	---	---	---	---	---	87	153	70	37	18
24	---	---	---	---	---	---	---	71	157	72	36	18
25	---	---	---	---	---	---	---	68	156	69	35	17
26	---	---	---	---	---	---	---	75	151	61	34	16
27	---	---	---	---	---	---	---	76	149	55	33	16
28	---	---	---	---	---	---	---	93	149	52	30	15
29	---	---	---	---	---	---	---	123	146	50	28	15
30	---	---	---	---	---	---	---	136	148	47	26	14
31	---	---	---	---	---	---	---	154	---	46	25	---
TOTAL	217.9	---	---	---	---	---	---	1259	4399	2725	1346	552
MEAN	11.5	---	---	---	---	---	---	96.8	147	87.9	43.4	18.4
AC-FT	432	---	---	---	---	---	---	2500	8730	5410	2670	1090
MAX	17	---	---	---	---	---	---	154	204	146	70	26
MIN	9.9	---	---	---	---	---	---	50	86	46	25	14

CAL YR 2007 TOTAL 9754.7 MEAN 54.2 MAX 156 MIN 9.8 AC-FT 19350 (PARTIAL YEAR RECORD)  
WTR YR 2008 TOTAL 10498.9 MEAN 68.2 MAX 204 MIN 9.9 AC-FT 20820 (PARTIAL YEAR RECORD)

MAX DISCH: 277 CFS AT 22:00 ON Jun. 2, 2008 GH 2.96 FT. SHIFT 0.11 FT.  
MAX GH: 2.96 FT. AT 22:00 ON Jun. 2, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

MIDDLE ST. VRAIN CREEK NEAR PEACEFUL VALLEY CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

SOUTH ST. VRRAIN CREEK NEAR WARD, CO

LOCATION.--Lat 40°05'27", long 105°30'50"

DRAINAGE AREA AND PERIOD OF RECORD.--14.4 mi<sup>2</sup>; 1925-27,28-31, 54-73, 1992 to present.

GAGE.--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in 42-inch diameter corrugated metal pipe shelter and well. The primary reference gage is a reference point (RP) and metal drop tape located in the shelter. There is no supplementary outside staff gage equipped at this gage.

REMARKS.--The primary record is hourly averages of 15-minute DCP data with chart as backup. Record is complete and reliable, except for October 15-19, 2007 when the stage-discharge relationship was affected by ice; October 19, 2007 to May 19, 2008 the gage was off for winter and no gage-height information available. Record is good, except for periods of no gage height and ice affected record, which are poor; discharge for October 19, 2007 and May 19, 2008, are based on partial day record, and are estimated and poor. This is a partial year record. No discharge record was kept for the winter period (October 19, 2007 to May 19, 2008). Station maintained and record developed by Russell Stroud.

RATING TABLE.--SSVWARCO11 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.1	---	---	---	---	---	---	---	110	130	41	37
2	12	---	---	---	---	---	---	---	131	123	46	35
3	11	---	---	---	---	---	---	---	140	117	46	33
4	10	---	---	---	---	---	---	---	137	125	45	31
5	9.4	---	---	---	---	---	---	---	130	117	42	32
6	9.2	---	---	---	---	---	---	---	103	121	43	29
7	8.3	---	---	---	---	---	---	---	91	118	53	27
8	7.4	---	---	---	---	---	---	---	93	107	45	25
9	8.4	---	---	---	---	---	---	---	74	88	46	23
10	7.8	---	---	---	---	---	---	---	77	89	59	14
11	7.6	---	---	---	---	---	---	---	92	88	53	9.9
12	7.2	---	---	---	---	---	---	---	71	84	47	19
13	7.1	---	---	---	---	---	---	---	58	81	42	17
14	9.5	---	---	---	---	---	---	---	71	73	40	14
15	8.0	---	---	---	---	---	---	---	93	65	43	12
16	8.0	---	---	---	---	---	---	---	108	65	66	10
17	8.0	---	---	---	---	---	---	---	119	64	67	9.1
18	9.0	---	---	---	---	---	---	---	126	65	53	9.4
19	9.0	---	---	---	---	---	---	45	136	60	46	12
20	---	---	---	---	---	---	---	51	144	59	43	11
21	---	---	---	---	---	---	---	59	143	55	41	13
22	---	---	---	---	---	---	---	67	142	54	38	12
23	---	---	---	---	---	---	---	56	139	58	38	11
24	---	---	---	---	---	---	---	48	141	72	38	9.2
25	---	---	---	---	---	---	---	47	139	66	44	8.8
26	---	---	---	---	---	---	---	51	130	56	46	8.3
27	---	---	---	---	---	---	---	49	134	49	44	8.2
28	---	---	---	---	---	---	---	56	140	47	40	8.1
29	---	---	---	---	---	---	---	79	129	45	39	7.8
30	---	---	---	---	---	---	---	83	135	43	38	7.5
31	---	---	---	---	---	---	---	92	---	41	37	---
TOTAL	166.0	---	---	---	---	---	---	783	3476	2425	1409	503.3
MEAN	8.74	---	---	---	---	---	---	60.2	116	78.2	45.5	16.8
AC-FT	329	---	---	---	---	---	---	1550	6890	4810	2790	998
MAX	12	---	---	---	---	---	---	92	144	130	67	37
MIN	7.1	---	---	---	---	---	---	45	58	41	37	7.5

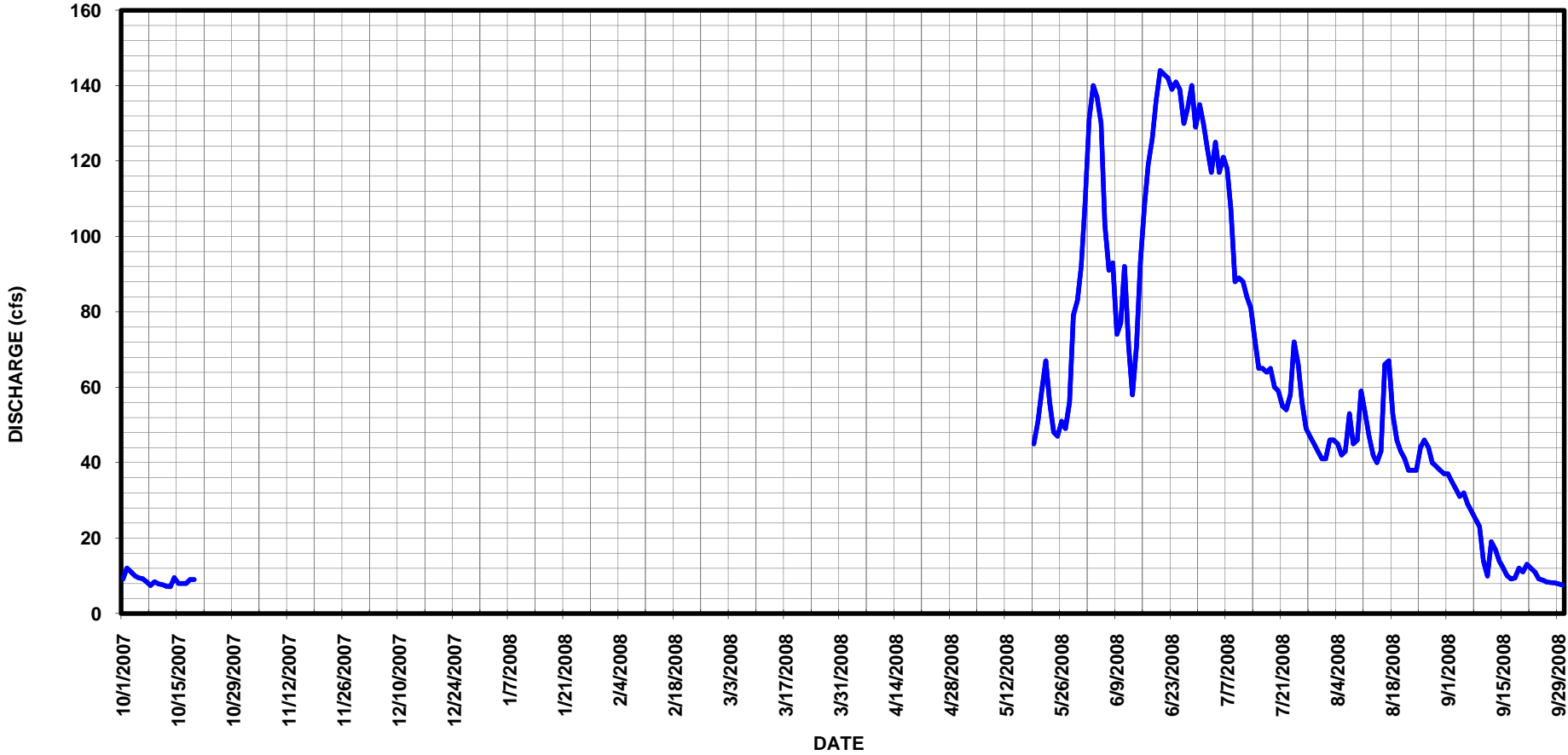
CAL YR 2007	TOTAL	7951.1	MEAN	51.0	MAX	170	MIN	7.1	AC-FT	15770	(PARTIAL YEAR RECORD)
WTR YR 2008	TOTAL	8762.3	MEAN	56.9	MAX	144	MIN	7.1	AC-FT	17380	(PARTIAL YEAR RECORD)

MAX DISCH: 161 CFS AT 00:15 ON Jun. 20, 2008 GH 2.76 FT. SHIFT 0 FT.

MAX GH: 2.76 FT. AT 00:15 ON Jun. 20, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

SOUTH ST. VRAIN CREEK NEAR WARD CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

LEFTHAND DIVERSION AT SO. ST. VRAIN CREEK NEAR WARD, CO

**LOCATION.**--Lat 40°05'29", long 105°30'31", the gage is located ½ mile downstream from gage on S. St. Vrain Creek off Highway 72.

**PERIOD OF RECORD AND DRAINAGE AREA.**--Established station on May 21, 1992 at request of Water Commissioner for administration of water rights in District 5, Div. 1. The gage is located one-quarter mile downstream from gage on South Saint Vrain Creek off Highway 72. This station is operated as a partial year record station usually from May to October.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a 42-inch corrugated metal pipe shelter with a 42-inch concrete well at a concrete control. The well is connected to the channel with two two-inch polyvinyl conduit (PVC) inlets. The PVC inlets are equipped with ball valves, street keys and flushing risers. The primary reference gage is a metal drop tape from an adjustable reference point. No supplemental staff is present.

**REMARKS.**--The primary record is hourly averages of 15-minute DCP data with chart as backup. Record is complete and reliable, except for October 14-19, 2007, when the stage-discharge relationship was affected by ice; October 19, 2007 to May 19, 2008, when the gage was shut down for winter and no gage-height information was collected. Record is good, except for periods of no gage height and ice affected record, which are poor; discharge for Oct 19 and May 19 are estimated and poor, since they are based on partial day record. This is a partial year record. Station maintained and record developed by Russell Stroud.

**RATING TABLE.**--LEFTHDCO03 USED FROM 01-Oct-2007 TO 30-Sep-2008

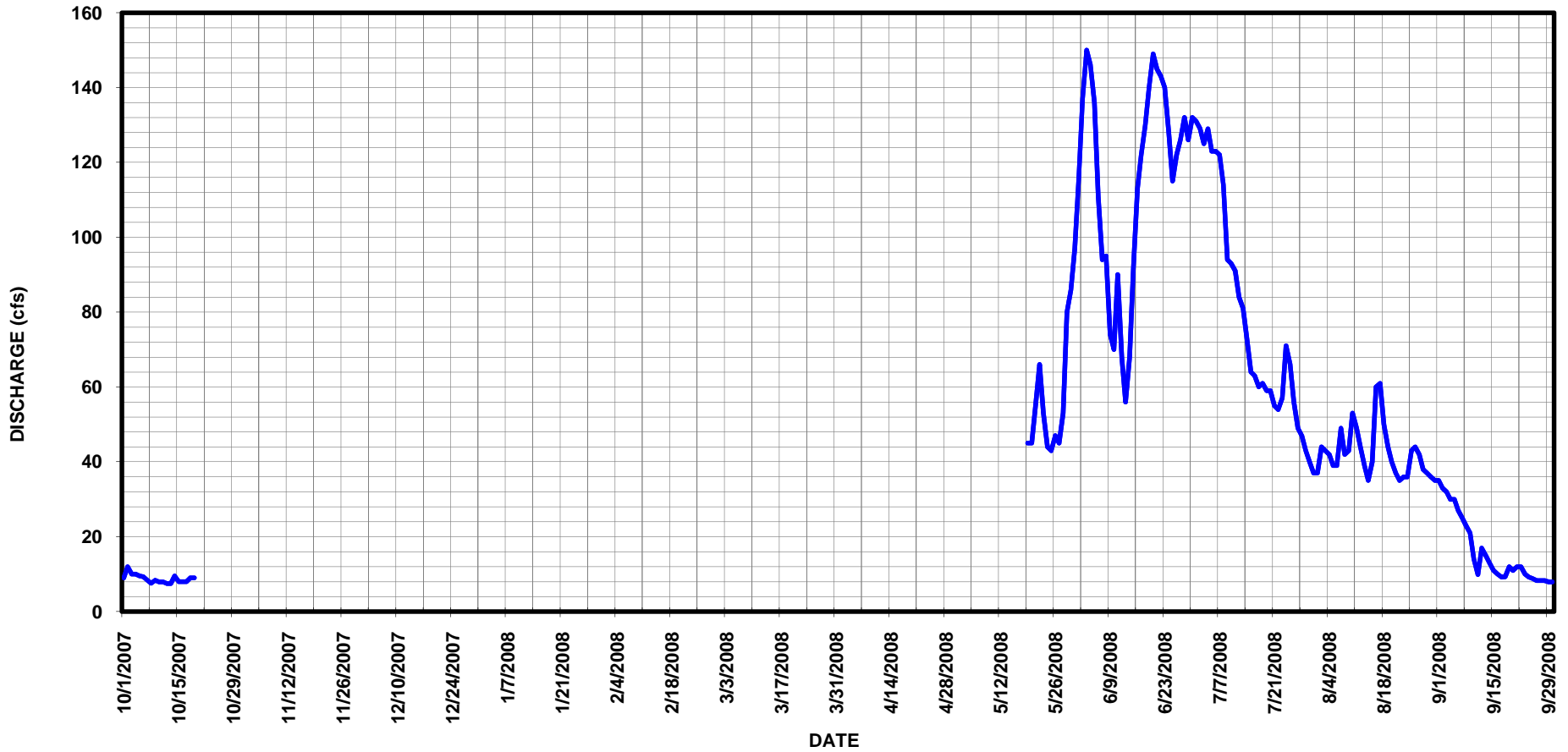
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	---	---	---	---	---	---	---	116	131	37	35
2	12	---	---	---	---	---	---	---	137	129	44	33
3	10	---	---	---	---	---	---	---	150	125	43	32
4	10	---	---	---	---	---	---	---	146	129	42	30
5	9.5	---	---	---	---	---	---	---	136	123	39	30
6	9.3	---	---	---	---	---	---	---	111	123	39	27
7	8.4	---	---	---	---	---	---	---	94	122	49	25
8	7.6	---	---	---	---	---	---	---	95	114	42	23
9	8.4	---	---	---	---	---	---	---	74	94	43	21
10	7.9	---	---	---	---	---	---	---	70	93	53	14
11	7.9	---	---	---	---	---	---	---	90	91	49	9.9
12	7.5	---	---	---	---	---	---	---	68	84	44	17
13	7.5	---	---	---	---	---	---	---	56	81	39	15
14	9.5	---	---	---	---	---	---	---	68	73	35	13
15	8.0	---	---	---	---	---	---	---	92	64	40	11
16	8.0	---	---	---	---	---	---	---	113	63	60	10
17	8.0	---	---	---	---	---	---	---	122	60	61	9.2
18	9.0	---	---	---	---	---	---	---	130	61	50	9.3
19	9.0	---	---	---	---	---	---	45	140	59	44	12
20	---	---	---	---	---	---	---	45	149	59	40	11
21	---	---	---	---	---	---	---	55	145	55	37	12
22	---	---	---	---	---	---	---	66	143	54	35	12
23	---	---	---	---	---	---	---	53	140	57	36	10
24	---	---	---	---	---	---	---	44	128	71	36	9.2
25	---	---	---	---	---	---	---	43	115	66	43	8.8
26	---	---	---	---	---	---	---	47	122	56	44	8.3
27	---	---	---	---	---	---	---	45	126	49	42	8.3
28	---	---	---	---	---	---	---	53	132	47	38	8.3
29	---	---	---	---	---	---	---	80	126	43	37	7.9
30	---	---	---	---	---	---	---	86	132	40	36	7.9
31	---	---	---	---	---	---	---	97	---	37	35	---
TOTAL	166.5	---	---	---	---	---	---	759	3466	2453	1312	480.1
MEAN	8.76	---	---	---	---	---	---	58.4	116	79.1	42.3	16.0
AC-FT	330	---	---	---	---	---	---	1510	6870	4870	2600	952
MAX	12	---	---	---	---	---	---	97	150	131	61	35
MIN	7.5	---	---	---	---	---	---	43	56	37	35	7.9
CAL YR 2007	TOTAL	6890.4	MEAN	44.5	MAX	109	MIN	7.5	AC-FT	13670	(PARTIAL YEAR RECORD)	
WTR YR 2008	TOTAL	8636.6	MEAN	56.1	MAX	150	MIN	7.5	AC-FT	17130	(PARTIAL YEAR RECORD)	

MAX DISCH: 169 CFS AT 02:00 ON Jun. 20, 2008 GH 2.21 FT. SHIFT 0.06 FT.  
MAX GH: 2.21 FT. AT 02:00 ON Jun. 20, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

### LEFTHAND DIVERSION AT SO. ST. VRAIN CREEK NEAR WARD CO WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06724000 ST. VRAIN CREEK AT LYONS, CO

**LOCATION.**--Lat 40°13'05", long 105°15'34", in NW¼NW¼ sec. 20, T.3 N., R.70 W., Boulder County, Hydrologic Unit 10190005, on left bank 75 ft southwest of U.S. Highway 36 (State Highways 7 and 66) at southeast edge of Lyons, 400 ft upstream from St. Vrain Supply Canal, and 0.4 mi downstream from confluence of North and South St. Vrain Creeks.

**DRAINAGE AREA AND PERIOD OF RECORD.**--212 mi². Aug. 1887 to Sep. 1891, June 1895 to current year. Monthly only data for some periods. Water quality data available from Oct. 1977 to Feb. 1981. On March 23, 2003, the gage was moved approximately 0.2 mi upstream. In the new location, the gage is above the Supply Ditch diversion, whereas the old location was below this diversion.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a 6-ft by 6-ft wooden shelter with 42-inch concrete stilling well upstream of a low head concrete diversion dam. The primary reference is an electric tape gage with a supplemental outside chain gage.

**REMARKS.**--Primary record is hourly averages of 15-minute data taken from satellite monitoring with chart back up. The record is complete and reliable, except for November 21-23, 2007; when the stilling well or inlets were frozen; December 3, 2007 to March 10, 2008, when the station was closed for winter. The record is good, except for periods of no gage height or ice affected record, which are estimated and poor. Station maintained and record developed by Russell Stroud.

**RATING TABLE.**--SVCLYOCO25 USED FROM 01-Oct-2007 TO 30-Sep-2008

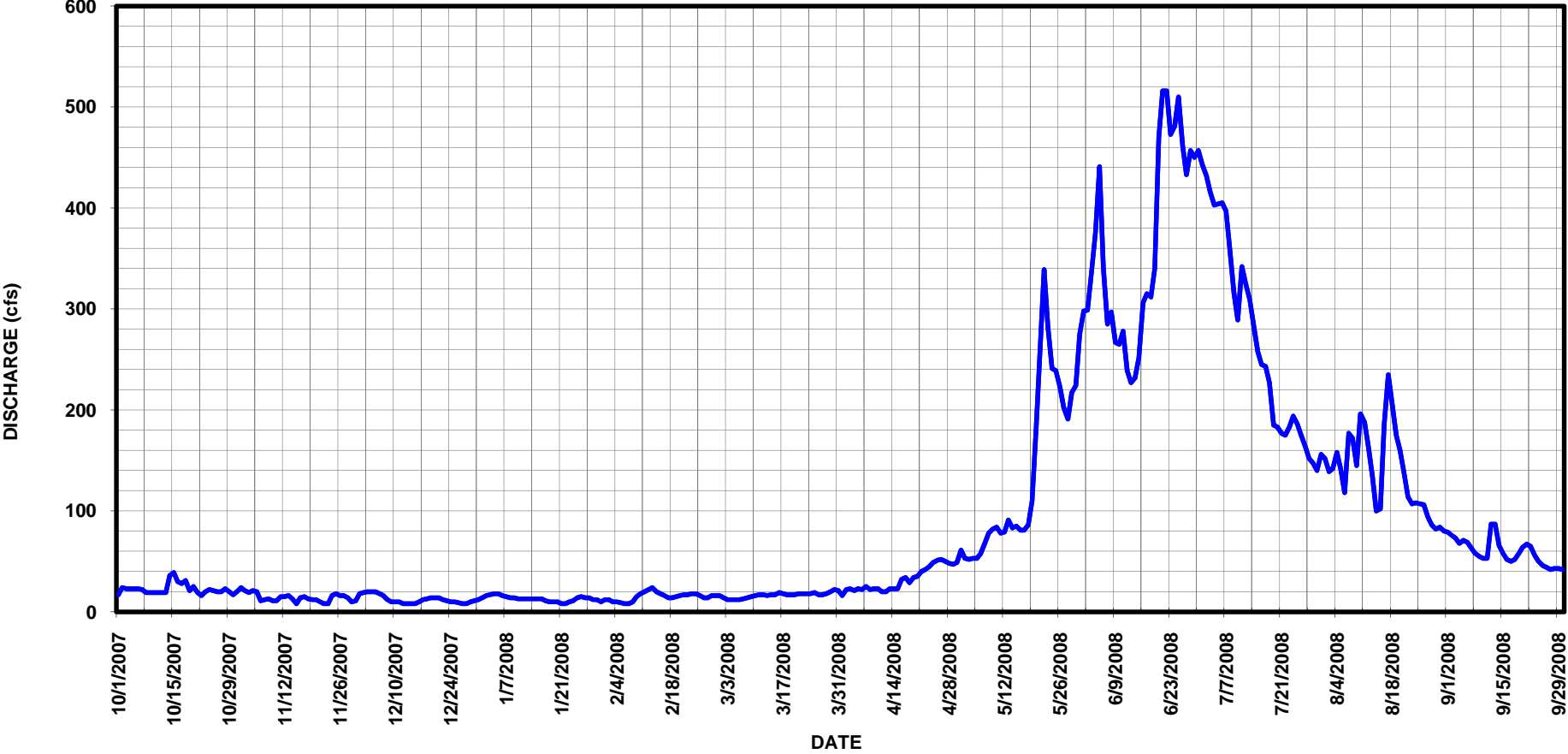
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	24	18	14	12	16	16	61	298	443	152	79
2	24	21	19	16	12	14	22	53	299	432	139	76
3	23	19	20	17	10	12	23	52	338	416	142	73
4	23	21	20	18	10	12	21	53	376	403	158	68
5	23	20	20	18	9.0	12	23	53	441	404	141	71
6	23	11	18	16	8.0	12	22	58	341	405	118	69
7	22	12	16	15	8.0	13	25	68	285	397	177	63
8	19	13	12	14	10	14	22	78	297	359	172	58
9	19	11	10	14	15	15	23	82	267	316	145	55
10	19	11	10	13	18	16	23	84	265	289	196	53
11	19	15	10	13	20	17	20	78	278	342	188	53
12	19	15	8.0	13	22	17	20	79	239	325	164	87
13	19	16	8.0	13	24	16	23	91	227	309	134	87
14	36	13	8.0	13	20	17	23	83	232	284	100	66
15	39	8.1	8.0	13	18	17	23	85	252	258	102	58
16	30	14	10	13	16	19	32	81	306	245	186	52
17	28	15	12	11	14	18	34	81	315	243	235	50
18	31	13	13	10	14	17	29	86	312	227	206	52
19	21	12	14	10	15	17	34	110	340	185	175	58
20	25	12	14	10	16	17	35	182	470	183	160	64
21	19	10	14	8.0	17	18	40	258	516	177	137	67
22	16	8.0	12	8.0	17	18	42	339	516	175	114	65
23	20	8.0	11	10	18	18	45	282	473	183	107	56
24	22	16	10	11	18	18	49	241	481	194	108	50
25	21	18	10	14	16	19	51	239	510	186	107	46
26	20	16	9.0	15	14	17	52	223	462	175	106	44
27	20	16	8.0	14	14	17	50	202	433	164	94	42
28	23	14	8.0	14	16	18	48	191	457	152	86	43
29	20	10	10	12	16	20	47	217	450	147	82	43
30	17	11	11	12	---	22	49	224	457	140	84	42
31	20	---	12	10	---	21	---	275	---	156	80	---
TOTAL	697	423.1	383.0	402.0	437.0	514	966	4289	10933	8314	4295	1790
MEAN	22.5	14.1	12.4	13.0	15.1	16.6	32.2	138	364	268	139	59.7
AC-FT	1380	839	760	797	867	1020	1920	8510	21690	16490	8520	3550
MAX	39	24	20	18	24	22	52	339	516	443	235	87
MIN	16	8.0	8.0	8.0	8.0	12	16	52	227	140	80	42
CAL YR 2007	TOTAL	36206.1	MEAN	99.2	MAX	483	MIN	8	AC-FT	71820		
WTR YR 2008	TOTAL	33443.1	MEAN	91.4	MAX	516	MIN	8	AC-FT	66330		

MAX DISCH: 564 CFS AT 06:30 ON Jun. 25, 2008 GH 2.71 FT. SHIFT -0.01 FT.  
MAX GH: 2.71 FT. AT 06:30 ON Jun. 25, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06724000 ST. VRAIN CREEK AT LYONS CO  
WY2008 HYDROGRAPH





PLATTE RIVER BASIN

06725500 MIDDLE BOULDER CREEK AT NEDERLAND, CO

**LOCATION.**--Lat 39°57'42", long 105°30'16", in NE¼SE¼ sec. 13, T.1 S., R.73 W., Boulder County, Hydrologic Unit 10190005, on left bank at Nederland just downstream from North Beaver Creek at inlet to Barker Reservoir.

**DRAINAGE AREA AND PERIOD OF RECORD.**--36.2 mi<sup>2</sup>; June 1907 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a timber shelter and concrete well at a sharp-crested Cipolletti weir with rectangular overflow crests. The primary reference gage is a metal drop tape from an adjustable reference point with a supplemental outside staff gage. City of Boulder maintains the gage and chart recorder.

**REMARKS.**--Primary record is hourly averages of 15-minute data taken from satellite monitoring with chart back up. Record is complete and reliable, except for December 3, 9-10, 13-14, 23-24, 29-31, 2007, January 1-2, 10-25, 29-31, February 1-2, 6-10, 13-14, 17-19, March 3, 23-25, 2008, when the stage-discharge relation was affected by ice on the weir and inlets freezing. The record is good, except during periods of ice affected record, which are estimated and poor. Flows above 250 cfs (GH = 2.34 ft.) on June 1-5, 18-30, 2008 are considered fair due to lack of definition of the stage-shift relationships at this gage height. Occasionally tree limbs catch on the weir affecting gage heights. Any debris or ice on the control is typically cleared weekly by the City of Boulder operator. Applied datum corrections for debris were only applied for short periods. Station maintained by City of Boulder and record developed by Lee Cunning.

**RATING TABLE.**--BOCMIDCO07 USED FROM 01-Oct-2007 TO 30-Sep-2008

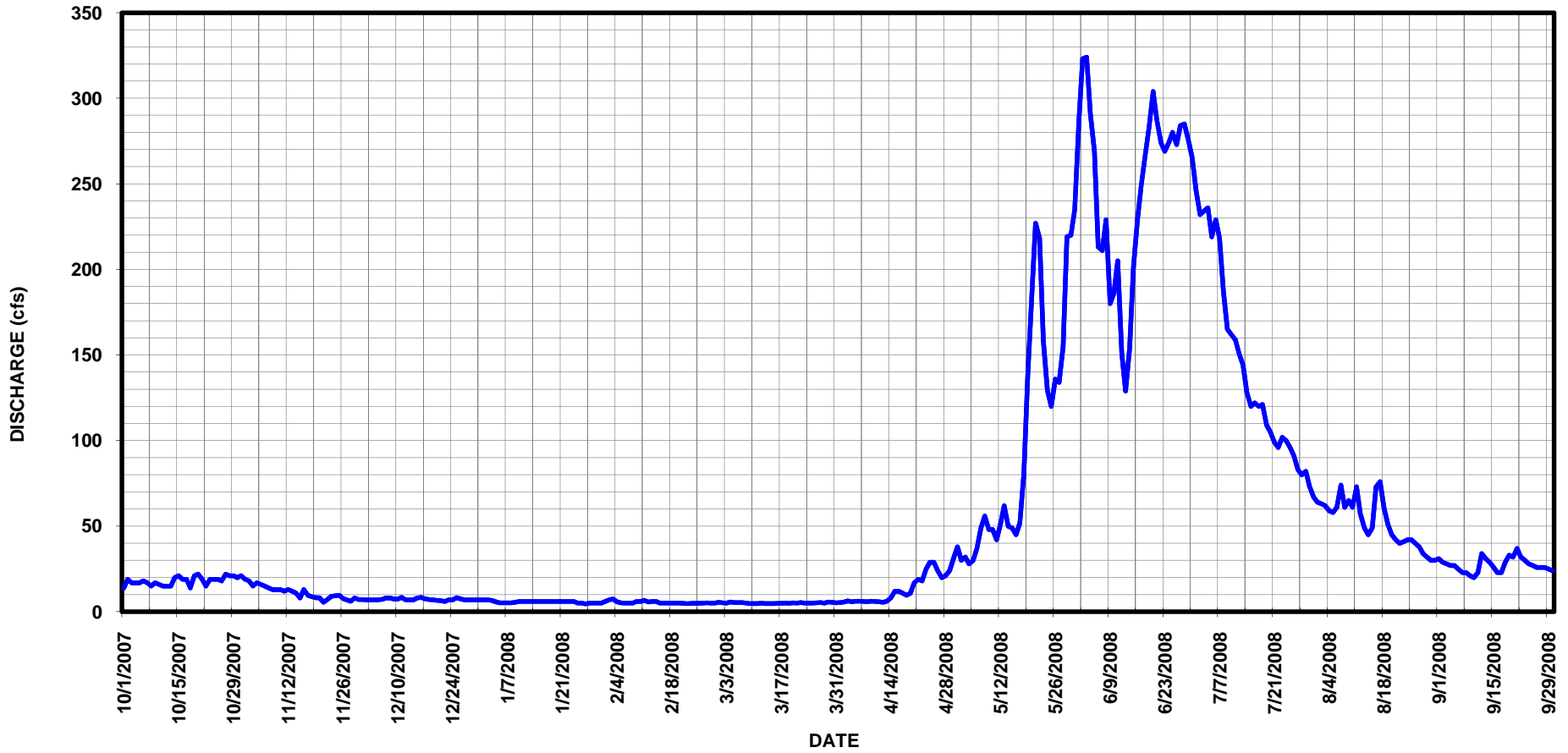
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	19	7.2	7.0	6.0	5.5	5.4	38	286	246	64	31
2	19	18	7.0	7.0	7.0	5.2	5.7	30	323	232	63	29
3	17	15	7.0	6.6	7.4	5.0	6.4	32	324	234	62	28
4	17	17	7.0	5.8	5.9	5.7	5.8	28	291	236	59	27
5	17	16	7.0	5.3	5.3	5.4	6.2	30	269	219	58	27
6	18	15	7.3	5.2	5.0	5.4	6.2	37	213	229	61	25
7	17	14	8.1	5.2	5.0	5.4	6.1	49	211	218	74	23
8	15	13	8.0	5.2	5.0	5.0	5.9	56	229	188	61	23
9	17	13	7.5	5.6	6.0	4.8	6.2	48	180	165	65	21
10	16	13	7.5	6.0	6.0	4.7	6.0	48	186	162	61	20
11	15	12	8.4	6.0	6.7	4.8	5.8	42	205	159	73	23
12	15	13	7.0	6.0	5.7	5.1	5.6	51	151	151	57	34
13	15	12	7.0	6.0	6.0	4.8	6.2	62	129	144	49	31
14	20	11	7.0	6.0	6.0	4.8	8.3	50	154	128	45	29
15	21	8.0	8.1	6.0	5.1	4.8	12	49	201	120	49	26
16	19	13	8.4	6.0	5.0	4.9	12	45	229	122	73	23
17	19	9.7	7.6	6.0	5.0	4.9	11	52	249	120	76	23
18	14	8.8	7.1	6.0	5.0	5.0	9.7	81	267	121	61	29
19	21	8.3	6.9	6.0	5.0	4.9	11	137	283	109	51	33
20	22	8.2	6.6	6.0	5.1	5.3	17	184	304	105	45	32
21	19	5.5	6.5	6.0	4.9	5.1	19	227	287	99	42	37
22	15	7.2	6.0	6.0	4.8	5.4	18	218	274	96	40	32
23	19	9.0	7.0	6.0	4.9	5.0	25	158	269	102	41	30
24	19	9.4	7.0	6.0	4.9	5.0	29	129	274	100	42	28
25	19	9.6	8.2	5.0	4.9	5.0	29	120	280	96	42	27
26	18	7.7	7.6	5.1	5.0	5.2	24	136	273	91	40	26
27	22	7.0	6.9	4.6	5.2	5.4	20	134	284	83	38	26
28	21	6.2	7.0	5.1	5.1	5.0	21	155	285	80	34	26
29	21	8.0	7.0	5.0	5.1	5.7	24	219	276	82	32	25
30	20	7.1	7.0	5.0	---	5.6	31	220	265	73	30	24
31	21	---	7.0	5.0	---	5.3	---	235	---	67	30	---
TOTAL	562	333.7	224.9	177.7	158.0	159.1	398.5	3100	7451	4377	1618	818
MEAN	18.1	11.1	7.25	5.73	5.45	5.13	13.3	100	248	141	52.2	27.3
AC-FT	1110	662	446	352	313	316	790	6150	14780	8680	3210	1620
MAX	22	19	8.4	7.0	7.4	5.7	31	235	324	246	76	37
MIN	14	5.5	6.0	4.6	4.8	4.7	5.4	28	129	67	30	20
CAL YR 2007	TOTAL	18101.4	MEAN	50	MAX	287	MIN	5.0	AC-FT	35900		
WTR YR 2008	TOTAL	19377.9	MEAN	52.9	MAX	324	MIN	4.6	AC-FT	38440		

MAX DISCH: 385 CFS AT 22:45 ON Jun. 2, 2008 GH 2.85 FT. SHIFT 0.02 FT.  
MAX GH: 2.85 FT. AT 22:45 ON Jun. 2, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06725500 MIDDLE BOULDER CREEK AT NEDERLAND CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06727000 BOULDER CREEK NEAR ORODELL, CO

**LOCATION.**--Lat 40°00'23", long 105°19'50", in NE¼SW¼ sec. 34, T.1 N., R.71 W., Boulder County, Hydrologic Unit 10190005, on left bank along State Highway 119, 0.7 mi southwest of old Orodell, 1.1 mi upstream from Fourmile Creek, and 2.9 mi southwest of the Boulder County Courthouse.

**DRAINAGE AREA AND PERIOD OF RECORD.**--102 mi<sup>2</sup>; Oct. 1906 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a 6-ft by 6-ft exposed aggregate concrete shelter with a 54-inch corrugated metal well. The primary reference is an electric tape gage. There is an outside staff gage across the stream placed approximately 1 foot lower than gage datum. The station includes a pressure transducer installed by Urban Drainage and Flood Control District.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite data with graphic chart as backup. Record is complete and reliable, except for November 22-30, December 1-3, 12-17, 2007, when the stage-discharge relationship was affected by ice; and, Dec 18-30, 2007, when the station was shut down due to ice. Record is good, except for periods of no gage height and ice affected record, which are poor. Station maintained by Division I Hydrographic Staff and record developed Lee Cunning.

**RATING TABLE.**--BOCOROCO14 USED FROM 01-Oct-2007 30-Sep-2008

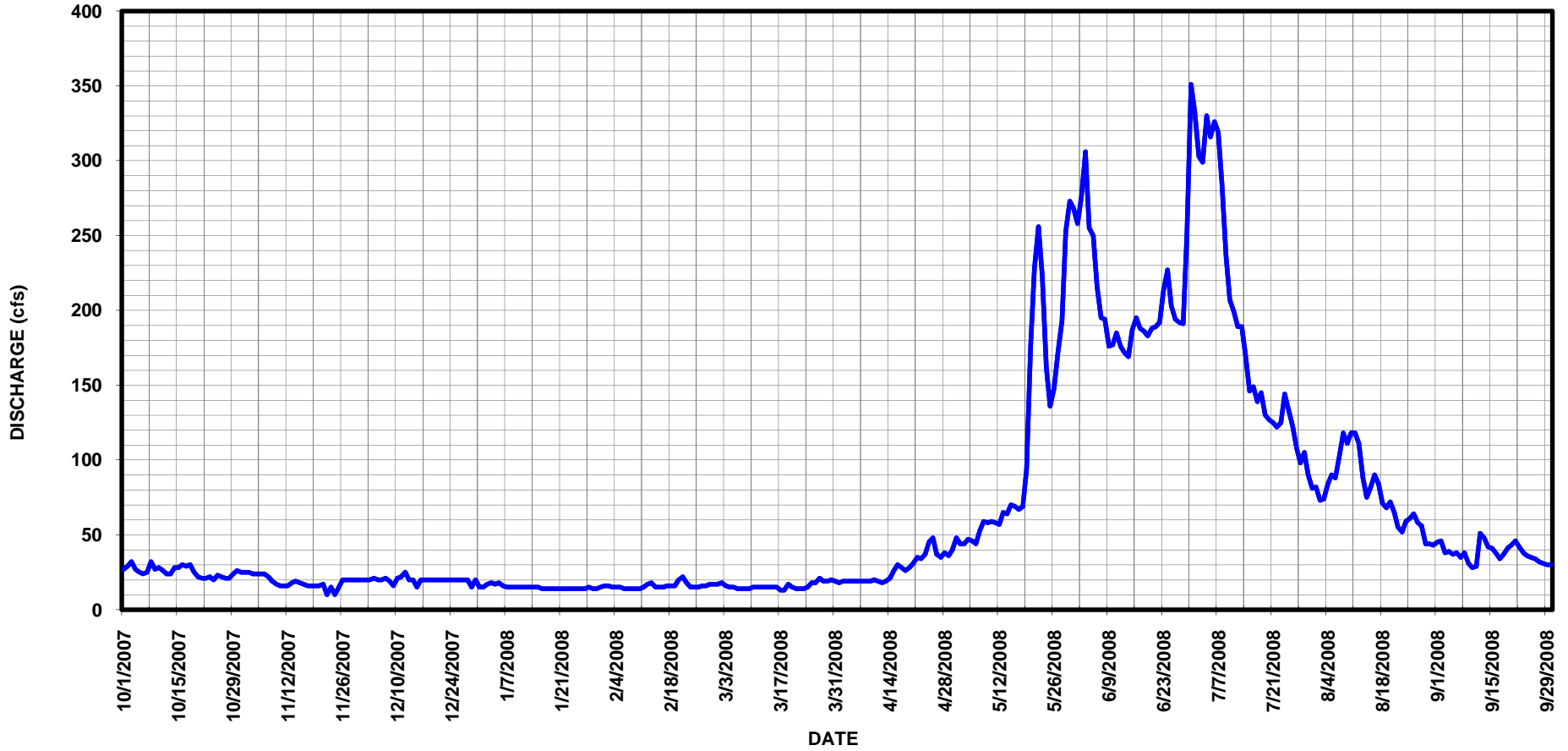
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	25	20	15	16	17	18	48	258	332	82	45
2	29	25	20	17	16	18	19	44	276	303	73	46
3	32	24	20	18	15	16	19	44	306	299	74	38
4	27	24	21	17	15	15	19	47	255	330	84	39
5	25	24	20	18	15	15	19	46	250	316	90	37
6	24	24	20	16	14	14	19	44	216	326	88	38
7	25	22	21	15	14	14	19	53	195	319	103	35
8	32	19	19	15	14	14	19	59	194	284	118	38
9	27	17	16	15	14	14	19	58	176	236	111	31
10	28	16	21	15	14	15	20	59	177	207	118	28
11	26	16	22	15	15	15	19	58	185	199	118	29
12	24	16	25	15	17	15	18	57	176	189	111	51
13	24	18	20	15	18	15	19	65	172	189	88	48
14	28	19	20	15	15	15	21	64	169	170	75	42
15	28	18	15	15	15	15	26	70	187	146	82	41
16	30	17	20	14	15	15	30	69	195	149	90	38
17	29	16	20	14	16	13	28	67	188	139	84	34
18	30	16	20	14	16	13	26	69	186	145	71	37
19	25	16	20	14	16	17	28	94	183	130	68	41
20	22	16	20	14	20	15	31	176	188	127	72	43
21	21	17	20	14	22	14	35	228	189	125	65	46
22	21	10	20	14	18	14	34	256	192	122	55	42
23	22	15	20	14	15	14	37	223	213	125	52	38
24	20	10	20	14	15	15	45	162	227	144	59	36
25	23	15	20	14	15	18	48	136	203	133	61	35
26	22	20	20	14	16	18	37	148	194	123	64	34
27	21	20	20	14	16	21	35	172	192	108	58	32
28	21	20	20	15	17	19	38	193	191	98	56	31
29	24	20	15	14	17	19	36	253	252	105	44	30
30	26	20	20	14	---	20	40	273	351	90	44	30
31	25	---	15	15	---	19	---	268	---	81	43	---
TOTAL	788	555	610	462	461	491	821	3603	6336	5789	2401	1133
MEAN	25.4	18.5	19.7	14.9	15.9	15.8	27.4	116	211	187	77.5	37.8
AC-FT	1560	1100	1210	916	914	974	1630	7150	12570	11480	4760	2250
MAX	32	25	25	18	22	21	48	273	351	332	118	51
MIN	20	10	15	14	14	13	18	44	169	81	43	28
CAL YR 2007	TOTAL	24897	MEAN	68.2	MAX	364	MIN	15	AC-FT	49380		
WTR YR 2008	TOTAL	23450	MEAN	64.1	MAX	351	MIN	10	AC-FT	46510		

MAX DISCH: 393 CFS AT 03:45 ON Jun. 30, 2008 GH 3.11 FT. SHIFT -0.01 FT.  
MAX GH: 3.11 FT. AT 03:45 ON Jun. 30, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06727000 BOULDER CREEK NEAR ORODELL CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

BOULDER CREEK AT BOULDER, CO

**LOCATION.**--Lat 40° 00' 53", long 105° 16' 49", in SW SW Sec. 30, T.1N., R.70W., Boulder County, on right bank in Central Park, 1 block West of the Broadway St. Bridge over Boulder Creek. Gage is located where the center line from 11<sup>th</sup> St crosses Boulder Creek.

**DRAINAGE AREA AND PERIOD OF RECORD.**--N/A; May 2004 to present.

**GAGE.**--Data Collection Platform (DCP) and a Acububbler stage sensor in a 12-inch x 30-inch x 36-inch NEMA4 enclosure. The control is a grouted rock dam. The primary reference is a staff gage placed on the right side of the channel slightly downstream from the shelter. A single orifice line in 2-inch pipe extends from the shelter past the stream staff and into the stream at about a 45° angle to the flow. Orifice terminates in a gravel pack plastic muffler that is buried in the stream bed.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite data. There is no backup record. Record is complete and reliable, except for December 14, 26, 28, 2007, January 13-14, 17, 19, 22, 24, 29-31, February 2, 3, 6-7, 2008, when the stage-discharge relationship was affected by ice. Record is good, except for the periods of ice affected record, which are poor. Station maintained by Division I Hydrographic Staff and record developed by Lee Cunning.

**RATING TABLE.**--BOCOBOCO3 USED FROM 01-Oct-2007 TO 30-Sep-2008

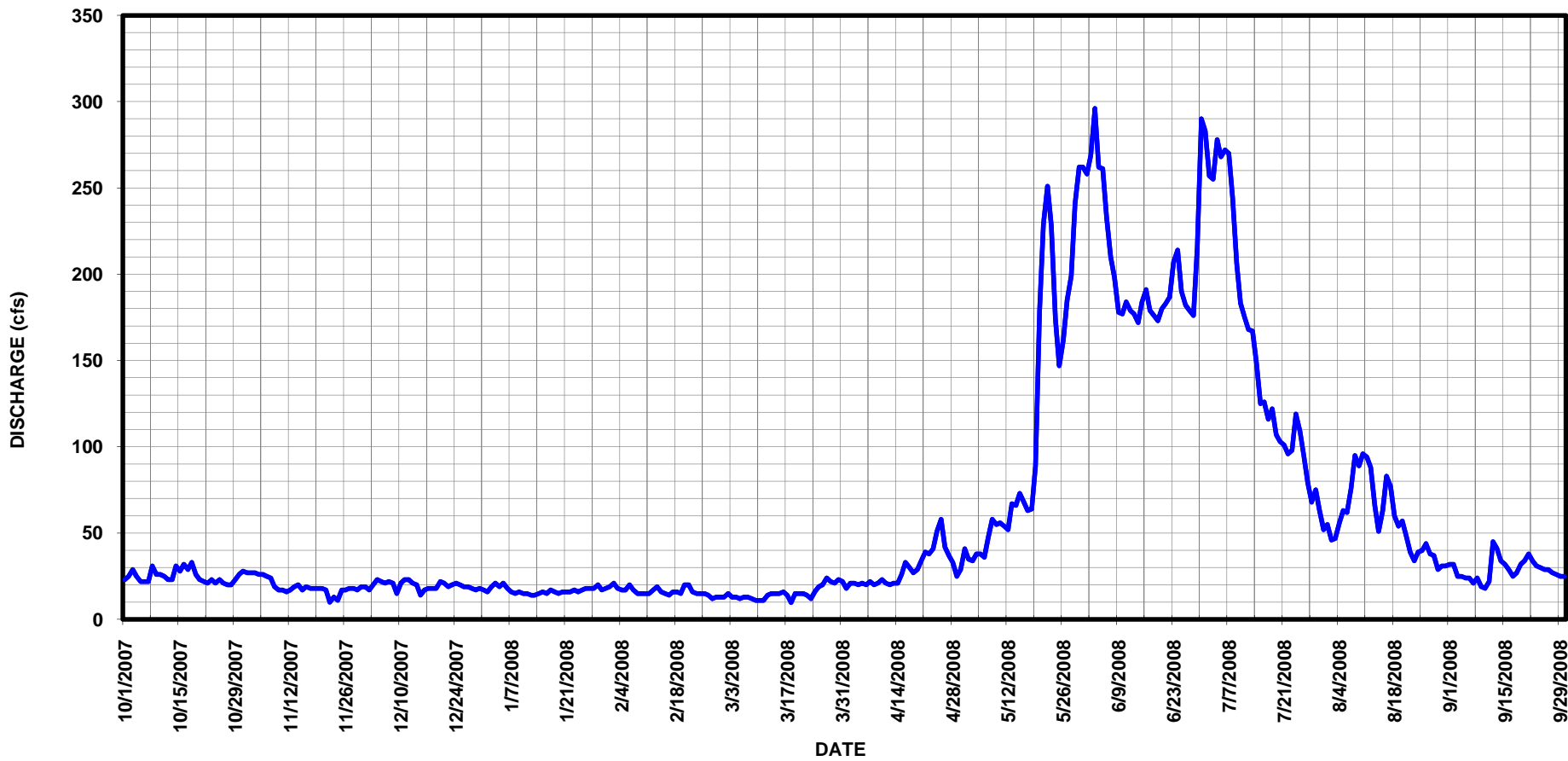
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	27	19	16	19	13	18	41	258	283	55	32
2	25	27	17	19	21	15	21	35	269	257	46	32
3	29	27	20	21	18	13	21	34	296	255	47	25
4	25	26	23	19	17	13	20	38	262	278	56	25
5	22	26	22	21	17	12	21	38	261	268	63	24
6	22	25	21	18	20	13	20	36	233	272	62	24
7	22	24	22	16	17	13	22	48	210	270	76	21
8	31	19	21	15	15	12	20	58	198	244	95	24
9	26	17	15	16	15	11	21	55	178	206	89	19
10	26	17	21	15	15	11	23	56	177	183	96	18
11	25	16	23	15	15	11	21	54	184	175	94	22
12	23	17	23	14	17	14	20	52	179	168	88	45
13	23	19	21	14	19	15	21	67	177	167	66	41
14	31	20	20	15	16	15	21	66	172	149	51	34
15	28	17	14	16	15	15	26	73	184	125	63	32
16	32	19	17	15	14	16	33	68	191	126	83	29
17	29	18	18	17	16	14	30	63	179	116	77	25
18	33	18	18	16	16	9.8	27	64	176	122	60	27
19	26	18	18	15	15	15	29	89	173	107	54	32
20	23	18	22	16	20	15	34	179	180	103	57	34
21	22	17	21	16	20	15	39	229	183	101	48	38
22	21	10	19	16	16	14	38	251	187	96	39	34
23	23	13	20	17	15	12	41	228	207	98	34	31
24	21	11	21	16	15	16	51	174	214	119	39	30
25	23	17	20	17	15	19	58	147	190	109	40	29
26	21	17	19	18	14	20	42	162	182	95	44	29
27	20	18	19	18	12	24	37	185	179	79	38	27
28	20	18	18	18	13	22	33	199	176	68	37	26
29	23	17	17	20	13	21	25	241	216	75	29	25
30	26	19	18	17	---	23	29	262	290	63	31	25
31	28	---	17	18	---	22	---	262	---	52	31	---
TOTAL	772	572	604	520	470	473.8	862	3554	6161	4829	1788	859
MEAN	24.9	19.1	19.5	16.8	16.2	15.3	28.7	115	205	156	57.7	28.6
AC-FT	1530	1130	1200	1030	932	940	1710	7050	12220	9580	3550	1700
MAX	33	27	23	21	21	24	58	262	296	283	96	45
MIN	20	10	14	14	12	9.8	18	34	172	52	29	18
CAL YR 2007	TOTAL	24890.0	MEAN	68.2	MAX	373	MIN	10.0	AC-FT	49370		
WTR YR 2008	TOTAL	21464.8	MEAN	58.6	MAX	296	MIN	9.8	AC-FT	42580		

MAX DISCH: 323 CFS AT 06:15 ON Jun. 4, 2008 GH 3.04 FT. SHIFT -0.09 FT.  
MAX GH: 3.04 FT. AT 06:15 ON Jun. 4, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

### BOULDER CREEK AT BOULDER CO WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06729450 SOUTH BOULDER CREEK BELOW GROSS RESERVOIR NEAR COAL CREEK, CO

**LOCATION.**--Lat 39°56'18", long 105°20'53", NW1/4 sec. 28, T.1 S., R.71 W., Boulder County. Measures releases from Gross Reservoir; which is filled by South Boulder Creek and transmountain diversions from Moffat Tunnel.

**DRAINAGE AREA AND PERIOD OF RECORD.**--92.8 sq. mi. East Slope drainage (Moffat Tunnel West Slope drainage not included); Oct. 1967 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a concrete shelter and concrete well at a 25-ft Parshall flume. The primary reference is an electric tape gage with a supplemental outside staff gage on the right wingwall. Gage is owned and maintained by Denver Water Dept. personnel.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite data with chart back up. The record is complete and reliable, except a short periods of ice-affected record on January 17, 29, 31 and February 6, 2008. Gage heights during this ice period were easily interpreted due to the constant releases from the reservoir. Flow values during this ice period were assumed to be the same as before and after the ice period. The record is rated good, except for periods when the flow was below 15 cfs and ice-affect days which are considered fair. The following days are rated fair: October 1-11 and 26-29, November 5-30, December 1-15 and 29-31, 2007, January 1-31, February 1-7 and 23-29, March 1-16 and 20-24, 2008, due to low flows; and, January 17, 29, 31, February 6, 2008, due to ice. Station maintained by Denver Water, operated by Steve Barrett and Patrick Tyler and record developed by Patrick Tyler.

**RATING TABLE.**--STD25FTPF USED FROM 01-Oct-2007 TO 01-Oct-2008

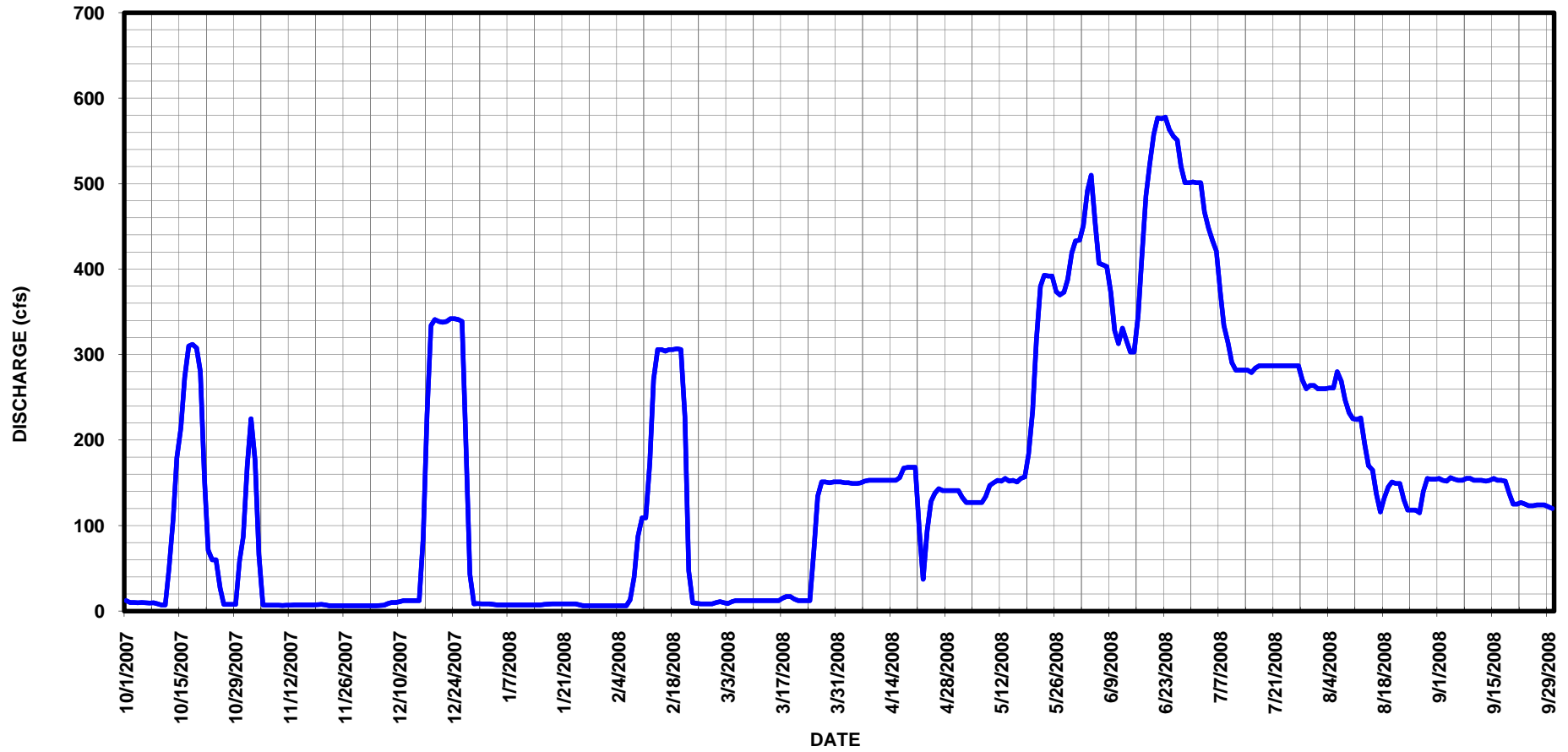
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	170	6.1	8.4	6.1	11	151	141	434	501	260	155
2	9.8	225	6.1	8.4	6.1	9.7	150	133	451	501	260	153
3	9.8	176	6.1	7.7	6.1	8.6	150	127	492	467	260	152
4	9.7	66	6.1	7.2	6.1	11	149	127	510	448	261	156
5	10	7.2	6.4	7.2	6.1	12	149	127	454	434	261	154
6	9.7	6.6	6.7	7.2	6.1	12	150	127	407	421	280	153
7	9.4	6.6	8.6	7.2	13	12	152	127	405	375	269	153
8	9.5	6.6	9.8	7.2	40	12	153	134	403	334	247	155
9	8.3	6.6	10	7.2	87	12	153	147	372	314	232	155
10	7.2	6.5	11	7.2	109	12	153	150	328	291	225	153
11	7.2	6.6	12	7.2	109	12	153	153	313	282	224	153
12	50	6.6	12	7.2	173	12	153	152	331	282	226	153
13	107	7.0	12	7.2	271	12	153	155	317	282	195	152
14	179	7.2	12	7.2	306	12	153	152	303	282	170	153
15	215	7.2	12	7.2	306	12	153	153	303	279	165	155
16	273	7.2	87	7.7	304	12	156	151	346	284	137	153
17	310	7.2	230	8.0	306	15	167	155	416	287	116	153
18	312	7.2	334	8.4	306	17	168	157	486	287	132	152
19	308	7.3	341	8.4	307	17	168	184	523	287	145	137
20	280	7.8	339	8.4	306	14	168	234	558	287	151	125
21	156	7.1	338	8.4	227	12	94	317	577	287	149	125
22	71	6.1	339	8.4	47	12	37	380	576	287	149	127
23	60	6.1	342	8.4	9.7	12	94	393	578	287	130	125
24	60	6.1	342	8.4	8.8	12	128	392	563	287	118	123
25	27	6.1	341	7.1	8.4	71	138	392	556	287	118	123
26	7.8	6.1	339	6.1	8.4	134	143	374	551	287	118	124
27	7.8	6.1	189	6.1	8.4	151	141	370	520	287	115	124
28	7.8	6.1	43	6.2	8.4	151	141	373	501	271	140	124
29	7.8	6.1	8.4	6.1	10	150	141	388	501	260	155	122
30	58	6.1	8.5	6.1	---	151	141	419	502	264	154	120
31	87	---	8.4	6.1	---	151	---	433	---	264	154	---
TOTAL	2686.8	810.4	3766.2	229.2	3315.7	1254.3	4300	7217	13577	9993	5716	4262
MEAN	86.7	27.0	121	7.39	114	40.5	143	233	453	322	184	142
AC-FT	5330	1610	7470	455	6580	2490	8530	14310	26930	19820	11340	8450
MAX	312	225	342	8.4	307	151	168	433	578	501	280	156
MIN	7.2	6.1	6.1	6.1	6.1	8.6	37	127	303	260	115	120
CAL YR 2007	TOTAL	41721.8	MEAN	114	MAX	397	MIN	6.1	AC-FT	82760		
WTR YR 2008	TOTAL	57127.6	MEAN	156	MAX	578	MIN	6.1	AC-FT	113300		

MAX DISCH: 609 CFS AT 21:30 ON Jun. 25, 2008 GH 3.2 FT. SHIFT 0 FT.  
MAX GH: 3.2 FT. AT 21:30 ON Jun. 25, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06729450 SOUTH BOULDER CREEK BELOW GROSS RESERVOIR NEAR COAL CREEK CO  
WY2008 HYDROGRAPH





PLATTE RIVER BASIN

SOUTH BOULDER CREEK DIVERSION NEAR ELDORADO SPRINGS, CO

**LOCATION.**--Lat 39°55'58", long 105°18'29", SW¼ sec. 26, T.1 S., R.71 W., Boulder County. Diverts Denver Water Board rights released from Gross Reservoir to South Boulder Creek.

**DRAINAGE AREA AND PERIOD OF RECORD.**--N/A; Oct. 1958 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a weekly chart recorder at a 12-ft Parshall flume in a timber shelter and concrete well. The primary reference gage is an electric tape gage with a supplemental outside staff. Gage is owned and maintained by Denver Water Dept.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart back up. Satellite data agreed with the recorder data within ±0.02 feet. The record is reliable and complete. Trickle flow (GH less than 0.10 ft.) record was zeroed out per agreement with Denver Water. The record is good. Station maintained by Denver Water, operated by Stever Barrett and record developed by Jana Ash.

**RATING TABLE.**--STD12FTPF USED FROM 01-Oct-2007 TO 01-Oct-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	150	0	0	0	0	135	100	175	269	197	119
2	0	211	0	0	0	0	131	86	161	274	198	119
3	0	167	0	0	0	0	127	75	150	243	198	119
4	0	61	0	0	0	0	126	74	150	224	201	119
5	0	0	0	0	0	0	126	74	109	216	204	119
6	0	0	0	0	0	0	126	74	67	209	216	119
7	0	0	0	0	0	0	126	74	61	175	202	119
8	0	0	0	0	0	0	126	74	60	150	184	122
9	0	0	0	0	25	0	128	74	60	149	171	124
10	0	0	0	0	100	0	129	75	60	148	171	124
11	1.0	0	0	0	100	0	129	75	61	149	171	124
12	36	0	0	0	157	0	129	75	85	150	171	124
13	90	0	0	0	254	0	129	76	103	151	141	124
14	164	0	0	0	289	0	128	76	103	162	120	124
15	202	0	0	0	295	0	128	76	103	173	120	124
16	252	0	44	0	295	0	129	76	131	184	96	126
17	295	0	207	0	295	0	129	76	179	193	74	128
18	295	0	317	0	296	0	129	76	229	195	75	127
19	294	0	326	0	294	0	129	90	250	194	76	114
20	268	0	326	0	292	0	129	100	265	194	77	99
21	152	0	326	0	222	0	66	129	276	194	77	99
22	61	0	326	0	47	0	0	165	274	195	77	99
23	51	0	327	0	0	0	50	175	274	198	77	99
24	52	0	327	0	0	0	91	184	284	200	77	102
25	23	0	327	0	0	51	91	190	289	200	77	103
26	0	0	327	0	0	119	90	181	291	203	77	103
27	0	0	185	0	0	139	90	175	273	206	77	103
28	0	0	49	0	0	137	92	175	261	197	101	103
29	0	0	0	0	0	135	95	175	261	191	119	103
30	40	0	0	0	---	135	98	175	261	191	119	103
31	76	---	0	0	---	135	---	175	---	193	119	---
TOTAL	2352.0	589	3414	0	2961	851	3331	3475	5306	5970	4060	3434
MEAN	75.9	19.6	110	0	102	27.5	111	112	177	193	131	114
AC-FT	4670	1170	6770	0	5870	1690	6610	6890	10520	11840	8050	6810
MAX	295	211	327	0	296	139	135	190	291	274	216	128
MIN	0	0	0	0	0	0	0	74	60	148	74	99

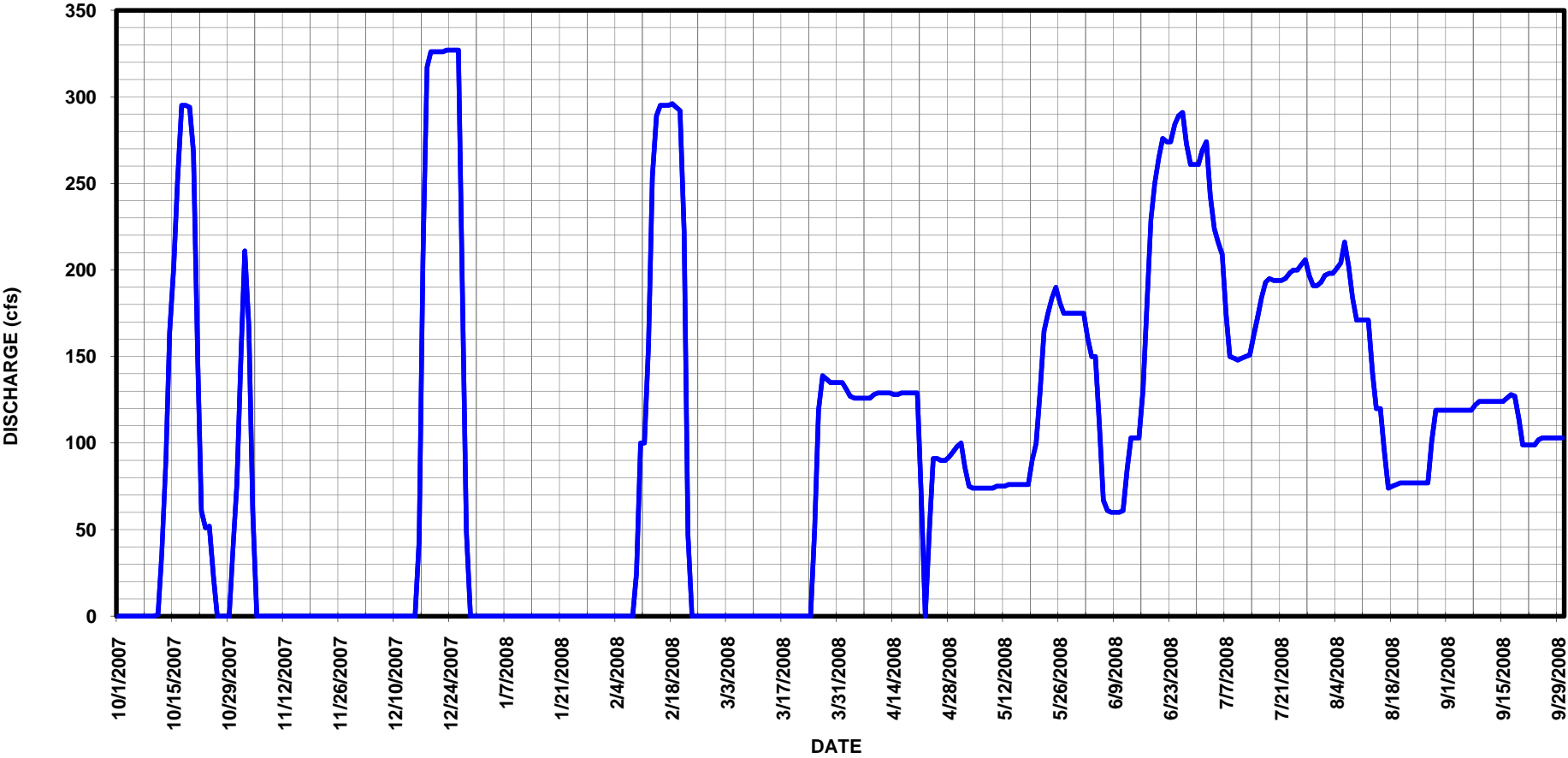
CAL YR 2007	TOTAL	22749	MEAN	62.3	MAX	327	MIN	0	AC-FT	45120
WTR YR 2008	TOTAL	35743	MEAN	97.7	MAX	327	MIN	0	AC-FT	70900

MAX DISCH: 331 CFS AT 02:45 ON Dec. 19, 2007 GH 3.4 FT. SHIFT 0 FT.

MAX GH: 3.4 FT. AT 02:45 ON Dec. 19, 2007

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

SOUTH BOULDER CREEK DIVERSION NEAR ELDORADO SPRINGS CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06729500 SOUTH BOULDER CREEK NEAR ELDORADO SPRINGS, CO

**LOCATION.**--Lat 39°55'51", long 105°17'44", in SW1/4 sec. 25, T.1 S., R.71 W., Boulder County, Hydrologic Unit 10190005, on left bank 0.2 mi downstream from South Draw, 1.0 mi west of Eldorado Springs, 1.8 mi downstream from South Boulder diversion canal, 5.0 mi south of Boulder, and 6.7 mi downstream from Gross Reservoir.

**DRAINAGE AREA AND PERIOD OF RECORD.**--109 mi<sup>2</sup>; Apr. 1888-Oct. 1892, May 1895-Sept. 1901, Aug. 1904 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in metal box shelter and corrugated metal pipe well. The primary reference gage is a metal drop tape from an adjustable reference point with a supplemental outside chain gage. Urban Drainage and Flood Control District operates a pressure transducer and LOS radio transmitter at the gage.

**REMARKS.**--The primary record is hourly averages of 15-minute data taken from satellite monitoring with chart back up. The record is reliable and complete, except for February 29, March 1-8, 15 and 23, 2008, when ice affected the stage discharge relationship; November 19, 2007 - February 26, 2008, when the station was closed for winter; May 21-28, 2008, due to debris on the control; and, September 22, 2008, when gage heights were unreliable due to equipment in the stream. The record is good, except for periods of no gage height and ice affected record, which are poor; and periods of debris on the control and machinery in the channel, which are fair. Station maintained by Steve Barrett and Patrick Tyler and record developed by Patrick Tyler.

**RATING TABLE.**--BOCELSCO23 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

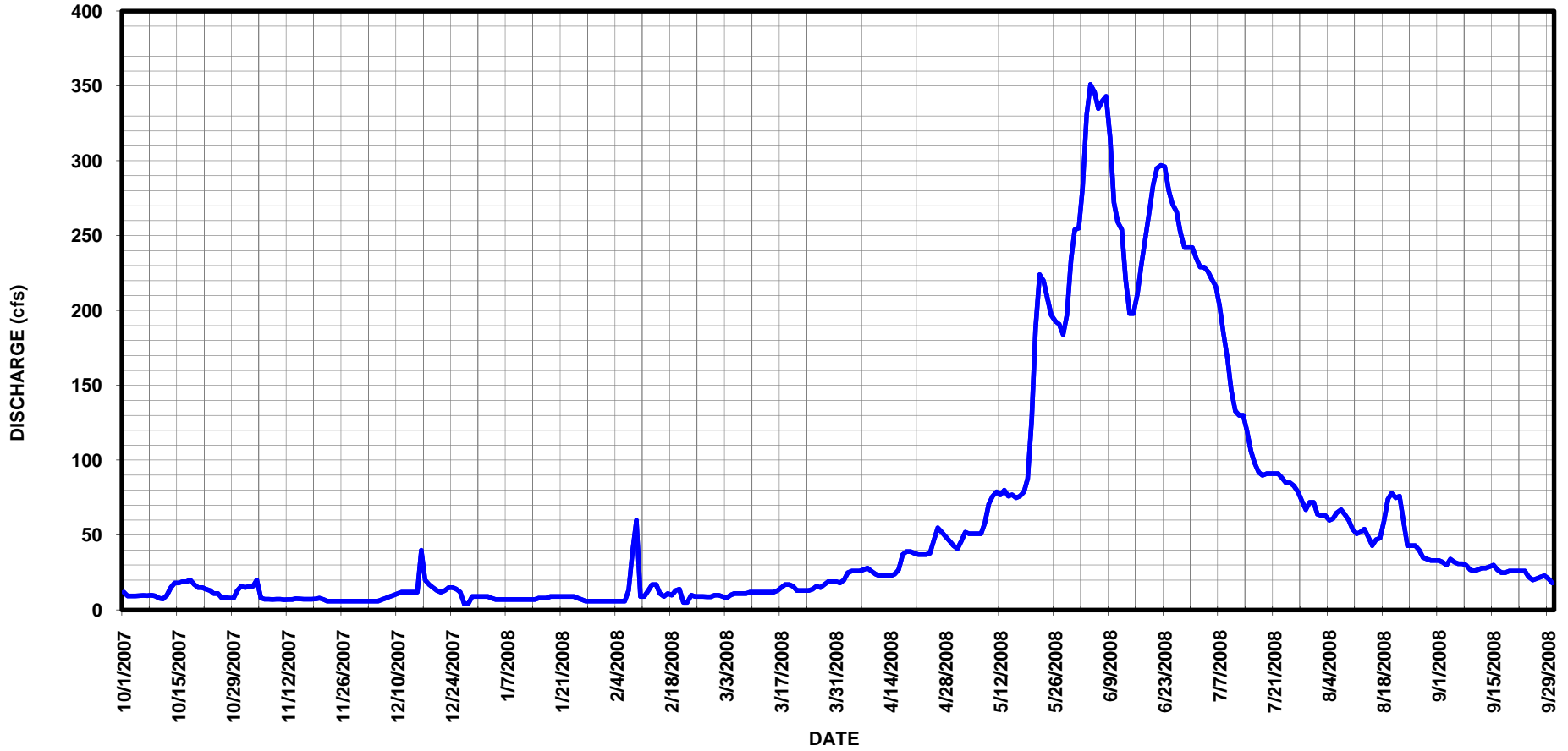
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	15	6.0	9.0	6.0	10	18	41	255	235	64	33
2	9.5	16	6.0	9.0	6.0	9.0	20	46	282	229	63	32
3	9.5	16	6.0	8.0	6.0	8.0	25	52	331	229	63	30
4	9.5	20	6.0	7.0	6.0	10	26	51	351	226	60	34
5	9.6	8.2	6.0	7.0	6.0	11	26	51	346	221	61	32
6	9.7	7.3	7.0	7.0	6.0	11	26	51	335	216	65	31
7	9.6	7.2	8.0	7.0	13	11	27	51	340	203	67	31
8	10	7.0	9.0	7.0	40	11	28	58	343	185	64	30
9	9.5	7.2	10	7.0	60	12	26	71	315	168	60	27
10	8.0	7.2	11	7.0	9.0	12	24	76	272	147	54	26
11	7.4	6.8	12	7.0	9.0	12	23	79	259	133	51	27
12	9.8	7.0	12	7.0	13	12	23	77	254	130	52	28
13	15	7.0	12	7.0	17	12	23	80	221	130	54	28
14	18	7.7	12	7.0	17	12	23	76	198	120	49	29
15	18	7.4	12	8.0	11	12	24	77	198	106	43	30
16	19	7.3	40	8.0	9.0	13	27	75	211	98	47	27
17	19	7.3	20	8.0	11	15	37	76	230	92	48	25
18	20	7.3	17	9.0	10	17	39	79	248	90	59	25
19	17	7.5	15	9.0	13	17	39	88	265	91	74	26
20	15	8.0	13	9.0	14	16	38	128	284	91	78	26
21	15	7.0	12	9.0	5.0	13	37	188	295	91	75	26
22	14	6.0	13	9.0	5.0	13	37	224	297	91	76	26
23	13	6.0	15	9.0	10	13	37	220	296	88	59	26
24	11	6.0	15	9.0	9.0	13	38	208	280	85	43	22
25	11	6.0	14	8.0	9.0	14	47	197	271	85	43	20
26	8.2	6.0	12	7.0	9.0	16	55	193	266	83	43	21
27	8.3	6.0	4.0	6.0	8.8	15	52	191	252	79	40	22
28	8.0	6.0	4.0	6.0	8.9	17	49	184	242	73	35	23
29	8.0	6.0	9.0	6.0	10	19	46	197	242	67	34	21
30	13	6.0	9.0	6.0	---	19	43	234	242	72	33	18
31	16	---	9.0	6.0	---	19	---	254	---	72	33	---
TOTAL	380.6	245.4	356.0	235.0	356.7	414.0	983	3673	8221	4026	1690	802
MEAN	12.3	8.18	11.5	7.58	12.3	13.4	32.8	118	274	130	54.5	26.7
AC-FT	755	487	706	466	708	821	1950	7290	16310	7990	3350	1590
MAX	20	20	40	9.0	60	19	55	254	351	235	78	34
MIN	7.4	6.0	4.0	6.0	5.0	8.0	18	41	198	67	33	18

CAL YR	2007	TOTAL	19770.8	MEAN	54.2	MAX	247	MIN	4	AC-FT	39220
WTR YR	2008	TOTAL	21382.7	MEAN	58.4	MAX	351	MIN	4	AC-FT	42410

MAX DISCH: 370 CFS AT 14:15 ON Jun. 3, 2008 GH 2.98 FT. SHIFT 0.02 FT.  
MAX GH: 2.98 FT. AT 14:15 ON Jun. 3, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06729500 SOUTH BOULDER CREEK NEAR ELDORADO SPRINGS CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06730300 COAL CREEK NEAR PLAINVIEW, CO

**LOCATION.**--Lat 39°52'40", long 105°16'39" (Eldorado Springs Quad. 1965, 1:24,000 scale) in SE1/4, NE1/4, Sec. 13, T. 2S, R. 71W, Jefferson County, on left bank 100 ft upstream from culvert on State Hwy 72, 1.2 miles south of Plainview, 5 miles downstream from Beaver Creek and 9 miles north of Golden, CO.

**DRAINAGE AREA AND PERIOD OF RECORD.**--15.1 mi<sup>2</sup>; Aug. 1959 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a 42-inch corrugated metal pipe shelter at a formed concrete control. The primary reference gage is a metal drop tape with adjustable Reference Point (RP) mounted on the instrument shelf with a supplemental outside staff gage located 2.5 feet downstream of the shelter.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart back up. Record is complete and reliable, except for November 20-24, December 6-15, 21-31, 2007, January 1-5, 7-25, and 28-31, February 1-8, 14-18 and 25-26, and March 2-7, 2008, when the gage was affected by ice; and, April 28-30, May 1-2, and 5, 2008, when construction activities required diversion of flow around the gage structure. The record is good, except for periods of ice affected and construction affected gage height record, which are poor. January 6, 26-27, 2008, are considered fair due to possible ice-affect. Station maintained by Steve Barrett and Patrick Tyler and record developed by Patrick Tyler and Russell Stroud.

**RATING TABLE.**--COCREPC09 USED FROM 01-Oct-2007 TO 30-Sep-2008

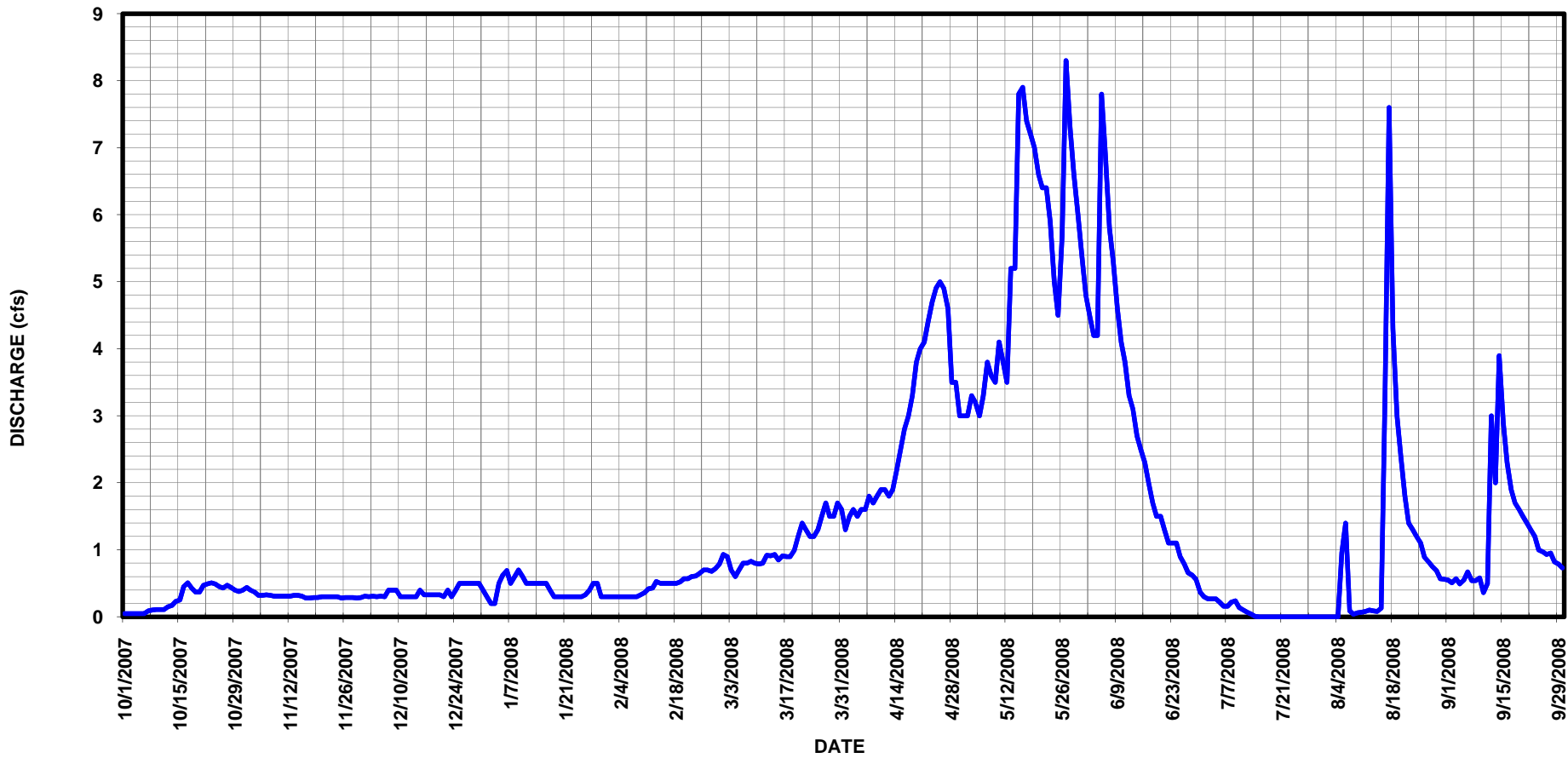
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.44	.31	.30	.30	.93	1.3	3.0	4.8	.30	0	.55
2	.05	.40	.30	.20	.30	.90	1.5	3.0	4.5	.27	0	.51
3	.05	.37	.31	.20	.30	.70	1.6	3.3	4.2	.27	0	.57
4	.05	.32	.30	.50	.30	.60	1.5	3.2	4.2	.27	0	.49
5	.05	.32	.31	.62	.30	.70	1.6	3.0	7.8	.22	.96	.55
6	.05	.33	.30	.69	.30	.80	1.6	3.3	6.9	.16	1.4	.67
7	.09	.32	.40	.50	.30	.80	1.8	3.8	5.8	.16	.09	.54
8	.10	.31	.40	.60	.30	.83	1.7	3.6	5.3	.22	.04	.54
9	.11	.31	.40	.70	.33	.80	1.8	3.5	4.6	.24	.06	.58
10	.11	.31	.30	.60	.36	.79	1.9	4.1	4.1	.14	.07	.36
11	.11	.31	.30	.50	.42	.80	1.9	3.8	3.8	.10	.08	.50
12	.15	.31	.30	.50	.43	.92	1.8	3.5	3.3	.07	.10	3.0
13	.17	.32	.30	.50	.53	.91	1.9	5.1	3.1	.04	.09	2.0
14	.23	.32	.30	.50	.50	.93	2.2	5.2	2.7	.01	.08	3.9
15	.25	.31	.40	.50	.50	.85	2.5	7.8	2.5	0	.13	2.9
16	.45	.28	.33	.50	.50	.91	2.8	7.9	2.3	0	3.3	2.3
17	.51	.28	.33	.40	.50	.90	3.0	7.4	2.0	0	7.6	1.9
18	.43	.29	.33	.30	.50	.90	3.3	7.2	1.7	0	4.3	1.7
19	.37	.29	.33	.30	.52	.99	3.8	7.0	1.5	0	3.0	1.6
20	.37	.29	.33	.30	.57	1.2	4.0	6.6	1.5	0	2.4	1.5
21	.47	.32	.30	.30	.57	1.4	4.1	6.4	1.3	0	1.8	1.4
22	.49	.31	.40	.30	.60	1.3	4.4	6.4	1.1	0	1.4	1.3
23	.51	.31	.30	.30	.61	1.2	4.7	5.9	1.1	0	1.3	1.2
24	.49	.29	.40	.30	.65	1.2	4.9	5.0	1.1	0	1.2	1.0
25	.45	.28	.50	.30	.70	1.3	5.0	4.5	.90	0	1.1	.97
26	.43	.29	.50	.33	.70	1.5	4.9	5.7	.79	0	.89	.93
27	.47	.29	.50	.40	.68	1.7	4.6	8.3	.66	0	.82	.95
28	.44	.29	.50	.50	.72	1.5	3.5	7.3	.62	0	.75	.82
29	.40	.28	.50	.50	.79	1.5	3.5	6.6	.56	0	.69	.79
30	.38	.29	.50	.30	---	1.7	3.0	6.0	.37	0	.57	.73
31	.40	---	.40	.30	---	1.6	---	5.4	---	0	.56	---
TOTAL	8.68	9.38	11.38	13.04	14.08	33.06	86.1	162.9	85.10	2.47	34.78	36.75
MEAN	.28	.31	.37	.42	.49	1.07	2.87	5.25	2.84	.080	1.12	1.23
AC-FT	17	19	23	26	28	66	171	323	169	4.9	69	73
MAX	.51	.44	.50	.70	.79	1.7	5.0	8.3	7.8	.30	7.6	3.9
MIN	.05	.28	.30	.20	.30	.60	1.3	3.0	.37	0	0	.36
CAL YR 2007	TOTAL	2143.69	MEAN	5.87	MAX	89.0	MIN	0	AC-FT	4250		
WTR YR 2008	TOTAL	497.62	MEAN	1.36	MAX	8.3	MIN	0	AC-FT	987		

MAX DISCH: 40 CFS AT 21:15 ON Aug. 5, 2008 GH 1.2 FT. SHIFT 0.04 FT.  
MAX GH: 1.2 FT. AT 21:15 ON Aug. 5, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06730300 COAL CREEK NEAR PLAINVIEW CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06731000 ST. VRAIN CREEK AT MOUTH, NEAR PLATTEVILLE, CO

**LOCATION.**--Lat 40°15'29", long 104°52'45", in SE¼NW¼ sec. 3, T,3 N., R.67 W., Weld County, Hydrologic Unit 10190005, on right bank 140 ft downstream from bridge on county road, 1.3 mi upstream from mouth, and 4.2 mi northwest of Platteville.

**DRAINAGE AREA AND PERIOD OF RECORD.**--976 mi<sup>2</sup>; 1927 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a 54-inch metal pipe shelter and well. The primary reference gage is an electric tape gage. A 3.33-ft outside staff gage is driven into the stream bed as a supplemental reading for low flows.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with graphical chart record as backup. The record is complete and reliable, except for Dec 28-31, 2007, Jan 1-2, 18-27, 2008, due to ice affecting the stage-discharge relationship. The record is complete and reliable, except for a period of ice affect Feb 18-22, 2006. The record is good, except for periods of ice affected record, which are estimated and considered poor. Station maintained by Patrick Tyler and record developed by Patrick Tyler and Russell Stroud.

**RATING TABLE.**--SVCPLACO27 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

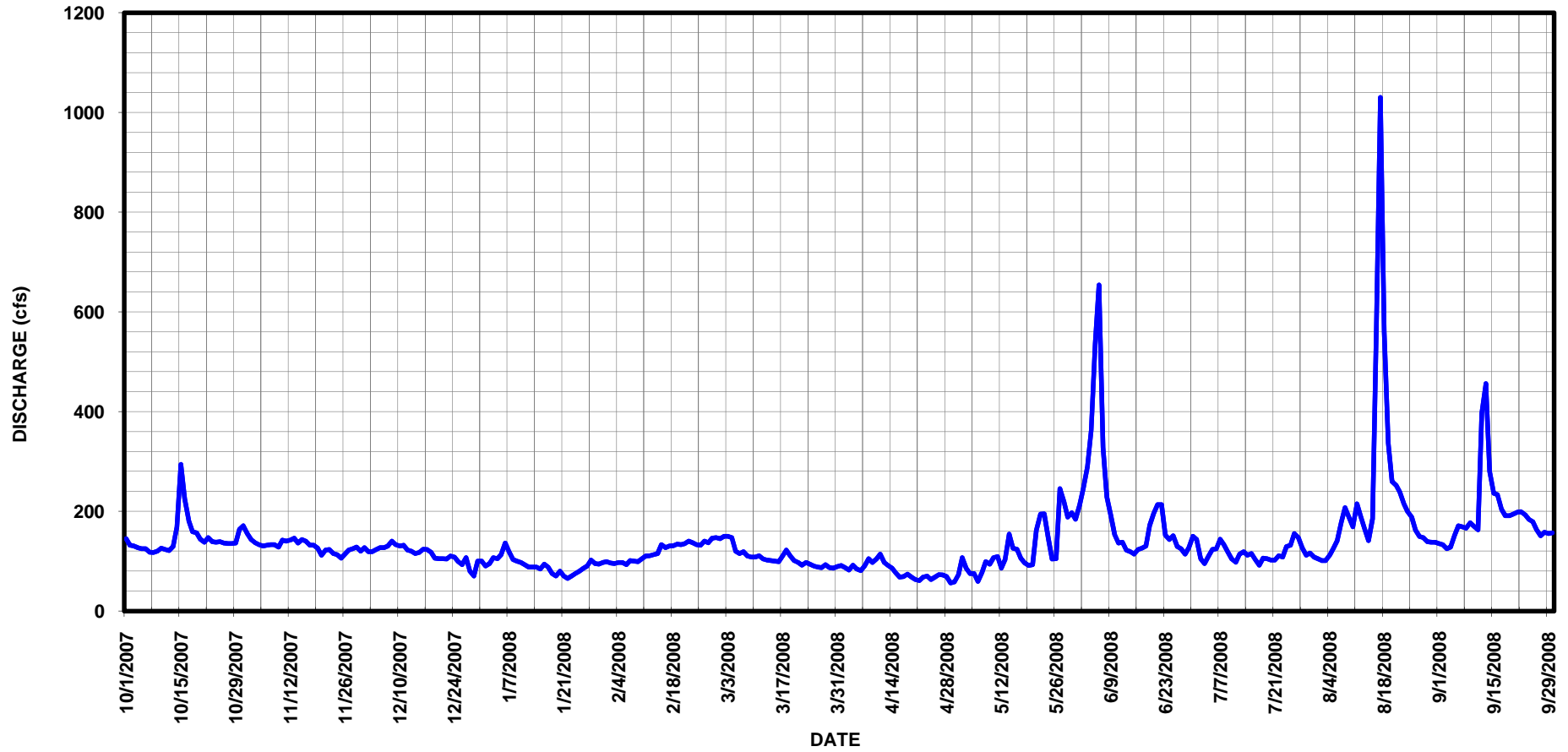
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	145	155	127	90	99	145	91	73	212	143	105	135
2	132	143	119	95	96	150	87	107	246	105	101	133
3	130	137	119	107	95	150	82	85	289	95	101	125
4	127	133	123	105	97	147	92	75	362	110	112	128
5	125	130	127	113	97	120	84	75	536	123	126	152
6	125	132	127	136	93	115	81	59	654	125	141	171
7	118	133	130	119	101	119	90	77	328	144	178	169
8	117	133	140	103	100	110	105	99	229	133	207	166
9	120	128	133	100	99	108	97	94	191	118	187	177
10	126	142	130	97	105	108	104	107	153	104	169	170
11	123	140	132	93	110	111	114	109	136	98	215	163
12	121	142	122	88	111	104	97	86	138	114	190	397
13	129	146	120	88	113	102	91	103	122	119	164	456
14	168	136	115	88	115	101	86	154	119	112	141	280
15	294	143	117	84	133	100	76	126	114	115	185	236
16	225	140	124	94	127	99	68	124	123	103	565	233
17	181	132	123	88	130	110	69	106	126	92	1030	204
18	159	132	118	75	131	122	74	96	130	106	560	191
19	157	126	106	70	134	110	68	91	172	105	337	191
20	144	112	105	80	133	101	63	93	196	102	260	194
21	138	122	105	70	135	97	61	163	213	102	252	198
22	147	123	104	65	140	92	68	194	213	111	238	199
23	139	115	110	70	137	97	70	195	152	108	215	193
24	138	113	108	75	133	94	63	146	143	129	199	184
25	139	106	99	80	132	90	68	104	151	132	188	179
26	136	114	93	85	140	88	73	105	129	155	162	163
27	135	122	107	90	137	87	72	245	125	147	149	151
28	135	125	80	102	146	93	69	219	114	127	147	158
29	136	128	70	95	147	87	56	188	127	112	139	155
30	164	120	100	94	---	86	58	197	150	116	138	157
31	171	---	100	97	---	89	---	184	---	108	138	---
TOTAL	4544	3903	3533	2836	3466	3332	2377	3879	6093	3613	7039	5808
MEAN	147	130	114	91.5	120	107	79.2	125	203	117	227	194
AC-FT	9010	7740	7010	5630	6870	6610	4710	7690	12090	7170	13960	11520
MAX	294	155	140	136	147	150	114	245	654	155	1030	456
MIN	117	106	70	65	93	86	56	59	114	92	101	125

CAL YR	2007	TOTAL	65663	MEAN	180	MAX	816	MIN	70	AC-FT	130200
WTR YR	2008	TOTAL	50423	MEAN	138	MAX	1030	MIN	56	AC-FT	100000

MAX DISCH: 1240 CFS AT 01:45 ON Aug. 17, 2008 GH 5.84 FT. SHIFT -0.71 FT.  
MAX GH: 5.84 FT. AT 01:45 ON Aug. 17, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06731000 ST. VRAIN CREEK AT MOUTH NEAR PLATTEVILLE CO  
WY2008 HYDROGRAPH





PLATTE RIVER BASIN

WIND RIVER ABOVE ADAMS TUNNEL NEAR ESTES PARK, CO

LOCATION.--Lat 40°19'38", long 105°34'53"

DRAINAGE AREA.--N/A

GAGE.--Data Collection Platform (DCP) and stage discharge recorder in a wooden shelter at a 4-foot steel Parshall flume. The primary reference gage is an electric tape gage with a secondary staff located on the left wing wall at the flume's H<sub>a</sub> location. The station is maintained in cooperation with the United States Bureau of Reclamation (USBR) and Colorado Division of Water Resources. Formerly called "Wind River Near Estes Park", this station is operated as part of the Colorado-Big Thompson (C-BT) system to determine east slope inflow into the system.

REMARKS.--The primary record is hourly averages of 15-minute satellite data with SDR as backup. It is complete and reliable, except for October 22, November 14-15, 2007, April, 27, 2008, when the stage-discharge relationship was affected by ice; November 16, 2007 through April 20, 2008, when the station was closed for winter, no gage-height information available; and, November 15, 2007 and April 21, 2008, when only partial day record was available. This is a partial year record. The record is good, except for periods of partial gage height and ice affected record, which are poor; and, periods when mean daily flows were below 1.3 cfs, which are fair. Stream flows are affected by diversion above the station amounting to approximately 300 AF per water year. Station maintained by USBR and DWR personnel, and record developed by Russell Stroud.

RATING TABLE.--STD04FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

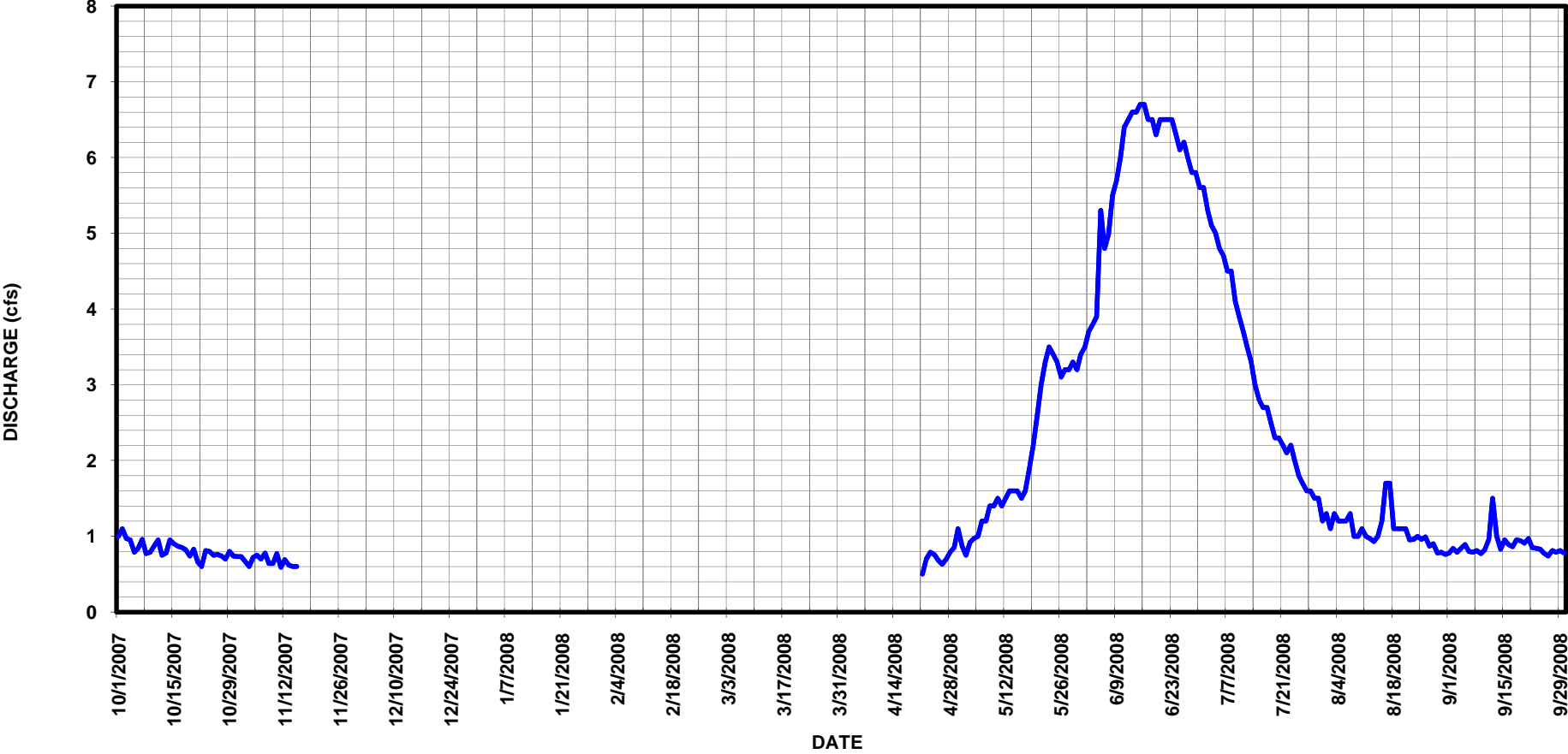
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	.73	---	---	---	---	---	.87	3.5	5.6	1.3	.78
2	1.1	.67	---	---	---	---	---	.75	3.7	5.3	1.1	.84
3	.97	.60	---	---	---	---	---	.92	3.8	5.1	1.3	.79
4	.95	.72	---	---	---	---	---	.97	3.9	5.0	1.2	.84
5	.79	.75	---	---	---	---	---	1.0	5.3	4.8	1.2	.89
6	.84	.70	---	---	---	---	---	1.2	4.8	4.7	1.2	.80
7	.96	.78	---	---	---	---	---	1.2	5.0	4.5	1.3	.79
8	.77	.64	---	---	---	---	---	1.4	5.5	4.5	1.0	.81
9	.79	.64	---	---	---	---	---	1.4	5.7	4.1	1.0	.77
10	.87	.77	---	---	---	---	---	1.5	6.0	3.9	1.1	.82
11	.95	.59	---	---	---	---	---	1.4	6.4	3.7	1.0	.96
12	.75	.69	---	---	---	---	---	1.5	6.5	3.5	.97	1.5
13	.78	.62	---	---	---	---	---	1.6	6.6	3.3	.93	1.0
14	.95	.60	---	---	---	---	---	1.6	6.6	3.0	1.0	.83
15	.90	.60	---	---	---	---	---	1.6	6.7	2.8	1.2	.95
16	.87	---	---	---	---	---	---	1.5	6.7	2.7	1.7	.89
17	.85	---	---	---	---	---	---	1.6	6.5	2.7	1.7	.86
18	.82	---	---	---	---	---	---	1.9	6.5	2.5	1.1	.95
19	.74	---	---	---	---	---	---	2.2	6.3	2.3	1.1	.94
20	.83	---	---	---	---	---	---	2.6	6.5	2.3	1.1	.91
21	.66	---	---	---	---	---	.50	3.0	6.5	2.2	1.1	.97
22	.60	---	---	---	---	---	.70	3.3	6.5	2.1	.95	.85
23	.81	---	---	---	---	---	.79	3.5	6.5	2.2	.96	.84
24	.80	---	---	---	---	---	.76	3.4	6.3	2.0	1.0	.83
25	.75	---	---	---	---	---	.68	3.3	6.1	1.8	.96	.77
26	.76	---	---	---	---	---	.63	3.1	6.2	1.7	.99	.74
27	.74	---	---	---	---	---	.70	3.2	6.0	1.6	.87	.81
28	.70	---	---	---	---	---	.79	3.2	5.8	1.6	.90	.79
29	.80	---	---	---	---	---	.85	3.3	5.8	1.5	.78	.81
30	.74	---	---	---	---	---	1.1	3.2	5.6	1.5	.79	.78
31	.73	---	---	---	---	---	---	3.4	---	1.2	.76	---
TOTAL	25.57	10.10	---	---	---	---	7.50	64.61	173.8	95.7	33.56	26.11
MEAN	.82	.67	---	---	---	---	.75	2.08	5.79	3.09	1.08	.87
AC-FT	51	20	---	---	---	---	15	128	345	190	67	52
MAX	1.1	.78	---	---	---	---	1.1	3.5	6.7	5.6	1.7	1.5
MIN	.60	.59	---	---	---	---	.50	.75	3.5	1.2	.76	.74

CAL YR 2007 TOTAL 619.38 MEAN 2.72 MAX 9.1 MIN 0.59 AC-FT 1230 (PARTIAL YEAR RECORD)  
WTR YR 2008 TOTAL 436.95 MEAN 2.09 MAX 6.7 MIN 0.50 AC-FT 867 (PARTIAL YEAR RECORD)

MAX DISCH: 16.8 CFS AT 13:00 ON Jun. 19, 2008 GH 1.03 FT. SHIFT 0 FT.  
MAX GH: 1.03 FT. AT 13:00 ON Jun. 19, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

WIND RIVER ABOVE ADAMS TUNNEL NEAR ESTES PARK CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

WIND RIVER BELOW ADAMS TUNNEL NEAR ESTES PARK, CO

LOCATION.--Lat 40°19'38", long 105°34'53"

DRAINAGE AREA.--N/A

GAGE.--Sutron Stage Discharge Recorder (SDR) in a 30-inch CMP shelter and well at a 3-foot Cipolletti weir. Primary reference gage is a drop tape with a supplemental outside staff gage. The shaft encoder is wired to the Data Collection Platform in the Adams Tunnel gage. The shaft encoder was replaced by a Sutron Stage Discharge Recorder (SDR) on June 4, 2008. The station is maintained in cooperation of the United States Bureau of Reclamation (USBR) and Colorado Division of Water Resources (DWR) to determine east slope flows into the Colorado Big Thompson (C-BT) system at Adam's Tunnel. This gage is used to compute the amount of Wind River water being 'skimmed' into the C-BT system. The amount of skim water is the difference between the two gages: Wind River above (WINDESCO) and below (WINBYPCO) Adams Tunnel: (Wind River skim = WINDESCO - WINBYPCO). When water is not being skimmed, all flow bypasses Adams Tunnel through a pipeline and the 3-foot Cipolletti weir records the same water as the WINDESCO flume. The USBR does not divert flow into the C-BT system when the native flow in Wind River is 2 cfs or less. Skim operations are not performed during winter periods.

REMARKS.--The record is hourly averages of 15-minute satellite data with the SDR log as backup. The gage height record was only evaluated for the skim period. Skimming operations occurred between May 21, 2008 through August 14, 2008. The record is complete and reliable during skim operations. Discharge values for the non-skim period of the record are from the WINDESCO record. See the WINDESCO record for gage height record comments and record rating for the non skim periods. WINBYPCO gage was used for the skim period only and is considered good. Station maintained by USBR and DWR personnel, and record developed by Russell Stroud.

RATING TABLE.--STD03FTCIP USED FROM 21 May, 2008 16:00 TO 14 Aug 2008 13:00

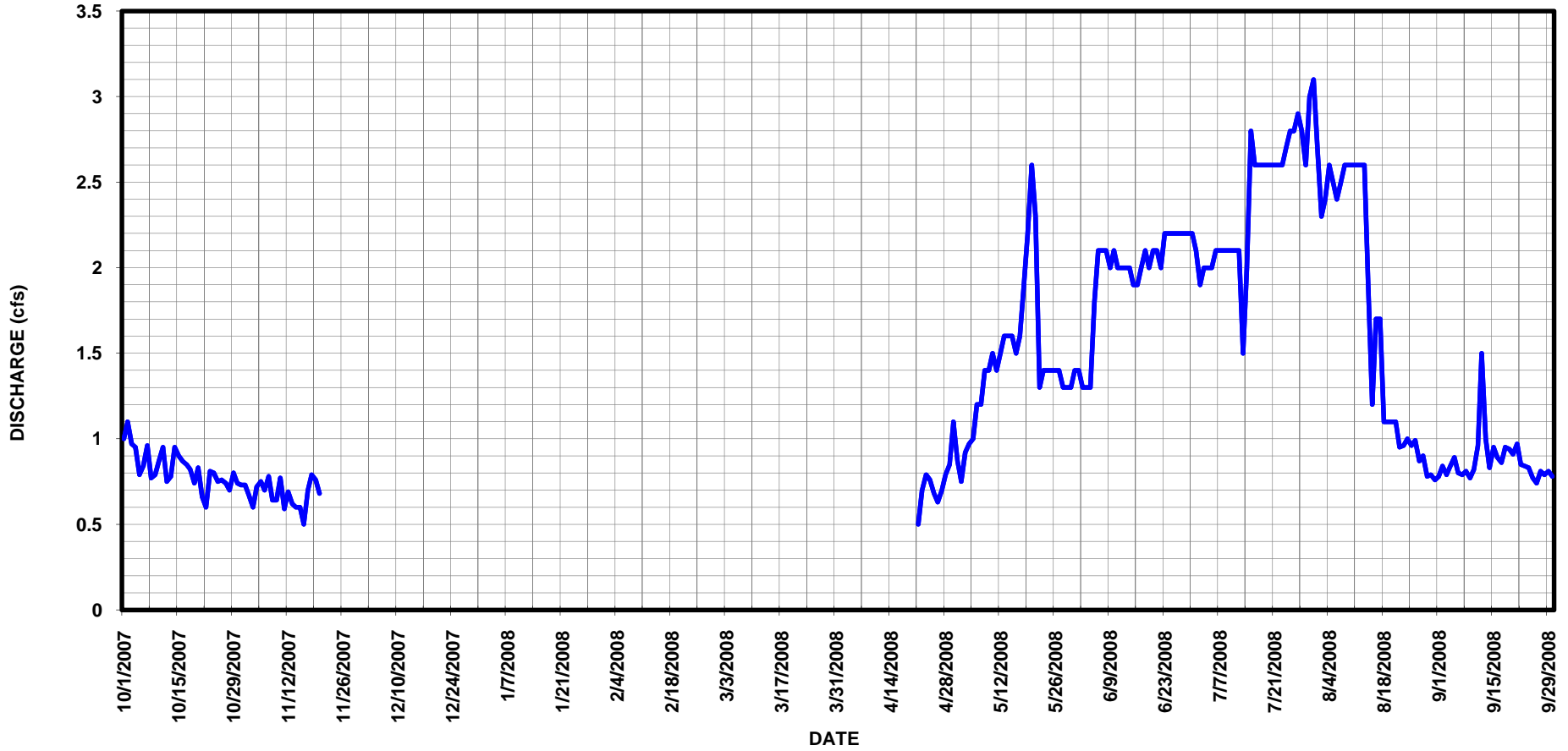
WINDESCO DISCHARGE VALUES USED FROM OCT 1, 2007 THRU MAY 21, 2008 15:00 AND AUG 14, 2008 14:00 THRU SEP 30, 2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	.73	---	---	---	---	---	.87	1.4	2.1	2.7	.78
2	1.1	.67	---	---	---	---	---	.75	1.3	1.9	2.3	.84
3	.97	.60	---	---	---	---	---	.92	1.3	2.0	2.4	.79
4	.95	.72	---	---	---	---	---	.97	1.3	2.0	2.6	.84
5	.79	.75	---	---	---	---	---	1.0	1.8	2.0	2.5	.89
6	.84	.70	---	---	---	---	---	1.2	2.1	2.1	2.4	.80
7	.96	.78	---	---	---	---	---	1.2	2.1	2.1	2.5	.79
8	.77	.64	---	---	---	---	---	1.4	2.1	2.1	2.6	.81
9	.79	.64	---	---	---	---	---	1.4	2.0	2.1	2.6	.77
10	.87	.77	---	---	---	---	---	1.5	2.1	2.1	2.6	.82
11	.95	.59	---	---	---	---	---	1.4	2.0	2.1	2.6	.96
12	.75	.69	---	---	---	---	---	1.5	2.0	2.1	2.6	1.5
13	.78	.62	---	---	---	---	---	1.6	2.0	1.5	2.6	1.0
14	.95	.60	---	---	---	---	---	1.6	2.0	2.0	1.9	.83
15	.90	.60	---	---	---	---	---	1.6	1.9	2.8	1.2	.95
16	.87	---	---	---	---	---	---	1.5	1.9	2.6	1.7	.89
17	.85	---	---	---	---	---	---	1.6	2.0	2.6	1.7	.86
18	.82	---	---	---	---	---	---	1.9	2.1	2.6	1.1	.95
19	.74	---	---	---	---	---	---	2.2	2.0	2.6	1.1	.94
20	.83	---	---	---	---	---	---	2.6	2.1	2.6	1.1	.91
21	.66	---	---	---	---	---	.50	2.3	2.1	2.6	1.1	.97
22	.60	---	---	---	---	---	.70	1.3	2.0	2.6	.95	.85
23	.81	---	---	---	---	---	.79	1.4	2.2	2.6	.96	.84
24	.80	---	---	---	---	---	.76	1.4	2.2	2.7	1.0	.83
25	.75	---	---	---	---	---	.68	1.4	2.2	2.8	.96	.77
26	.76	---	---	---	---	---	.63	1.4	2.2	2.8	.99	.74
27	.74	---	---	---	---	---	.70	1.4	2.2	2.9	.87	.81
28	.70	---	---	---	---	---	.79	1.3	2.2	2.8	.90	.79
29	.80	---	---	---	---	---	.85	1.3	2.2	2.6	.78	.81
30	.74	---	---	---	---	---	1.1	1.3	2.2	3.0	.79	.78
31	.73	---	---	---	---	---	---	1.4	---	3.1	.76	---
TOTAL	25.57	10.10	---	---	---	---	7.50	44.61	59.2	74.5	52.86	26.11
MEAN	.82	.67	---	---	---	---	.75	1.44	1.97	2.40	1.71	.87
AC-FT	51	20	---	---	---	---	15	88	117	148	105	52
MAX	1.1	.78	---	---	---	---	1.1	2.6	2.2	3.1	2.7	1.5
MIN	.60	.59	---	---	---	---	.50	.75	1.3	1.5	.76	.74

CAL YR 2007 TOTAL 303.86 MEAN 1.33 MAX 3.6 MIN 0.59 AC-FT 603 (PARTIAL YEAR RECORD)  
WTR YR 2008 TOTAL 300.45 MEAN 1.44 MAX 3.1 MIN 0.50 AC-FT 596 (PARTIAL YEAR RECORD)  
MAX DISCH: 3.15 CFS AT 05:15 ON Jul 15, 2008 GH 0.46 FT. SHIFT 0 FT.  
MAX GH: 0.46 FT. AT 05:15 ON Jul 15, 2008

WIND RIVER BELOW ADAMS TUNNEL NEAR ESTES PARK CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06733000 BIG THOMPSON RIVER (above Lake Estes) AT ESTES PARK, CO

**LOCATION.**--Lat 40°22'42", long 105°30'48", in NW¼NW¼ sec. 30, T.5 N., R.72 W., Larimer County on right bank in Estes Park, 600 ft downstream from bridge on State Highways 7 and 66, 900 ft downstream from Black Canyon Creek, and 0.3 mi northwest of Estes Power Plant. Station is upstream from Lake Estes.

**DRAINAGE AREA AND PERIOD OF RECORD.**--137 mi<sup>2</sup>. October 1946 to current year.

**GAGE.**--Sutron Stage Discharge Recorder (SDR) and satellite monitoring data collection platform (DCP) in a 4 ft x 4 ft precast concrete shelter and stilling well at a 15 foot concrete Parshall Flume with overflow bays flanking the flume. The primary reference is an electric tape gage in the shelter with two supplementary outside staff gages. One supplementary staff is located in the flume's H<sub>a</sub> location and the second staff is located on the backside of the shelter. The second staff is only used when the flume's overflow bays are in use. The gage is maintained in cooperation of the United States Bureau of Reclamation (USBR) and the Colorado Division of Water Resources as part of the Colorado-Big Thompson Project. Datum of gage is 7,492.5 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with SDR data as backup. The record is complete and reliable, except for October 1, 2007 through January 4, 2008 when the flume was under construction, no gage-height information is available. A coffer dam was placed immediately upstream from the flume and water was forced over the left edge of water overflow bay to during construction. And January 4 to March 27, 2008, when the flume was ice affected and often submerged due to ice damming downstream of the flume. No gage-height information is available. Record is good, except for periods of no gage height or ice affected record, which were estimated and are considered fair. Record developed by Russell Stroud.

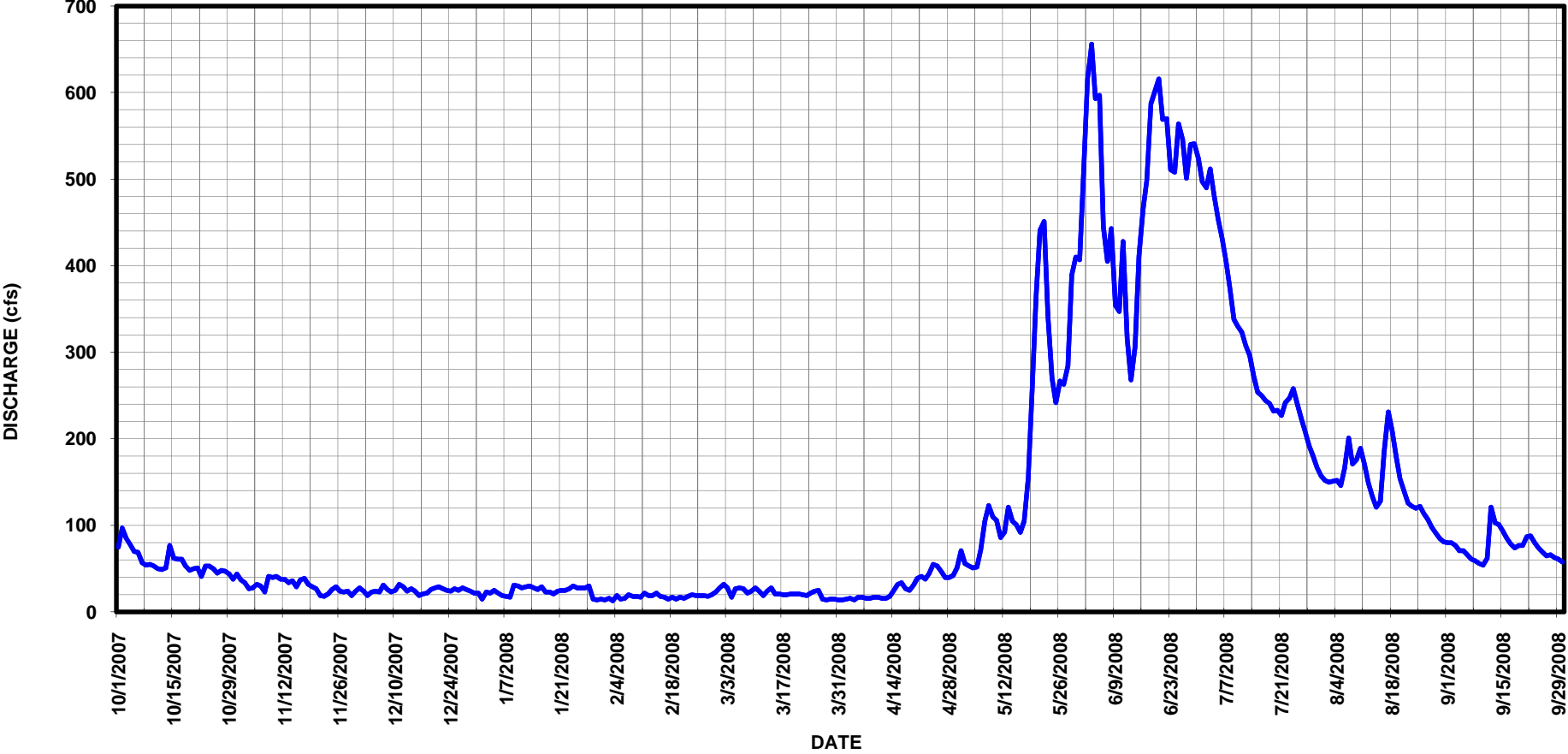
**RATING TABLE.**--BTABESCO09 USED FROM 27-Mar-2008 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	37	28	15	14	28	14	71	513	497	152	80
2	97	34	24	23	16	32	15	56	616	490	150	80
3	85	27	19	22	13	28	16	53	656	512	151	77
4	78	28	23	25	19	17	14	51	593	480	152	71
5	70	32	24	22	15	27	17	52	597	454	146	71
6	69	30	23	19	16	28	17	72	445	431	166	66
7	57	23	31	18	20	27	16	105	405	405	201	61
8	54	41	26	17	18	22	16	123	443	374	171	59
9	55	40	23	31	18	24	17	110	354	338	176	56
10	53	41	25	30	17	28	17	106	347	330	189	54
11	50	38	32	28	22	24	16	86	428	323	170	62
12	49	38	29	29	19	19	16	92	316	308	149	121
13	51	34	24	30	19	24	18	121	268	296	133	103
14	77	36	27	28	22	28	25	105	307	273	121	101
15	62	29	24	26	18	21	32	101	411	254	128	93
16	61	37	19	29	17	21	34	92	465	250	186	85
17	61	39	21	23	15	20	27	105	499	244	231	78
18	53	32	22	23	17	20	25	156	587	241	210	74
19	48	29	26	21	15	21	31	254	601	232	179	77
20	50	27	28	24	17	21	39	366	616	233	154	77
21	51	19	29	25	16	21	41	441	569	227	139	87
22	41	18	27	25	18	20	38	451	570	242	126	88
23	53	21	25	27	20	19	45	342	511	247	122	80
24	53	26	24	30	19	22	55	270	508	258	120	74
25	50	29	27	28	19	24	53	242	564	240	122	69
26	45	24	25	28	19	25	47	267	546	224	114	65
27	48	23	28	28	18	15	40	263	501	208	107	66
28	47	24	26	30	20	14	40	284	540	192	98	63
29	44	19	24	15	23	15	42	389	541	180	91	61
30	38	24	22	14	---	15	51	410	524	167	85	58
31	44	---	22	15	---	14	---	407	---	157	81	---
TOTAL	1769	899	777	748	519	684	874	6043	14841	9307	4520	2257
MEAN	57.1	30.0	25.1	24.1	17.9	22.1	29.1	195	495	300	146	75.2
AC-FT	3510	1780	1540	1480	1030	1360	1730	11990	29440	18460	8970	4480
MAX	97	41	32	31	23	32	55	451	656	512	231	121
MIN	38	18	19	14	13	14	14	51	268	157	81	54
CAL YR 2007	TOTAL	39913	MEAN	109	MAX	535	MIN	8	AC-FT	7917		
0												
WTR YR 2008	TOTAL	43238	MEAN	118	MAX	656	MIN	13	AC-FT	85760		

MAX DISCH: 781 CFS AT 01:45 ON Jun. 3, 2008 GH 4.88 FT. SHIFT 0.19 FT.  
MAX GH: 4.88 FT. AT 01:45 ON Jun. 3, 2008

06733000 BIG THOMPSON RIVER (above Lake Estes) AT ESTES PARK CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06734500 FISH CREEK NEAR ESTES PARK, CO

**LOCATION.**--Lat 40°22'06", long 105°29'35", SW¼ sec. 29, T.5 N., R.72 W. on right bank 100ft upstream from high water line of Lake Estes, 0.4 mile upstream from bridge on State Highway 66, and 2 miles southeast of Estes Park.

**DRAINAGE AREA AND PERIOD OF RECORD.**--16.9 mi<sup>2</sup>; 1946 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a 4 foot by 4 foot concrete shelter and stilling well at a 5-ft Parshall flume. An electric drop tape is the primary reference gage with a supplemental outside staff gage.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart back up. The record is complete and reliable, except for November 13, 2007 to April 21, 2008 when the gage was shut off for winter. No gage-height record is available. The record is good, except when average daily flows were below 1.6 cfs occurring on October 1-13, 2007; October 16 - November 13, 2007; June 30 - August 15, 2008; August 19 - September 11, 2008 and September 14 - September 30, 2008, which are considered fair; and, Nov 13, 2007 and April 21, 2008, partial day record and considered fair. This is a partial year record. Station maintained and record developed by Russell Stroud.

**RATING TABLE.**--FISHESCO06 USED FROM 01-Oct-2007 TO 30-Sep-2008

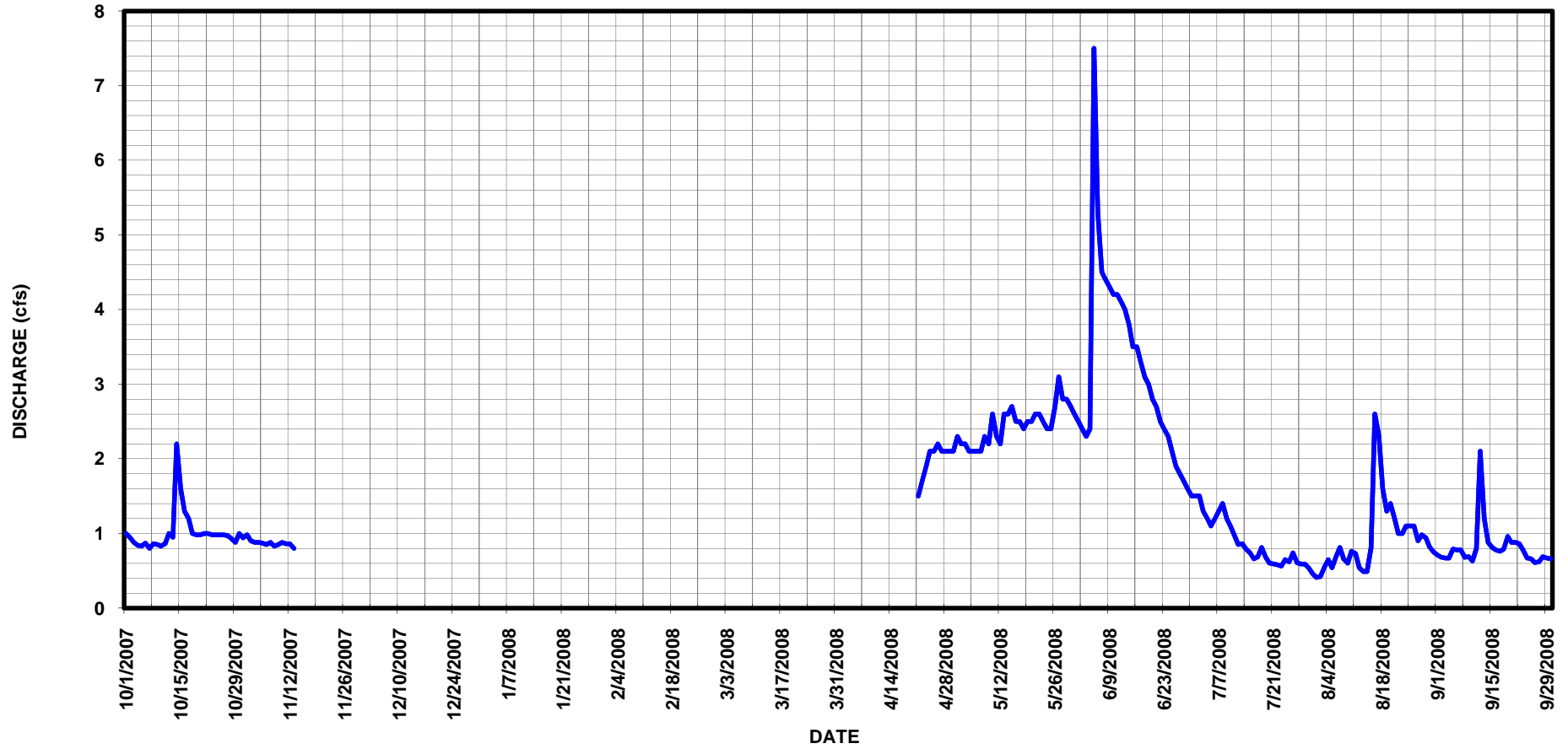
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	.98	---	---	---	---	---	2.3	2.5	1.5	.41	.71
2	.95	.90	---	---	---	---	---	2.2	2.4	1.5	.42	.68
3	.88	.88	---	---	---	---	---	2.2	2.3	1.3	.54	.67
4	.84	.88	---	---	---	---	---	2.1	2.4	1.2	.65	.67
5	.83	.87	---	---	---	---	---	2.1	7.5	1.1	.54	.79
6	.87	.85	---	---	---	---	---	2.1	5.3	1.2	.68	.78
7	.80	.88	---	---	---	---	---	2.1	4.5	1.3	.81	.78
8	.86	.83	---	---	---	---	---	2.3	4.4	1.4	.66	.68
9	.85	.85	---	---	---	---	---	2.2	4.3	1.2	.60	.69
10	.83	.88	---	---	---	---	---	2.6	4.2	1.1	.76	.63
11	.86	.86	---	---	---	---	---	2.3	4.2	.97	.73	.80
12	1.0	.86	---	---	---	---	---	2.2	4.1	.85	.54	2.1
13	.95	.80	---	---	---	---	---	2.6	4.0	.86	.49	1.2
14	2.2	---	---	---	---	---	---	2.6	3.8	.79	.49	.88
15	1.6	---	---	---	---	---	---	2.7	3.5	.74	.81	.81
16	1.3	---	---	---	---	---	---	2.5	3.5	.66	2.6	.78
17	1.2	---	---	---	---	---	---	2.5	3.3	.69	2.3	.76
18	1.0	---	---	---	---	---	---	2.4	3.1	.81	1.6	.79
19	.98	---	---	---	---	---	---	2.5	3.0	.68	1.3	.96
20	.98	---	---	---	---	---	---	2.5	2.8	.60	1.4	.88
21	1.0	---	---	---	---	---	1.5	2.6	2.7	.59	1.2	.88
22	1.0	---	---	---	---	---	1.7	2.6	2.5	.58	1.0	.86
23	.98	---	---	---	---	---	1.9	2.5	2.4	.56	1.0	.77
24	.98	---	---	---	---	---	2.1	2.4	2.3	.65	1.1	.67
25	.98	---	---	---	---	---	2.1	2.4	2.1	.62	1.1	.66
26	.98	---	---	---	---	---	2.2	2.7	1.9	.74	1.1	.61
27	.97	---	---	---	---	---	2.1	3.1	1.8	.61	.90	.62
28	.93	---	---	---	---	---	2.1	2.8	1.7	.59	.98	.69
29	.88	---	---	---	---	---	2.1	2.8	1.6	.59	.94	.67
30	1.0	---	---	---	---	---	2.1	2.7	1.5	.54	.82	.66
31	.94	---	---	---	---	---	---	2.6	---	.46	.75	---
TOTAL	31.42	11.32	---	---	---	---	19.9	76.2	95.6	26.98	29.22	24.13
MEAN	1.01	.87	---	---	---	---	1.99	2.46	3.19	.87	.94	.80
AC-FT	62	22	---	---	---	---	39	151	190	54	58	48
MAX	2.2	.98	---	---	---	---	2.2	3.1	7.5	1.5	2.6	2.1
MIN	.80	.80	---	---	---	---	1.5	2.1	1.5	.46	.41	.61
CAL YR 2007	TOTAL	828.88	MEAN	3.67	MAX	13.0	MIN	.80	AC-FT	1640 (PARTIAL YEAR RECORD)		
WTR YR 2008	TOTAL	314.77	MEAN	1.52	MAX	7.5	MIN	.41	AC-FT	624 (PARTIAL YEAR RECORD)		

MAX DISCH: 11.1 CFS AT 12:30 ON Jun. 5, 2008 GH 0.69 FT. SHIFT 0 FT.  
MAX GH: 0.69 FT. AT 12:30 ON Jun. 5, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06734500 FISH CREEK NEAR ESTES PARK CO  
WY2008 HYDROGRAPH





PLATTE RIVER BASIN

06735500 BIG THOMPSON RIVER (below Lake Estes) NEAR ESTES PARK, CO

**LOCATION.**--Lat 40°22'35", long 105°29'06", in NE¼NE¼ sec. 29, T.5 N., R.72 W., Larimer County, Hydrologic Unit 10190006, on right bank 100 ft upstream from Dry Gulch, 600 ft downstream from Olympus Dam, and 2.0 mi east of Estes Park.

**DRAINAGE AREA.**--155 mi<sup>2</sup>. Area at site used Jan. 29, 1934, to Mar. 21, 1951, 162 mi<sup>2</sup>.

**GAGE.**--Data Collection Platform (DCP), Design Analysis H-334 Absolute shaft encoder, Sutron Stage Discharge Recorder (SDR) in a 4 ft x 4 ft precast concrete shelter and stilling well at a 15 foot concrete Parshall Flume with overflow bays flanking the flume. The Sutron 8210 DCP is equipped with a speech modem, for telephone access. The primary reference is an electric tape gage in the shelter with two supplementary outside staff gages. One supplementary staff is located in the H<sub>a</sub> location (which was removed but not replaced in WY08) of the flume and the second staff is located on the backside of the shelter. The second staff is used when the flumes' overflow bays are in use. The gage is maintained in cooperation of the United States Bureau of Reclamation (USBR) and the Colorado Division of Water Resources (DWR) as part of the Colorado-Big Thompson (C-BT) project.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite data with SDR as backup. Record is complete and reliable. The record is good. Record developed by Russell Stroud.

**RATING TABLE.**--BTBLES010 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

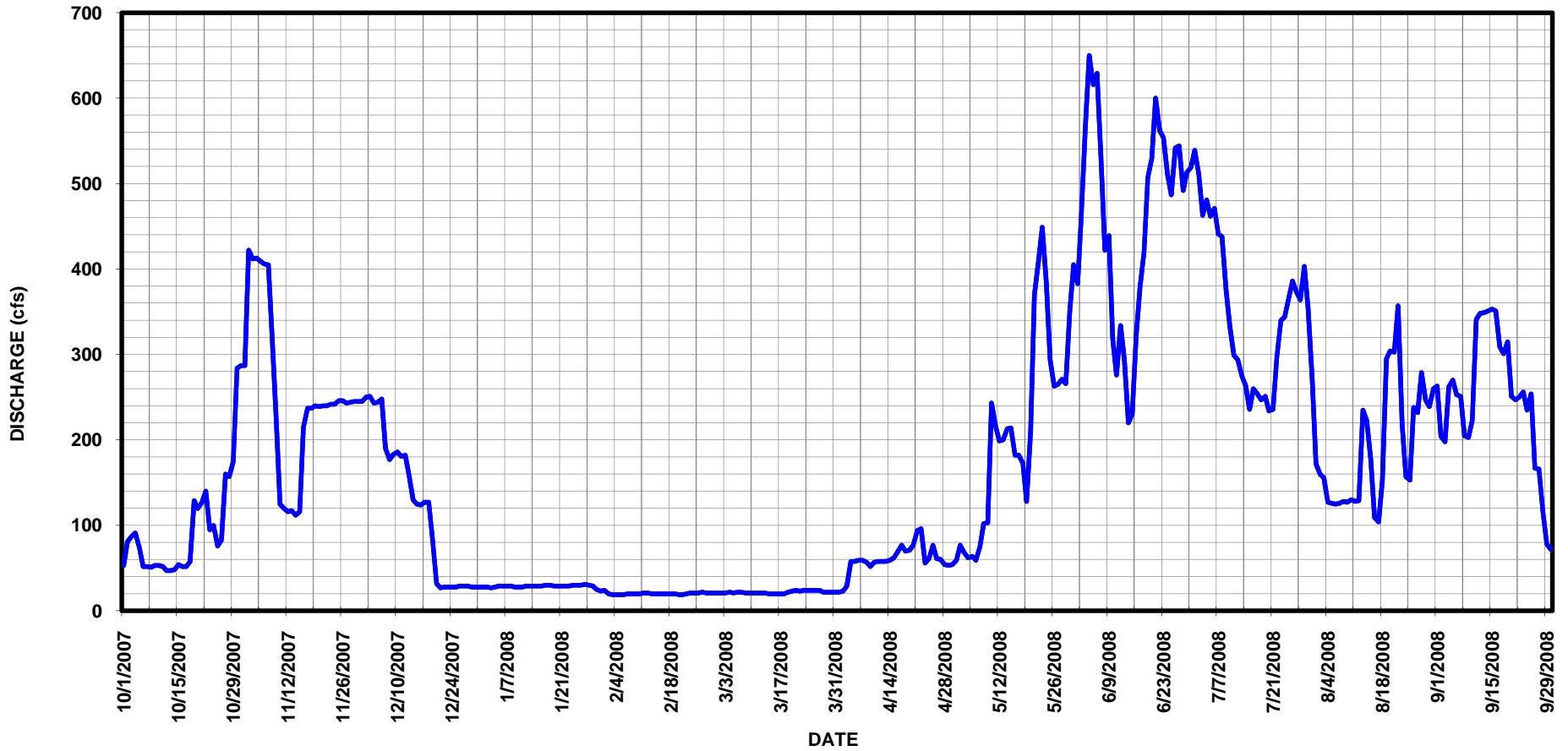
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	287	245	28	24	21	22	59	383	539	172	263
2	81	422	250	28	20	21	23	77	465	511	160	204
3	87	412	251	27	19	21	29	68	567	463	156	198
4	91	413	243	28	19	22	58	62	650	481	127	262
5	74	409	244	29	19	21	58	64	616	462	126	270
6	52	406	248	29	19	22	59	59	629	471	125	253
7	52	405	190	29	20	22	59	75	527	441	126	251
8	51	319	177	29	20	21	57	102	422	438	128	205
9	53	224	183	28	20	21	52	103	439	376	127	203
10	53	125	186	28	20	21	57	243	318	333	130	223
11	52	120	181	28	21	21	58	216	276	299	128	341
12	47	116	182	29	21	21	58	199	334	294	129	348
13	47	117	159	29	20	21	58	200	294	275	235	349
14	48	112	130	29	20	20	59	213	220	264	223	351
15	54	116	125	29	20	20	62	214	230	236	177	353
16	52	215	124	29	20	20	69	182	323	260	109	351
17	52	237	127	30	20	20	77	182	379	254	104	309
18	58	237	127	30	20	20	70	173	420	247	153	301
19	129	240	84	29	20	22	71	128	507	251	295	315
20	120	239	32	29	19	23	77	210	530	234	304	251
21	127	240	27	29	19	24	94	370	600	236	303	247
22	140	240	28	29	20	23	96	409	562	297	357	250
23	95	242	28	29	21	24	56	449	554	340	218	256
24	100	242	28	30	21	24	61	384	511	344	157	235
25	76	246	28	30	21	24	77	294	487	366	153	254
26	83	246	29	30	22	24	61	263	542	386	238	167
27	160	243	29	31	21	24	60	265	544	373	232	166
28	157	244	29	30	21	22	54	271	492	364	279	118
29	175	245	28	29	21	22	53	266	513	403	247	78
30	284	245	28	25	---	22	54	352	519	353	239	72
31	287	---	28	23	---	22	---	405	---	271	260	---
TOTAL	2990	7604	3798	889	588	676	1799	6557	13853	10862	5917	7444
MEAN	96.5	253	123	28.7	20.3	21.8	60.0	212	462	350	191	248
AC-FT	5930	15080	7530	1760	1170	1340	3570	13010	27480	21540	11740	14770
MAX	287	422	251	31	24	24	96	449	650	539	357	353
MIN	47	112	27	23	19	20	22	59	220	234	104	72

CAL YR	2007	TOTAL	37439	MEAN	103	MAX	422	MIN	18	AC-FT	74260
WTR YR	2008	TOTAL	62977	MEAN	172	MAX	650	MIN	19	AC-FT	124900

MAX DISCH: 669 CFS AT 19:30 ON Jun. 4, 2008 GH 4.62 FT. SHIFT 0 FT.  
MAX GH: 4.62 FT. AT 19:30 ON Jun. 4, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06735500 BIG THOMPSON RIVER (below Lake Estes) NEAR ESTES PARK CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06734900 OLYMPUS TUNNEL (ESTES FOOTHILLS CANAL) AT LAKE ESTES, CO

**LOCATION.**--Lat 40°22'30", long 105°29'13", in SE¼NW¼ sec. 29, T.5 N., R.72 W., Larimer County, Hydrologic Unit 10190006, at tunnel entrance at south end of Olympus Dam on Lake Estes, 1.9 mi east of Estes Park.

**GAGE.**--Data Collection Platform (DCP), Design Analysis H-334 absolute shaft encoder, and a Sutron Stage Discharge Recorder (SDR) in a 4 foot by 4 foot concrete shelter at a 15.2 foot wide concrete canal section. The primary reference is an electric tape gage located in the shelter with a supplemental staff gage located on the left wall of the canal. This station is operated in cooperation of the Colorado Division of Water Resources (DWR) and the United States Bureau of Reclamation (USBR) as part of the Colorado-Big Thompson (C-BT) system.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite data with SDR data as back up. The record is complete and reliable. Zero flow occurs at gage heights of 0.16 ft. or less due to well inlets being slightly above the section floor. Zero flow was observed on March 27, 2008. The record is fair. Station maintained by USBR and DWR personnel, and record developed by Russell Stroud.

**RATING TABLE.**--OLYTUNCO07 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

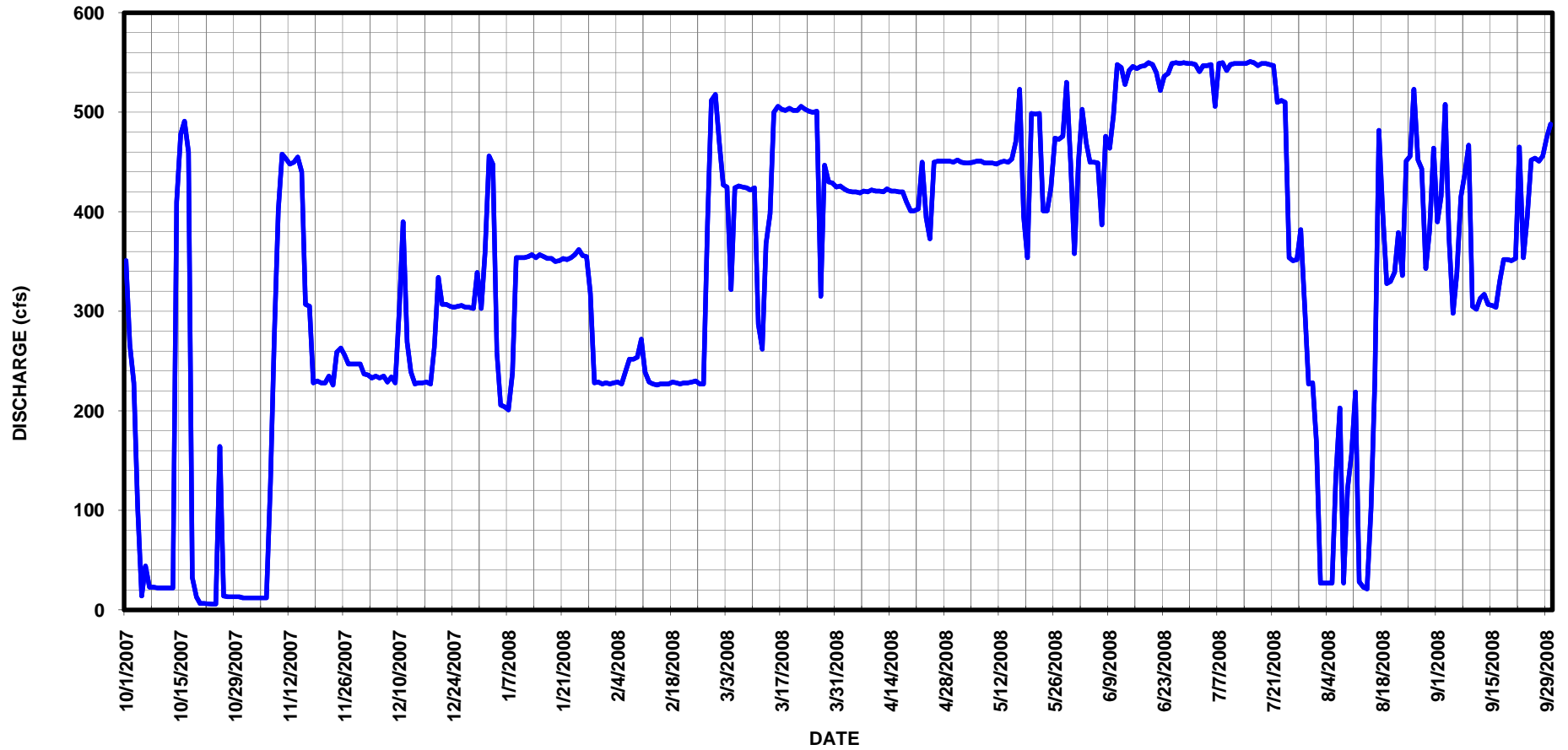
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	351	12	237	359	228	471	426	452	451	548	169	390
2	267	12	236	456	227	427	423	450	503	541	27	416
3	228	12	233	448	228	425	421	449	469	547	27	508
4	104	12	235	259	229	322	420	449	450	547	27	374
5	14	12	233	206	227	424	420	450	450	548	27	298
6	44	12	235	204	240	426	419	451	449	506	134	338
7	23	128	229	201	252	425	421	451	387	549	203	415
8	23	273	234	238	252	424	420	449	476	550	27	437
9	22	402	228	354	254	422	422	449	464	542	122	467
10	22	458	302	354	272	424	421	449	497	548	156	305
11	22	453	390	354	239	287	421	448	548	549	219	302
12	22	448	269	355	229	262	420	450	545	549	28	313
13	22	450	239	357	227	368	423	451	528	549	23	317
14	410	455	227	354	226	398	421	450	542	549	21	307
15	478	440	228	357	227	500	421	453	546	551	103	306
16	491	307	228	355	227	506	420	471	544	550	231	304
17	460	305	229	353	227	503	420	523	546	547	482	331
18	32	228	227	353	229	502	410	395	547	549	400	352
19	13	230	264	350	228	504	401	354	550	549	328	352
20	6.4	228	334	351	227	502	401	499	548	548	330	351
21	6.4	228	307	353	228	502	403	498	540	547	339	353
22	6.1	235	307	352	228	506	450	499	522	510	379	465
23	5.8	226	305	354	229	503	394	401	536	512	336	354
24	5.8	259	304	357	230	501	373	401	539	510	451	394
25	164	263	305	362	227	500	450	424	549	354	456	452
26	14	256	306	356	227	501	451	474	550	351	523	454
27	13	247	304	355	390	315	451	473	549	352	452	451
28	13	247	304	318	512	447	451	476	550	382	443	456
29	13	247	303	228	518	430	451	530	549	303	343	475
30	13	247	339	229	---	429	450	449	549	227	381	488
31	12	---	303	227	---	425	---	358	---	228	464	---
TOTAL	3320.5	7332	8424	10109	7484	13581	12695	13976	15473	15192	7651	11525
MEAN	107	244	272	326	258	438	423	451	516	490	247	384
AC-FT	6590	14540	16710	20050	14840	26940	25180	27720	30690	30130	15180	22860
MAX	491	458	390	456	518	506	451	530	550	551	523	508
MIN	5.8	12	227	201	226	262	373	354	387	227	21	298

CAL YR	2007	TOTAL	137936.5	MEAN	378	MAX	557	MIN	5.8	AC-FT	273600
WTR YR	2008	TOTAL	126762.5	MEAN	346	MAX	551	MIN	5.8	AC-FT	251400

MAX DISCH: 568 CFS AT 16:00 ON Jun. 27, 2008 GH 8.14 FT. SHIFT 0 FT.  
MAX GH: 8.14 FT. AT 16:00 ON Jun. 27, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

0673490 OLYMPUS TUNNEL (ESTES FOOTHILLS CANAL) AT LAKE ESTES CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06736000 NORTH FORK BIG THOMPSON RIVER AT DRAKE, CO

**LOCATION.**--Lat 40°20'45", long 105°26'30", NW¼ sec. 3, T.5 N., R.71 W., Larimer County, 400 ft upstream from mouth at Drake, Co. on U. S. Highway 34 to Estes Park, Co.

**DRAINAGE AREA AND PERIOD OF RECORD.**--85.1 mi<sup>2</sup>; 1947 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a 42-inch CMP shelter and well at a formed concrete control. The primary reference gage is an electric tape gage with a supplemental outside chain gage as backup.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart record as back up. The record is complete and reliable, except for October 22, 23, November 6, 7, 15, 21-30, December 1-9, 2007, when the stage-discharge relationship affected by ice; December 10, 2007 through April 8, 2008, when the gage was shut off for winter and no gage-height record is available. The record is good, except during periods of no gage height and ice affected record, which are poor. Station maintained and record developed by Russell Stroud.

**RATING TABLE.**--BTNFDRCO11 USED FROM 01-Oct-2007 TO 30-Sept-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	11	9.0	7.0	6.0	8.0	8.0	23	64	75	29	18
2	13	11	9.0	7.0	6.0	7.0	8.0	20	74	80	28	18
3	13	10	12	8.0	7.0	6.0	9.0	20	78	88	28	19
4	13	11	14	7.0	7.0	7.0	8.0	18	83	80	28	18
5	13	11	13	7.0	6.0	7.0	9.0	18	133	74	27	19
6	12	10	10	6.0	6.0	6.0	9.0	19	125	71	27	19
7	11	10	10	6.0	7.0	7.0	8.0	22	117	68	30	17
8	11	10	8.0	5.0	7.0	7.0	9.0	22	117	65	29	16
9	12	10	8.0	6.0	7.0	7.0	7.8	23	100	58	28	16
10	12	9.9	10	6.0	8.0	7.0	8.8	22	91	57	27	15
11	12	9.9	10	6.0	8.0	8.0	8.1	21	92	57	27	17
12	11	9.8	8.0	7.0	8.0	9.0	8.0	22	83	54	24	31
13	11	9.5	8.0	7.0	8.0	9.0	9.2	27	78	53	23	24
14	16	9.6	7.0	6.0	7.0	9.0	11	24	77	50	22	21
15	15	9.0	7.0	7.0	7.0	8.0	13	25	79	48	25	19
16	15	11	8.0	6.0	8.0	8.0	15	24	83	46	38	17
17	14	9.3	10	5.0	8.0	8.0	12	26	86	44	35	16
18	12	8.8	10	6.0	9.0	8.0	12	30	90	44	28	16
19	12	8.5	11	5.0	9.0	8.0	13	38	87	40	25	17
20	14	8.5	11	6.0	9.0	8.0	15	44	88	39	24	17
21	14	8.0	10	5.0	9.0	8.0	17	53	91	39	24	17
22	10	8.0	9.0	5.0	8.0	7.0	16	62	93	39	22	17
23	12	8.0	10	6.0	8.0	6.0	17	54	93	41	22	16
24	13	8.0	10	6.0	9.0	7.0	20	45	93	43	22	15
25	13	9.0	9.0	7.0	9.0	8.0	20	44	94	39	23	15
26	12	10	8.0	8.0	8.0	8.0	20	47	89	38	22	15
27	12	10	7.0	8.0	9.0	8.0	18	52	88	40	20	15
28	12	10	6.0	8.0	9.0	8.0	18	51	84	36	20	15
29	11	10	7.0	7.0	9.0	8.0	18	55	77	34	19	15
30	11	9.0	8.0	7.0	---	8.0	19	57	74	32	18	14
31	12	---	7.0	6.0	---	8.0	---	58	---	30	18	---
TOTAL	387	287.8	284.0	199.0	226.0	236.0	383.9	1066	2701	1602	782	524
MEAN	12.5	9.59	9.16	6.42	7.79	7.61	12.8	34.4	90.0	51.7	25.2	17.5
AC-FT	768	571	563	395	448	468	761	2110	5360	3180	1550	1040
MAX	16	11	14	8.0	9.0	9.0	20	62	133	88	38	31
MIN	10	8.0	6.0	5.0	6.0	6.0	7.8	18	64	30	18	14
CAL YR 2007	TOTAL	11264.8	MEAN	30.9	MAX	114	MIN	4	AC-FT	22340		
WTR YR 2008	TOTAL	8678.7	MEAN	23.7	MAX	133	MIN	5	AC-FT	17210		

MAX DISCH: 160 CFS AT 17:00 ON Jun. 5, 2008 GH 4.56 FT. SHIFT 0 FT.  
MAX GH: 4.56 FT. AT 17:00 ON Jun. 5, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06736000 NORTH FORK BIG THOMPSON RIVER AT DRAKE CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

DILLE TUNNEL (EAST PORTAL) NEAR DRAKE, CO

**LOCATION.**--Lat 40°25'10", long 105°14'45", NW¼NW¼ sec. 9, T.5 N., R.70 W., Larimer County. Diverts water from Big Thompson River and Transmountain diversions from Colorado River basin to Hansen Feeder Canal.

**GAGE.**--Data Collection Platform (DCP), incremental shaft encoder and Sutron Stage Discharge Recorder (SDR) in a concrete shelter and well at a 8-foot concrete Parshall Flume. The primary reference gage is an electric tape gage located within the shelter. There is no supplemental gage. The station is maintained by Northern Colorado Water Conservancy District (NCWCD), United States Bureau of Reclamation (USBR), and Colorado Division of Water Resources personnel as part of the Colorado-Big Thompson (C-BT) system.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with SDR data used as backup. Base gage and instruments are checked daily when tunnel is in operation by NCWCD personnel. The record is complete and reliable. The shaft encoder and SDR do not completely go to zero when the tunnel is not in use. Levels and flume inspection on October 9, 2007 found the inlet invert is approximately 0.09 feet above the flume floor and crest. Therefore, zero discharge is determined operationally, and confirmed by visits by NCWCD and DWR personnel and USBR water orders. Record is good. Flow at station is intermittent dependent on river flows, water orders, and other regulations. Station maintained and record developed by Russell Stroud.

**RATING TABLE.**--STD08FTPF Expanded USED FROM 01-Oct-2007 TO 30-Sep-2008

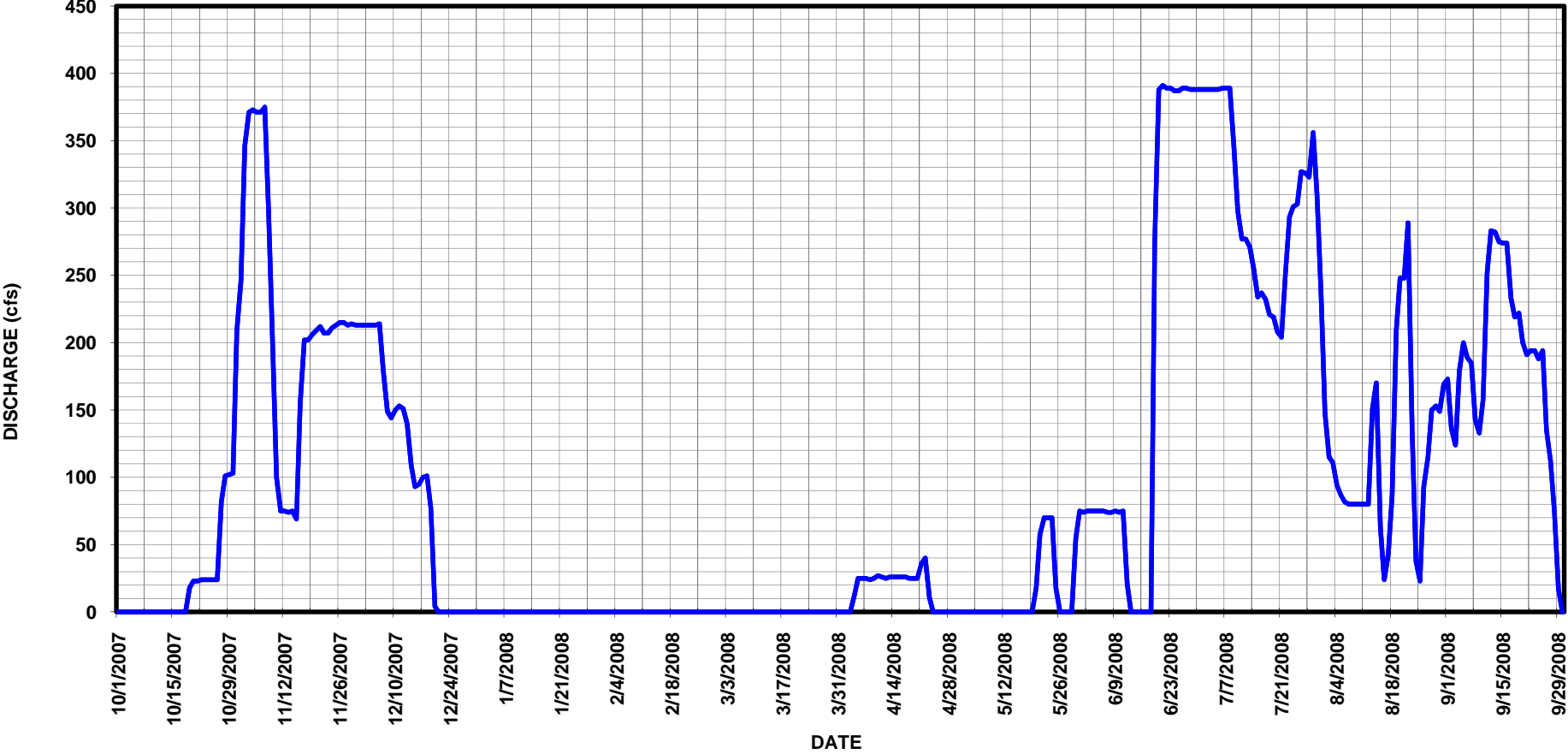
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	246	213	0	0	0	0	0	74	388	148	173
2	0	346	213	0	0	0	0	0	75	388	115	136
3	0	371	213	0	0	0	0	0	75	388	111	124
4	0	373	213	0	0	0	12	0	75	388	94	179
5	0	371	213	0	0	0	25	0	75	388	87	200
6	0	371	214	0	0	0	25	0	75	389	82	189
7	0	375	179	0	0	0	25	0	74	389	80	185
8	0	297	149	0	0	0	24	0	74	389	80	143
9	0	197	144	0	0	0	25	0	75	345	80	133
10	0	100	150	0	0	0	27	0	74	298	80	158
11	0	75	153	0	0	0	26	0	75	277	80	252
12	0	75	151	0	0	0	25	0	21	277	80	283
13	0	74	140	0	0	0	26	0	0	271	151	282
14	0	75	109	0	0	0	26	0	0	255	170	275
15	0	69	93	0	0	0	26	0	0	234	63	274
16	0	155	95	0	0	0	26	0	0	237	24	274
17	0	202	100	0	0	0	26	0	0	232	43	233
18	0	202	101	0	0	0	25	0	0	221	87	219
19	18	206	77	0	0	0	25	0	276	219	209	222
20	23	209	4.1	0	0	0	25	18	388	208	248	200
21	23	212	0	0	0	0	36	58	391	204	248	191
22	24	207	0	0	0	0	40	70	389	250	289	194
23	24	207	0	0	0	0	11	70	389	293	135	194
24	24	211	0	0	0	0	0	70	387	301	38	188
25	24	213	0	0	0	0	0	18	387	303	23	194
26	24	215	0	0	0	0	0	0	389	327	93	135
27	82	215	0	0	0	0	0	0	389	326	115	112
28	101	213	0	0	0	0	0	0	388	323	150	74
29	102	214	0	0	0	0	0	0	388	356	153	17
30	103	213	0	0	---	0	0	55	388	310	149	0
31	209	---	0	0	---	0	---	75	---	235	169	---
TOTAL	781	6509	2924.1	0	0	0	506	434	5391	9409	3674	5433
MEAN	25.2	217	94.3	0	0	0	16.9	14.0	180	304	119	181
AC-FT	1550	12910	5800	0	0	0	1000	861	10690	18660	7290	10780
MAX	209	375	214	0	0	0	40	75	391	389	289	283
MIN	0	69	0	0	0	0	0	0	0	204	23	0
CAL YR 2007	TOTAL	12618	MEAN	34.6	MAX	375	MIN	0	AC-FT	25030		
WTR YR 2008	TOTAL	35061	MEAN	95.8	MAX	391	MIN	0	AC-FT	69540		

MAX DISCH: 394 CFS AT 07:30 ON Jun. 21, 2008 GH 4.77 FT. SHIFT 0 FT.  
MAX GH: 4.77 FT. AT 07:30 ON Jun. 21, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

DILLE TUNNEL (EAST PORTAL) NEAR DRAKE CO  
WY2008 HYDROGRAPH





PLATTE RIVER BASIN

06738000 BIG THOMPSON RIVER AT MOUTH OF CANYON, NEAR DRAKE, CO

**LOCATION.**--Lat 40°25'18", long 105°13'34", in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 3, T,5 N., R.70 W., Larimer County, Hydrologic Unit 10190006, on right bank at mouth of canyon, 400 ft upstream from Handy Ditch diversion dam, and 6.0 mi east of Drake.

**DRAINAGE AREA AND PERIOD OF RECORD.**--305 mi<sup>2</sup>; 1927-1933, 1938 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a 5-foot by 6-foot pre-cast concrete shelter at concrete control section. The chart recorder and shaft encoder are activated by a Stacom manometer. An outside wire-weight is the primary reference gage. On April 2, 2008 A Sutron Constant Flow Bubbler (CFB) was installed and run concurrently with the Satcom manometer. A second CFB unit was installed in the Satcom manometer's place on July 11, 2008 and operated concurrently with the first CFB. On July 22, 2008 the gage was reoriented to run on a single Sutron CFB in its current configuration. On July 23, 2008, the DCP located in the shelter was removed and the CFB was permanently added to the Hansen Feeder Canal Wasteway to the Big Thompson River (HFCWASCO) Data Collection Platform (DCP) via a Design Analysis H-423 SDI-12 to RS-485 converter unit carried by buried copper wire placed by the United States Bureau of Reclamation (USBR) between this and the HFCWASCO gages. Additionally, a Design Analysis H-416 (SDI-12 to 4-20mA converter) is also connected to the CFB unit to provide a Supervisory Control and Data Acquisition (SCADA) output to the USBR's control center. The manned cableway located approximately 250-feet upstream of the shelter was removed on April 3, 2008. It had been deemed unsuitable for use and subsequently condemned prior to its removal. An aircraft cable pulley system intended for use with an Acoustic Doppler Current Profiler (ADCP) was installed across the channel perpendicular from the shelter on May 15, 2008 and subsequently removed in October, 2008. The measurement section was determined to be inadequate for ADCP use after attempting numerous ADCP measurements employing several different methods and techniques.

The gage is used by United States Bureau of Reclamation (USBR), Northern Colorado Water Conservancy District (NCWCD), Colorado Division of Water Resources (DWR) and Home Supply Ditch personnel.

**REMARKS.**--The primary record from October 1, 2007 to April 2, 2008 is hourly averages of 15-minute satellite data with chart record as backup. From April 2- July 11, 2008 the primary record is hourly averages of 15-minute CFB data with shaft encoder and chart record as backup. From July 12-September 30, 2008 the record is hourly averages of 15-minute CFB data with the CFB's independent log as backup. The record is complete, reliable, and good, except as follows: October 1-December 7, 2007, when manometer required several large calibration corrections, the record is considered fair; December 8-9, 2008, when the gage was affected by ice, the record is estimated and poor; December 10, 2007 to March 18, 2008, when the gage was off for the winter, the record is estimated and poor; March 18-31, 2008, when the manometer performance was questionable, the record is fair; April 1-2, 2008, partial day record for CFB installation, record is estimated and is rated fair; May 21-31, June 1-19, 22, 2008, when flows exceeded 200% of the highest WY08 discharge measurement, record rated as fair; and, July 23-24, 2008, partial day record for gage telemetry, record rated as fair. Following the installation of the Sutron CFB a marked increase in the accuracy of measured stage as well as better performance of the gage was noted. The CFB follows stage changes much cleaner and more realistically than the Stacom manometer. Stage and discharge records following the installation of the Sutron CFB should be noticeably better in future years.

Station maintained and record developed by Russell Stroud.

STATE OF COLORADO  
 DIVISION OF WATER RESOURCES  
 OFFICE OF STATE ENGINEER

STA NO. 6738000      BIG THOMPSON RIVER AT MOUTH OF CANYON NEAR DRAKE

Rating Table BTCANYC016      USED FROM 01-Oct-2007 TO 30-Sept-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	47	33	35	25	28	25	72	416	222	66	98
2	70	49	35	35	25	29	25	82	504	201	67	89
3	84	44	37	30	25	29	30	81	624	168	67	85
4	87	41	31	35	25	29	39	74	731	163	63	75
5	82	42	31	30	25	29	39	74	841	148	59	77
6	65	36	35	30	25	30	39	71	814	145	65	76
7	57	34	28	30	27	30	40	80	696	122	69	74
8	56	42	35	30	27	32	39	105	559	111	69	78
9	55	53	40	30	27	33	35	108	531	99	68	74
10	55	59	45	30	26	35	37	236	417	98	68	63
11	55	50	40	30	26	29	39	248	337	82	69	69
12	54	47	40	30	26	30	39	228	438	68	65	89
13	52	45	30	30	28	30	40	233	438	57	69	76
14	61	43	35	30	26	30	42	239	347	57	68	81
15	58	44	35	30	26	30	46	247	337	52	147	86
16	57	38	35	30	27	30	52	215	435	56	154	83
17	56	35	35	30	25	30	58	209	520	62	96	91
18	55	37	35	25	28	30	54	207	582	63	74	90
19	88	36	35	25	28	28	54	179	333	63	69	96
20	98	34	35	30	28	29	60	223	238	60	68	74
21	97	32	35	25	28	29	65	360	297	61	67	64
22	107	29	35	25	28	29	65	436	276	62	66	65
23	79	32	35	25	29	30	69	470	259	65	126	67
24	62	31	35	25	29	29	70	408	221	65	150	60
25	54	31	35	30	29	30	83	362	195	82	148	60
26	52	33	35	30	29	30	77	340	232	78	141	60
27	67	29	30	25	29	32	71	343	243	74	134	59
28	62	31	30	25	29	32	67	349	199	64	133	63
29	70	31	30	30	28	29	64	348	198	57	113	77
30	148	31	30	25	---	28	65	367	208	68	101	77
31	84	---	35	25	---	29	---	419	---	70	97	---
TOTAL	2183	1166	1070	895	783	927	1528	7413	12466	2843	2816	2276
MEAN	70.4	38.9	34.5	28.9	27.0	29.9	50.9	239	416	91.7	90.8	75.9
AC-FT	4330	2310	2120	1780	1550	1840	3030	14700	24730	5640	5590	4510
MAX	148	59	45	35	29	35	83	470	841	222	154	98
MIN	52	29	28	25	25	28	25	71	195	52	59	59

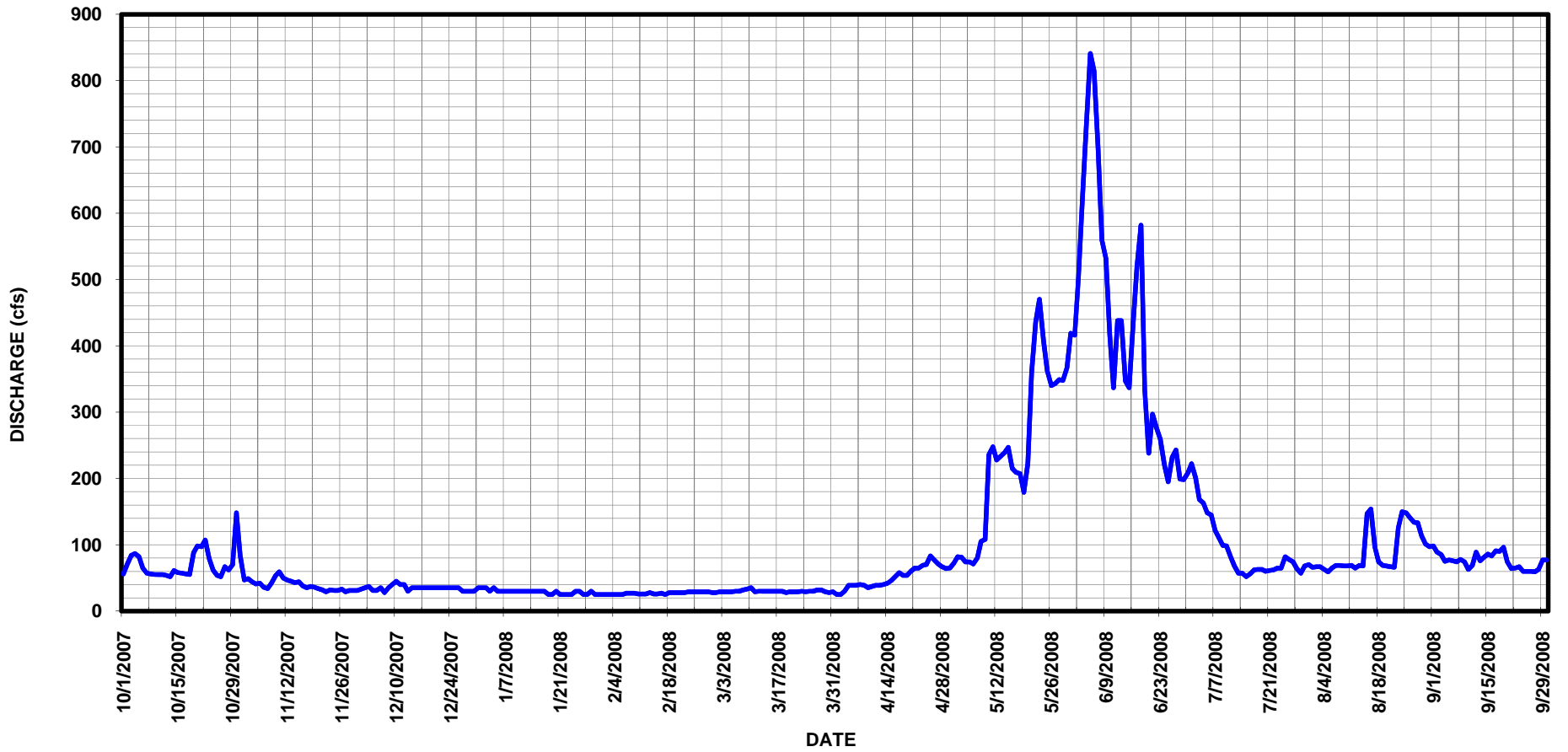
CAL YR	2007	TOTAL	34369	MEAN	94.2	MAX	279	MIN	23	AC-FT	68170
WTR YR	2008	TOTAL	36366	MEAN	99.4	MAX	841	MIN	25	AC-FT	72130

MAX DISCH: 923 CFS AT 17:30 ON Jun. 5, 2008 GH 4.14 FT. SHIFT 0 FT.  
 MAX GH: 4.14 FT. AT 17:30 ON Jun. 5, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

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06738000 BIG THOMPSON RIVER AT MOUTH OF CANYON NEAR DRAKE CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

BUCKHORN CREEK NEAR MASONVILLE, CO

**LOCATION.**--Lat 40°26'04", long 105°10'47", just downstream from Larimer County Road 24H bridge over Buckhorn Creek.

**DRAINAGE AREA.**--140mi<sup>2</sup>.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a wooden shelter and metal pipe stilling well at a formed concrete control. Primary reference gage is an electric tape gage inside the shelter with no supplemental outside reference.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart back up. Daily maximum and minimum stages for the satellite record checked to within +0.02 ft. with the chart. The record is complete and reliable, except for for January 1, 22, 2008, when the gage was ice affected. The record is good, except for periods of ice affected record, which are estimated and rated fair. Mean daily flows on June 6-7, 2008 and the peak on June 6, 2008 are rated poor since the stage-discharge relationship has not been confirmed at the stages experience since 2005. Station maintained and record developed by Mark Simpson.

**RATING TABLE.**--BUCRMVCO07 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

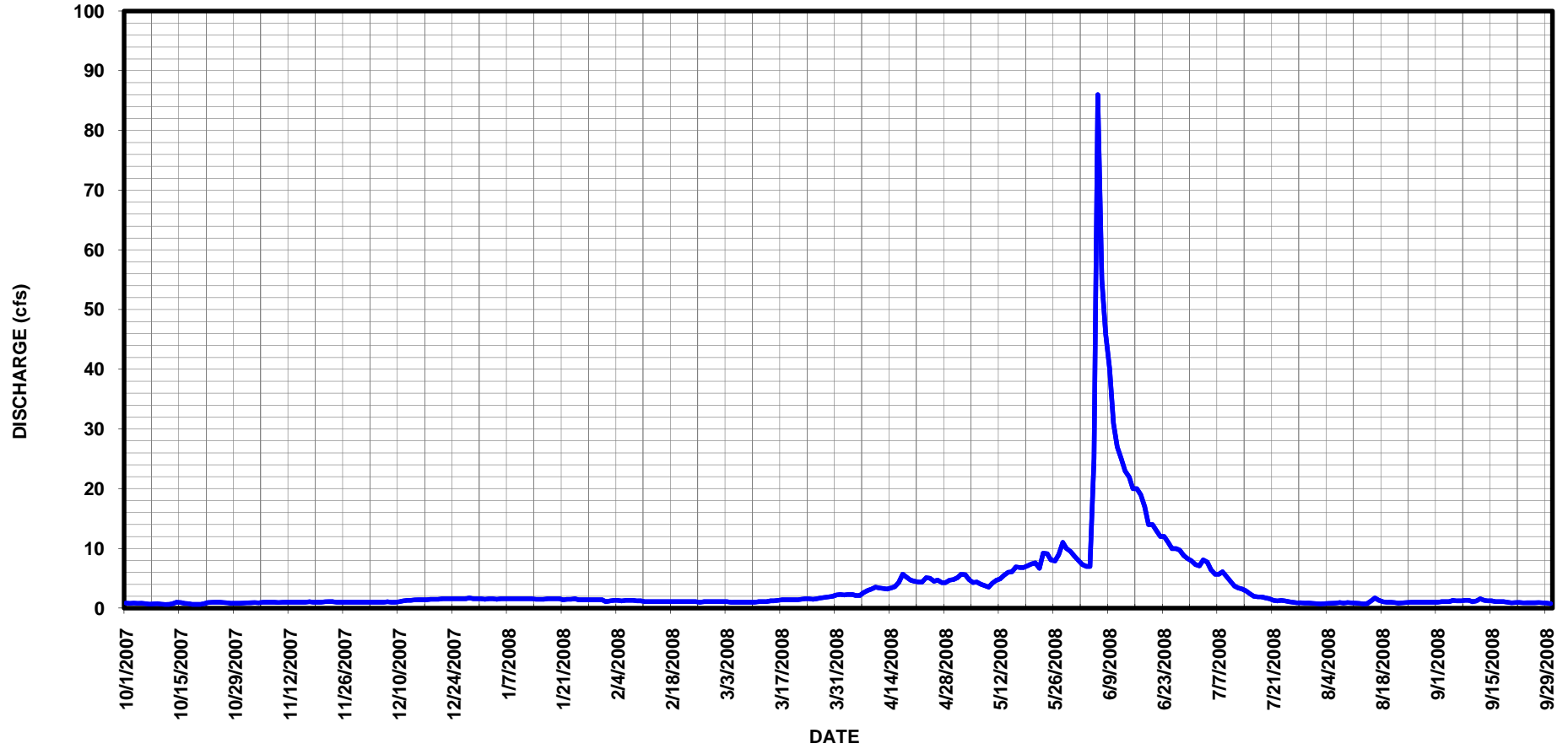
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.85	.90	.98	1.5	1.1	1.1	2.3	5.1	8.0	7.3	.78	1.0
2	.79	.89	.98	1.6	1.2	1.1	2.2	5.7	7.3	7.1	.70	1.1
3	.85	.95	.98	1.6	1.3	1.1	2.3	5.6	7.0	8.1	.77	1.1
4	.81	.92	.98	1.5	1.3	1.0	2.3	4.8	7.0	7.7	.82	1.1
5	.79	.97	.98	1.6	1.2	.98	2.1	4.3	25	6.4	.79	1.3
6	.75	.98	.98	1.6	1.3	.98	2.1	4.4	86	5.7	.85	1.2
7	.66	.98	1.1	1.6	1.3	.99	2.6	4.0	55	5.7	.95	1.2
8	.74	.97	1.0	1.6	1.3	.98	3.0	3.8	46	6.1	.87	1.3
9	.75	.94	.99	1.6	1.2	.98	3.2	3.5	40	5.3	.94	1.3
10	.69	1.0	1.1	1.6	1.2	.99	3.5	4.2	31	4.5	.90	1.1
11	.63	.99	1.2	1.6	1.1	1.1	3.4	4.7	27	3.7	.87	1.2
12	.65	.98	1.3	1.6	1.1	1.1	3.3	4.9	25	3.4	.81	1.6
13	.78	.98	1.3	1.6	1.1	1.1	3.2	5.5	23	3.2	.70	1.3
14	.99	.98	1.4	1.5	1.1	1.2	3.4	6.0	22	2.9	.75	1.2
15	.94	.99	1.4	1.5	1.1	1.2	3.6	6.1	20	2.4	1.2	1.2
16	.83	1.0	1.4	1.5	1.1	1.3	4.3	6.9	20	2.0	1.7	1.1
17	.77	1.1	1.4	1.6	1.1	1.4	5.7	6.8	19	1.9	1.3	1.1
18	.64	1.0	1.5	1.6	1.1	1.4	5.2	6.8	17	1.9	1.1	1.1
19	.65	1.0	1.5	1.6	1.1	1.4	4.7	7.1	14	1.7	.99	1.0
20	.65	.99	1.5	1.6	1.1	1.4	4.5	7.4	14	1.6	.97	.91
21	.78	1.1	1.6	1.4	1.1	1.4	4.4	7.6	13	1.3	.94	.94
22	.95	1.1	1.6	1.5	1.1	1.5	4.4	6.7	12	1.2	.86	.93
23	.98	1.1	1.6	1.5	1.1	1.6	5.1	9.2	12	1.3	.90	.90
24	.98	.98	1.6	1.6	1.1	1.6	5.0	9.1	11	1.2	.94	.92
25	.98	1.0	1.6	1.4	.98	1.5	4.5	8.1	10	1.1	.97	.91
26	.96	1.0	1.6	1.4	1.1	1.6	4.7	7.9	10	1.0	.98	.89
27	.92	.99	1.6	1.4	1.1	1.7	4.3	9.0	9.7	.90	.98	.96
28	.83	.99	1.7	1.4	1.1	1.8	4.3	11	8.8	.88	.99	.90
29	.83	.98	1.6	1.4	1.1	1.9	4.7	10	8.3	.87	1.0	.85
30	.83	.98	1.6	1.4	---	2.0	4.8	9.5	7.9	.86	1.0	.76
31	.87	---	1.6	1.4	---	2.2	---	8.7	---	.80	1.0	---
TOTAL	25.12	29.73	41.67	47.3	33.18	41.60	113.1	204.4	616.0	100.01	29.32	32.37
MEAN	.81	.99	1.34	1.53	1.14	1.34	3.77	6.59	20.5	3.23	.95	1.08
AC-FT	50	59	83	94	66	83	224	405	1220	198	58	64
MAX	.99	1.1	1.7	1.6	1.3	2.2	5.7	11	86	8.1	1.7	1.6
MIN	.63	.89	.98	1.4	.98	.98	2.1	3.5	7.0	.80	.70	.76

CAL YR	2007	TOTAL	2878.8	MEAN	7.89	MAX	43	MIN	.53	AC-FT	5710
WTR YR	2008	TOTAL	1313.8	MEAN	3.59	MAX	86	MIN	.63	AC-FT	2610

MAX DISCH: 110 CFS AT 02:30 ON Jun. 6, 2008 GH 5.92 FT. SHIFT -0.16 FT.  
MAX GH: 5.92 FT. AT 02:30 ON Jun. 6, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

### BUCKHORN CREEK NEAR MASONVILLE CO WY2008 HYDROGRAPH



PLATTE RIVER BASIN

CHARLES HANSEN FEEDER CANAL BELOW BIG THOMPSON SIPHON NEAR DRAKE, CO

**LOCATION.**--Lat 40°25'20", long 105°13'33", SW¼SW¼ sec. 3, T.5 N., T.70 W., Larimer County.

**GAGE.**--Data Collection Platform (DCP), incremental shaft encoder and Sutron Stage Discharge Recorder (SDR) in a 4 ft x 4 ft pre-cast concrete shelter and concrete well. An electric tape gage is the primary reference with no supplemental staff gage. The control is check structure installed in the canal bottom. AC power is available at the gage and heaters are used to keep the stilling well from freezing in winter months. Station is maintained in cooperation with the State of Colorado Division of Water Resources (DWR), United States Bureau of Reclamation (USBR) and Northern Colorado Water Conservancy District (NCWCD). This gage is part of the Colorado Big Thompson (C-BT) project.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with SDR record as backup. The record is complete and reliable. The record is good. Station maintained and record developed by Russell Stroud.

**RATING TABLE.**--HFCBBSCO17 USED FROM 01-Oct-2007 TO 30-Sept-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

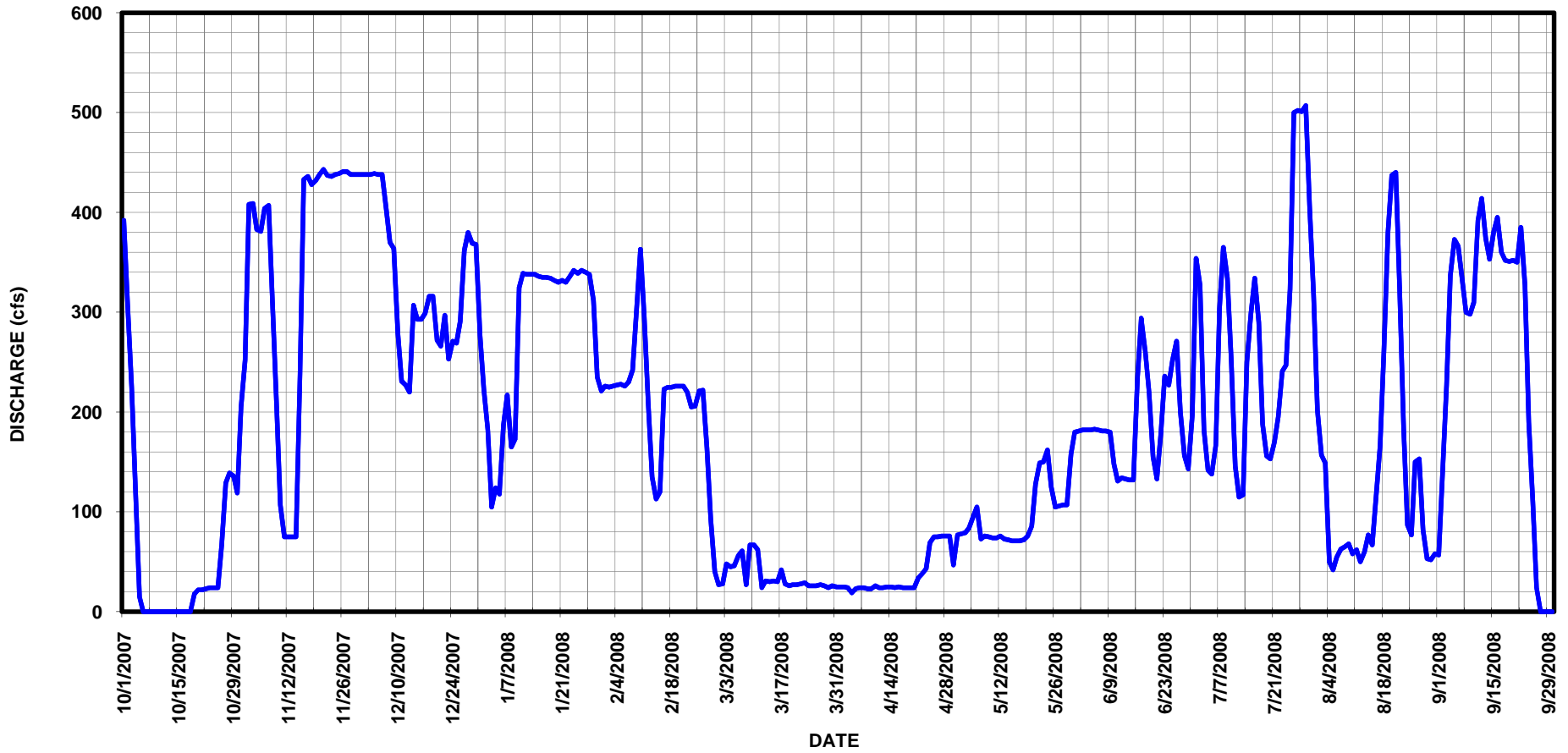
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	392	252	438	223	226	27	25	77	181	354	202	57
2	308	408	438	182	225	28	25	78	182	327	157	138
3	225	409	438	105	226	48	24	79	182	182	149	227
4	123	383	439	124	227	45	19	84	182	142	50	337
5	15	381	438	118	228	46	23	95	183	138	42	373
6	0	404	438	187	226	56	24	105	182	167	55	366
7	0	407	406	217	230	61	24	73	181	304	63	332
8	0	310	370	165	242	27	23	76	181	365	65	300
9	0	208	364	173	300	67	23	75	180	334	68	298
10	0	107	279	325	363	67	26	74	148	254	58	310
11	0	75	231	339	295	62	24	74	131	146	62	392
12	0	75	227	338	207	24	24	76	134	115	50	414
13	0	75	220	338	135	31	25	73	133	117	60	374
14	0	75	307	338	113	30	25	72	132	250	77	353
15	0	238	293	336	120	31	24	71	132	299	67	380
16	0	433	293	335	223	30	25	71	234	334	115	395
17	0	436	299	335	225	42	24	71	294	290	166	360
18	0	428	316	334	225	28	24	72	261	188	261	352
19	18	432	316	332	226	26	24	76	220	156	380	351
20	22	438	272	330	226	27	24	86	155	153	437	352
21	22	443	266	332	226	27	34	128	133	170	440	350
22	23	437	297	330	220	28	38	149	179	195	324	385
23	24	436	253	336	205	29	43	150	236	241	183	327
24	24	438	271	342	206	26	69	162	227	247	87	190
25	24	439	269	339	221	26	75	125	252	323	77	110
26	67	441	291	342	222	26	75	105	271	500	150	24
27	129	441	362	340	164	27	76	106	200	502	153	0
28	139	438	380	338	93	26	76	107	156	501	82	0
29	136	438	369	312	40	24	76	107	143	507	53	0
30	119	438	368	235	---	26	47	158	197	407	52	0
31	205	---	277	221	---	25	---	180	---	317	58	---
TOTAL	2015	10363	10225	8641	6085	1093	1088	3035	5602	8525	4243	7847
MEAN	65.0	345	330	279	210	35.3	36.3	97.9	187	275	137	262
AC-FT	4000	20560	20280	17140	12070	2170	2160	6020	11110	16910	8420	15560
MAX	392	443	439	342	363	67	76	180	294	507	440	414
MIN	0	75	220	105	40	24	19	71	131	115	42	0

CAL YR	2007	TOTAL	78184	MEAN	214	MAX	517	MIN	0	AC-FT	155000
WTR YR	2008	TOTAL	68762	MEAN	188	MAX	507	MIN	0	AC-FT	136400

MAX DISCH: 526 CFS AT 15:00 ON Jul. 29, 2008 GH 6.51 FT. SHIFT 0 FT.  
MAX GH: 6.51 FT. AT 15:00 ON Jul. 29, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

CHARLES HANSEN FEEDER CANAL BELOW BIG THOMPSON SIPHON NEAR DRAKE CO  
WY2008 HYDROGRAPH





PLATTE RIVER BASIN

06738100 CHARLES HANSEN FEEDER CANAL WASTEWAY TO BIG THOMPSON NEAR DRAKE, CO

**LOCATION.**--Lat 40°25'11", long 105°13'30", NE¼NW¼ sec. 10, T.5 N., R.70 W., Larimer County. Hydrologic unit 10190006, on right bank of Charles Hansen Feeder Canal Wasteway, at canal trifurcation, 0.25 miles south of US Route 34, and 7 miles west of Loveland, Colorado.

**GAGE.**--Data Collection Platform (DCP), Design Analysis H-334 Absolute shaft encoder, weather station, and Sutron Stage Discharge Recorder (SDR) in a 4 ft x 4 ft precast concrete shelter and concrete well at a 15-foot modified concrete Parshall Flume. An electric drop tape located in the shelter serves as the primary reference with a supplemental outside staff gage at the flume H<sub>a</sub> location. AC power is available on site. Data are also transmitted to a Supervisory Control And Data Acquisition (SCADA) system via 4-20 mA output to the Loveland Control Center (LCC). After July 24, 2008, data acquired from the Big Thompson River at Canyon Mouth (BTCANYCO) gage was added as a telemetered parameter to Hansen Feeder Canal Wasteway to Big Thompson River (HFCWASCO) DCP. This gage is operated in cooperation with Colorado Division of Water Resources (DWR), United States Bureau of Reclamation (USBR) and Northern Colorado Water Conservancy District (NCWCD) as part of the Colorado Big Thompson (C-BT) project.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with the SDR data as backup. The record is complete and reliable. Record is good. Station maintained by NCWCD, USBR, and DWR personnel, and record developed by Russell Stroud.

**RATING TABLE.**--HFCWASCO03 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

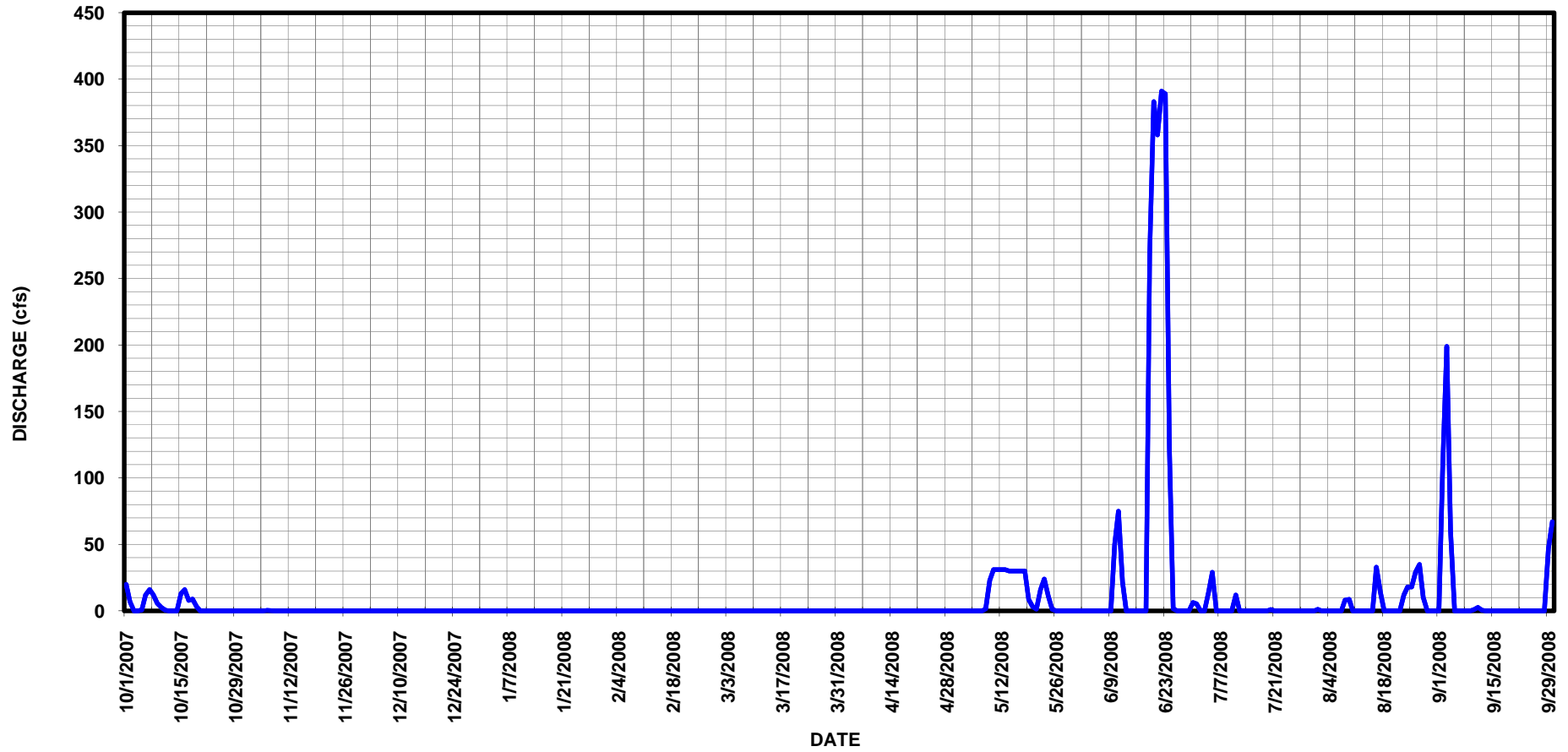
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	0	0	0	0	0	0	0	0	5.3	1.3	0
2	7.0	0	0	0	0	0	0	0	0	0	0	109
3	0	0	0	0	0	0	0	0	0	0	0	199
4	0	0	0	0	0	0	0	0	0	14	0	60
5	.76	0	0	0	0	0	0	0	0	29	0	0
6	12	.40	0	0	0	0	0	0	0	0	0	0
7	16	.24	0	0	0	0	0	0	0	0	0	0
8	12	0	0	0	0	0	0	1.7	0	0	8.2	0
9	5.4	0	0	0	0	0	0	23	0	0	8.7	0
10	2.7	0	0	0	0	0	0	31	50	0	0	.94
11	.68	0	0	0	0	0	0	31	75	12	0	2.6
12	0	0	0	0	0	0	0	31	22	0	0	.52
13	0	0	0	0	0	0	0	31	0	0	0	0
14	0	0	0	0	0	0	0	30	0	0	0	0
15	13	0	0	0	0	0	0	30	0	0	0	0
16	16	0	0	0	0	0	0	30	0	0	33	0
17	8.0	0	0	0	0	0	0	30	0	0	14	0
18	8.9	0	0	0	0	0	0	30	0	0	0	0
19	3.3	0	0	0	0	0	0	8.8	270	0	0	0
20	0	0	0	0	0	0	0	3.3	383	1.1	0	0
21	0	0	0	0	0	0	0	1.4	358	0	0	0
22	0	0	0	0	0	0	0	16	391	0	0	0
23	0	0	0	0	0	0	0	24	389	0	12	0
24	0	0	0	0	0	0	0	11	122	0	18	0
25	0	0	0	0	0	0	0	1.5	1.7	0	18	0
26	0	0	0	0	0	0	0	0	0	0	29	0
27	0	0	0	0	0	0	0	0	0	0	35	0
28	0	0	0	0	0	0	0	0	0	0	10	0
29	0	0	0	0	0	0	0	0	0	0	0	47
30	0	0	0	0	---	0	0	0	6.2	0	0	67
31	0	---	0	0	---	0	---	0	---	0	0	---
TOTAL	125.74	.64	0	0	0	0	0	364.7	2067.9	61.4	187.2	486.06
MEAN	4.06	.021	0	0	0	0	0	11.8	68.9	1.98	6.04	16.2
AC-FT	249	1.3	0	0	0	0	0	723	4100	122	371	964
MAX	20	.40	0	0	0	0	0	31	391	29	35	199
MIN	0	0	0	0	0	0	0	0	0	0	0	0

CAL YR	2007	TOTAL	16406.6	MEAN	45	MAX	373	MIN	0	AC-FT	32540
WTR YR	2008	TOTAL	3293.64	MEAN	9	MAX	391	MIN	0	AC-FT	6530

MAX DISCH: 422 CFS AT 16:30 ON Jun. 20, 2008 GH 3.33 FT. SHIFT 0 FT.  
MAX GH: 3.33 FT. AT 16:30 ON Jun. 20, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06738100 CHARLES HANSEN FEEDER CANAL WASTEWAY TO BIG THOMPSON NEAR DRAKE CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06738100 CHARLES HANSEN FEEDER CANAL POWER PLANT TO BIG THOMPSON RIVER  
NEAR DRAKE, CO

**LOCATION.**--Lat 40°25'15", long 105°13'30", NE¼NW¼ sec. 10, T.5 N., R.70 W., Larimer County, Hydrologic unit 10190006, on right bank of Big Thompson River, .25 miles downstream of canyon mouth, 0.25 miles north of US Route 34, and 7 miles west of Loveland, Colorado.

**GAGE.**--Data Collection Platform (DCP) connected to a flow meter directly connected to the power turbine. The graphic recorder was not put into use this year as per agreement with the Colorado Division of Water Resources (DWR) and the United States Bureau of Reclamation (USBR). This gage is operated in cooperation of DWR and USBR personnel as part of the Colorado-Big Thompson project.

**REMARKS.**--The primary record is fifteen minute discharge data from the ultrasonic flow meter and collected by the DCP. The record is complete and reliable, except the unadjusted peak discharge value recorded on June 20, 2008 (16:15) of 408 cfs was discarded. Erroneous value is assumed to be due to water hammer at the meter location. Record is good, except for June 19-24, 2008 which is fair, due to attempts to start power generation. In agreement with DWR and USBR, the gage will continue to transmit over the winter while the power plant is offline. Station maintained by USBR and record developed by Russell Stroud.

**RATING TABLE.**--STCONVERT USED FROM 01-OCT-2007 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

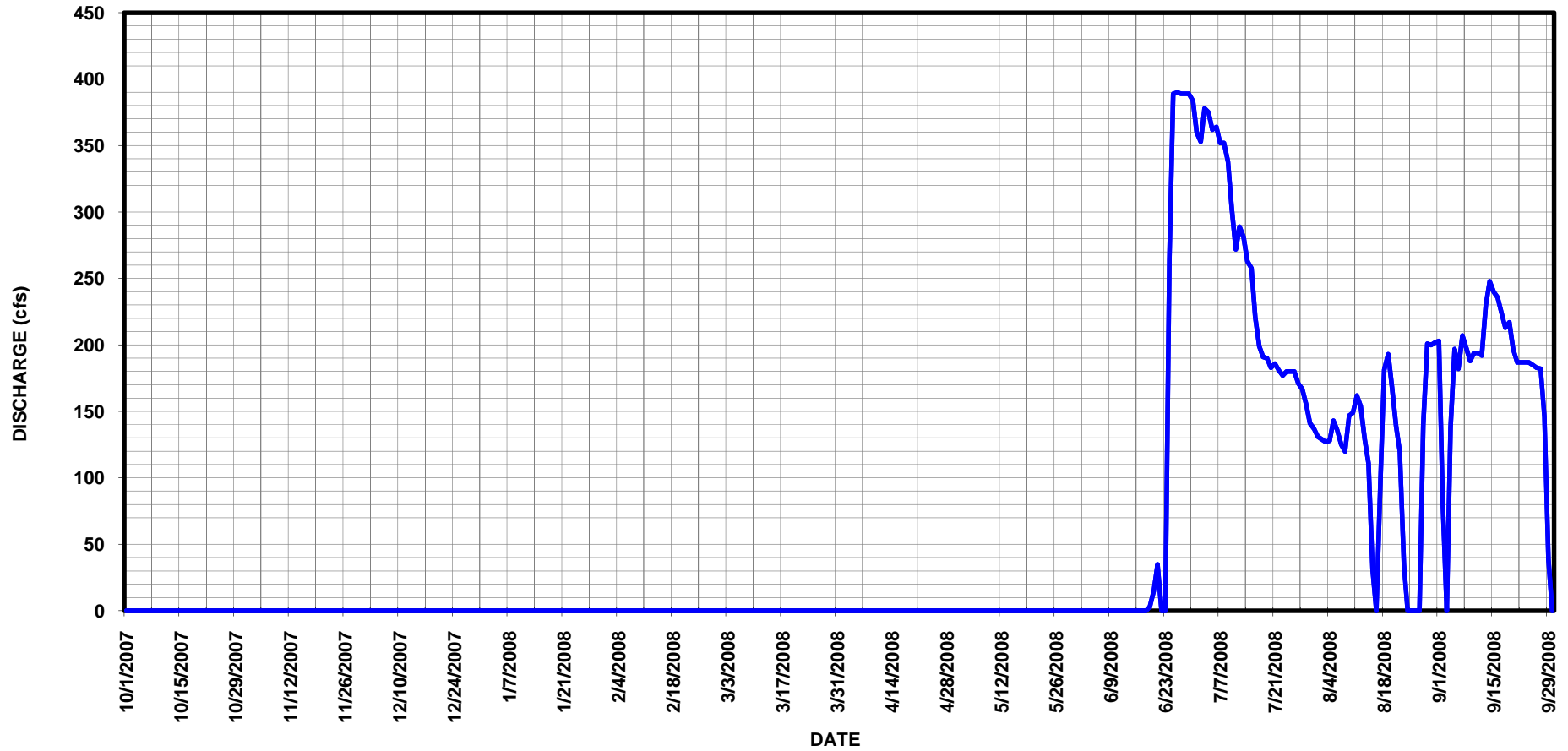
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	360	131	203
2	0	0	0	0	0	0	0	0	0	353	129	82
3	0	0	0	0	0	0	0	0	0	378	127	0
4	0	0	0	0	0	0	0	0	0	375	128	138
5	0	0	0	0	0	0	0	0	0	362	143	197
6	0	0	0	0	0	0	0	0	0	364	136	182
7	0	0	0	0	0	0	0	0	0	352	125	207
8	0	0	0	0	0	0	0	0	0	352	120	198
9	0	0	0	0	0	0	0	0	0	338	147	188
10	0	0	0	0	0	0	0	0	0	303	149	194
11	0	0	0	0	0	0	0	0	0	272	162	194
12	0	0	0	0	0	0	0	0	0	289	154	192
13	0	0	0	0	0	0	0	0	0	281	129	230
14	0	0	0	0	0	0	0	0	0	263	111	248
15	0	0	0	0	0	0	0	0	0	258	31	240
16	0	0	0	0	0	0	0	0	0	221	0	236
17	0	0	0	0	0	0	0	0	0	199	97	224
18	0	0	0	0	0	0	0	0	0	191	181	213
19	0	0	0	0	0	0	0	0	2.8	190	193	217
20	0	0	0	0	0	0	0	0	15	183	168	197
21	0	0	0	0	0	0	0	0	35	186	139	187
22	0	0	0	0	0	0	0	0	0	181	120	187
23	0	0	0	0	0	0	0	0	0	177	35	187
24	0	0	0	0	0	0	0	0	264	180	0	187
25	0	0	0	0	0	0	0	0	389	180	0	185
26	0	0	0	0	0	0	0	0	390	180	0	183
27	0	0	0	0	0	0	0	0	389	171	0	182
28	0	0	0	0	0	0	0	0	389	167	140	146
29	0	0	0	0	0	0	0	0	389	155	201	39
30	0	0	0	0	---	0	0	0	384	141	200	0
31	0	---	0	0	---	0	---	0	---	137	202	---
TOTAL	0	0	0	0	0	0	0	0	2646.8	7739	3598	5263
MEAN	0	0	0	0	0	0	0	0	88.2	250	116	175
AC-FT	0	0	0	0	0	0	0	0	5250	15350	7140	10440
MAX	0	0	0	0	0	0	0	0	390	378	202	248
MIN	0	0	0	0	0	0	0	0	0	137	0	0

CAL YR	2007	TOTAL	7529.0	MEAN	20.6	MAX	232	MIN	0	AC-FT	14930
WTR YR	2008	TOTAL	19246.8	MEAN	52.6	MAX	390	MIN	0	AC-FT	38180

MAX DISCH: 403 CFS AT 13:15 ON Jun. 21, 2008 GH 403 FT. SHIFT 0 FT.

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06738100 CHARLES HANSEN FEEDER CANAL POWER PLANT TO BIG THOMPSON RIVER NEAR DRAKE CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

BOULDER CREEK FEEDER CANAL NEAR LYONS, CO

**LOCATION.**--Lat 40°12'58", long 105°15'28", NE¼NW¼ sec. 20, T.3 N., R.70 W., Boulder County, about 0.2 miles east of Lyons, CO.

**DRAINAGE AREA.**--N/A

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a 6 ft x 8 ft concrete shelter at a 10-ft concrete Parshall flume. The primary reference gage is an electric tape gage located in the shelter with a supplemental staff located at the H<sub>a</sub> location on the right wing wall. The Stevens recorder was removed in May 2008. A Sutron Stage Discharge Recorder (SDR) was installed on June 20, 2008 to provide backup record. The gage is operated in cooperation with Northern Colorado Water Conservancy District (NCWCD) and the State of Colorado Division of Water Resources (DWR).

**REMARKS.**--The primary record is the hourly averages of 15-minute satellite data during the period October 1, 2007 to June 20, 2008. From June 21 to September 30, 2008 the primary record is hourly averages of 15-minute satellite data with the SDR as backup. The record is complete and reliable. The record is good. Structure is not operated in winter months. The structure was turned off from November 1, 2007 through May 5, 2008. Station maintained by NCWCD and DWR personnel and record developed by Russell Stroud.

**RATING TABLE.**--BFCLYOCO02 USED FROM 01-Oct-2007 TO 30-Sep-2008

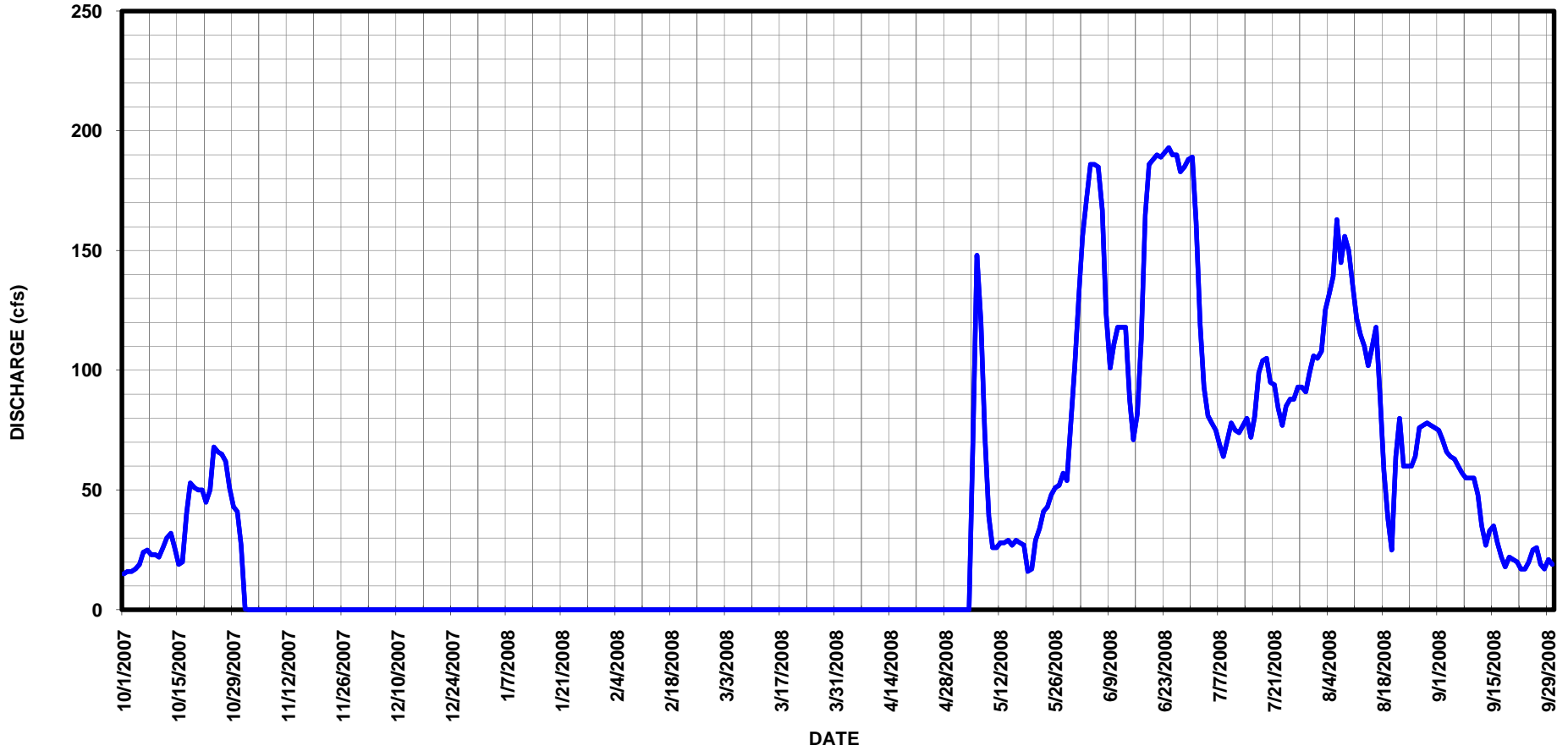
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	.32	0	0	0	0	0	0	131	162	105	75
2	16	0	0	0	0	0	0	0	156	119	108	71
3	16	0	0	0	0	0	0	0	172	93	125	66
4	17	0	0	0	0	0	0	0	186	81	132	64
5	19	0	0	0	0	0	0	74	186	78	139	63
6	24	0	0	0	0	0	0	148	185	75	163	60
7	25	0	0	0	0	0	0	120	167	69	145	57
8	23	0	0	0	0	0	0	74	124	64	156	55
9	23	0	0	0	0	0	0	39	101	71	150	55
10	22	0	0	0	0	0	0	26	111	78	136	55
11	26	0	0	0	0	0	0	26	118	75	122	48
12	30	0	0	0	0	0	0	28	118	74	115	35
13	32	0	0	0	0	0	0	28	118	77	110	27
14	26	0	0	0	0	0	0	29	88	80	102	33
15	19	0	0	0	0	0	0	27	71	72	110	35
16	20	0	0	0	0	0	0	29	82	81	118	28
17	40	0	0	0	0	0	0	28	113	99	89	22
18	53	0	0	0	0	0	0	27	165	104	58	18
19	51	0	0	0	0	0	0	16	186	105	38	22
20	50	0	0	0	0	0	0	17	188	95	25	21
21	50	0	0	0	0	0	0	29	190	94	64	20
22	45	0	0	0	0	0	0	34	189	84	80	17
23	50	0	0	0	0	0	0	41	191	77	60	17
24	68	0	0	0	0	0	0	43	193	85	60	20
25	66	0	0	0	0	0	0	48	190	88	60	25
26	65	0	0	0	0	0	0	51	190	88	64	26
27	62	0	0	0	0	0	0	52	183	93	76	19
28	51	0	0	0	0	0	0	57	185	93	77	17
29	43	0	0	0	0	0	0	54	188	91	78	21
30	41	0	0	0	---	0	0	79	189	99	77	19
31	27	---	0	0	---	0	---	102	---	106	76	---
TOTAL	1115	.32	0	0	0	0	0	1326	4654	2750	3018	1111
MEAN	36.0	.011	0	0	0	0	0	42.8	155	88.7	97.4	37.0
AC-FT	2210	.6	0	0	0	0	0	2630	9230	5450	5990	2200
MAX	68	.32	0	0	0	0	0	148	193	162	163	75
MIN	15	0	0	0	0	0	0	0	71	64	25	17
CAL YR 2007	TOTAL	9427.74	MEAN	25.8	MAX	129	MIN	0	AC-FT	18700		
WTR YR 2008	TOTAL	13974.32	MEAN	38.2	MAX	193	MIN	0	AC-FT	27720		

MAX DISCH: 199 CFS AT 12:15 ON Jun. 26, 2008 GH 2.71 FT. SHIFT 0 FT.  
MAX GH: 2.71 FT. AT 12:15 ON Jun. 26, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

**BOULDER CREEK FEEDER CANAL NEAR LYONS CO  
WY2008 HYDROGRAPH**



PLATTE RIVER BASIN

ST. VRRAIN SUPPLY CANAL NEAR LYONS, CO

**LOCATION.**--Lat 40°13'05", long 105°15'35", NE¼NW¼ sec. 20, T.3 N., R.70 W., Boulder County, about 0.2 miles east of Lyons,CO.

**DRAINAGE AREA.**--N/A

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a 36-inch corrugated metal pipe shelter and stilling well at a concrete 15-foot Parshall flume. An electric tape gage located in the shelter is the primary reference gage with a supplemental staff located on the right wing wall at the H<sub>a</sub> location. The gage is operated in cooperation with Northern Colorado Water Conservancy District (NCWCD) and the State of Colorado Division of Water Resources (DWR).

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart as backup. The record is complete and reliable, except for: zero flow on November 1-12, 2007 was found to be residual water in the stilling well as supported by the November 12<sup>th</sup> observation of zero flow. Thus, sustained flows for gage-height values of 0.08 feet or less occurring on portions of November 1, 2007 and May 19-20, 2008 were set to zero. Structure is not operated in winter months. The structure was turned off from November 1, 2007 through May 5, 2008. The DCP and graphical chart recorder are disabled when the canal is not in use. The record is good. Station maintained by NCWCD and DWR personnel and record developed by Russell Stroud.

**RATING TABLE.**--SVSLYOCO05 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

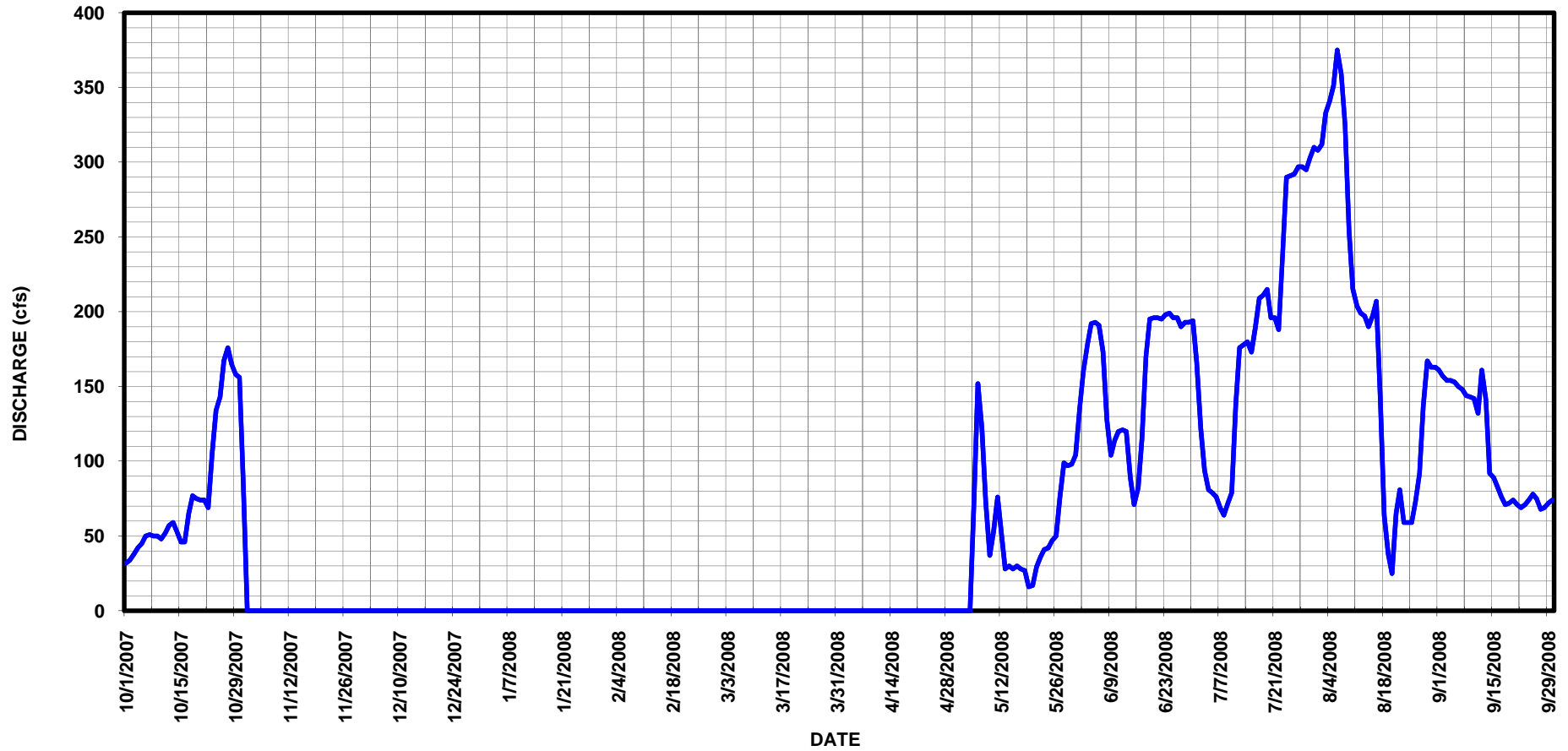
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	.23	0	0	0	0	0	0	135	166	308	161
2	34	0	0	0	0	0	0	0	160	122	312	157
3	38	0	0	0	0	0	0	0	178	94	333	154
4	42	0	0	0	0	0	0	0	192	81	341	154
5	45	0	0	0	0	0	0	75	193	79	351	153
6	50	0	0	0	0	0	0	152	191	76	375	150
7	51	0	0	0	0	0	0	122	173	69	359	148
8	50	0	0	0	0	0	0	73	128	64	325	144
9	50	0	0	0	0	0	0	37	104	72	254	143
10	48	0	0	0	0	0	0	53	114	79	215	142
11	52	0	0	0	0	0	0	76	120	138	204	132
12	57	0	0	0	0	0	0	52	121	176	199	161
13	59	0	0	0	0	0	0	28	120	178	197	141
14	53	0	0	0	0	0	0	30	89	180	190	92
15	46	0	0	0	0	0	0	28	71	173	197	89
16	46	0	0	0	0	0	0	30	82	189	207	83
17	65	0	0	0	0	0	0	28	115	209	140	76
18	77	0	0	0	0	0	0	27	170	211	64	71
19	75	0	0	0	0	0	0	16	195	215	38	72
20	74	0	0	0	0	0	0	17	196	196	25	74
21	74	0	0	0	0	0	0	29	196	196	65	71
22	69	0	0	0	0	0	0	36	195	188	81	69
23	106	0	0	0	0	0	0	41	198	240	59	71
24	134	0	0	0	0	0	0	42	199	290	59	74
25	143	0	0	0	0	0	0	47	196	291	59	78
26	167	0	0	0	0	0	0	50	196	292	73	75
27	176	0	0	0	0	0	0	76	190	297	92	68
28	165	0	0	0	0	0	0	99	193	297	137	69
29	158	0	0	0	0	0	0	97	193	295	167	72
30	156	0	0	0	---	0	0	98	194	303	163	74
31	87	---	0	0	---	0	---	104	---	310	163	---
TOTAL	2479	.23	0	0	0	0	0	1563	4797	5766	5752	3218
MEAN	80.0	.008	0	0	0	0	0	50.4	160	186	186	107
AC-FT	4920	.5	0	0	0	0	0	3100	9510	11440	11410	6380
MAX	176	.23	0	0	0	0	0	152	199	310	375	161
MIN	32	0	0	0	0	0	0	0	71	64	25	68

CAL YR	2007	TOTAL	20976.23	MEAN	57.5	MAX	278	MIN	0	AC-FT	41610
WTR YR	2008	TOTAL	23575.23	MEAN	64.4	MAX	375	MIN	0	AC-FT	46760

MAX DISCH: 388 CFS AT 20:00 ON Aug. 6, 2008 GH 3.16 FT. SHIFT 0 FT.  
MAX GH: 3.16 FT. AT 20:00 ON Aug. 6, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

### ST. VRAIN SUPPLY CANAL NEAR LYONS CO WY2008 HYDROGRAPH





PLATTE RIVER BASIN

LITTLE THOMPSON RIVER AT CANYON MOUTH NEAR BERTHOUD, CO

**LOCATION.**--Lat 40°15'29", long 105°12'21", SW¼NW¼ sec. 2, T. 3 N., 70 W., Boulder County, on the left bank, at the mouth of the Canyon, 1800 ft. upstream from the Culver Ditch Diversion and 8.5 mi. southwest of Berthoud, Co.

**DRAINAGE AREA AND PERIOD OF RECORD.**--100 mi<sup>2</sup>; 1962-1969, 1993 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a 42-inch CMP shelter and well. A drop tape from an adjustable reference point is the primary reference gage.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart as back up. The record is complete and reliable for the period of gage operation, except for December 28 and March 6, when only partial day record was available due to gage closing and opening. The station was closed for winter from December 28, 2007 through March 06, 2008. The record is considered fair, except for December 28 and March 6 which were estimated and poor. This gage is a partial year station that is closed in the winter months. Station maintained by Mark Simpson and record developed by Lee Cunning.

**RATING TABLE.**--LTCANYCO12 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

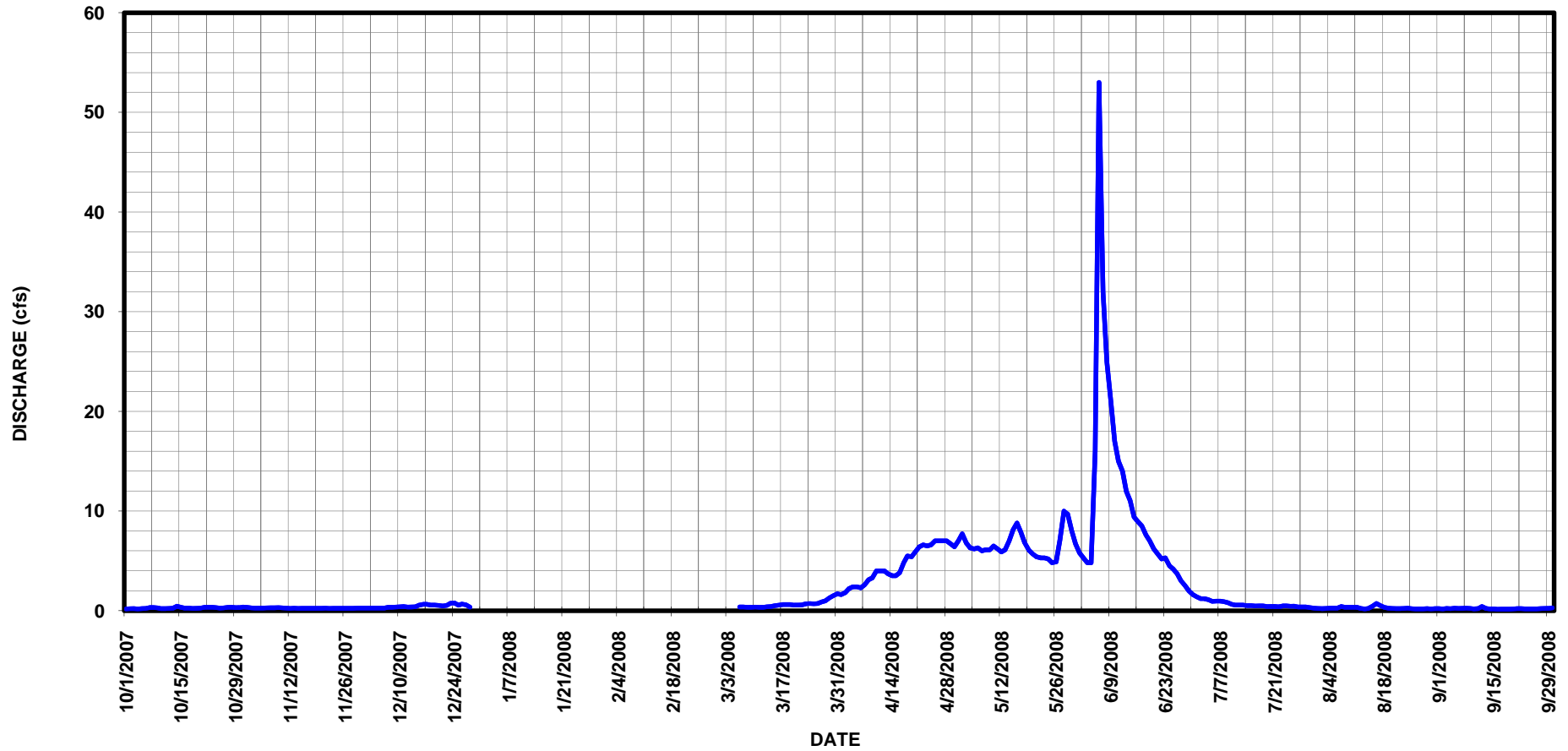
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.35	.27	---	---	---	1.6	6.9	4.8	1.4	.23	.20
2	.20	.29	.27	---	---	---	1.8	7.7	4.1	1.2	.20	.19
3	.20	.27	.27	---	---	---	2.2	6.6	3.8	1.2	.22	.22
4	.19	.26	.27	---	---	---	2.4	6.1	3.8	1.1	.27	.21
5	.20	.27	.27	---	---	---	2.4	6.0	18	.94	.25	.26
6	.22	.29	.27	---	---	.36	2.3	5.8	62	.96	.27	.24
7	.30	.28	.34	---	---	.36	2.6	5.3	36	.97	.41	.23
8	.30	.29	.34	---	---	.35	3.1	5.4	29	.92	.35	.25
9	.28	.30	.37	---	---	.35	3.3	5.4	24	.79	.33	.23
10	.21	.29	.39	---	---	.36	4.0	6.1	20	.65	.34	.19
11	.20	.25	.41	---	---	.33	4.0	5.6	18	.55	.34	.21
12	.22	.24	.38	---	---	.35	4.0	5.1	16	.57	.22	.43
13	.27	.25	.38	---	---	.39	3.7	5.5	15	.55	.18	.23
14	.46	.24	.40	---	---	.43	3.5	6.3	13	.51	.23	.19
15	.34	.23	.55	---	---	.49	3.5	7.7	11	.49	.46	.18
16	.27	.23	.63	---	---	.55	3.8	8.6	11	.47	.72	.16
17	.25	.23	.64	---	---	.61	4.8	7.4	10	.48	.49	.15
18	.23	.22	.57	---	---	.60	5.5	6.2	9.1	.48	.33	.15
19	.24	.22	.56	---	---	.60	5.4	5.2	8.4	.43	.25	.16
20	.26	.22	.52	---	---	.56	5.9	4.6	7.1	.41	.24	.17
21	.35	.27	.48	---	---	.56	6.4	4.1	6.4	.41	.21	.20
22	.33	.23	.53	---	---	.58	6.6	3.9	5.7	.40	.21	.20
23	.33	.23	.74	---	---	.69	6.5	3.8	5.9	.47	.23	.18
24	.31	.23	.77	---	---	.73	6.6	3.8	5.1	.48	.25	.18
25	.27	.23	.57	---	---	.70	7.0	3.4	4.6	.44	.20	.18
26	.28	.23	.67	---	---	.72	7.3	3.5	3.7	.45	.18	.18
27	.34	.23	.59	---	---	.89	7.2	6.2	3.0	.38	.18	.21
28	.34	.23	.36	---	---	.98	6.9	10	2.5	.37	.19	.22
29	.31	.27	---	---	---	1.3	6.4	9.5	2.0	.37	.20	.24
30	.32	.27	---	---	---	1.5	6.1	7.2	1.6	.32	.19	.28
31	.37	---	---	---	---	1.7	---	5.9	---	.26	.20	---
TOTAL	8.57	7.64	12.81	---	---	17.04	136.8	184.8	364.6	19.42	8.57	6.32
MEAN	.28	.25	.46	---	---	.66	4.56	5.96	12.2	.63	.28	.21
AC-FT	17	15	25	---	---	34	271	367	723	39	17	13
MAX	.46	.35	.77	---	---	1.7	7.3	10	62	1.4	.72	.43
MIN	.18	.22	.27	---	---	.33	1.6	3.4	1.6	.26	.18	.15

CAL YR 2007 TOTAL 4314.04 MEAN 14.48 MAX 97 MIN .07 AC-FT 8560 (PARTIAL YEAR RECORD)  
WTR YR 2008 TOTAL 766.57 MEAN 2.57 MAX 62 MIN .15 AC-FT 1520 (PARTIAL YEAR RECORD)

MAX DISCH: 85.5 CFS AT 22:45 ON Jun. 5, 2008 GH 3.59 FT. SHIFT 0.00 FT.  
MAX GH: 3.59 FT. AT 22:45 ON Jun. 5, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

LITTLE THOMPSON RIVER AT CANYON MOUTH NEAR BERTHOUD CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06744000 BIG THOMPSON RIVER AT MOUTH NEAR LA SALLE, CO

**LOCATION.**--Lat 40°21'00", long 104°47'04", in SW1/4, SE1/4, Sec. 33, T.5N., R.66 W., Weld County, CO, on left bank just southeast of gage on Evans Town Ditch, 0.7 miles upstream from bridge on WCR 396, 1.6 miles upstream from mouth and 4 miles West of LaSalle, CO.

**DRAINAGE AREA AND PERIOD OF RECORD.**--828 mi<sup>2</sup>; 1951 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a wooden shelter with galvanized well section at a formed concrete control. The primary reference gage is an electric tape gage. The supplemental outside chain gage is unreliable and no longer used. The City of Fort Collins also has flood alert equipment installed

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart backup. Daily maximum and minimum stages for the satellite record agreed within ±0.02 ft of the chart. The record is complete and reliable, except for December 10, 13, 15-18, 22-24, 26-31, 2007, January 1-3, 10, 12-13, 16-25, 29-31, February 6-8, 2008, when ice affected the stage-discharge relationship. The record is good, except during periods of ice affected record, which are estimated and poor. Station maintained by Div. 1 Hydrographic Staff and record developed by Lee Cunning.

**RATING TABLE.**--BIGLASCO25 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

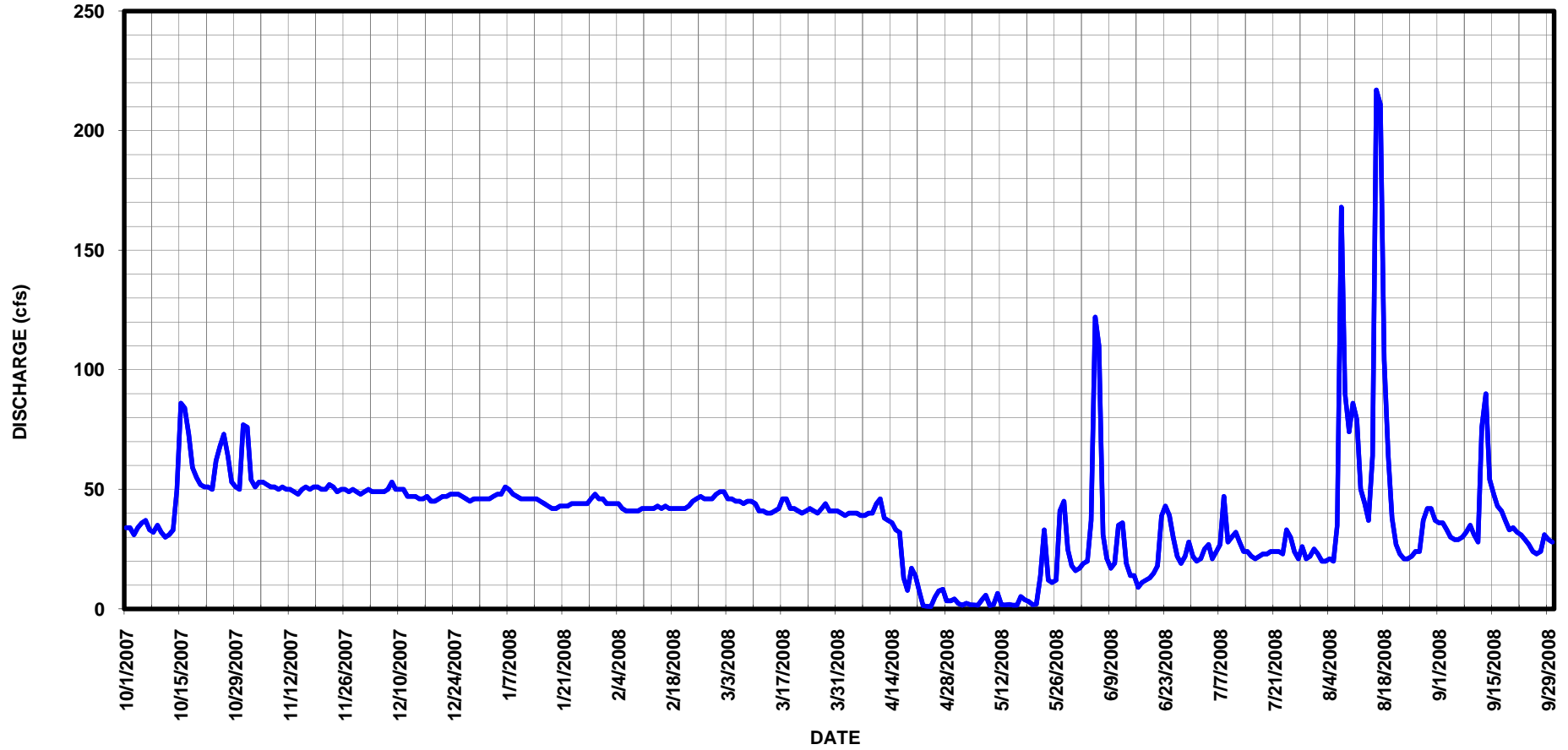
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	76	49	46	44	49	40	2.2	17	20	23	36
2	34	54	50	46	44	49	39	1.5	19	21	20	36
3	31	51	49	47	44	46	40	2.3	20	25	20	33
4	34	53	49	48	44	46	40	1.8	37	27	21	30
5	36	53	49	48	42	45	40	1.7	122	21	20	29
6	37	52	49	51	41	45	39	1.6	110	24	35	29
7	33	51	50	50	41	44	39	3.8	31	27	168	30
8	32	51	53	48	41	45	40	5.7	21	47	90	32
9	35	50	50	47	41	45	40	1.4	17	28	74	35
10	32	51	50	46	42	44	44	1.8	19	30	86	31
11	30	50	50	46	42	41	46	6.5	35	32	79	28
12	31	50	47	46	42	41	38	1.8	36	28	50	76
13	33	49	47	46	42	40	37	1.7	19	24	44	90
14	50	48	47	46	43	40	36	1.9	14	24	37	54
15	86	50	46	45	42	41	33	1.6	14	22	64	48
16	84	51	46	44	43	42	32	1.6	9.0	21	217	43
17	73	50	47	43	42	46	13	5.2	11	22	211	41
18	59	51	45	42	42	46	7.7	3.8	12	23	104	37
19	55	51	45	42	42	42	17	3.1	13	23	64	33
20	52	50	46	43	42	42	14	1.8	15	24	38	34
21	51	50	47	43	42	41	7.3	2.0	18	24	27	32
22	51	52	47	43	43	40	1.3	14	39	24	23	31
23	50	51	48	44	45	41	1.1	33	43	23	21	29
24	62	49	48	44	46	42	.98	12	39	33	21	27
25	68	50	48	44	47	41	4.9	11	30	30	22	24
26	73	50	47	44	46	40	7.5	12	22	24	24	23
27	64	49	46	44	46	42	8.2	41	19	21	24	24
28	53	50	45	46	46	44	3.4	45	22	26	37	31
29	51	49	46	48	48	41	3.4	25	28	21	42	29
30	50	48	46	46	---	41	4.1	18	22	22	42	28
31	77	---	46	46	---	41	---	16	---	25	37	---
TOTAL	1541	1540	1478	1412	1255	1333	716.88	281.8	873.0	786	1785	1083
MEAN	49.7	51.3	47.7	45.5	43.3	43.0	23.9	9.09	29.1	25.4	57.6	36.1
AC-FT	3060	3050	2930	2800	2490	2640	1420	559	1730	1560	3540	2150
MAX	86	76	53	51	48	49	46	45	122	47	217	90
MIN	30	48	45	42	41	40	.98	1.4	9.0	20	20	23
CAL YR 2007	TOTAL	15254.20	MEAN	41.8	MAX	335	MIN	2.60	AC-FT	30260		
WTR YR 2008	TOTAL	14084.68	MEAN	38.5	MAX	217	MIN	.98	AC-FT	27940		

MAX DISCH: 294 CFS AT 03:30 ON Aug. 17, 2008 GH 2.52 FT. SHIFT -0.04 FT.

MAX GH: 2.52 FT. AT 03:30 ON Aug. 17, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06744000 BIG THOMPSON RIVER AT MOUTH NEAR LA SALLE CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06752000 CACHE LA POUDDRE RIVER AT MOUTH OF CANYON, NEAR FORT COLLINS, CO

**LOCATION.**--Lat 40°39'52", long 105°13'26", in NW¼ sec. 15, T.8 N., R.70 W., Larimer County, Hydrologic Unit 10190007, on left bank at mouth of canyon, 0.5 mi downstream from headgate of Poudre Valley Canal, 1.2 mi upstream from Lewistone Creek, and 9.3 mi northwest of courthouse in Fort Collins.

**DRAINAGE AREA AND PERIOD OF RECORD.**--1,056 mi<sup>2</sup>. Sporadic and somewhat unreliable data from June 1881 to Aug. 1883. Reliable data from Oct. 1883 to current year. Periodic water-quality data from 1962 to 1995.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a weekly chart recorder in a concrete shelter and stilling well. The primary reference gage is a drop tape from an adjustable reference point on the instrument shelf. There is a supplemental chain gage. An air temperature sensor was installed in September 2008.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart as backup. Satellite mean gage heights checked with chart values to within ±0.02 ft. The record is complete and reliable, except for February 23 - 28; March 3, 6 and 7, 2008, when the stage-discharge relationship was affected by ice; and November 25, 2007 through February 22, 2008, when the station was closed for the winter. The record is good, except during the winter shutdown period, which was estimated and poor; and during periods of ice affected record, which are estimated and fair. Station maintained and record developed by Lee Cunning.

**RATING TABLE.**--CLAFTCC011 USED FROM 01-OCT-2007 TO 30-SEP-2008

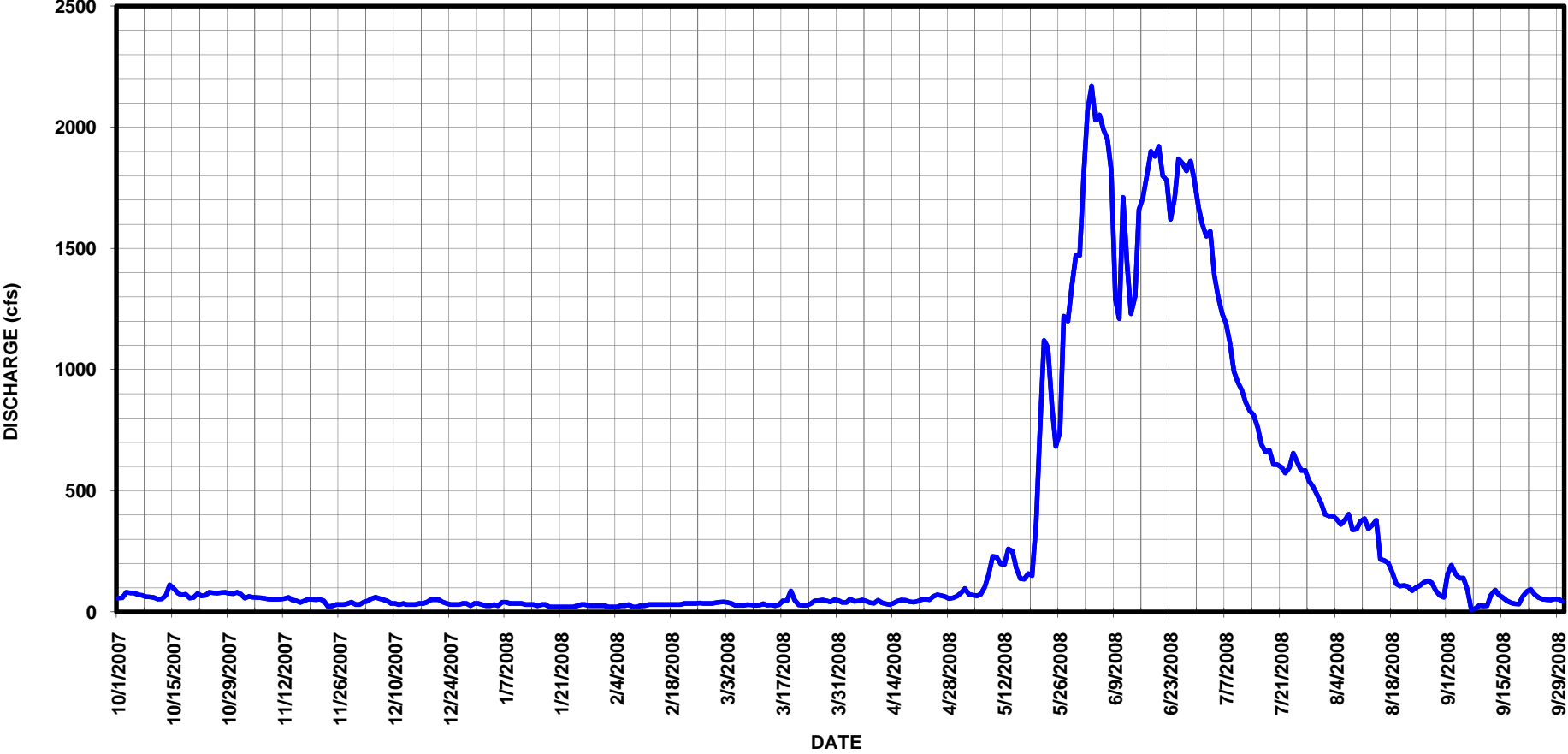
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	73	30	30	25	40	39	78	1810	1600	403	155
2	58	57	40	25	20	41	39	97	2070	1550	396	193
3	81	64	45	25	20	39	54	72	2170	1570	396	156
4	79	60	55	30	20	35	43	69	2030	1390	381	140
5	79	59	60	25	25	27	45	66	2050	1300	361	140
6	71	58	55	40	25	27	49	73	1990	1230	377	93
7	68	56	50	40	30	26	45	103	1950	1190	403	9.6
8	63	52	45	35	20	30	38	155	1820	1110	338	13
9	61	51	35	35	20	29	36	229	1290	992	342	26
10	59	51	35	35	25	27	48	226	1210	948	373	24
11	53	53	30	35	25	28	38	198	1710	914	384	25
12	54	55	35	30	30	33	33	196	1430	865	343	69
13	68	59	30	30	30	28	30	259	1230	829	359	90
14	111	49	30	30	30	29	37	250	1300	813	378	69
15	97	46	30	25	30	25	45	181	1660	761	216	58
16	79	39	35	30	30	30	49	137	1710	689	212	46
17	70	46	35	30	30	46	48	135	1800	660	202	38
18	73	52	40	20	30	45	42	158	1900	666	166	33
19	57	51	50	20	30	86	40	150	1880	608	116	32
20	59	50	50	20	30	48	43	367	1920	607	107	64
21	76	53	50	20	35	29	50	754	1800	597	109	84
22	66	45	40	20	35	26	53	1120	1780	573	104	93
23	68	21	35	20	34	26	50	1090	1620	596	88	72
24	81	24	30	20	34	33	64	845	1710	655	100	59
25	79	30	30	25	37	46	71	683	1870	616	109	53
26	77	30	30	30	35	47	67	740	1850	583	121	50
27	80	30	35	30	34	49	63	1220	1820	583	128	49
28	81	35	35	25	35	46	55	1200	1860	539	120	54
29	76	40	25	25	38	41	58	1340	1780	515	87	53
30	75	30	35	25	---	50	65	1470	1670	484	68	44
31	81	---	35	25	---	47	---	1470	---	449	60	---
TOTAL	2237	1419	1195	855	842	1159	1437	15131	52690	26482	7347	2084.6
MEAN	72.2	47.3	38.5	27.6	29.0	37.4	47.9	488	1756	854	237	69.5
AC-FT	4440	2810	2370	1700	1670	2300	2850	30010	104500	52530	14570	4130
MAX	111	73	60	40	38	86	71	1470	2170	1600	403	193
MIN	53	21	25	20	20	25	30	66	1210	449	60	9.6
CAL YR 2007	TOTAL	95400	MEAN	261	MAX	1800	MIN	20.0	AC-FT	189200		
WTR YR 2008	TOTAL	112880	MEAN	308	MAX	2170	MIN	9.6	AC-FT	223900		

MAX DISCH: 2530 CFS AT 10:30 ON Jun. 3, 2008 GH 5.3 FT. SHIFT -0.24 FT.  
MAX GH: 5.3 FT. AT 10:30 ON Jun. 3, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06752000 CACHE LA POUVRE RIVER AT MOUTH OF CANYON, NEAR FORT COLLINS CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06752500 CACHE LA POUFRE RIVER NEAR GREELEY, CO

**LOCATION.**--Lat 40°25'04", long 104°39'22", in NW¼ sec. 11, T.5 N., R.65 W., Weld County, Hydrologic Unit 10190007, on right bank 15 ft. downstream from highway bridge, 2.9 mi east of courthouse in Greeley, and 3.0 mi upstream from mouth.

**DRAINAGE AREA AND PERIOD OF RECORD.**--1,877 mi<sup>2</sup>; 1903 to current year

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a 48-inch metal shelter and well. The primary reference gage is an electric drop tape gage in the shelter. A wire weight gage on the bridge above the station and some distance from the inlets is supplementary. Elevation of gage is 4,610 ft above National Geodetic Vertical Datum of 1929, from topographic map.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite data with chart record as backup. Record is complete and reliable, except for January 21-25, 2008, when the well was frozen. The record is good, except during periods of no gage height record (well frozen), which is poor. Station maintained and record developed by Lee Cunning.

**RATING TABLE.**--CLAGRECO26 USED FROM 01-Oct-2007 TO 30-Sep-2008

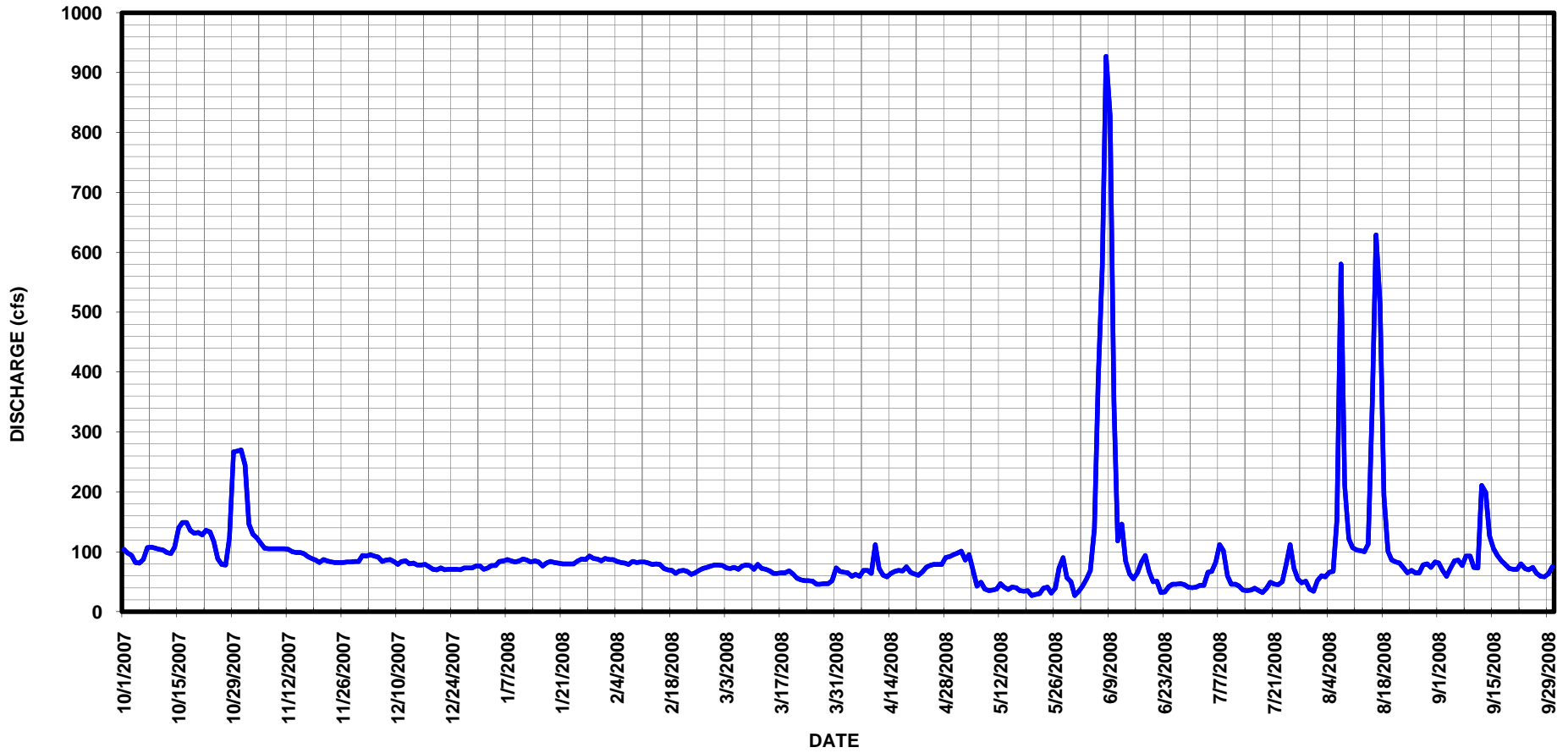
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	244	94	71	89	78	67	98	34	41	52	81
2	98	146	93	73	87	77	66	101	43	44	60	69
3	94	129	95	77	87	73	65	86	55	44	58	59
4	82	123	93	77	84	72	59	95	69	66	66	72
5	81	114	91	84	82	74	62	68	139	67	67	85
6	87	106	84	85	81	71	59	43	387	83	153	86
7	107	105	86	87	79	76	69	49	576	112	580	77
8	108	105	87	85	84	78	69	38	927	102	211	93
9	106	105	84	83	82	77	64	35	827	60	122	93
10	104	105	79	85	83	71	112	36	351	46	107	74
11	103	105	84	88	83	79	72	38	118	46	103	73
12	99	104	85	86	81	72	61	47	146	43	102	211
13	97	100	80	83	79	71	58	41	85	36	100	199
14	108	99	81	85	80	68	64	37	63	35	113	127
15	140	99	78	83	79	64	67	41	55	36	346	105
16	149	97	78	76	72	64	69	40	65	39	629	94
17	149	92	79	81	70	65	68	35	82	35	512	85
18	136	89	75	84	69	65	75	34	94	32	194	79
19	131	86	71	82	64	68	66	35	67	39	101	72
20	132	82	70	81	68	63	63	27	50	49	86	71
21	128	87	73	80	69	56	61	29	51	46	83	71
22	136	85	70	80	67	53	66	30	32	45	81	80
23	133	83	71	80	62	52	74	39	33	50	73	72
24	117	82	71	80	65	52	77	41	42	78	65	70
25	88	82	71	85	69	51	79	31	46	112	69	74
26	79	82	70	88	72	46	79	39	46	73	65	64
27	78	83	73	87	74	46	79	73	47	54	65	59
28	124	83	73	93	76	47	90	90	45	48	78	58
29	267	84	73	89	78	47	92	57	41	51	80	63
30	268	84	76	88	---	52	95	50	40	38	74	75
31	270	---	76	85	---	73	---	27	---	34	83	---
TOTAL	3903	3070	2464	2571	2215	2001	2147	1530	4656	1684	4578	2591
MEAN	126	102	79.5	82.9	76.4	64.5	71.6	49.4	155	54.3	148	86.4
AC-FT	7740	6090	4890	5100	4390	3970	4260	3030	9240	3340	9080	5140
MAX	270	244	95	93	89	79	112	101	927	112	629	211
MIN	78	82	70	71	62	46	58	27	32	32	52	58
CAL YR 2007	TOTAL	28721	MEAN	78.7	MAX	294	MIN	18	AC-FT	56970		
WTR YR 2008	TOTAL	33410	MEAN	91.3	MAX	927	MIN	27	AC-FT	66270		

MAX DISCH: 996 CFS AT 02:45 ON Jun. 8, 2008 GH 6.16 FT. SHIFT -1.55 FT.  
MAX GH: 6.16 FT. AT 02:45 ON Jun. 8, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06752500 CACHE LA POUVRE RIVER NEAR GREELEY CO  
WY2008 HYDROGRAPH





PLATTE RIVER BASIN

CACHE LA POUFRE RIVER AT GREELEY WASTEWATER PLANT NEAR GREELEY, CO

**LOCATION.**--Lat 40°25'21", Long 104°40'37" in SW ¼ section 4, T5N, R65W, Weld County. Just east of Greeley, on right bank, approximately 400 feet east of Highway 85, river mile 5.5.

**DRAINAGE AREA AND PERIOD OF RECORD.**--Not determined; 2007 to current year.

**GAGE.**--Data Collection Platform and shaft encoder in a 7 ft x 7 ft exposed aggregate concrete shelter with a 48-inch diameter concrete stilling well. The primary reference gage is an electric tape gage located in the shelter. There is no outside reference at this time. The elevation of the gage is 4,636.33 feet above sea level (Boyle Engineering Company, 2001).

**REMARKS.**--Primary record is taken from the hourly averages of 15-minute satellite data. The record is complete and reliable. The record is considered good. The peak of June 8, 2008 is considered fair due to lack of confirming measurements at this stage. Station maintained and record developed by Greg Harp, City of Greeley WPCF. Record reviewed by Division I Hydrographic Staff.

**RATING TABLE.**--CLAWASCO05 USED FROM 01-Oct-2007 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

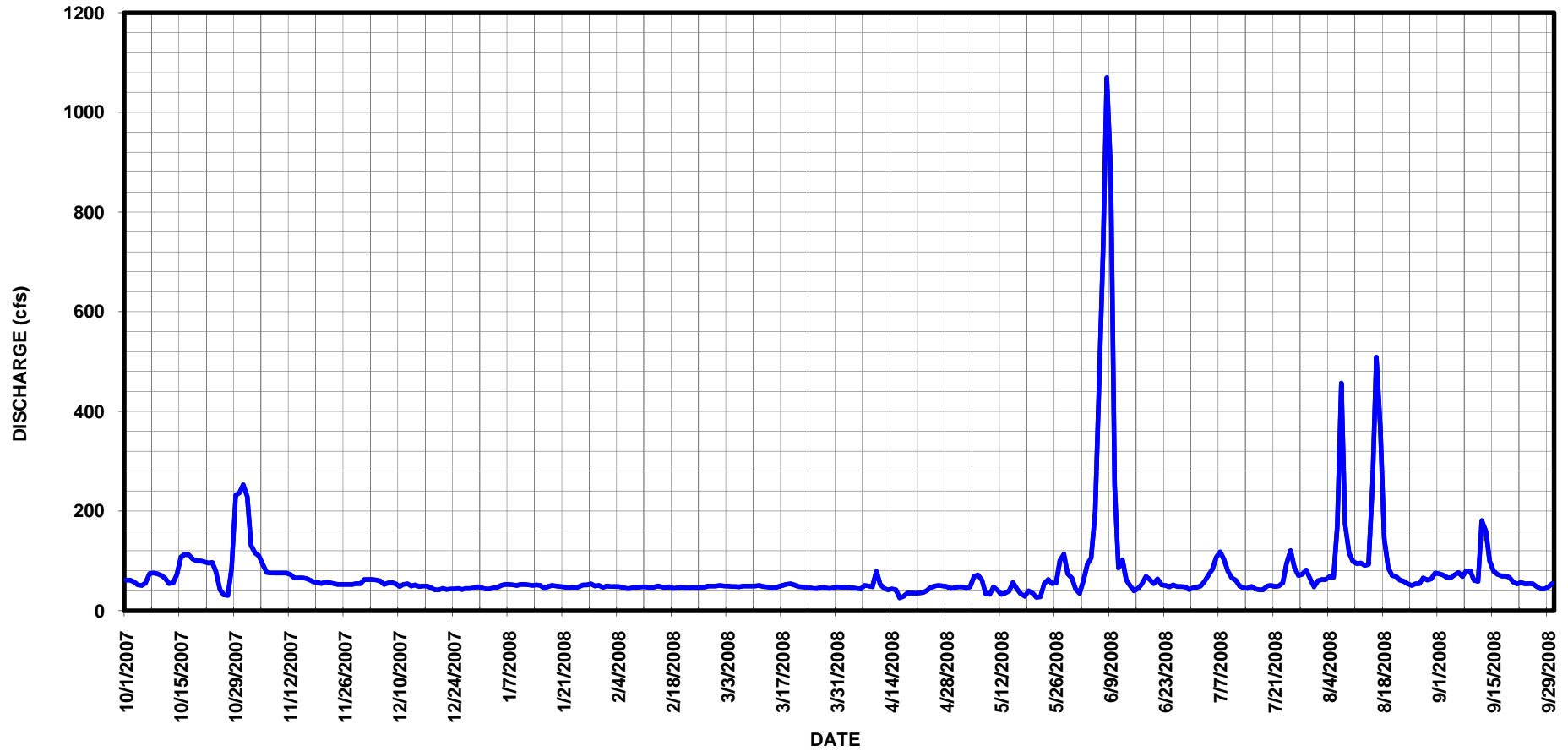
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	229	63	44	50	51	47	48	35	47	60	74
2	62	131	63	44	49	50	47	48	60	50	63	72
3	58	116	63	46	49	50	47	45	94	59	63	67
4	52	110	62	47	49	49	46	48	106	72	69	66
5	51	92	60	51	47	49	45	69	199	83	67	72
6	56	77	53	53	45	48	44	72	447	108	170	77
7	75	76	56	53	45	50	51	62	718	118	457	69
8	76	76	57	52	47	50	50	34	1070	103	174	80
9	74	76	54	51	47	50	48	33	875	79	116	80
10	71	76	49	53	48	50	79	48	251	66	99	61
11	65	76	53	53	48	51	53	41	86	61	95	59
12	55	73	54	52	46	49	45	33	102	50	96	181
13	56	66	50	51	47	48	42	36	62	46	91	160
14	73	66	52	52	50	46	44	40	50	45	93	100
15	108	66	49	51	48	46	42	57	40	49	256	79
16	113	65	50	45	46	49	26	44	45	44	509	73
17	112	62	50	49	48	51	29	34	54	42	364	70
18	104	58	46	51	45	53	36	29	69	42	145	70
19	100	57	42	50	46	54	36	40	63	50	86	67
20	100	55	42	49	47	52	35	35	55	51	71	58
21	98	58	45	48	46	49	36	27	64	49	69	54
22	96	57	43	46	46	48	37	28	52	50	62	57
23	97	55	44	47	47	47	41	55	51	56	59	54
24	78	53	44	46	46	46	47	63	48	95	54	55
25	42	53	45	49	47	45	50	55	52	121	51	54
26	32	53	43	52	47	45	51	56	49	87	54	49
27	31	53	45	52	50	47	50	101	49	71	55	44
28	86	53	45	54	50	46	49	114	48	73	66	44
29	232	55	46	50	50	45	45	74	43	82	62	48
30	237	55	48	51	---	46	46	66	46	65	64	55
31	253	---	46	47	---	48	---	44	---	48	76	---
TOTAL	2805	2248	1562	1539	1376	1508	1344	1579	4983	2062	3816	2149
MEAN	90.5	74.9	50.4	49.6	47.4	48.6	44.8	50.9	166	66.5	123	71.6
AC-FT	5560	4460	3100	3050	2730	2990	2670	3130	9880	4090	7570	4260
MAX	253	229	63	54	50	54	79	114	1070	121	509	181
MIN	31	53	42	44	45	45	26	27	35	42	51	44

CAL YR	2007	TOTAL	23320	MEAN	63.9	MAX	490	MIN	14	AC-FT	46250
WTR YR	2008	TOTAL	26971	MEAN	73.7	MAX	1070	MIN	26	AC-FT	53500

MAX DISCH: 1150 CFS AT 01:30 ON Jun. 8, 2008 GH 4.6 FT. SHIFT 0 FT.  
MAX GH: 4.6 FT. AT 01:30 ON Jun. 8, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

CACHE LA POUFRE RIVER AT GREELEY WASTEWATER PLANT NEAR GREELEY CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06754000 SOUTH PLATTE RIVER NEAR KERSEY, CO

**LOCATION.**--Lat 40°24'45", long 104°33'47", in NW¼SW¼ sec. 9, T.5 N., R.64 W., Weld County, Hydrologic Unit 10190003, on downstream side of bridge on State Highway 37, 1.9 mi north of railroad in Kersey, and 2.5 mi downstream from Cache la Poudre River.

**DRAINAGE AREA AND PERIOD OF RECORD.**--9,659 mi<sup>2</sup>. May 1901 to Dec. 1903, Mar. 1905 to current year. Monthly totals only for some periods. Periodic water-quality data available from 1950.

**GAGE.**--Graphic water-stage recorder and shaft encoder (SE) activated by a manometer, Sutron Accububble, orifice line and muffler and data collection platform (DCP) in a concrete block shelter. The primary reference gage is an outside wire weight gage. The datum of the gage is 4578.02 ft MSL (NAVD 1988) established by Colorado Water Conservation Board levels in 2005.

**REMARKS.**--The primary record is hourly averages of 15-minute data taken from the Acububbler. The Accububble data had some spikes in the winter months and these were assumed to be bad data. The spike hours were located by graphing the data, and hourly values were adjusted in the record as necessary. Calibration was maintained by about 140 visits to the gage. About 40 corrections ranging from -0.06 to +0.05 ft were applied to the record. Only nine of the corrections were greater than +/-0.02 ft. Calibrating the bubbler is difficult since the orifice muffler is often covered with sand. The channel was ice-free during the winter. The record is complete and reliable. Record is rated as fair due to amount of variability in GH corrections and the stage-shift tables. Station maintained and record developed by Bob Cooper.

**RATING TABLE.**--PLAKERCO22 USED FROM 01-Oct-2007 TO 30-Sep-2008

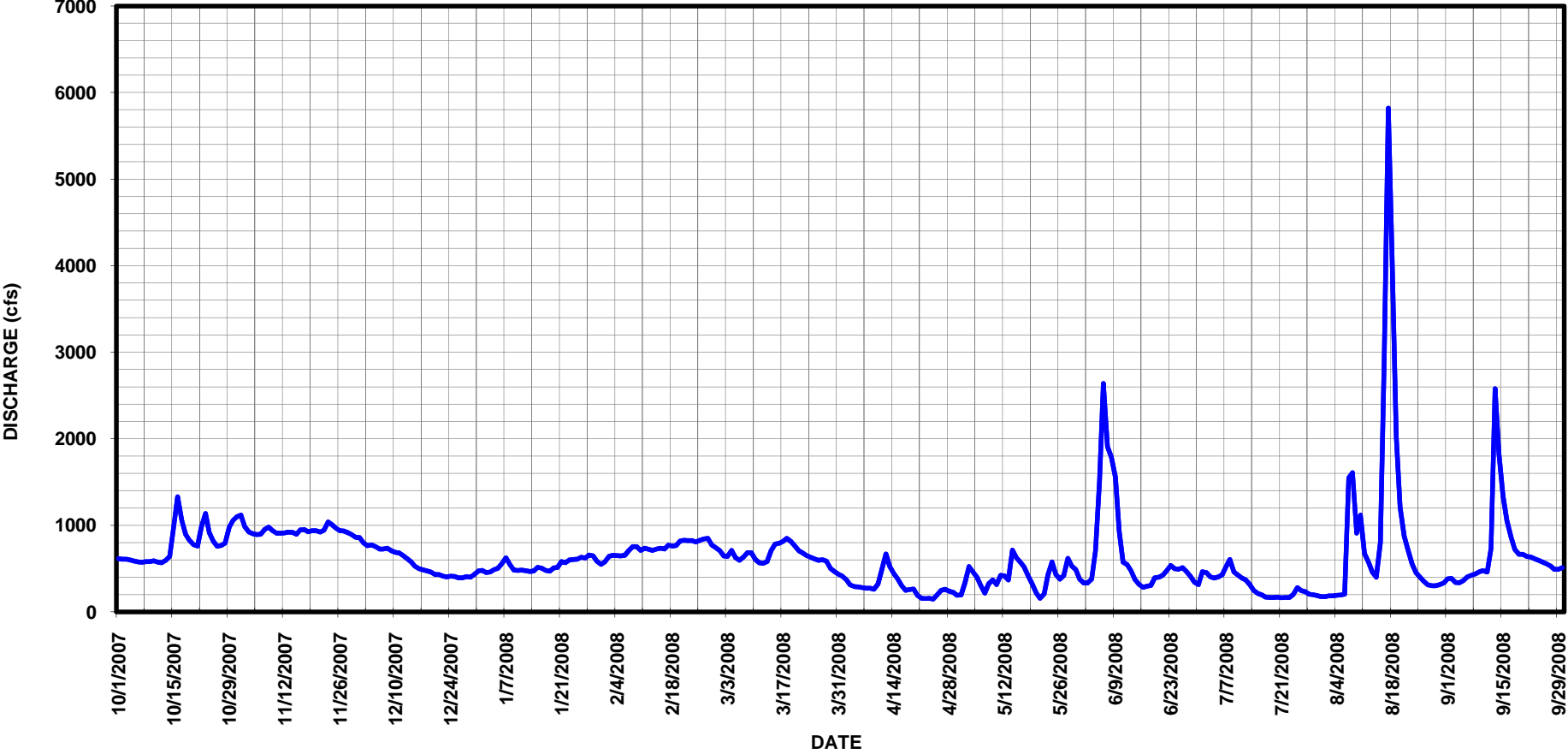
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	616	1120	860	481	579	711	416	195	336	464	179	384
2	610	985	797	457	643	649	374	335	337	457	187	390
3	611	923	766	461	654	642	314	525	379	407	186	342
4	602	905	775	491	651	711	295	464	710	391	194	339
5	587	895	756	505	649	628	292	402	1510	406	196	364
6	579	898	727	564	654	599	281	306	2640	429	206	406
7	576	955	726	626	710	632	274	220	1910	525	1550	424
8	583	980	736	543	755	686	276	325	1790	607	1610	440
9	582	940	709	483	755	686	262	371	1560	461	912	466
10	590	911	689	480	712	608	324	315	929	428	1120	478
11	577	910	684	485	736	570	491	423	576	393	675	462
12	571	913	651	479	724	564	670	417	548	369	579	733
13	598	922	616	468	712	582	525	371	478	317	459	2580
14	643	921	579	475	726	713	443	714	374	251	402	1830
15	995	897	527	517	736	783	383	631	320	216	804	1340
16	1330	950	501	507	727	795	306	575	286	198	2920	1060
17	1060	951	488	481	772	817	251	519	297	172	5820	868
18	899	928	475	470	761	852	261	416	306	167	4070	725
19	827	938	462	510	767	817	267	327	396	167	2030	668
20	779	939	435	517	819	764	192	222	403	171	1210	668
21	762	922	433	582	829	710	159	159	423	166	877	641
22	982	947	414	568	825	684	155	208	478	168	719	637
23	1140	1040	406	601	826	653	160	427	538	169	557	614
24	918	1010	414	606	811	633	149	578	499	202	457	598
25	815	968	411	612	828	613	200	435	494	281	402	575
26	760	938	394	633	844	599	250	379	513	248	356	558
27	768	935	396	624	852	604	262	422	469	233	312	530
28	797	917	408	657	776	587	241	621	410	207	305	495
29	981	894	403	648	742	504	228	532	345	200	305	495
30	1060	863	434	585	---	467	193	489	315	190	316	513
31	1100	---	476	550	---	438	---	381	---	179	336	---
TOTAL	24298	28215	17548	16666	21575	20301	8894	12704	20569	9239	30251	20623
MEAN	784	941	566	538	744	655	296	410	686	298	976	687
AC-FT	48200	55960	34810	33060	42790	40270	17640	25200	40800	18330	60000	40910
MAX	1330	1120	860	657	852	852	670	714	2640	607	5820	2580
MIN	571	863	394	457	579	438	149	159	286	166	179	339
CAL YR 2007	TOTAL	396184	MEAN	1085	MAX	5690	MIN	136	AC-FT	785830		
WTR YR 2008	TOTAL	230883	MEAN	631	MAX	5820	MIN	149	AC-FT	458000		

MAX DISCH: 6950 CFS AT 17:00 ON Aug. 17, 2008 GH 8.48 FT. SHIFT -0.31 FT.  
MAX GH: 8.48 FT. AT 17:00 ON Aug. 17, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06754000 SOUTH PLATTE RIVER NEAR KERSEY CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06758500 SOUTH PLATTE RIVER NEAR WELDONA, CO

**LOCATION.**--Lat 40°19'17", long 103°55'13" (NAD 1983), in SW¼SW¼ sec. 7, T.4 N., R.58 W., Morgan County, Hydrologic Unit 10190003, on left bank 600 ft downstream from bridge on State Highway 144, 2.8 mi southeast of Weldona, and 4.2 mi upstream from Bijou Creek.

**DRAINAGE AREA AND PERIOD OF RECORD.**--13,190 mi<sup>2</sup>. October 1952 to current year.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a corrugated metal pipe and stilling well. The primary reference gage is an electric tape gage inside the shelter. There is no outside reference. A radio bridge is also installed and collects data from a nearby ditch return gage satellite transmission by the DCP. Datum of gage is 4309.79 ft. msl, based on Colorado Water Conservation Board levels run in 2005.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart back up. The record is complete and reliable, except for January 22-30, 2008, when the river was frozen and the stage-discharge relationship was affected by ice. During this period the record is unreliable due to ice in the stilling well. Encoder calibration was supported by 69 visits to the gage. The record is good, except for January 22-30, 2008, which was estimated and poor due to ice conditions; and Jan 17-21, 2008, which is fair due to discrepancies between the chart and encoder. Station maintained and record developed by Bob Cooper.

**RATING TABLE.**--PLAWELCO19 USED FROM 01-Oct-2007 TO 30-Sep-2008

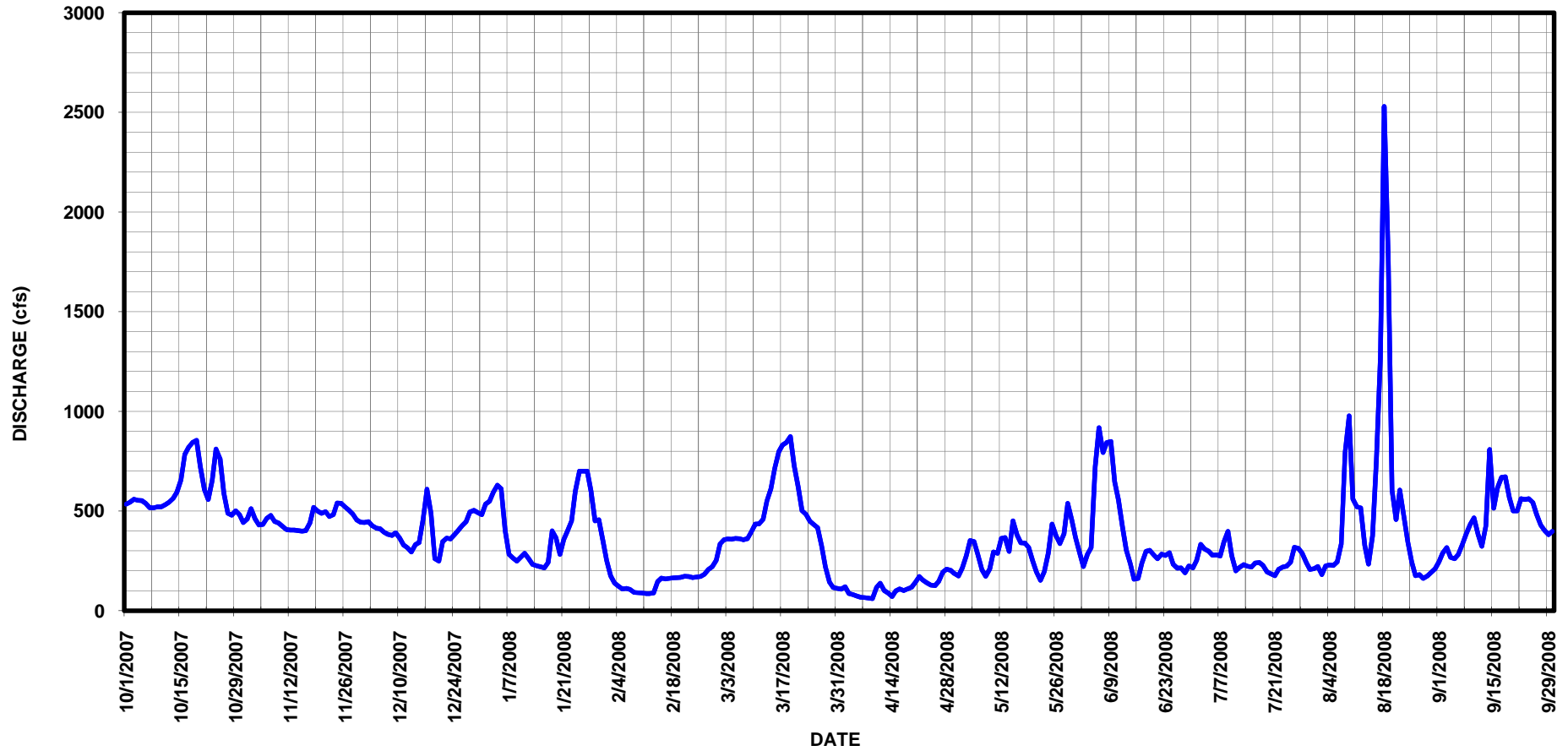
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	534	460	442	534	252	334	107	174	290	252	221	245
2	544	511	446	549	174	356	119	213	221	332	180	289
3	559	460	426	594	139	359	86	274	283	310	224	316
4	553	430	414	629	122	358	81	351	316	299	229	268
5	552	433	411	612	109	362	73	346	721	278	227	260
6	539	463	394	401	111	361	67	281	918	279	244	282
7	517	478	383	283	106	356	65	205	794	274	335	333
8	515	448	377	264	91	361	63	173	844	345	793	386
9	521	440	391	248	90	395	60	209	849	397	978	433
10	521	423	364	269	88	434	115	295	647	275	560	466
11	532	407	330	288	86	436	137	288	556	199	521	383
12	544	405	315	260	86	459	101	362	419	217	515	323
13	563	405	295	232	88	551	89	367	304	231	329	426
14	594	401	331	226	145	612	71	297	235	223	234	808
15	655	399	342	220	163	715	99	450	158	219	376	514
16	782	402	461	215	159	797	109	380	161	239	750	616
17	820	439	609	241	161	832	101	341	239	242	1270	669
18	844	518	489	400	165	844	109	339	297	227	2530	672
19	854	499	261	366	166	873	117	318	302	194	1770	567
20	721	489	248	283	167	727	142	250	279	185	604	501
21	608	496	346	357	173	620	171	194	260	175	457	501
22	558	472	363	400	171	502	152	152	284	208	605	561
23	653	481	359	450	166	483	139	196	277	219	473	557
24	811	540	381	600	169	449	128	288	290	223	349	561
25	762	539	403	700	171	431	125	434	232	243	244	542
26	589	521	426	700	182	416	147	374	213	318	175	483
27	489	505	447	700	207	323	193	337	215	312	181	430
28	479	484	495	600	220	219	208	384	190	288	161	403
29	500	456	503	450	253	143	203	539	224	241	174	381
30	482	443	493	456	---	115	186	456	214	206	192	398
31	442	---	481	352	---	111	---	366	---	210	210	---
TOTAL	18637	13847	12426	12879	4380	14334	3563	9633	11232	7860	16111	13574
MEAN	601	462	401	415	151	462	119	311	374	254	520	452
AC-FT	36970	27470	24650	25550	8690	28430	7070	19110	22280	15590	31960	26920
MAX	854	540	609	700	253	873	208	539	918	397	2530	808
MIN	442	399	248	215	86	111	60	152	158	175	161	245
CAL YR 2007	TOTAL	212085	MEAN	581	MAX	3070	MIN	118	AC-FT	420700		
WTR YR 2008	TOTAL	138476	MEAN	378	MAX	2530	MIN	60	AC-FT	274700		

MAX DISCH: 3050 CFS AT 18:15 ON Aug. 18, 2008 GH 5.84 FT. SHIFT -0.4 FT.  
MAX GH: 5.84 FT. AT 18:15 ON Aug. 18, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06758500 SOUTH PLATTE RIVER NEAR WELDONA CO  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06759910 SOUTH PLATTE RIVER AT BALZAC, CO

**LOCATION.**--Lat 40°21'28", long 103°31'43", in SW<sup>1</sup>NE<sup>4</sup> sec. 33, T.5 N., R.55 W., Morgan County, Hydrologic Unit 10190012, on bank 4.3 mi northeast of Snyder, and 0.7 mi downstream from North Sterling Canal.

**DRAINAGE AREA AND PERIOD OF RECORD.**--16,623 mi<sup>2</sup>; Oct. 1916 to present, prior to Oct. 1933: monthly discharge only.

**GAGE.**--Data Collection Platform (DCP) equipped with a speech modem, shaft encoder and a continuous chart recorder in a CMP shelter and stilling well. A supplemental bubbler gage stage sensor is installed. The primary reference gage is an electric tape and there is a supplemental outside wire weight. The datum of the gage is 4135.02 ft (NADV88) based on Colorado Water Conservation Board levels run in 2005.

**REMARKS.**--The primary record is hourly averages of fifteen-minute satellite with chart back up. The record is complete, reliable, and good, except for the following days with partially plugged inlets, which were fair to poor. These days are rated fair: December 13, 16, 17, 24, 2007; January 16-March 14, May 16, and September 17, 2008. These days are considered totally estimated and poor: October 15 - 17, November 19, 24, December 9, 10, 25, 26, 28-30, 2007, January 18, March 17, May 19, July 3, August 24, and September 15, 2008. Stage discharge relationship was affected by ice cover from Dec. 24-30, 2007, and this period is considered poor. August 24<sup>th</sup> is considered estimated and poor since the rating was poorly defined at that stage and period. Station maintained by Bob Erosky and record developed by Bob Erosky and Bob Cooper.

**RATING TABLE.**--PLABALCO03 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

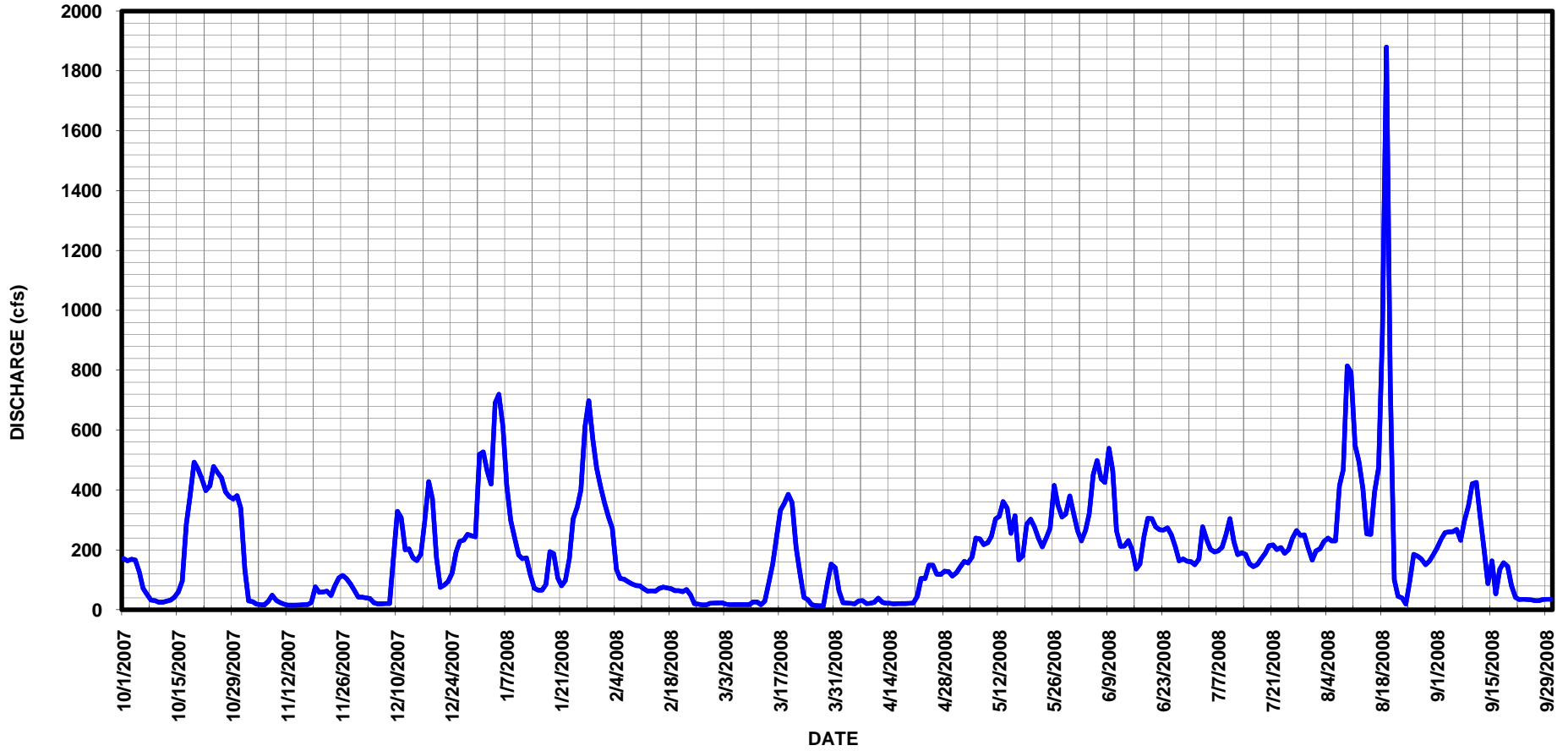
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	170	132	46	526	358	22	56	119	259	150	198	205
2	163	35	44	455	310	23	17	136	224	168	205	232
3	168	34	42	409	271	18	17	154	261	282	230	253
4	166	26	30	638	136	17	15	150	319	238	242	256
5	125	25	27	660	104	17	13	168	451	205	233	259
6	71	23	27	587	102	17	22	233	491	195	233	267
7	50	34	28	406	93	17	23	231	437	197	416	229
8	32	51	28	283	86	17	15	211	425	209	470	294
9	30	37	165	229	81	17	15	218	537	257	815	342
10	25	32	311	176	80	26	18	242	463	308	793	419
11	25	25	291	163	70	26	30	299	260	230	548	424
12	28	23	191	167	62	17	19	308	210	184	495	307
13	32	23	194	115	63	28	15	361	233	191	405	199
14	42	23	167	69	62	91	15	338	231	186	257	87
15	60	24	158	63	71	151	13	251	200	153	255	163
16	95	25	179	64	75	243	14	312	136	144	395	53
17	285	25	281	81	73	332	14	160	153	151	475	135
18	380	31	417	186	70	355	14	173	245	170	924	157
19	493	75	352	180	64	385	15	280	305	189	1880	145
20	465	59	166	103	64	358	16	298	304	215	759	81
21	426	59	70	75	60	207	37	273	277	218	100	41
22	385	61	78	94	67	123	96	234	267	203	43	34
23	401	50	91	158	49	41	95	205	266	210	38	35
24	471	78	121	280	20	34	144	236	273	190	14	34
25	452	105	183	326	18	17	143	268	251	203	97	33
26	432	111	217	388	16	14	114	415	210	243	185	28
27	380	102	223	564	16	13	114	347	163	269	178	29
28	362	81	238	646	21	13	127	305	169	254	168	34
29	354	63	234	489	22	90	126	317	162	254	150	35
30	366	46	234	473	---	152	107	380	160	208	162	35
31	320	---	509	411	---	139	---	320	---	166	184	---
TOTAL	7254	1518	5342	9464	2584	3020	1479	7942	8342	6440	11547	4845
MEAN	234	50.6	172	305	89.1	97.4	49.3	256	278	208	372	162
AC-FT	14390	3010	10600	18770	5130	5990	2930	15750	16550	12770	22900	9610
MAX	493	132	509	660	358	385	144	415	537	308	1880	424
MIN	25	23	27	63	16	13	13	119	136	144	14	28

CAL YR 2007 TOTAL 110987 MEAN 304 MAX 2620 MIN 15 AC-FT 220100  
WTR YR 2008 TOTAL 69777 MEAN 191 MAX 1880 MIN 13 AC-FT 138400

MAX DISCH: 2350 CFS AT 10:15 ON Aug. 19, 2008 GH 5.56 FT. SHIFT -1.31 FT.  
MAX GH: 5.56 FT. AT 10:15 ON Aug. 19, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06759910 SOUTH PLATTE RIVER AT BALZAC CO  
WY2008 HYDROGRAPH





PLATTE RIVER BASIN

06763990 SOUTH PLATTE RIVER AT JULESBURG, CO. CHANNEL NO 2

**LOCATION.**--Lat 40°58'37", long 102°14'52", in NE¼SE¼ sec. 33, T.12 N., R.44 W., Sedgwick County, on right bank of channel No 2 (right channel) 5 ft downstream from bridge on U.S. Highway 385, 0.9 mi southeast of Julesburg, 3.0 mi upstream from Colorado-Nebraska State line, and 8 mi downstream from Lodgepole Creek.

**DRAINAGE AREA AND PERIOD OF RECORD.**--23,821 mi<sup>2</sup>. April 1902 to current year. Monthly data only for some periods. Published as near Julesburg and at Ovid in earlier years.

**GAGE.**--Data Collection Platform (DCP) and AccuBubbler housed in a concrete shelter. The primary reference gage is a wire weight gage located mid span on the bridge. Datum of gage formerly 3,448.51 ft. MSL (NGVD 1929), 3449.50 ft MSL (NAVD 1988) confirmed by CWCB levels in 2005.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data. The record is complete, reliable, and good. During all of WY2008, the gage height record is of standing water. This standing water record does show a large range of stage change as the water gets backed up to varying degrees by ice-damming and vegetative build-up. The channel 2 gage is visited frequently and any live flow will be anticipated by higher flows in channel 1. If live flow occurs an observation will be recorded and a measurement will be made. Zero flow for 2008 is supported by 31 Colorado and 11 Nebraska observations. Colorado observations are written on a visit sheet and Nebraska's are recorded on blank measurement notes. This record is added to the records from channels 1 and 4 to form the record for the South Platte River at Julesburg, Combined flow. Station maintained by Devin Ridnour and Bob Erosky and record developed by Bob Cooper.

**RATING TABLE.**--ZERO GH USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

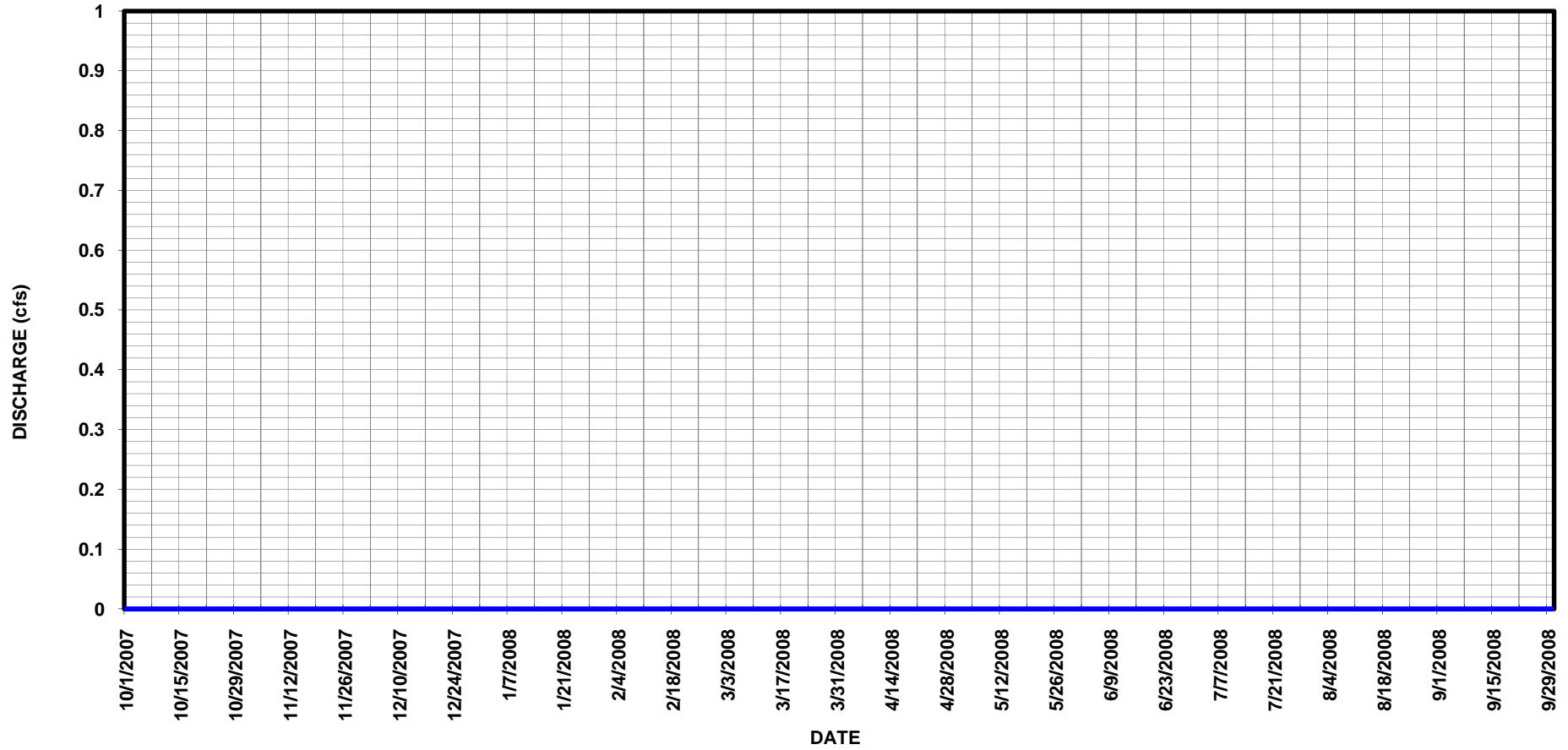
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	---	0	0	0	0	0	0	0
31	0	---	0	0	---	0	---	0	---	0	0	---
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	0	0	0	0	0
MAX	0	0	0	0	0	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0

CAL YR 2007 TOTAL 4211.07 MEAN 11.5 MAX 357 MIN 0 AC-FT 8350  
WTR YR 2008 TOTAL 0 MEAN 0 MAX 0 MIN 0 AC-FT 0

MAX DISCH: 0 CFS  
MAX GH: NOT DETERMINED

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06763990 SOUTH PLATTE RIVER AT JULESBURG, CO. CHANNEL NO 2  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06763990 SOUTH PLATTE RIVER AT JULESBURG, CO. CHANNEL NO 1

**LOCATION.**--Lat 40°58'37", long 102°14'52", in NE¼SE¼ sec. 33, T.12 N., R.44 W., on Highway 385 bridge south of Julesburg CO.

**DRAINAGE AREA AND PERIOD OF RECORD.**--23,821 mi<sup>2</sup>; 1995 to current year.

**GAGE.**--Data Collection Platform (DCP) with a phone modem and Sutron Constant Flow Bubbler (CFB). The primary reference gage is a wire weight gage located mid span on the bridge with a supplemental staff located on the bridge pier closest to the shelter. A telephone and speech modem are installed so that the gage can be accessed by phone (970-474-0948). Datum of gage 3449.50 ft MSL (NAVD 1988) confirmed by CWCB levels in 2005.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data. The CFB failed in early October and was replaced with a Sutron Accububbler. In early December, the orifice line began freezing while the channel was still open. Another CFB was installed December 5<sup>th</sup>, since the constant bubbling keeps the line from freezing. The replacement unit was bad out of the box and on December 20<sup>th</sup> the back-up Accububbler unit was reinstalled. This unit again allowed the orifice line to freeze resulting in spotty record until January 10, when a good CFB unit was installed. The record is complete, reliable, and good, except for the following periods. The following days have some degree of estimation and are rated fair due to ice: November 26-27, 2007. The following days are estimated and poor due to equipment problems and ice: October 1-12, November 15-16, December 5-31, 2007, January 1-4,17-31, February 1-8, 2008. This record is added to the records from channels 2 and 4 to form the record for the South Platte River at Julesburg, Combined flow. Station maintained by Devin Ridnour and Bob Erosky and record developed by Devin Ridnour and Bob Cooper.

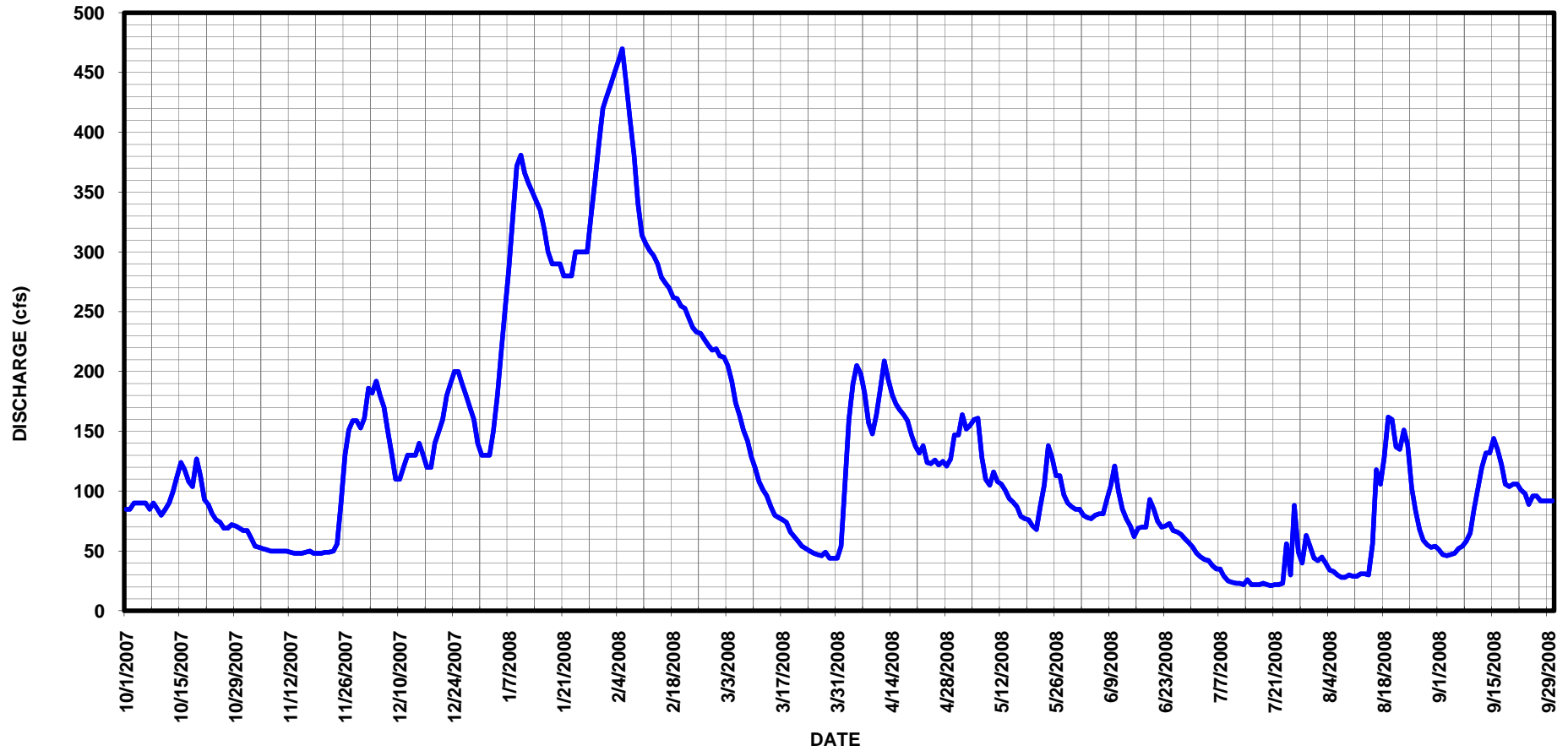
**RATING TABLE.**--ONEJURCO06 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	67	161	130	430	213	54	147	85	48	42	51
2	85	61	186	130	440	212	108	164	80	45	45	47
3	90	54	182	150	450	205	160	152	78	43	40	46
4	90	53	192	180	460	192	190	155	77	42	34	47
5	90	52	180	216	470	174	205	160	80	38	33	48
6	90	51	170	253	440	163	198	161	81	35	30	52
7	85	50	150	287	410	151	182	128	81	35	28	54
8	90	50	130	331	380	142	157	110	93	29	28	58
9	85	50	110	372	341	129	148	105	105	25	30	65
10	80	50	110	381	314	119	164	116	121	24	29	85
11	85	50	120	366	307	108	185	108	100	23	29	103
12	90	49	130	357	301	101	209	106	85	23	31	120
13	100	48	130	350	297	96	194	101	77	22	31	132
14	112	48	130	342	290	87	181	94	71	26	30	132
15	124	48	140	335	279	80	173	91	62	22	56	144
16	118	49	130	319	274	78	168	87	69	22	118	135
17	108	50	120	300	270	76	164	79	70	22	106	122
18	104	48	120	290	262	74	159	77	70	23	128	106
19	127	48	140	290	261	66	147	76	93	22	162	104
20	113	48	150	290	255	62	138	71	85	21	160	106
21	93	49	160	280	253	58	132	68	75	22	137	106
22	89	49	180	280	245	54	138	88	70	22	135	101
23	81	50	190	280	237	52	124	105	71	23	151	98
24	76	56	200	300	233	50	123	138	73	56	139	89
25	74	92	200	300	232	48	126	128	67	30	103	96
26	69	130	190	300	227	47	122	113	66	88	84	96
27	69	151	180	300	222	46	125	113	64	49	68	92
28	72	159	170	330	218	49	121	97	60	40	59	92
29	71	159	160	360	219	44	127	90	57	63	55	92
30	69	153	140	390	---	44	147	87	53	54	53	92
31	67	---	130	420	---	44	---	85	---	44	54	---
TOTAL	2781	2072	4781	9209	9017	3064	4569	3400	2319	1081	2228	2711
MEAN	89.7	69.1	154	297	311	98.8	152	110	77.3	34.9	71.9	90.4
AC-FT	5520	4110	9480	18270	17890	6080	9060	6740	4600	2140	4420	5380
MAX	127	159	200	420	470	213	209	164	121	88	162	144
MIN	67	48	110	130	218	44	54	68	53	21	28	46
CAL YR 2007	TOTAL	61834	MEAN	169	MAX	1290	MIN	31	AC-FT	122600		
WTR YR 2008	TOTAL	47232	MEAN	129	MAX	470	MIN	21	AC-FT	93680		

MAX DISCH: 480 CFS AT 13:00 ON Feb. 5, 2008 (BY DISCHARGE MEASUREMENT DURING PERIOD OF ICE EFFECT) GH NOT DETERMINED  
MAX GH: 7.39 FT. ON FEB. 6, 2008 (BACKWATER FROM ICE)  
FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06763990 SOUTH PLATTE RIVER AT JULESBURG, CO. CHANNEL NO 1  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06763980 SOUTH PLATTE RIVER AT JULESBURG, CO. CHANNEL NO 4 (INCLUDES FLOW FROM CHANNEL NO 3)

**LOCATION.**--Lat 40°58'46", long 102°15'15", in NW¼NE¼ sec. 33, T.12 N., R.44 W., Sedgwick County, Hydrologic Unit 10190018, on left bank of channel No 4 (left channel) 215 ft downstream from bridge on U.S. Highway 385, 0.9 mi southeast of Julesburg, 3.0 mi upstream from Colorado-Nebraska State line, and 8 mi downstream from Lodgepole Creek.

**DRAINAGE AREA.**--23,821 mi<sup>2</sup>.

**GAGE.**--Metal pipe shelter and well. Primary reference is a drop with an adjustable RP. Supplemental outside chain gage. The chart recorder was removed on October 20, 2005. DCP was removed in 2006. GH record was not kept in WY2007 and WY2008.

**REMARKS.**--Gage height record is unreliable at this gage due to ponding from the vegetative growth during the recent drought period. No GH record was collected this year, since no upstream river water came down the channel. Observations of "no flow" and "ponded"-- made by Colorado and Nebraska--are assumed to include a small amount of base flow that had very little velocity. Discharge was estimated for the entire year in the following manner: administrative record from the Julesburg return ditch was added to the flows recorded for the Julesburg Sewer Plant effluent. Both these records can be considered fair. However, the channel 4 estimates are considered poor since a certain amount of accretion in the channel will be missed, particularly during rainy weather. This record is added to the daily flows of channels 1 and 2 to form the record for the South Platte River at Julesburg, Combined flow. Station maintained by Devin Ridnour and Bob Erosky and record developed by Bob Cooper.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	.23	.24	.24	.22	.20	.19	.18	.22	.34	.72	1.2
2	.36	.27	.22	.25	.23	.20	.22	.77	.17	.57	.36	1.0
3	.38	.25	.25	.25	.25	.23	.61	.63	.38	.43	.31	.80
4	.42	.24	.19	.25	.23	.21	.22	.25	.36	.32	3.5	.79
5	.34	.26	.24	.23	.24	.24	.20	.23	1.5	.34	3.7	.75
6	.45	.22	.23	.23	.17	.24	.20	.21	.37	.35	1.8	1.7
7	.38	.23	.22	.25	.23	.21	.26	.23	.16	.32	1.2	1.0
8	.39	.24	.26	.25	.23	.23	.20	.24	.22	1.4	.99	1.0
9	.38	.24	.21	.26	.25	.20	.21	2.8	.22	.57	.39	.48
10	.39	.22	.23	.22	.23	.22	1.2	1.1	.29	.31	.59	.49
11	.44	.26	.23	.24	.25	.20	1.7	.23	.26	.37	.32	.47
12	.40	.25	.22	.23	.21	.22	.53	.23	.27	.83	.68	3.0
13	.38	.24	.22	.23	.24	.22	.28	.24	.29	.74	1.1	.52
14	.31	.25	.20	.25	.21	.21	.21	.25	.30	.42	.95	.22
15	.43	.25	.22	.22	.23	.21	.18	.26	.31	.45	6.0	.25
16	.34	.22	.21	.24	.22	.23	.18	.24	1.2	1.2	2.1	.27
17	.32	.24	.25	.25	.23	.23	.21	.25	.23	.86	.22	.25
18	.36	.23	.23	.25	.24	.22	.23	.24	.26	.83	.25	.27
19	.34	.28	.25	.23	.24	.23	.22	.27	.39	.35	.25	.28
20	.36	.23	.21	.22	.21	.20	.22	.24	.39	.38	.29	.28
21	.35	.23	.23	.26	.22	.21	.25	.40	.49	.41	.27	.28
22	.32	.25	.22	.23	.22	.24	.17	.71	.22	.44	.31	.29
23	.33	.23	.25	.27	.24	.21	.25	2.4	.80	1.8	.30	.27
24	.33	.23	.23	.25	.21	.20	.87	.66	.39	.76	.83	.29
25	.35	.25	.23	.27	.21	.23	.61	.20	.31	2.4	.90	.29
26	.34	.24	.23	.22	.22	.24	.20	.18	.33	1.4	.94	.33
27	.33	.25	.22	.22	.21	.22	.20	.22	.33	1.1	.79	.31
28	.30	.19	.26	.25	.22	.22	.23	.22	.35	2.9	1.2	.27
29	.34	.23	.23	.22	.20	.24	.22	.21	.31	1.4	.77	.31
30	.35	.22	.23	.24	---	.21	.24	.17	.38	.90	.35	.28
31	.33	---	.23	.22	---	.22	---	.18	---	.71	.72	---
TOTAL	11.24	7.17	7.09	7.44	6.51	6.79	10.71	14.64	11.70	25.60	33.10	17.94
MEAN	.36	.24	.23	.24	.22	.22	.36	.47	.39	.83	1.07	.60
AC-FT	22	14	14	15	13	13	21	29	23	51	66	36
MAX	.45	.28	.26	.27	.25	.24	1.7	2.8	1.5	2.9	6.0	3.0
MIN	.30	.19	.19	.22	.17	.20	.17	.17	.16	.31	.22	.22

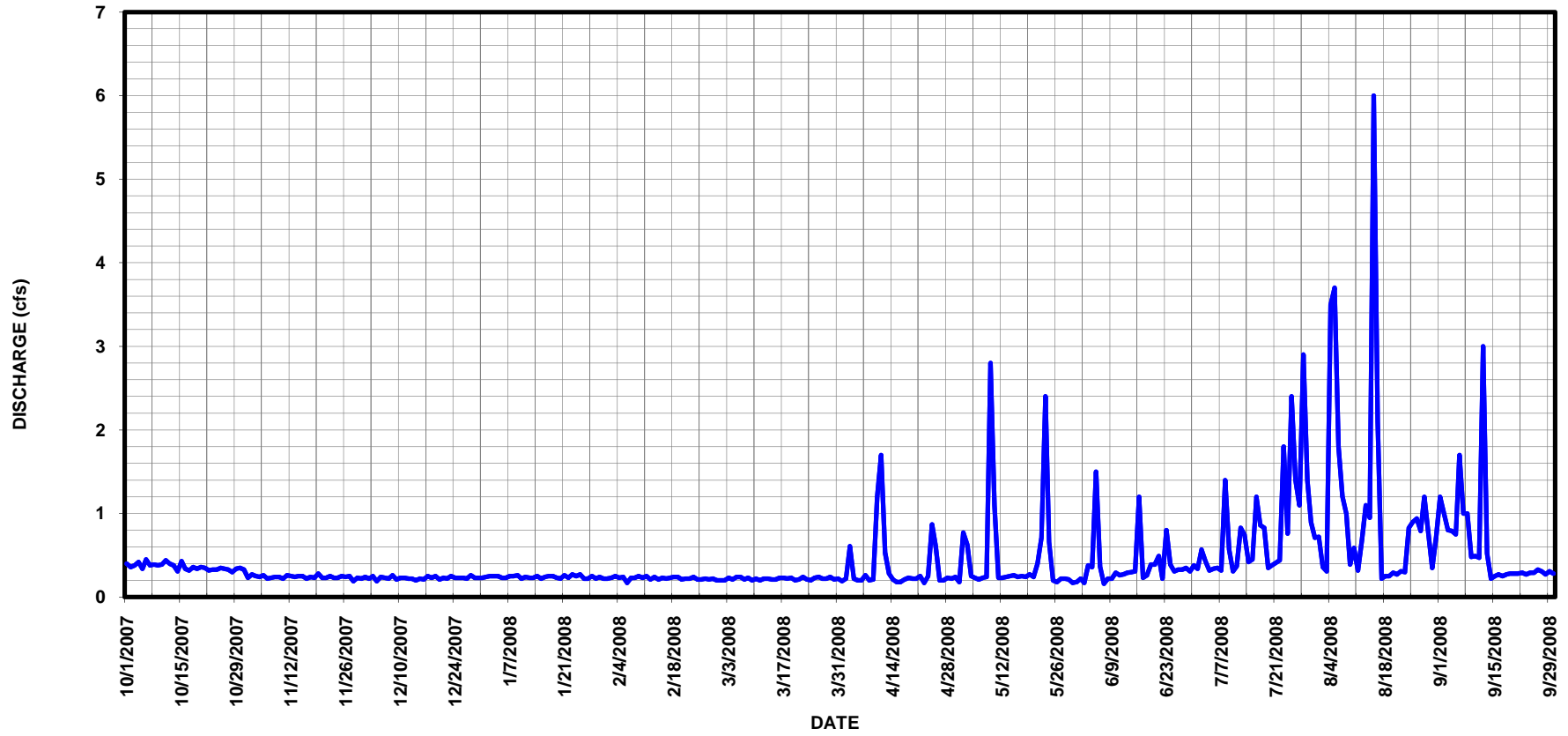
CAL YR	2007	TOTAL	548.6	MEAN	1.50	MAX	24	MIN	.19	AC-FT	1090
WTR YR	2008	TOTAL	159.93	MEAN	.44	MAX	6	MIN	.16	AC-FT	317

MAX DISCH: NOT DETERMINED

MAX GH: NOT DETERMINED

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06763990 SOUTH PLATTE RIVER AT JULESBURG, CO. CHANNEL NO 4 (INCLUDES CHANNEL NO 3)  
WY2008 HYDROGRAPH



PLATTE RIVER BASIN

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO (COMBINED)

LOCATION.--See Channel No.2 and Channel No.4.

DRAINAGE AREA AND PERIOD OF RECORD.--23,821 mi<sup>2</sup>; Apr. 1902 to present. Monthly discharge for some periods published in USGS WSP 1310.

GAGE.--In WY2008, Channel Two was dry. Channel Four had a trickle of base flow, along with some local augmentation and storm water in the spring and summer. All flow from points upstream remained in Channel One. The Channel 4 gage was abandoned in 2006 due to swampy conditions. Channel 4 flows in 2008 were estimated by combining administrative records for the Town of Julesburg sewer plant and the Town of Julesburg Return Ditch. Both of these locations have recorders and measurement devices and the records have at least fair accuracy. However, the channel 4 estimates are considered Poor since a certain amount of accretion in the channel will be missed, particularly during rainy weather.

REMARKS.--Each channel had estimated periods this year. If an individual channel's estimation contributed a significant percentage to the total flow for a particular day (>10% of mean daily Q), then the combined flow is considered estimated for that day. The combined flow record is good, except the following days are estimated and poor: October 1-12, November 15-16, December 5-31, 2007, January 1-4, 17-31, February 1-8, August 4, 5, 15, 2008; and, the following days are rated as fair, either because the Channel 1 record was fair, or one of the other channels had a significant estimated flow: November 26, 27, 2007. In WY2008, 99.8% of the combined flow was in Channel One, so the accuracy of the combined flow resides mainly with Channel One. Record developed by Devin Ridnour, Bob Erosky and Bob Cooper.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

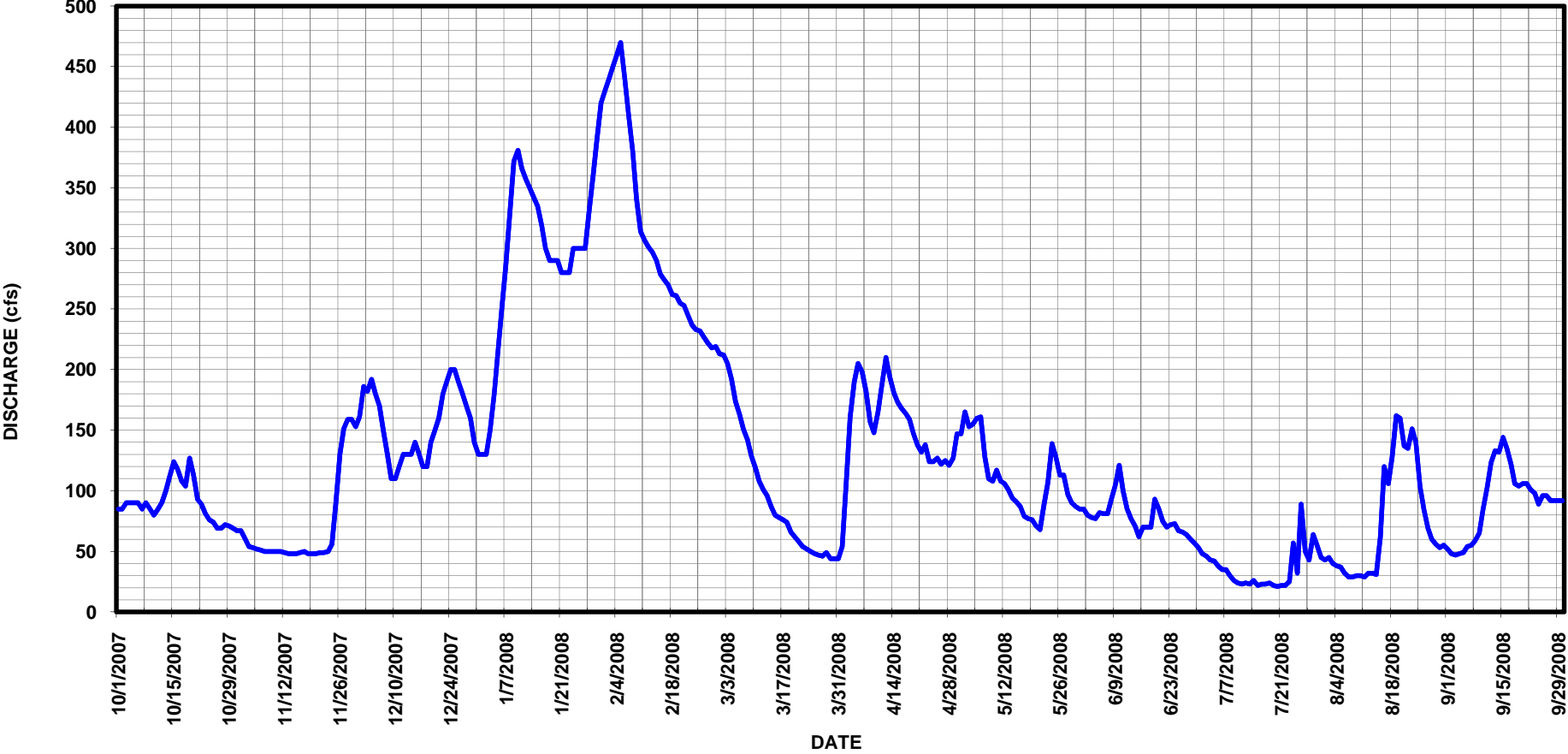
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	67	161	130	430	213	54	147	85	48	43	52
2	85	61	186	130	440	212	108	165	80	46	45	48
3	90	54	182	150	450	205	161	153	78	43	40	47
4	90	53	192	180	460	192	190	155	77	42	38	48
5	90	52	180	216	470	174	205	160	82	38	37	49
6	90	51	170	253	440	163	198	161	81	35	32	54
7	85	50	150	287	410	151	182	128	81	35	29	55
8	90	50	130	331	380	142	157	110	93	30	29	59
9	85	50	110	372	341	129	148	108	105	26	30	65
10	80	50	110	381	314	119	165	117	121	24	30	85
11	85	50	120	366	307	108	187	108	100	23	29	103
12	90	49	130	357	301	101	210	106	85	24	32	123
13	100	48	130	350	297	96	194	101	77	23	32	133
14	112	48	130	342	290	87	181	94	71	26	31	132
15	124	48	140	335	279	80	173	91	62	22	62	144
16	118	49	130	319	274	78	168	87	70	23	120	135
17	108	50	120	300	270	76	164	79	70	23	106	122
18	104	48	120	290	262	74	159	77	70	24	128	106
19	127	48	140	290	261	66	147	76	93	22	162	104
20	113	48	150	290	255	62	138	71	85	21	160	106
21	93	49	160	280	253	58	132	68	75	22	137	106
22	89	49	180	280	245	54	138	89	70	22	135	101
23	81	50	190	280	237	52	124	107	72	25	151	98
24	76	56	200	300	233	50	124	139	73	57	140	89
25	74	92	200	300	232	48	127	128	67	32	104	96
26	69	130	190	300	227	47	122	113	66	89	85	96
27	69	151	180	300	222	46	125	113	64	50	69	92
28	72	159	170	330	218	49	121	97	60	43	60	92
29	71	159	160	360	219	44	127	90	57	64	56	92
30	69	153	140	390	---	44	147	87	53	55	53	92
31	67	---	130	420	---	44	---	85	---	45	55	---
TOTAL	2781	2072	4781	9209	9017	3064	4576	3410	2323	1102	2260	2724
MEAN	89.7	69.1	154	297	311	98.8	153	110	77.4	35.5	72.9	90.8
AC-FT	5520	4110	9480	18270	17890	6080	9080	6760	4610	2190	4480	5400
MAX	127	159	200	420	470	213	210	165	121	89	162	144
MIN	67	48	110	130	218	44	54	68	53	21	29	47

CAL YR 2007 TOTAL 66521 MEAN 182 MAX 1650 MIN 33 AC-FT 132000  
WTR YR 2008 TOTAL 47319 MEAN 129 MAX 470 MIN 21 AC-FT 93860

MAX DISCH: 480 CFS AT 13:00 ON Feb. 5, 2008 GH Not Determined SHIFT N/A  
MAX GH: Not Determined

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO (COMBINED)  
WY2008 HYDROGRAPH





PLATTE RIVER BASIN

STATELINE DITCH RETURN NEAR JULESBURG CO

**LOCATION.**--Lat 40°59'58", long 102°14'55", in NW1/4 NW1/4 of sec 27, T. 12N, R. 44W, Yuma County, East of Julesburg, Co. Gage is about 700 ft. north of US Highway 138 on Yuma County Road 43 near the Colorado-Nebraska Stateline.

**DRAINAGE AREA AND PERIOD OF RECORD.**--Not determined; Data from 2001 in DWR diversion records, published by Hydrographic Branch since 2007.

**GAGE.**--Sutron Stage Discharge Recorder in a metal box over a small diameter stilling well at a 4-foot steel Parshall flume set in concrete in an earthen ditch. Satellite monitoring DCP in NEMA box mounted on nearby posts. The primary reference gage is the staff gage located in the flume. Gage is seasonal and is not operated in the winter. The gage is owned and maintained by the Julesburg irrigation District to record augmentation water delivered to the South Platte River at the stateline.

**REMARKS.**--The record is hourly averages of 15-minute satellite data with the SDR log as backup. The record is complete and reliable. The canal did not run water on November 13, 15, 20-21, December 1, 2007 - April 22, 2008. The record is considered fair due to lack of confirmation of the Parshall Flume rating by measurements. Station maintained by Division I Hydrographic Staff and record developed by Lee Cunning.

**RATING TABLE.**--STD04FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

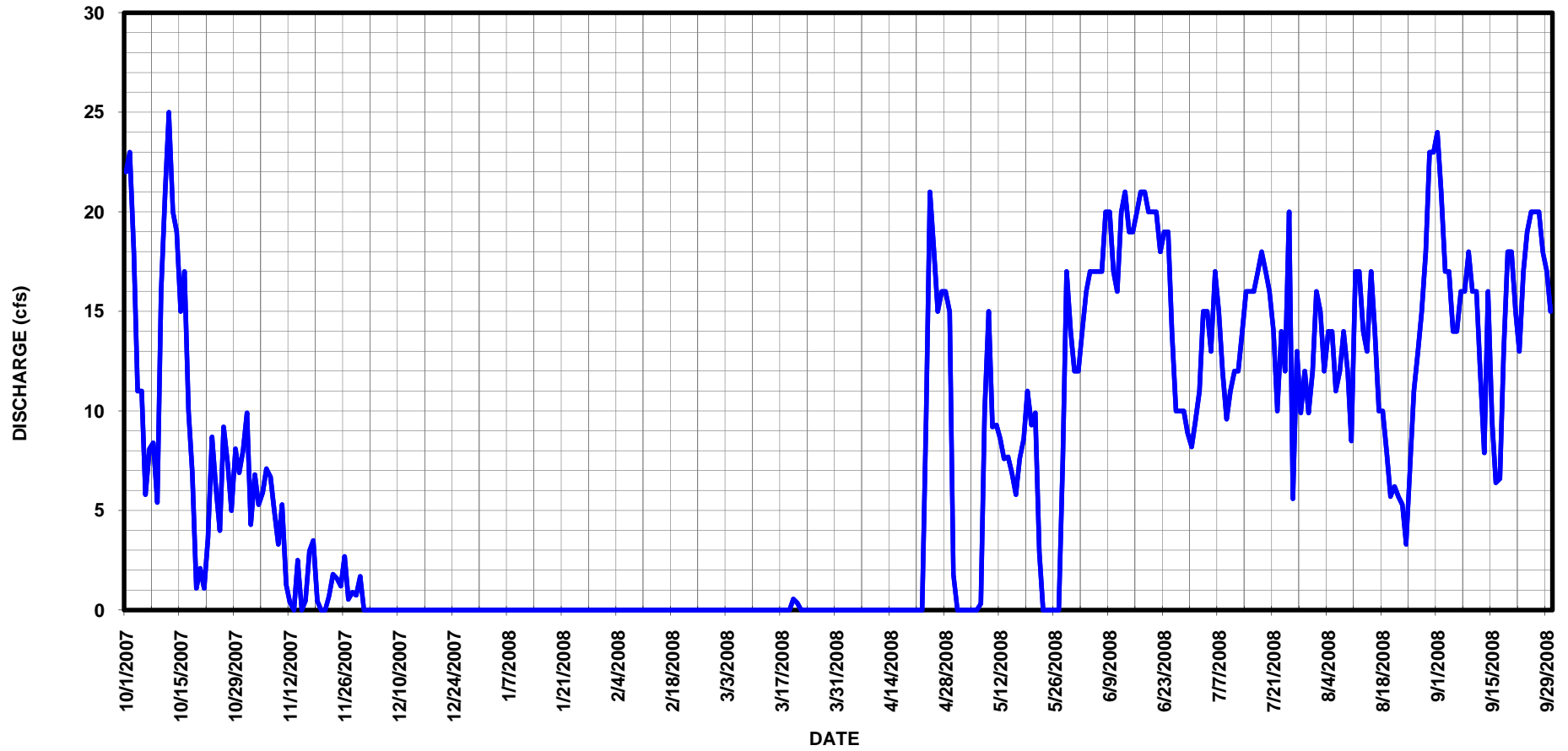
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	9.9	0	0	0	0	0	0	12	9.5	16	24
2	23	4.3	0	0	0	0	0	0	14	11	15	21
3	18	6.8	0	0	0	0	0	0	16	15	12	17
4	11	5.3	0	0	0	0	0	0	17	15	14	17
5	11	5.9	0	0	0	0	0	0	17	13	14	14
6	5.8	7.1	0	0	0	0	0	0	17	17	11	14
7	8.1	6.7	0	0	0	0	0	.33	17	15	12	16
8	8.4	5.0	0	0	0	0	0	10	20	12	14	16
9	5.4	3.3	0	0	0	0	0	15	20	9.6	12	18
10	16	5.3	0	0	0	0	0	9.2	17	11	8.5	16
11	21	1.3	0	0	0	0	0	9.3	16	12	17	16
12	25	.39	0	0	0	0	0	8.6	20	12	17	12
13	20	0	0	0	0	0	0	7.6	21	14	14	7.9
14	19	2.5	0	0	0	0	0	7.7	19	16	13	16
15	15	0	0	0	0	0	0	6.9	19	16	17	9.5
16	17	.48	0	0	0	0	0	5.8	20	16	14	6.4
17	10	3.0	0	0	0	0	0	7.6	21	17	10	6.6
18	6.9	3.5	0	0	0	0	0	8.6	21	18	10	13
19	1.1	.45	0	0	0	0	0	11	20	17	7.9	18
20	2.1	0	0	0	0	.55	0	9.3	20	16	5.7	18
21	1.1	0	0	0	0	.35	0	9.9	20	14	6.2	15
22	3.6	.69	0	0	0	0	0	2.9	18	10	5.7	13
23	8.7	1.8	0	0	0	0	9.8	0	19	14	5.3	17
24	6.2	1.6	0	0	0	0	21	0	19	12	3.3	19
25	4.0	1.2	0	0	0	0	18	0	14	20	7.3	20
26	9.2	2.7	0	0	0	0	15	0	10	5.6	11	20
27	7.4	.54	0	0	0	0	16	0	10	13	13	20
28	5.0	.89	0	0	0	0	16	7.6	10	9.9	15	18
29	8.1	.75	0	0	0	0	15	17	8.9	12	18	17
30	6.9	1.7	0	0	---	0	1.8	14	8.2	9.9	23	15
31	8.0	---	0	0	---	0	---	12	---	12	23	---
TOTAL	334.0	83.09	0	0	0	.90	112.6	180.33	501.1	414.5	384.9	470.4
MEAN	10.8	2.77	0	0	0	.029	3.75	5.82	16.7	13.4	12.4	15.7
AC-FT	662	165	0	0	0	1.8	223	358	994	822	763	933
MAX	25	9.9	0	0	0	.55	21	17	21	20	23	24
MIN	1.1	0	0	0	0	0	0	0	8.2	5.6	3.3	6.4
CAL YR 2007	TOTAL	2371.05	MEAN	6.50	MAX	25	MIN	0	AC-FT	4700		
WTR YR 2008	TOTAL	2481.82	MEAN	6.78	MAX	25	MIN	0	AC-FT	4920		

MAX DISCH: 27.8 CFS AT 03:00 ON Oct. 2, 2007 GH 1.42 FT. SHIFT 0 FT.  
MAX GH: 1.42 FT. AT 03:00 ON Oct. 2, 2007

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

### STATELINE DITCH RETURN NEAR JULESBURG CO WY2008 HYDROGRAPH



PLATTE RIVER BASIN  
TRANSMOUNTAIN DIVERSIONS INTO THE SOUTH PLATTE BASIN IN COLORADO

**TRANSMOUNTAIN DIVERSIONS INTO THE SOUTH PLATTE BASIN IN COLORADO, WY 2008**  
**WATER YEAR 2008** (October 2007 - September 2008)

<b>FROM THE COLORADO RIVER BASIN</b>													
NAME	2007			2008									TOTAL
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Adams Tunnel*	4488	13983	11411	10233	7582	13568	13322	14375	14331	16750	8466	16351	144,860
Berthoud Pass Ditch	0	0	0	0	0	0	0	0	79.5	185	69.8	20.4	354
Boreas Pass Ditch	0	0	0	0	0	0	0	0	34.3	43.4	7.91	0	86
Grand River Ditch	309	0	0	0	0	0	0	228	4966	4203	1055	380	11,141
A.P. Gumlick Tunnel**	0	0	0	0	0	0	0	471	123	0	0	0	594
Moffat Tunnel	1848	747	499	364	257	227	378	5480	16313	5405	2523	2105	36,146
Roberts Tunnel	65.4	57.6	2388	2093	1744	719	0	4692	12190	10794	3626	407	38,776
Straight Creek Tunnel	6.13	4.95	4.56	3.98	3.92	4.02	4.30	9.16	42.3	37.0	14.4	8.99	144
Vidler Tunnel	0	0	0	0	0	0	0	0	230	252	51.6	0	534
TOTALS FROM THE COLORADO RIVER BASIN (DAY-CFS)												<b>232,635</b>	
TOTALS FROM THE COLORADO RIVER BASIN (ACRE-FT)												<b>461,432</b>	
*West slope water only                      **Direct release to Clear Creek only. All other flow included in Moffat Tunnel													

<b>FROM THE LARAMIE RIVER BASIN</b>													
NAME	2007			2008									TOTAL
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Bob Creek Ditch	0	0	0	0	0	0	0	17.5	138	0.630	0	0	156
Columbine Ditch	0	0	0	0	0	0	0	0	0	0	0	0	0
Deadman Ditch	0	0	0	0	0	0	0	138	497	77.6	0	0	712
Laramie-Poudre Tunnel	0	0	0	0	0	0	0	871	4208	3899	171	0	9,149
Skyline Ditch	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS FOR THE LARAMIE RIVER (DAY-CFS)												<b>10,017</b>	
TOTALS FOR THE LARAMIE RIVER (Acre Feet, 19875 AF per CALENDAR Year Allowed Under Laramie River Agreement)												<b>19,869</b>	
NAME	2007			2008									TOTAL
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Wilson Supply Ditch (Gage)	0	0	0	0	0	0	0	675	1379	81.2	0	0	2,135
minus Deadman Ditch	0	0	0	0	0	0	0.0	138	497	77.6	0	0	712
= SAND CR. DIVERSION***	0	0	0	0	0	0	0.0	537	882	3.61	0	0	1,423
*** Negative Numbers due to Deadman Ditch Losses													
TOTALS FROM THE LARAMIE RIVER BASIN (DAY-CFS)												<b>11,440</b>	
TOTALS FROM THE LARAMIE RIVER BASIN (ACRE-FT)												<b>22,691</b>	

<b>FROM THE NORTH PLATTE RIVER BASIN</b>													
NAME	2007			2008									TOTAL
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Cameron Pass Ditch	0	0	0	0	0	0	0	0	71.1	27.27	0	0	98
Michigan Ditch	150.4	73.3	43.5	33.5	26.2	20.9	18.7	163.9	1423.0	1002.0	271.3	156.0	3,383
TOTALS FROM THE NORTH PLATTE RIVER BASIN (DAY-CFS)												<b>3,481</b>	
TOTALS FROM THE NORTH PLATTE RIVER BASIN (ACRE-FT)												<b>6,905</b>	

<b>SPECIAL CATEGORIES</b>													
NAME	2007			2008									TOTAL
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Hoosier Pass Tunnel *	0.74	0	0	0	0	0	39.1	572	2381	1287	907	341	5,528
Aurora Homestake Pipeline**	2279	1216	1242	1277	1152	1185	0	9.98	1087	0.70	2036	0	11,485
* Diverts into Division One, but entire flow is piped to the City of Colorado Springs in Division 2													
** Contains a Mixture of Colorado River Water and Water Transferred from the Arkansas River													

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TRANSMOUNTAIN DIVERSION TO

PLATTE RIVER BASIN

AURORA HOMESTAKE PIPELINE ABOVE SPINNEY MOUNTAIN RESERVOIR

**LOCATION.**--Lat 38°56'53", long 105°41'02", in Park County above Spinney Mountain Reservoir.

**PERIOD OF RECORD.**--1998 to present.

**GAGE.**--Two 36" venturi meters in a pipeline monitored by a Data Collection Platform (DCP). The DCP, venturi meters and facilities are owned and maintained by the City of Aurora. There are two meters - one is the main discharge to Spinney, and the other discharge valve is for pressure-relief (surge) on the pipeline. Both releases are monitored by the DCP and the combined Aurora and City of Colorado Springs Supervisory Control and Data Acquisition (SCADA) system.

**REMARKS.**--The primary record is two sets of hourly discharges taken from satellite monitoring. When DCP data were not available or reliable, values from the combined Aurora and City of SCADA system accounting were used. Missing data due to transmission errors were replaced by SCADA system values on Oct 28, Nov 24, Dec 5-7, 2007, Jan 8, Mar 9, 14-16, 2008. The record must be regarded as fair until the meter is calibrated with discharge measurements. Record developed by Mike Wild.

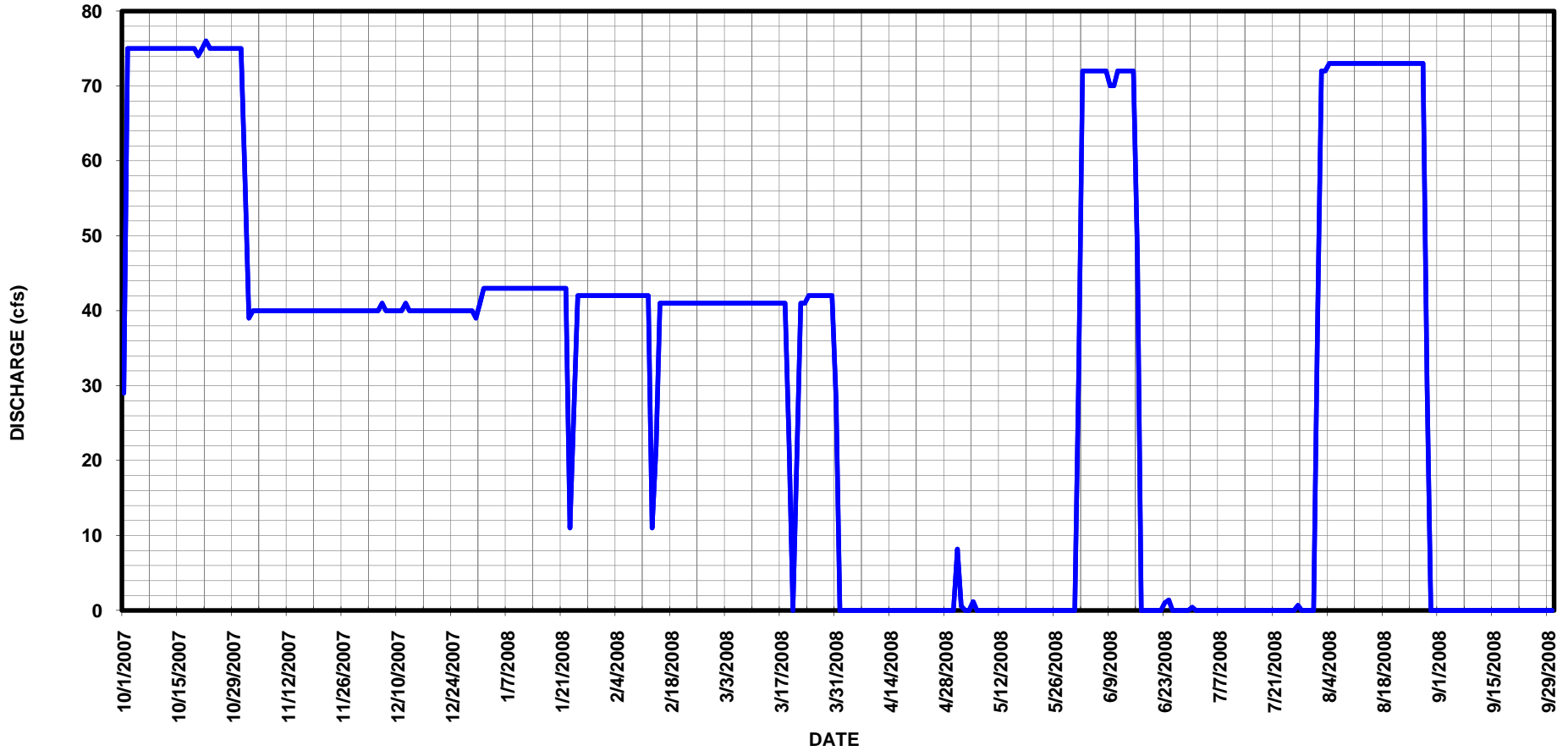
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	57	40	43	42	41	0	8.2	33	0	37	0
2	75	39	40	43	42	41	0	.58	72	0	72	0
3	75	40	40	43	42	41	0	0	72	0	72	0
4	75	40	40	43	42	41	0	0	72	0	73	0
5	75	40	40	43	42	41	0	1.2	72	0	73	0
6	75	40	41	43	42	41	0	0	72	0	73	0
7	75	40	40	43	42	41	0	0	72	0	73	0
8	75	40	40	43	42	41	0	0	72	0	73	0
9	75	40	40	43	42	41	0	0	70	0	73	0
10	75	40	40	43	42	41	0	0	70	0	73	0
11	75	40	40	43	42	41	0	0	72	0	73	0
12	75	40	41	43	42	41	0	0	72	0	73	0
13	75	40	40	43	11	41	0	0	72	0	73	0
14	75	40	40	43	22	41	0	0	72	0	73	0
15	75	40	40	43	41	41	0	0	72	0	73	0
16	75	40	40	43	41	41	0	0	47	0	73	0
17	75	40	40	43	41	41	0	0	0	0	73	0
18	75	40	40	43	41	41	0	0	0	0	73	0
19	75	40	40	43	41	22	0	0	0	0	73	0
20	74	40	40	43	41	0	0	0	0	0	73	0
21	75	40	40	43	41	21	0	0	0	0	73	0
22	76	40	40	43	41	41	0	0	0	0	73	0
23	75	40	40	11	41	41	0	0	1.0	0	73	0
24	75	40	40	26	41	42	0	0	1.4	0	73	0
25	75	40	40	42	41	42	0	0	0	0	73	0
26	75	40	40	42	41	42	0	0	0	0	73	0
27	75	40	40	42	41	42	0	0	0	.70	73	0
28	75	40	40	42	41	42	0	0	0	0	73	0
29	75	40	40	42	41	42	0	0	0	0	30	0
30	75	40	39	42	---	42	0	0	.45	0	0	0
31	75	---	41	42	---	28	---	0	---	0	0	---
TOTAL	2279	1216	1242	1277	1152	1185	0	9.98	1086.85	.70	2036	0
MEAN	73.5	40.5	40.1	41.2	39.7	38.2	0	.32	36.2	.023	65.7	0
AC-FT	4520	2410	2460	2530	2280	2350	0	20	2160	1.4	4040	0
MAX	76	57	41	43	42	42	0	8.2	72	.70	73	0
MIN	29	39	39	11	11	0	0	0	0	0	0	0
CAL YR 2007 TOTAL	11516.80	MEAN	31.6	MAX	76	MIN	0	AC-FT	22840			
WTR YR 2008 TOTAL	11484.53	MEAN	31.4	MAX	76	MIN	0	AC-FT	22780			

MAX DISCH: 80.2 CFS AT 04:45 ON Oct. 21, 2007

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

AURORA HOMESTAKE PIPELINE ABOVE SPINNEY MOUNTAIN RESERVOIR CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

PLATTE RIVER BASIN

09042000 EAST PORTAL HOOSIER PASS TUNNEL NEAR ALMA, CO

**LOCATION.**--Lat 39°21'33", long 106°04'37"; Park County, tunnel diverts water from tributaries of Blue River in Colorado River basin to Montgomery Res. (Middle Fork South Platte River) in sec. 14, T. 8 S., R. 78 W., in Platte River basin.

**PERIOD OF RECORD.**--1952 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a weekly chart recorder at an 8-foot Parshall flume with a metal stilling well. Flume and equipment are housed inside the tunnel entrance. Facilities are owned and maintained by the City of Colorado Springs.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart backup. The record is complete and reliable. The record is good due to increased definition by measurements. The flow is controlled by numerous diversions into the tunnel inlet from the Blue River drainage. Station maintained and record developed by Garver Brown.

**RATING TABLE.**--STD08FTPF USED FROM 01-Oct-2007 TO 01-Oct-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	0	0	0	0	0	.20	4.2	78	74	26	19
2	.41	0	0	0	0	0	.67	2.7	95	57	35	14
3	0	0	0	0	0	0	.67	2.3	104	55	38	14
4	0	0	0	0	0	0	.67	3.0	87	54	36	13
5	0	0	0	0	0	0	.67	5.1	57	55	34	11
6	0	0	0	0	0	0	.67	8.2	42	59	36	10
7	0	0	0	0	0	0	.67	9.7	52	54	39	9.7
8	0	0	0	0	0	0	.67	9.3	60	45	33	8.3
9	0	0	0	0	0	0	.67	7.0	44	47	28	7.9
10	0	0	0	0	0	0	.67	6.5	51	48	27	9.4
11	0	0	0	0	0	0	.67	5.3	56	48	37	8.0
12	0	0	0	0	0	0	.67	6.9	39	46	38	21
13	0	0	0	0	0	0	.69	7.5	33	42	36	17
14	0	0	0	0	0	0	.76	5.6	42	34	31	13
15	0	0	0	0	0	0	.95	4.8	63	45	28	12
16	0	0	0	0	0	0	1.0	4.4	83	43	41	12
17	0	0	0	0	0	0	.92	6.5	91	43	51	11
18	0	0	0	0	0	0	.83	13	102	44	30	12
19	0	0	0	0	0	0	.88	23	111	33	18	14
20	0	0	0	0	0	0	1.2	39	104	31	21	13
21	0	0	0	0	0	0	1.3	47	105	31	23	13
22	0	0	0	0	0	0	1.7	39	95	27	22	11
23	0	0	0	0	0	0	2.8	27	81	38	23	11
24	0	0	0	0	0	0	3.3	19	88	54	26	8.7
25	0	0	0	0	0	0	2.9	17	97	34	27	9.0
26	0	0	0	0	0	0	2.1	18	96	29	27	8.7
27	0	0	0	0	0	0	1.7	23	100	23	24	8.3
28	0	0	0	0	0	0	1.9	39	104	24	20	8.3
29	0	0	0	0	0	0	2.7	50	119	29	18	8.6
30	0	0	0	0	---	0	3.9	55	102	22	17	4.9
31	0	---	0	0	---	0	---	64	---	19	17	---
TOTAL	.74	0	0	0	0	0	39.10	572.0	2381	1287	907	340.8
MEAN	.024	0	0	0	0	0	1.30	18.5	79.4	41.5	29.3	11.4
AC-FT	1.5	0	0	0	0	0	78	1130	4720	2550	1800	676
MAX	.41	0	0	0	0	0	3.9	64	119	74	51	21
MIN	0	0	0	0	0	0	.20	2.3	33	19	17	4.9

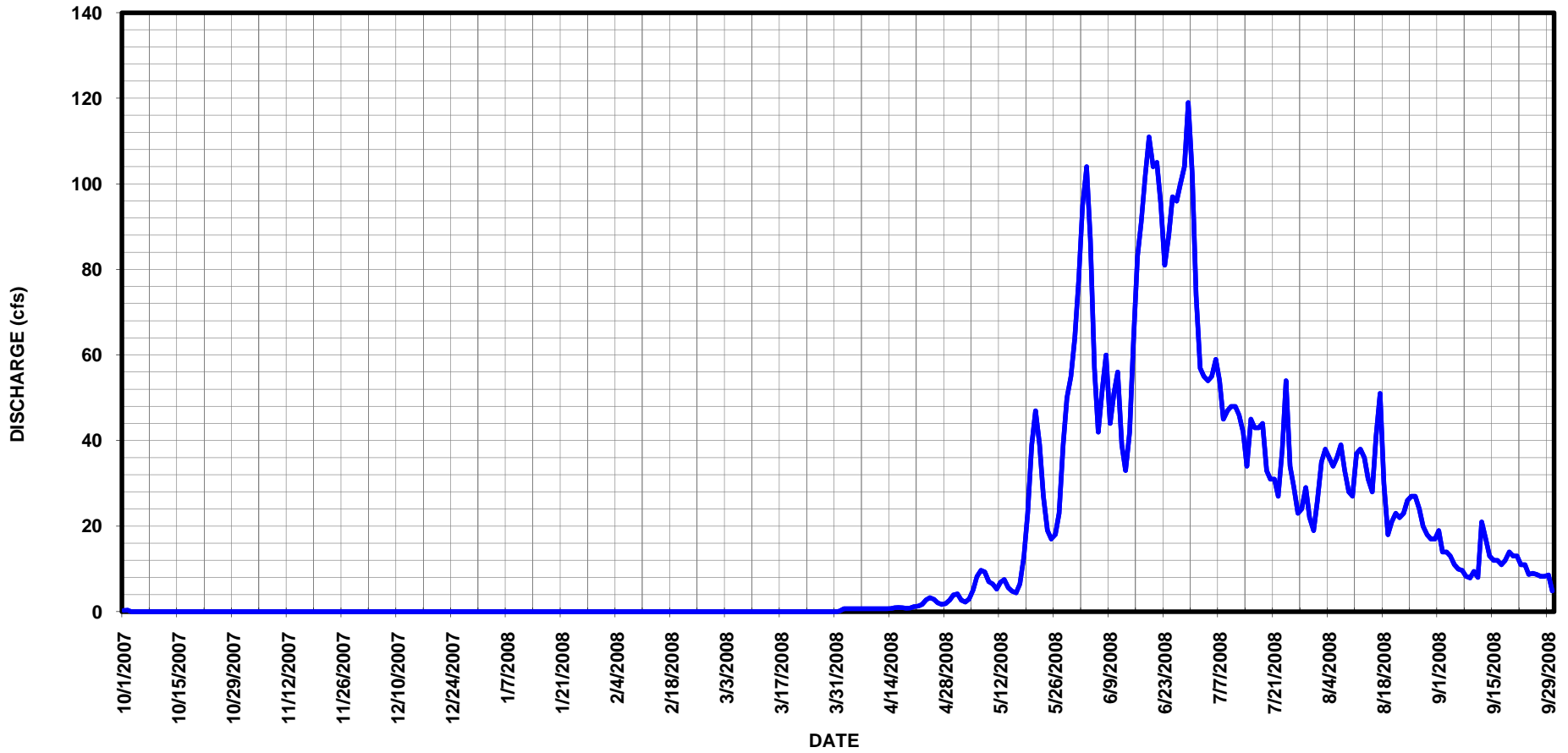
CAL YR	2007	TOTAL	3028.54	MEAN	8.3	MAX	132	MIN	0	AC-FT	6007
WTR YR	2008	TOTAL	5527.64	MEAN	15.1	MAX	119	MIN	0	AC-FT	10960

MAX DISCH: 149 CFS AT 22:30 ON Jun. 29, 2008 GH 2.62 FT. SHIFT -0.02 FT.

MAX GH: 2.62 FT. AT 22:30 ON Jun. 29, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09042000 EAST PORTAL HOOSIER PASS TUNNEL NEAR ALMA CO  
WY2008 HYDROGRAPH





TRANSMOUNTAIN DIVERSION TO

PLATTE RIVER BASIN

09046000 BOREAS PASS DITCH AT BOREAS PASS, CO

**LOCATION.**--Lat 39°24'37", long 105°58'05". Diverts water from tributaries of Blue River in Colorado River basin to Tarryall Creek in sec. 26, T.7 S., R.77 W., in Platte River basin.

**PERIOD OF RECORD.**--Gage established in 1932, with continuous record from 1950 to present, and for some years prior to 1950.

**GAGE.**--Data Collection Platform (DCP) and Sutron Stage Discharge Recorder (SDR) at an 18-inch Parshall Flume with a metal stilling well. The ditch goes underground after collection, and the flume and equipment are housed inside a manhole. The flume is set into the concrete pipeline, approximately 14 ft. underground. A staff gage in the flume is used as the primary reference gage. The gage and equipment are owned by the City of Englewood. The DCP and ditch gates are operated by an independent contractor under a special contract arrangement with Englewood.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data. A Sutron SDR is utilized for data backup. The gage was operated and satellite data were collected from 1600 June 7 to 1500 August 20, 2008. The gage was visited 6 times during the 2008 water year. The record is complete and reliable. The record is good. The gage is seasonal and runs typically from May/June to August. Record developed by Mike Wild.

**RATING TABLE.**-- STD01HFTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

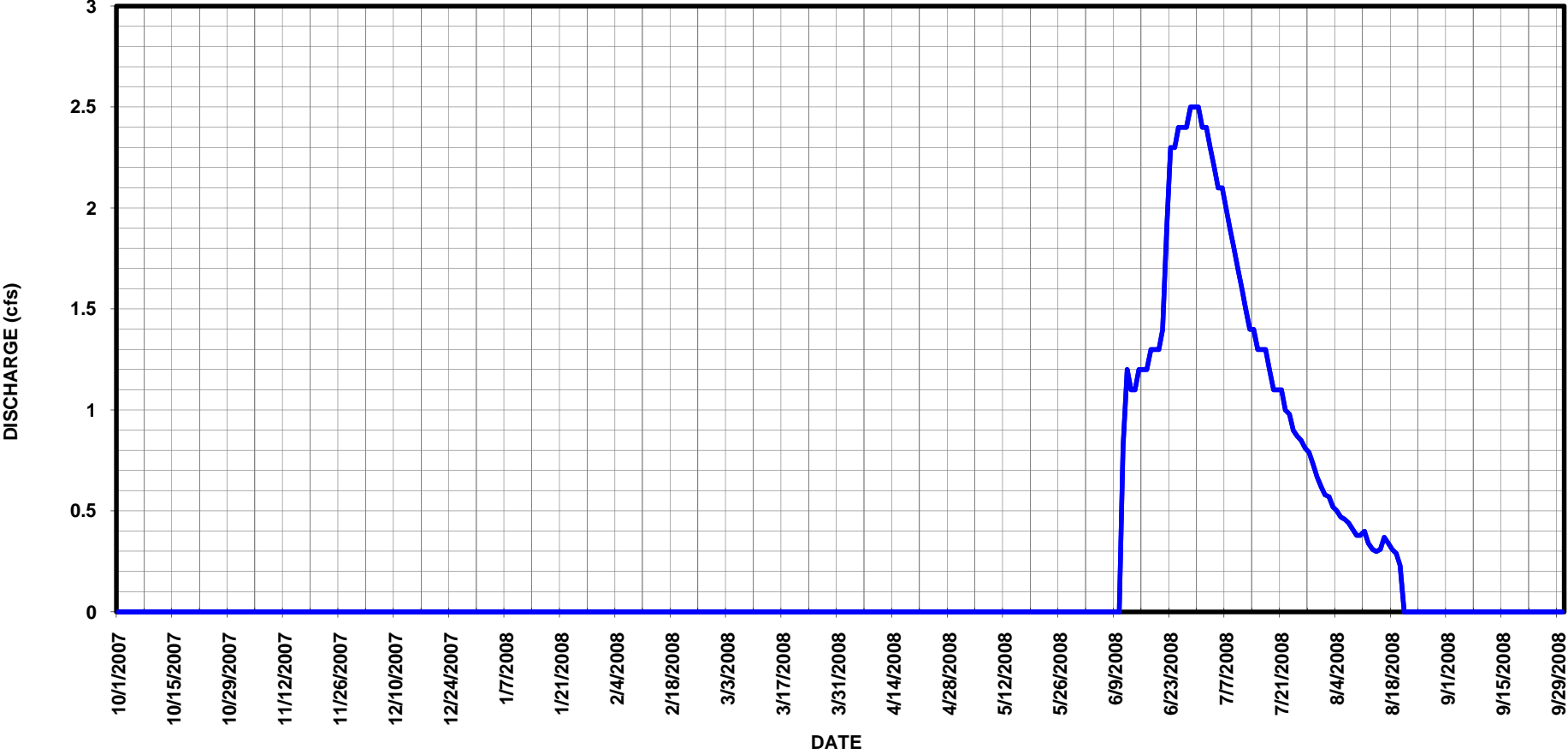
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	2.4	.58	0
2	0	0	0	0	0	0	0	0	0	2.4	.57	0
3	0	0	0	0	0	0	0	0	0	2.3	.52	0
4	0	0	0	0	0	0	0	0	0	2.2	.50	0
5	0	0	0	0	0	0	0	0	0	2.1	.47	0
6	0	0	0	0	0	0	0	0	0	2.1	.46	0
7	0	0	0	0	0	0	0	0	0	2.0	.44	0
8	0	0	0	0	0	0	0	0	0	1.9	.41	0
9	0	0	0	0	0	0	0	0	0	1.8	.38	0
10	0	0	0	0	0	0	0	0	0	1.7	.38	0
11	0	0	0	0	0	0	0	0	.82	1.6	.40	0
12	0	0	0	0	0	0	0	0	1.2	1.5	.34	0
13	0	0	0	0	0	0	0	0	1.1	1.4	.31	0
14	0	0	0	0	0	0	0	0	1.1	1.4	.30	0
15	0	0	0	0	0	0	0	0	1.2	1.3	.31	0
16	0	0	0	0	0	0	0	0	1.2	1.3	.37	0
17	0	0	0	0	0	0	0	0	1.2	1.3	.34	0
18	0	0	0	0	0	0	0	0	1.3	1.2	.31	0
19	0	0	0	0	0	0	0	0	1.3	1.1	.29	0
20	0	0	0	0	0	0	0	0	1.3	1.1	.23	0
21	0	0	0	0	0	0	0	0	1.4	1.1	0	0
22	0	0	0	0	0	0	0	0	1.9	1.0	0	0
23	0	0	0	0	0	0	0	0	2.3	.98	0	0
24	0	0	0	0	0	0	0	0	2.3	.90	0	0
25	0	0	0	0	0	0	0	0	2.4	.87	0	0
26	0	0	0	0	0	0	0	0	2.4	.85	0	0
27	0	0	0	0	0	0	0	0	2.4	.81	0	0
28	0	0	0	0	0	0	0	0	2.5	.79	0	0
29	0	0	0	0	0	0	0	0	2.5	.73	0	0
30	0	0	0	0	---	0	0	0	2.5	.67	0	0
31	0	---	0	0	---	0	---	0	---	.62	0	---
TOTAL	0	0	0	0	0	0	0	0	34.32	43.42	7.91	0
MEAN	0	0	0	0	0	0	0	0	1.49	1.40	.26	0
AC-FT	0	0	0	0	0	0	0	0	68	86	16	0
MAX	0	0	0	0	0	0	0	0	2.5	2.4	.58	0
MIN	0	0	0	0	0	0	0	0	0	.62	0	0
CAL YR 2007	TOTAL	94.41	MEAN	0.26	MAX	4.0	MIN	0	AC-FT	187		
WTR YR 2008	TOTAL	85.65	MEAN	1.02	MAX	2.5	MIN	0	AC-FT	170		

MAX DISCH: 2.95 CFS AT 13:00 ON Jun. 22, 2008 GH 0.66 FT. SHIFT -0.03 FT.  
MAX GH: 0.66 FT. AT 13:00 ON Jun. 22, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09046000 BOREAS PASS DITCH AT BOREAS PASS CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

PLATTE RIVER BASIN

09050590 HAROLD D. ROBERTS TUNNEL NEAR GRANT, CO

**LOCATION.**--Lat 39°27'50", long 105°41'01"; Harold D. Roberts tunnel diverts water from Dillon Reservoir in Blue River basin, to North Fork South Platte River (tributary to South Platte River) in SW¼SW¼ sec. 4, T. 7 S., R. 74 W., in Platte River basin.

**PERIOD OF RECORD.**--1963 to present.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a continuous chart recorder in a concrete shelter and well at a 20-ft. Parshall flume. Primary reference gage is an electric tape gage with a supplemental staff gage in the flume. Gage is owned and maintained by the Denver Water Dept., who also generate power from the tunnel flow.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart backup. It is complete and reliable. The recording equipment functions well and is considered reliable during cold weather due to a heat lamp installed within the shelter and well. During zero-flow periods, there is a residual gage height due to standing water in the well & flume. (The inlet is slightly above the floor of the flume, and dead moss traps patches of water in the flume.) The level seems to vary from 0.05 ft to 0.15 ft. Denver Water Department records were used to verify periods of zero flow. The record is rated as good. Station maintained and record developed by Mike Wild.

**RATING TABLE.**--STD20FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

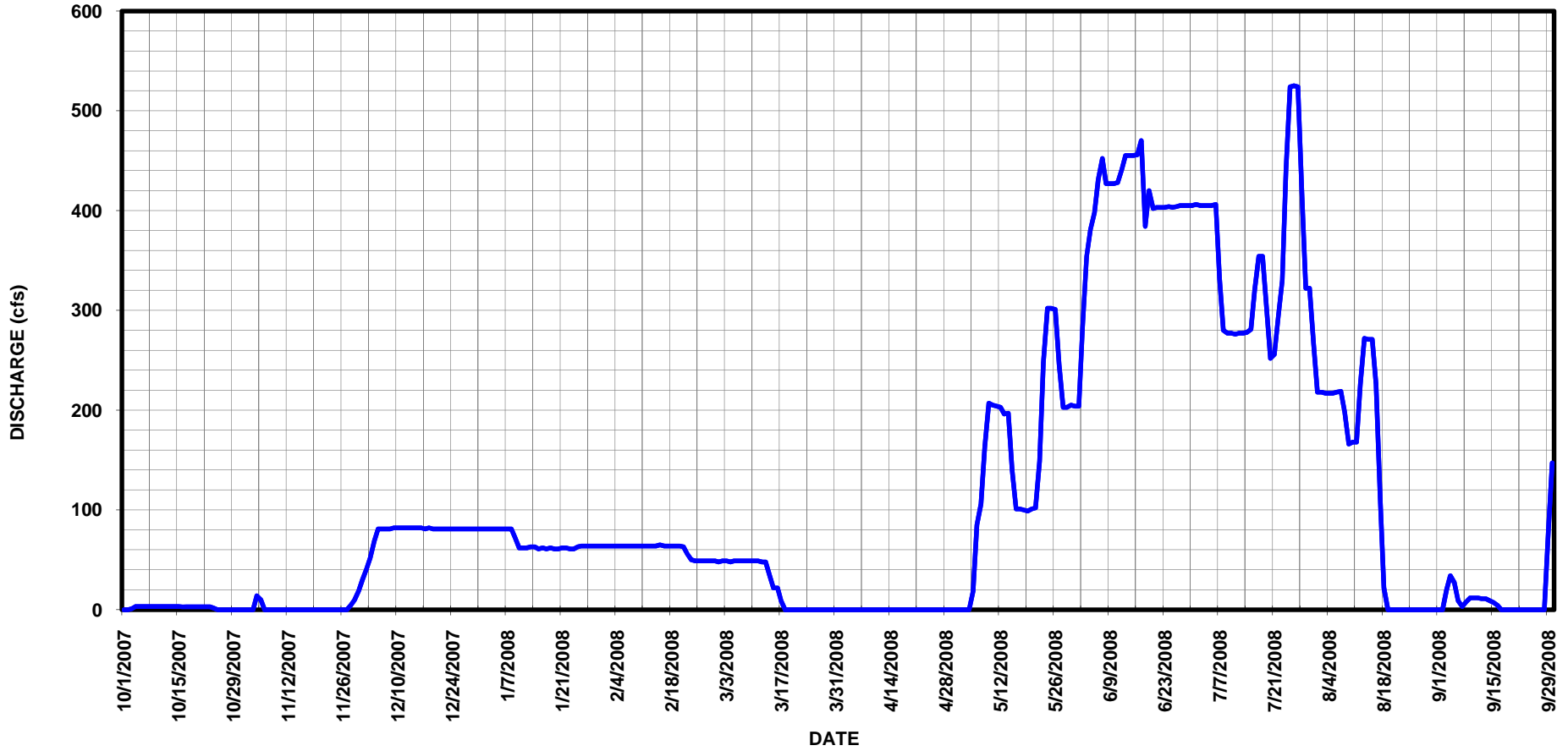
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	30	81	64	48	0	0	204	406	218	0
2	0	0	41	81	64	49	0	0	283	405	218	0
3	1.2	0	52	81	64	49	0	0	354	405	217	20
4	3.3	14	69	81	64	48	0	0	381	405	217	34
5	3.3	10	81	81	64	49	0	19	398	405	217	27
6	3.3	0	81	81	64	49	0	85	431	406	218	8.9
7	3.3	0	81	81	64	49	0	106	452	332	219	3.2
8	3.3	0	81	81	64	49	0	163	427	280	198	7.8
9	3.3	0	82	72	64	49	0	207	427	277	166	12
10	3.3	0	82	62	64	49	0	205	427	277	168	12
11	3.3	0	82	62	64	49	0	204	428	276	168	12
12	3.3	0	82	62	64	48	0	203	441	277	226	11
13	3.3	0	82	63	64	48	0	196	455	277	272	11
14	3.3	0	82	63	64	34	0	197	455	278	271	9.2
15	3.2	0	82	61	65	22	0	140	455	281	271	7.4
16	2.9	0	82	62	64	22	0	101	456	321	226	4.5
17	2.9	0	81	61	64	8.3	0	101	470	354	114	0
18	2.9	0	82	62	64	0	0	100	384	354	22	0
19	2.9	0	81	61	64	0	0	99	420	301	0	0
20	2.9	0	81	61	64	0	0	101	402	252	0	0
21	2.9	0	81	62	63	0	0	102	403	256	0	0
22	2.9	0	81	62	56	0	0	149	403	293	0	0
23	2.9	0	81	61	50	0	0	248	403	330	0	0
24	1.5	0	81	61	49	0	0	302	404	441	0	0
25	0	0	81	63	49	0	0	302	403	524	0	0
26	0	0	81	64	49	0	0	301	404	525	0	0
27	0	0	81	64	49	0	0	246	405	524	0	0
28	0	4.6	81	64	49	0	0	203	405	422	0	0
29	0	10	81	64	49	0	0	203	405	322	0	80
30	0	19	81	64	---	0	0	205	405	322	0	147
31	0	---	81	64	---	0	---	204	---	266	0	---
TOTAL	65.4	57.6	2388	2093	1744	719.3	0	4692	12190	10794	3626	407.0
MEAN	2.11	1.92	77.0	67.5	60.1	23.2	0	151	406	348	117	13.6
AC-FT	130	114	4740	4150	3460	1430	0	9310	24180	21410	7190	807
MAX	3.3	19	82	81	65	49	0	302	470	525	272	147
MIN	0	0	30	61	49	0	0	0	204	252	0	0

CAL YR	2007	TOTAL	19819.1	MEAN	54.3	MAX	487	MIN	0	AC-FT	39310
WTR YR	2008	TOTAL	38776.3	MEAN	106	MAX	525	MIN	0	AC-FT	76910

MAX DISCH: 535 CFS AT 12:00 ON Jul. 24, 2008 GH 3.31 FT. SHIFT 0.07 FT.  
MAX GH: 3.31 FT. AT 12:00 ON Jul. 24, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09050590 HAROLD D. ROBERTS TUNNEL NEAR GRANT CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

PLATTE RIVER BASIN

STRAIGHT CREEK TUNNEL AT EAST PORTAL EISENHOWER TUNNEL

**LOCATION.**--Lat 39°40'45", long 105°54'10", NE1/4, sec. 28, T1S, R71W. Manhole is located in the East Portal CDOT parking lot between the East and West bound traffic lanes of Interstate 70.

**DRAINAGE AREA.**--Eisenhower Tunnel seepage with effluent from sewage treatment facility.

**GAGE.**--A Sutron Stage Discharge Recorder (SDR) in a NEMA enclosure at a 12-inch Parshall Flume located in a manhole-vault in the Colorado Dept. of Transportation (CDOT) parking lot between eastbound and westbound lanes of I-70. The tunnel pipeline is approximately 12 ft. underground. There is a condensing environment in the tunnel; the moisture has destroyed electronic and electrical equipment placed there previously. Most metal objects are corroded. The air is of poor quality within the tunnel. Confined space equipment (Oxygen tester & man-hoist) is used when taking readings. Facility is owned by Colorado Department of Transportation, and maintained by the City of Golden.

**REMARKS.**--Primary record is hourly average of 15-minute data from the SDR recorder. Recorder was checked against the staff on October 15, 2007, May 21 and October 9, 2008 and found to read correctly. The record is considered to be complete and reliable. The CDOT parking lot is covered with ice in the winter and such readings are not made. The record is fair due to the accuracy and limited range of the measurements made. This record is requested by Colorado Div. of Water Resources Division 5 and the Upper Colorado River Commission to complete their accounting of transmountain diversions. Station maintained by Division I Hydrographic Staff and record developed by Bob Cooper.

**RATING TABLE.**--STD01FTPF USED FROM 01-Oct-2007 TO 09-Oct-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	.18	.15	.16	.12	.14	.13	.18	.70	1.8	.62	.36
2	.21	.17	.15	.19	.14	.13	.14	.16	.80	1.8	.61	.36
3	.21	.17	.15	.16	.14	.13	.13	.15	.92	1.8	.59	.35
4	.19	.17	.15	.13	.14	.13	.13	.15	1.0	1.7	.59	.34
5	.20	.17	.15	.13	.13	.14	.14	.18	1.1	1.7	.55	.34
6	.21	.17	.15	.13	.14	.13	.13	.21	1.1	1.7	.55	.33
7	.21	.17	.16	.14	.14	.13	.13	.24	1.0	1.6	.53	.33
8	.21	.17	.15	.13	.13	.13	.14	.23	1.1	1.6	.53	.33
9	.20	.17	.15	.14	.14	.13	.13	.20	1.2	1.5	.52	.33
10	.20	.17	.15	.13	.14	.13	.13	.19	1.2	1.4	.53	.32
11	.19	.17	.16	.12	.13	.13	.12	.19	1.3	1.4	.50	.32
12	.19	.17	.15	.13	.14	.13	.13	.21	1.3	1.3	.46	.39
13	.20	.17	.15	.12	.14	.13	.13	.21	1.3	1.3	.46	.31
14	.21	.17	.15	.12	.13	.13	.13	.20	1.2	1.2	.44	.31
15	.21	.17	.16	.12	.14	.12	.14	.19	1.3	1.2	.48	.29
16	.20	.17	.16	.12	.13	.13	.14	.19	1.4	1.1	.54	.28
17	.20	.17	.15	.13	.14	.13	.14	.23	1.5	1.1	.46	.32
18	.19	.17	.15	.12	.13	.14	.13	.28	1.6	1.0	.43	.30
19	.19	.17	.16	.12	.14	.12	.14	.37	1.7	.98	.41	.30
20	.19	.17	.14	.12	.13	.12	.15	.42	1.7	.94	.41	.29
21	.19	.17	.15	.12	.14	.13	.15	.43	1.7	.92	.40	.27
22	.19	.16	.14	.12	.13	.12	.16	.38	1.8	.88	.40	.26
23	.19	.16	.14	.12	.14	.12	.18	.34	1.8	.88	.40	.25
24	.19	.15	.13	.12	.13	.13	.19	.31	1.8	.85	.39	.25
25	.19	.15	.14	.12	.13	.13	.16	.34	1.8	.84	.39	.25
26	.20	.15	.13	.12	.13	.13	.14	.36	1.8	.82	.38	.26
27	.20	.15	.14	.12	.14	.13	.14	.42	1.8	.78	.38	.25
28	.19	.15	.14	.12	.14	.14	.14	.47	1.8	.79	.38	.23
29	.19	.15	.13	.12	.13	.13	.17	.53	1.8	.73	.38	.23
30	.20	.15	.13	.12	---	.13	.19	.57	1.8	.70	.36	.24
31	.20	---	.15	.12	---	.13	---	.63	---	.65	.36	---
TOTAL	6.13	4.95	4.56	3.98	3.92	4.02	4.30	9.16	42.32	36.96	14.43	8.99
MEAN	.20	.17	.15	.13	.14	.13	.14	.30	1.41	1.19	.47	.30
AC-FT	12	9.8	9.0	7.9	7.8	8.0	8.5	18	84	73	29	18
MAX	.21	.18	.16	.19	.14	.14	.19	.63	1.8	1.8	.62	.39
MIN	.19	.15	.13	.12	.12	.12	.12	.15	.70	.65	.36	.23

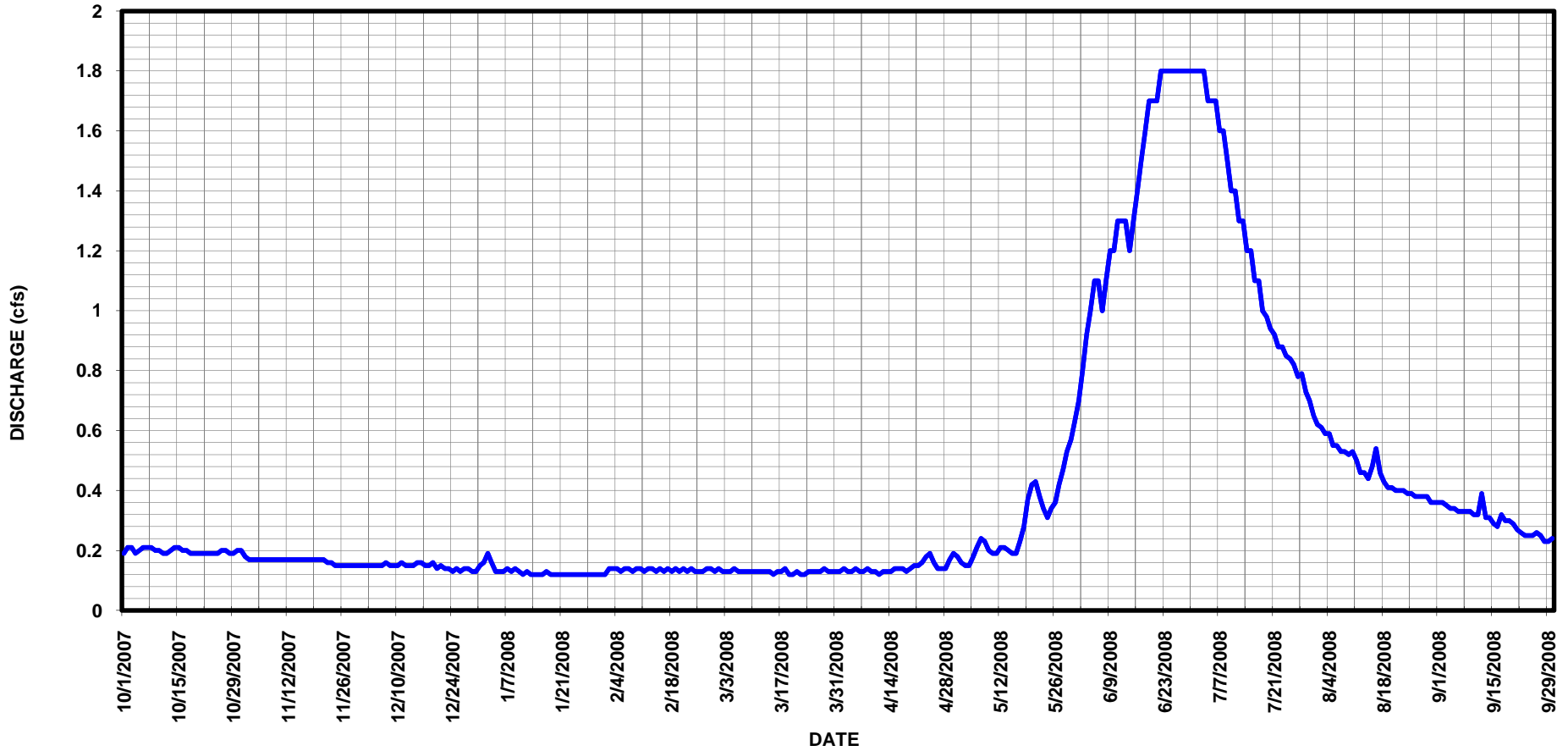
CAL YR	2007	TOTAL	106.66	MEAN	.29	MAX	1.4	MIN	.08	AC-FT	212
WTR YR	2008	TOTAL	143.72	MEAN	.39	MAX	1.8	MIN	.12	AC-FT	285

MAX DISCH: 2.07 CFS AT 20:45 ON Jul. 1, 2008 GH 0.66 FT. SHIFT 0 FT.

MAX GH: 0.66 FT. AT 20:45 ON Jul. 1, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

STRAIGHT CREEK TUNNEL AT EAST PORTAL EISENHOWER TUNNEL CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

PLATTE RIVER BASIN

A.P. GUMGLICK TUNNEL (aka JONES PASS TUNNEL) RELEASE TO CLEAR CREEK NEAR JONES PASS, CO

**LOCATION.**--Lat. 39°46'13", Long. 105°51'03"; in SW1/4, Sec. 24, T3S, R76W. Two miles east of Jones Pass at Henderson Mine, 11 miles west of Empire, Colorado. Diversion is from tributaries of the Williams Fork River in the Colorado River Basin. Since July, 1959, Gumlick water has been rediverted into Vasquez Tunnel to Vasquez Creek in the Frazier River and Colorado River basins. Gumlick Tunnel flows may be released into Clear Creek and must be accounted for as a separate trans-mountain diversion from the Colorado River Basin to the South Platte Basin.

**PERIOD OF RECORD.**--WY2006 is first year of published record.

**GAGE.**--Gumlick Tunnel water emerges on the East Slope into a covered canal. A radial gate allows flow from an 8x8 ft. opening in the canal side into the West Fork of Clear Creek drainage. Stevens Type F graphic water stage recorder at 10-ft. Parshall flume with 5 ft. walls, in a square concrete shelter with a 12" stilling well. The gage is set to an outside staff gage on the flume. Gage is owned and maintained by Denver Water Department. Datum of gage is 10,312.5 ft.

**REMARKS.**--The record is chart-based and the recorder is maintained by Denver Water Dept. The record is complete and reliable with no missing data. Hourly GH's were estimated from the chart and entered into a records spreadsheet. The gage was visited once during the release by a State hydrographer and the chart gage height was correctly set to the outside staff gage. This gage is an infrequently used transmountain diversion owned by Denver Water Dept. and used to deliver water to Clear Creek in Division One. The record is considered good. Water was not run last year so the 2007 Calendar year flows are zero. Record developed by Bob Cooper.

**RATING TABLE.**--STD10FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

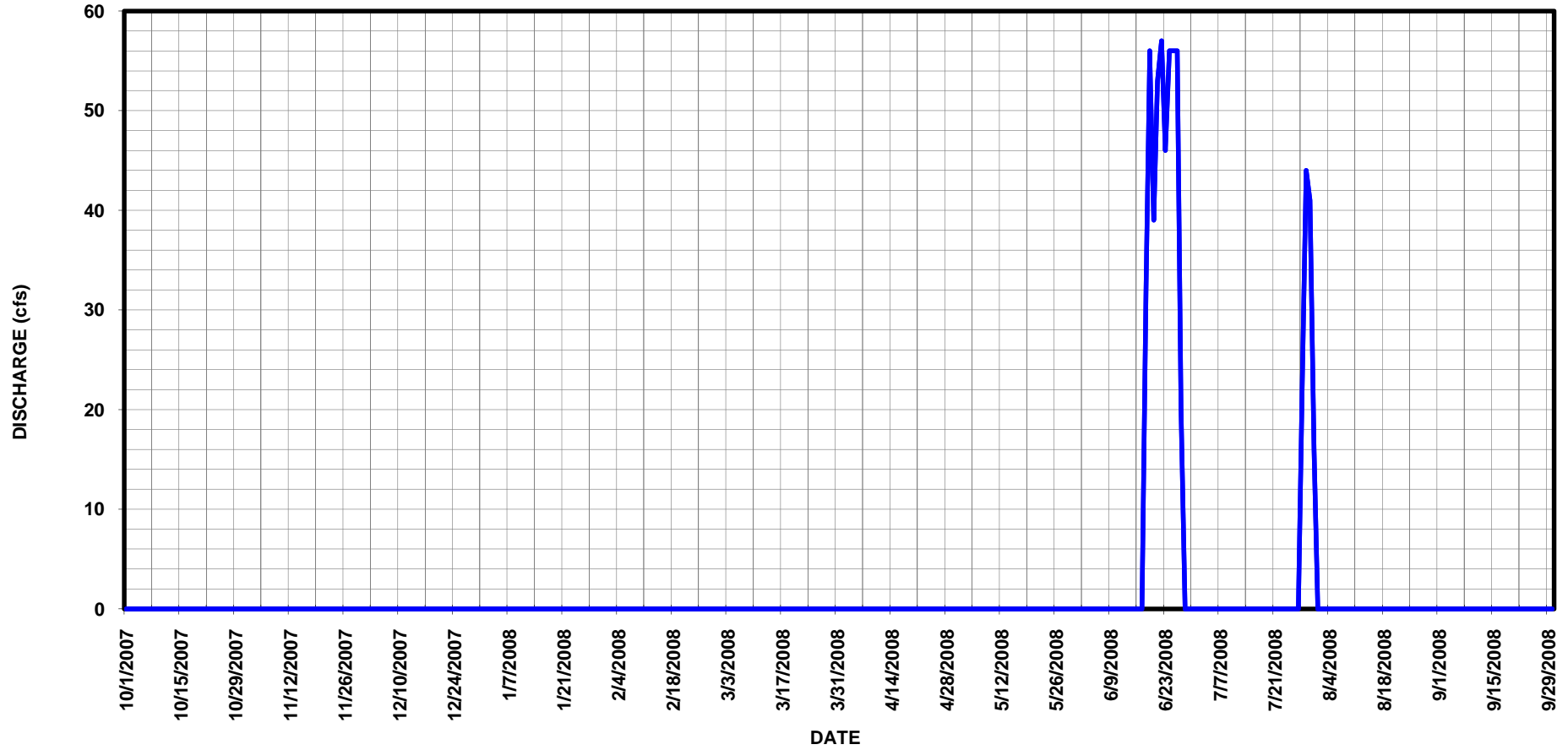
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	32	0	0	0
19	0	0	0	0	0	0	0	0	56	0	0	0
20	0	0	0	0	0	0	0	0	39	0	0	0
21	0	0	0	0	0	0	0	0	53	0	0	0
22	0	0	0	0	0	0	0	0	57	0	0	0
23	0	0	0	0	0	0	0	0	46	0	0	0
24	0	0	0	0	0	0	0	0	56	0	0	0
25	0	0	0	0	0	0	0	0	56	0	0	0
26	0	0	0	0	0	0	0	0	56	0	0	0
27	0	0	0	0	0	0	0	0	20	0	0	0
28	0	0	0	0	0	0	0	0	0	22	0	0
29	0	0	0	0	0	0	0	0	0	44	0	0
30	0	0	0	0	---	0	0	0	0	41	0	0
31	0	---	0	0	---	0	---	0	---	16	0	---
TOTAL	0	0	0	0	0	0	0	0	471	123	0	0
MEAN	0	0	0	0	0	0	0	0	15.7	3.97	0	0
AC-FT	0	0	0	0	0	0	0	0	934	244	0	0
MAX	0	0	0	0	0	0	0	0	57	44	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0

CAL YR	2007	TOTAL	0	MEAN	0	MAX	0	MIN	0	AC-FT	0
WTR YR	2008	TOTAL	594	MEAN	1.62	MAX	57	MIN	0	AC-FT	1180

MAX DISCH: 77 CFS AT 19:30 ON Jun. 22, 2008 GH 1.45 FT. SHIFT 0.07 FT.  
MAX GH: 1.45 FT. AT 19:30 ON Jun. 22, 2008

**A.P. GUMBLICK TUNNEL (aka JONES PASS TUNNEL) RELEASE TO CLEAR CREEK NEAR JONES PASS CO  
WY2008 HYDROGRAPH**





TRANSMOUNTAIN DIVERSION TO

PLATTE RIVER BASIN

09047300 VIDLER TUNNEL NEAR ARGENTINE PASS, CO

**LOCATION.**--Lat 39°37'28", long 105°47'28", sec.6, T.5 S., R.75 W., Summit County, at Argentine Pass above Keystone Ski Area.

**PERIOD OF RECORD.**--1971 to present.

**GAGE.**--Stevens F-type recorder and digital shaft encoder in an enclosure mounted on a prefabricated steel 3-ft Parshall flume. The flume is inside the tunnel, approximately 320 feet from the Data Collection Platform (DCP). The primary reference gage is the flume staff gage. Stevens chart recorder was replaced with a Sutron SDR (Stage Discharge Recorder) on July 1 2008. Gage is owned and maintained by the City of Golden.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart or SDR backup. The record is complete and reliable. Chart data were used to fill in missing DCP data on several dates without loss of accuracy. The record is considered good. Record developed by Mike Wild.

**RATING TABLE.**--STD03FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

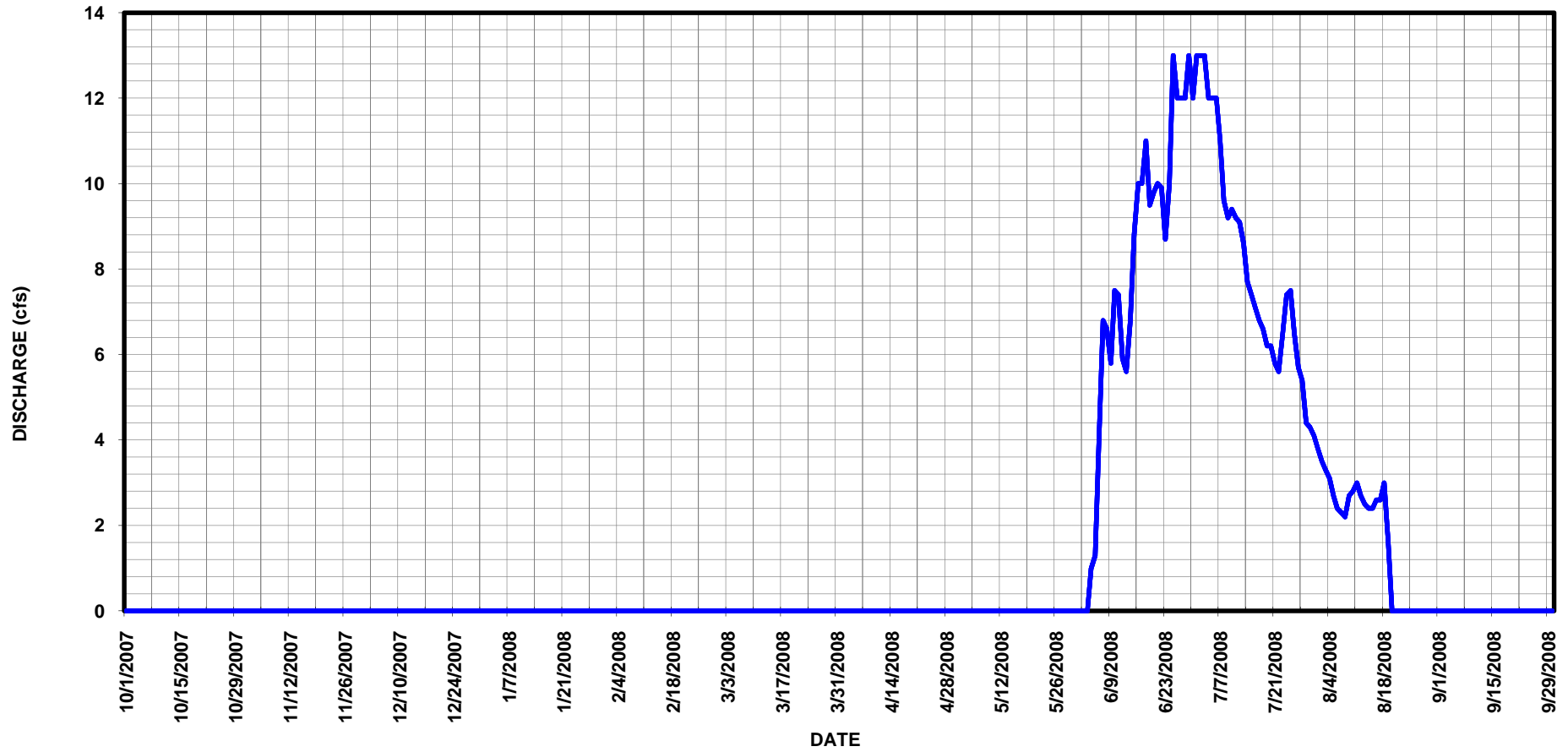
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	13	3.8	0
2	0	0	0	0	0	0	0	0	0	13	3.5	0
3	0	0	0	0	0	0	0	0	0	13	3.3	0
4	0	0	0	0	0	0	0	0	1.0	12	3.1	0
5	0	0	0	0	0	0	0	0	1.3	12	2.7	0
6	0	0	0	0	0	0	0	0	4.0	12	2.4	0
7	0	0	0	0	0	0	0	0	6.8	11	2.3	0
8	0	0	0	0	0	0	0	0	6.6	9.6	2.2	0
9	0	0	0	0	0	0	0	0	5.8	9.2	2.7	0
10	0	0	0	0	0	0	0	0	7.5	9.4	2.8	0
11	0	0	0	0	0	0	0	0	7.4	9.2	3.0	0
12	0	0	0	0	0	0	0	0	5.9	9.1	2.7	0
13	0	0	0	0	0	0	0	0	5.6	8.6	2.5	0
14	0	0	0	0	0	0	0	0	6.8	7.7	2.4	0
15	0	0	0	0	0	0	0	0	8.8	7.4	2.4	0
16	0	0	0	0	0	0	0	0	10	7.1	2.6	0
17	0	0	0	0	0	0	0	0	10	6.8	2.6	0
18	0	0	0	0	0	0	0	0	11	6.6	3.0	0
19	0	0	0	0	0	0	0	0	9.5	6.2	1.6	0
20	0	0	0	0	0	0	0	0	9.8	6.2	0	0
21	0	0	0	0	0	0	0	0	10	5.8	0	0
22	0	0	0	0	0	0	0	0	9.9	5.6	0	0
23	0	0	0	0	0	0	0	0	8.7	6.5	0	0
24	0	0	0	0	0	0	0	0	10	7.4	0	0
25	0	0	0	0	0	0	0	0	13	7.5	0	0
26	0	0	0	0	0	0	0	0	12	6.5	0	0
27	0	0	0	0	0	0	0	0	12	5.7	0	0
28	0	0	0	0	0	0	0	0	12	5.4	0	0
29	0	0	0	0	0	0	0	0	13	4.4	0	0
30	0	0	0	0	---	0	0	0	12	4.3	0	0
31	0	---	0	0	---	0	---	0	---	4.1	0	---
TOTAL	0	0	0	0	0	0	0	0	230.4	252.3	51.6	0
MEAN	0	0	0	0	0	0	0	0	7.68	8.14	1.66	0
AC-FT	0	0	0	0	0	0	0	0	457	500	102	0
MAX	0	0	0	0	0	0	0	0	13	13	3.8	0
MIN	0	0	0	0	0	0	0	0	0	4.1	0	0

CAL YR	2007	TOTAL	360.3	MEAN	0.99	MAX	16	MIN	0	AC-FT	715
WTR YR	2008	TOTAL	534.3	MEAN	1.46	MAX	13	MIN	0	AC-FT	1060

MAX DISCH: 16.2 CFS AT 17:45 ON Jun. 29, 2008 GH 1.26 FT. SHIFT -0.05 FT.  
MAX GH: 1.26 FT. AT 17:45 ON Jun. 29, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09047300 VIDLER TUNNEL NEAR ARGENTINE PASS CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

PLATTE RIVER BASIN

09021500 BERTHOUD PASS DITCH AT BERTHOUD PASS, CO

**LOCATION.**--Lat 39°47'56", long 105°46'36" in SW1/4, sec. 10, T3S, R75W. Berthoud Pass Ditch diverts water from tributaries of Fraser River between headgate in sec. 33, T. 2 S., R. 75 W., Grand County, and Berthoud Pass, in Colorado River basin, to Hoop Creek, tributary to west fork Clear Creek in sec. 10, T3S, R75W, in Platte River Basin.

**PERIOD OF RECORD.**--July 1932 to present.

**GAGE.**--Data Collection Platform (DCP) and shaft encoder inside a 42-inch metal shelter and well at a 30 inch by 9 ft. cutthroat flume. The stilling well has been divided to accommodate two recorders, one for Ha and one for Hb. The primary reference gage is drop tape located in the shelter. There is a staff gage in the flume at the Ha position, but no reference for Hb. Gage is owned and maintained by the City of Northglenn. Construction was done at the gage in October-November 2007 to cover the ditch. Prior to construction, snow-plows and traffic would drop debris into the ditch. The incoming ditch itself was replaced with a 36-inch Corrugated Metal Pipe and the flume was covered with sheets of metal. An extra foot of concrete was also added to the walls of the flume, extending them from 3 ft. to 4 ft. in height. The exiting ditch was replaced with a 36 inch Corrugated Plastic Pipe.

**REMARKS.**-- The primary record is hourly averages of 15-minute satellite data with the DCP log as back-up. The record is complete and reliable with no missing data. The record is considered good, except for the instantaneous peak of 11.2 cfs which is considered poor. Station maintained by Division I Hydrographic Staff and record developed by Patrick Tyler.

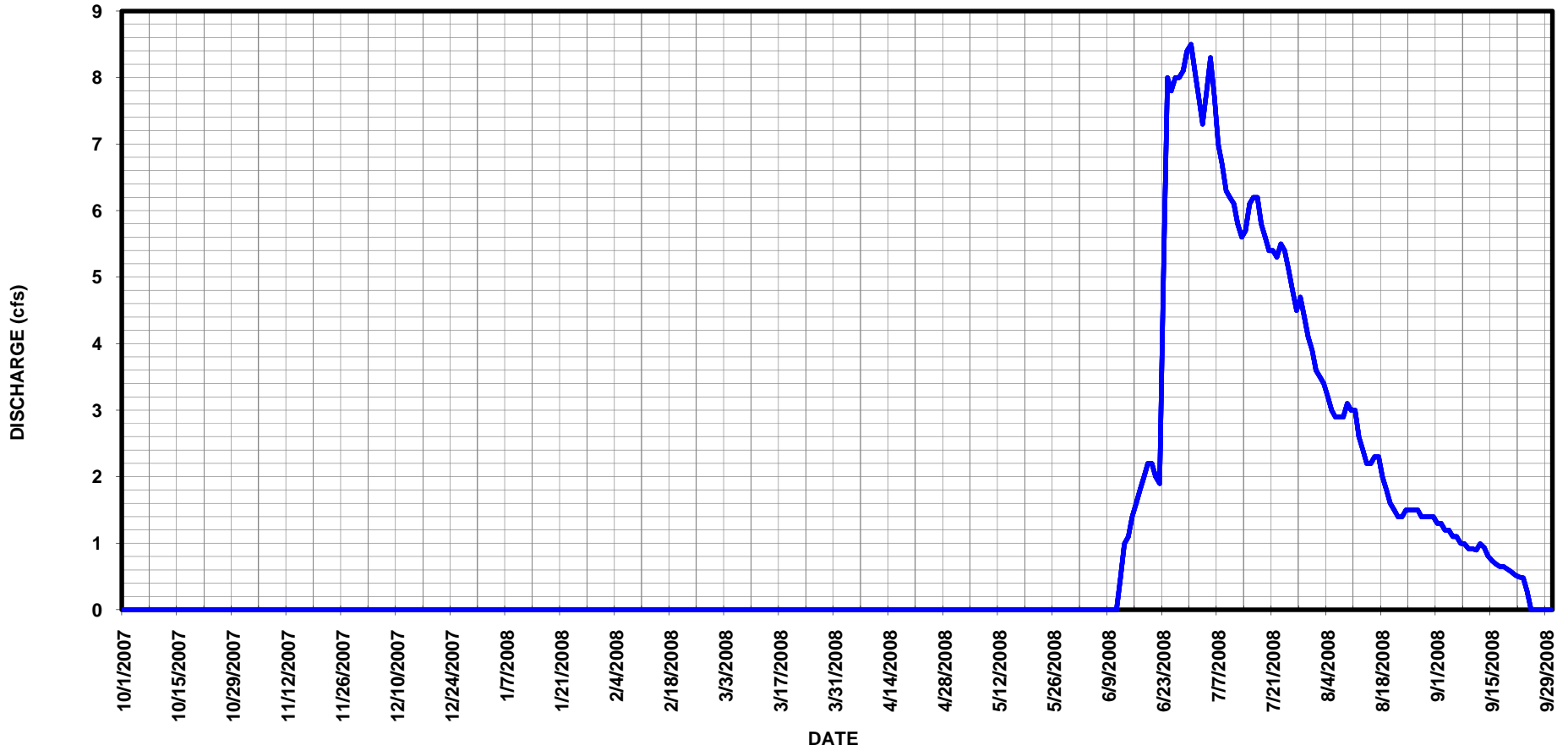
**RATING TABLE.**--BERDITCO02 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	8.1	3.6	1.3
2	0	0	0	0	0	0	0	0	0	7.7	3.5	1.3
3	0	0	0	0	0	0	0	0	0	7.3	3.4	1.2
4	0	0	0	0	0	0	0	0	0	7.8	3.2	1.2
5	0	0	0	0	0	0	0	0	0	8.3	3.0	1.1
6	0	0	0	0	0	0	0	0	0	7.7	2.9	1.1
7	0	0	0	0	0	0	0	0	0	7.0	2.9	1.0
8	0	0	0	0	0	0	0	0	0	6.7	2.9	.99
9	0	0	0	0	0	0	0	0	0	6.3	3.1	.92
10	0	0	0	0	0	0	0	0	0	6.2	3.0	.92
11	0	0	0	0	0	0	0	0	0	6.1	3.0	.90
12	0	0	0	0	0	0	0	0	.49	5.8	2.6	.99
13	0	0	0	0	0	0	0	0	.99	5.6	2.4	.94
14	0	0	0	0	0	0	0	0	1.1	5.7	2.2	.81
15	0	0	0	0	0	0	0	0	1.4	6.1	2.2	.74
16	0	0	0	0	0	0	0	0	1.6	6.2	2.3	.69
17	0	0	0	0	0	0	0	0	1.8	6.2	2.3	.65
18	0	0	0	0	0	0	0	0	2.0	5.8	2.0	.65
19	0	0	0	0	0	0	0	0	2.2	5.6	1.8	.61
20	0	0	0	0	0	0	0	0	2.2	5.4	1.6	.57
21	0	0	0	0	0	0	0	0	2.0	5.4	1.5	.52
22	0	0	0	0	0	0	0	0	1.9	5.3	1.4	.49
23	0	0	0	0	0	0	0	0	5.0	5.5	1.4	.48
24	0	0	0	0	0	0	0	0	8.0	5.4	1.5	.28
25	0	0	0	0	0	0	0	0	7.8	5.1	1.5	0
26	0	0	0	0	0	0	0	0	8.0	4.8	1.5	0
27	0	0	0	0	0	0	0	0	8.0	4.5	1.5	0
28	0	0	0	0	0	0	0	0	8.1	4.7	1.4	0
29	0	0	0	0	0	0	0	0	8.4	4.4	1.4	0
30	0	0	0	0	---	0	0	0	8.5	4.1	1.4	0
31	0	---	0	0	---	0	---	0	---	3.9	1.4	---
TOTAL	0	0	0	0	0	0	0	0	79.48	184.7	69.8	20.35
MEAN	0	0	0	0	0	0	0	0	2.65	5.96	2.25	.68
AC-FT	0	0	0	0	0	0	0	0	158	366	138	40
MAX	0	0	0	0	0	0	0	0	8.5	8.3	3.6	1.3
MIN	0	0	0	0	0	0	0	0	0	3.9	1.4	0
CAL YR 2007	TOTAL	362.5	MEAN	.99	MAX	12	MIN	0	AC-FT	719		
WTR YR 2008	TOTAL	354.3	MEAN	.97	MAX	8.5	MIN	0	AC-FT	703		

MAX DISCH: 11.2 CFS AT 17:15 ON Jun. 23, 2008 GH 1.39 FT. GH CORR. 0.04 FT. SHIFT 0 FT.  
MAX GH: 1.43 FT. (GH CORR. 0.04 FT. APPLIED) AT 17:15 ON Jun. 23, 2008

09021500 BERTHOUD PASS DITCH AT BERTHOUD PASS CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

PLATTE RIVER BASIN

09022500 EAST PORTAL MOFFAT TUNNEL NEAR ROLLINSVILLE, CO

**LOCATION.**--Lat 39°54'07", long 105°38'44"; in SW1/4, sec. 2, T2S, R74W. Diverts water from tributaries of William's Fork River and main stem and tributaries of Fraser River in Colorado River basin, to South Boulder Creek, in sec. 2, T2S, R74W, in Platte River basin, Gilpin County.

**PERIOD OF RECORD.**--June 1936 to present.

**GAGE.**--Data Collection Platform (DCP) with speech modem, shaft encoder and a weekly chart recorder in a timber shelter at a concrete stilling well and 15-foot Parshall flume. Primary reference gage is an electric tape gage with a supplemental staff gage in the flume. Gage is owned and maintained by the Denver Water Department.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite data with chart backup. The record is complete and reliable. The flume is generally not subject to ice as the water was still warm from the tunnel. The graphic chart is changed weekly by Denver Water Dept personnel. Record is good, with exception of Nov 30 - Dec 1, 2006, which have been estimated and are considered poor. Station maintained by Division I Hydrographic Staff and record developed by Bob Cooper.

**RATING TABLE.**--STD15FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

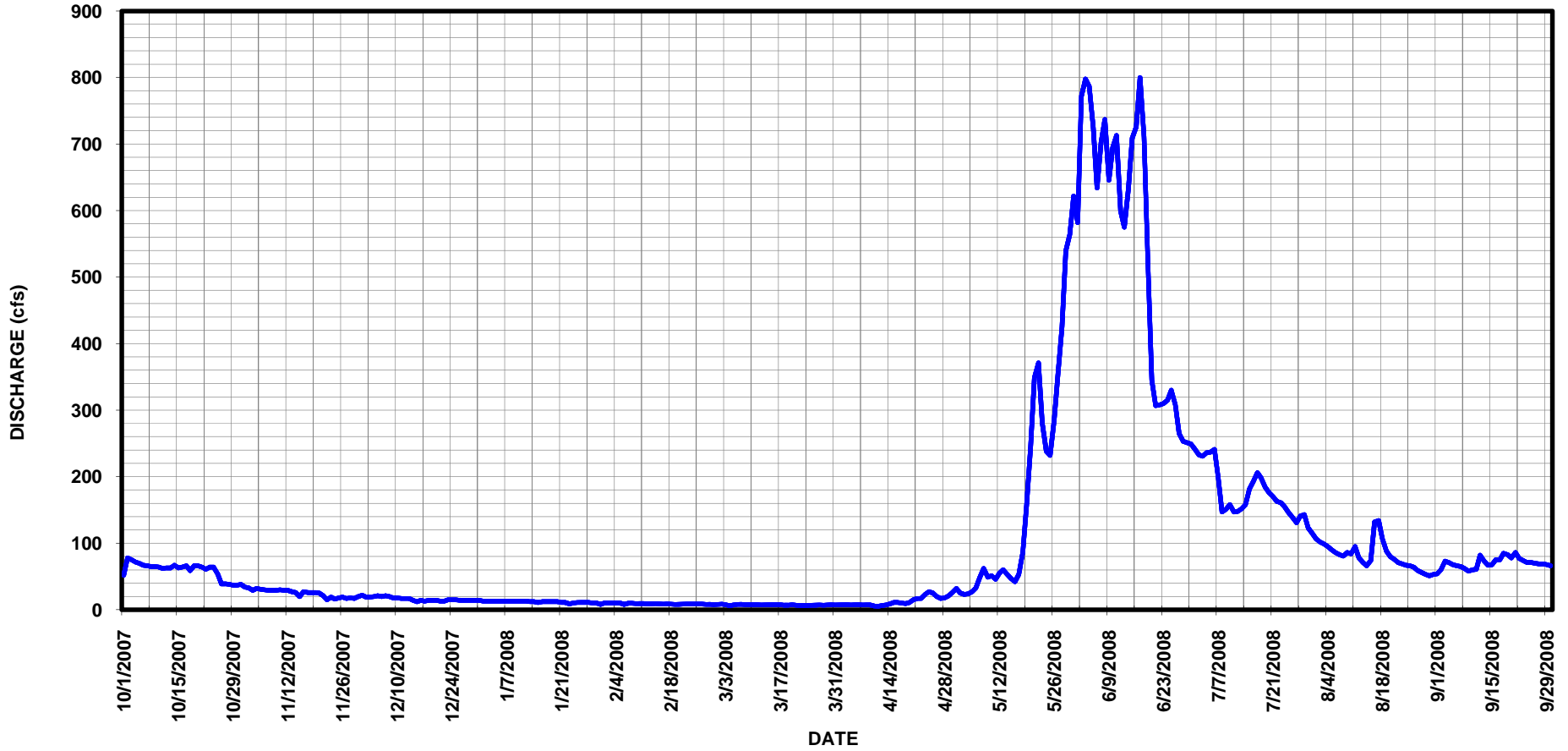
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	34	22	13	10	8.0	7.2	32	582	242	107	54
2	78	33	19	13	10	8.5	7.7	25	772	233	102	60
3	75	29	19	13	10	7.5	7.6	23	798	231	99	73
4	72	32	20	13	10	6.2	7.2	24	787	236	95	71
5	70	31	21	13	10	7.4	7.5	27	725	237	90	68
6	67	30	20	13	8.1	8.0	7.5	33	634	241	86	66
7	66	29	21	13	9.5	7.9	7.3	49	703	198	83	65
8	65	29	20	13	9.6	7.8	7.2	62	737	147	81	62
9	65	29	18	13	9.3	7.8	7.2	49	646	151	86	58
10	64	30	18	13	9.3	7.7	5.7	51	695	158	84	60
11	62	29	17	13	9.3	7.7	5.2	46	713	147	95	61
12	63	29	17	13	8.8	7.3	6.4	55	600	148	78	82
13	63	27	17	12	8.7	7.2	7.1	60	575	152	71	73
14	67	26	14	12	9.1	7.7	8.8	53	633	158	66	67
15	63	20	12	11	8.9	7.6	11	47	709	182	74	68
16	64	27	14	12	8.6	7.5	11	42	726	193	132	75
17	66	26	13	12	8.7	7.5	9.9	53	800	206	134	75
18	59	26	14	12	8.5	6.9	9.3	87	711	198	107	85
19	66	26	14	12	8.0	6.8	11	157	526	184	88	83
20	66	25	14	12	8.2	7.8	15	245	345	176	80	78
21	64	21	13	11	8.6	7.0	17	349	307	170	76	86
22	61	15	13	11	8.4	6.3	17	371	308	163	71	77
23	64	19	15	9.0	8.4	6.3	23	281	310	161	69	74
24	64	16	15	10	8.4	6.5	27	238	315	155	67	71
25	54	18	15	11	8.4	7.0	25	232	330	146	66	71
26	39	19	14	11	8.3	7.0	20	285	308	139	64	70
27	39	17	14	11	8.1	7.2	17	354	265	131	59	69
28	38	18	14	11	8.2	6.7	18	425	253	141	56	69
29	37	17	14	10	7.7	7.3	21	539	251	143	53	68
30	37	20	14	10	---	7.5	26	564	249	123	51	66
31	38	---	14	8.1	---	7.4	---	622	---	115	53	---
TOTAL	1848	747	499	364.1	257.1	227.0	377.8	5480	16313	5405	2523	2105
MEAN	59.6	24.9	16.1	11.7	8.87	7.32	12.6	177	544	174	81.4	70.2
AC-FT	3670	1480	990	722	510	450	749	10870	32360	10720	5000	4180
MAX	78	34	22	13	10	8.5	27	622	800	242	134	86
MIN	37	15	12	8.1	7.7	6.2	5.2	23	249	115	51	54
CAL YR 2007	TOTAL	22630.2	MEAN	62.0	MAX	380	MIN	7.2	AC-FT	44900		
WTR YR 2008	TOTAL	36146	MEAN	98.8	MAX	800	MIN	5.2	AC-FT	71700		

MAX DISCH: 889 CFS AT 19:30 ON Jun. 17, 2008 GH 5.39 FT. SHIFT 0.13 FT.  
MAX GH: 5.39 FT. AT 19:30 ON Jun. 17, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09022500 EAST PORTAL MOFFAT TUNNEL NEAR ROLLINSVILLE CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

PLATTE RIVER BASIN

09013000 ALVA B. ADAMS TUNNEL (NET) AT EAST PORTAL NEAR ESTES PARK, CO

**LOCATION.**--Lat 40°19'40", long 105°34'39", in NW¼ sec. 9, T.3 N., R.75 W., Larimer County on right bank at upstream end of Aspen Creek Siphon, 700 ft. below east portal, and 4.5 mi. southwest of Estes Park.

**PERIOD OF RECORD.**--ADANETCO (West Slope Water only) published since 2000. Adams Tunnel (ADATUNCO), published since 1948, includes small amounts of east slope water that enter the ADATUNCO stilling basin.

**GAGE.**--Alva B. Adam's Tunnel (Net) (ADANETCO) is a computed record. This record is comprised of data obtained from Alva B. Adam's Tunnel Near Estes Park, CO (ADATUNCO), Wind River Near Estes Park, CO (WINDESCO) and Wind River Bypass Below Adam's Tunnel Near Estes Park, CO (WINBYPCO). See individual records for WINDESCO and WINBYPCO for station equipment. ADATUNCO equipment includes a shaft encoder, Sutron Stage Discharge Recorder (SDR) and Satellite Monitoring Data Collection Platform (DCP) in a rectangular concrete shelter and concrete  $H_a$  /  $H_b$  wells at a 15-foot Parshall flume. Gage is equipped with electric tape gages on both wells. A supplementary staff gage is located on the left wing wall of the flume at the  $H_a$  location. The gage is operated cooperatively by the US Bureau of Reclamation (USBR) and the Colorado Division of Water Resources as part of the Colorado Big-Thompson (C-BT) project.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with SDR as backup. The record is complete and reliable. In the winter months heat lamps and heaters are used to keep the well from freezing. Zero flow is determined operationally. Small residuals draining through the flume after the tunnel was turned off were considered to be zero, since skimming was not occurring during these periods. Zero flow occurred on part of the day or all day on the following days: October 4-13, 19-20, 2007; August 2-3, 5-6, 2008. Zero flow was observed on October 6, 2007.

ADANETCO (West slope delivery only) has been published to provide the west slope delivery on a daily basis. ADANETCO discharge is determined by calculating the amount of skimmed Wind River water moved through the ADATUNCO structure and subtracting that amount from the ADATUNCO record on days when skimming occurred. The net skim is Wind River above Adams Tunnel (WINDESCO) minus Wind River bypass (WINBYPCO) below Adams Tunnel. Thus  $ADANETCO = ADATUNCO - (WINDESCO - WINBYPCO)$ . Skimming operations recorded from May 21, 2008 (16:00) through August 14, 2008 (12:00). The ADATUNCO, WINDESCO, and WINBYPCO records are considered good during this period. For non-skim periods,  $ADANETCO = ADATUNCO$  and is rated good.

Station maintained by USBR and DWR personnel and record developed by Russell Stroud.

09013000 ALVA B. ADAMS TUNNEL (NET) AT EAST PORTAL

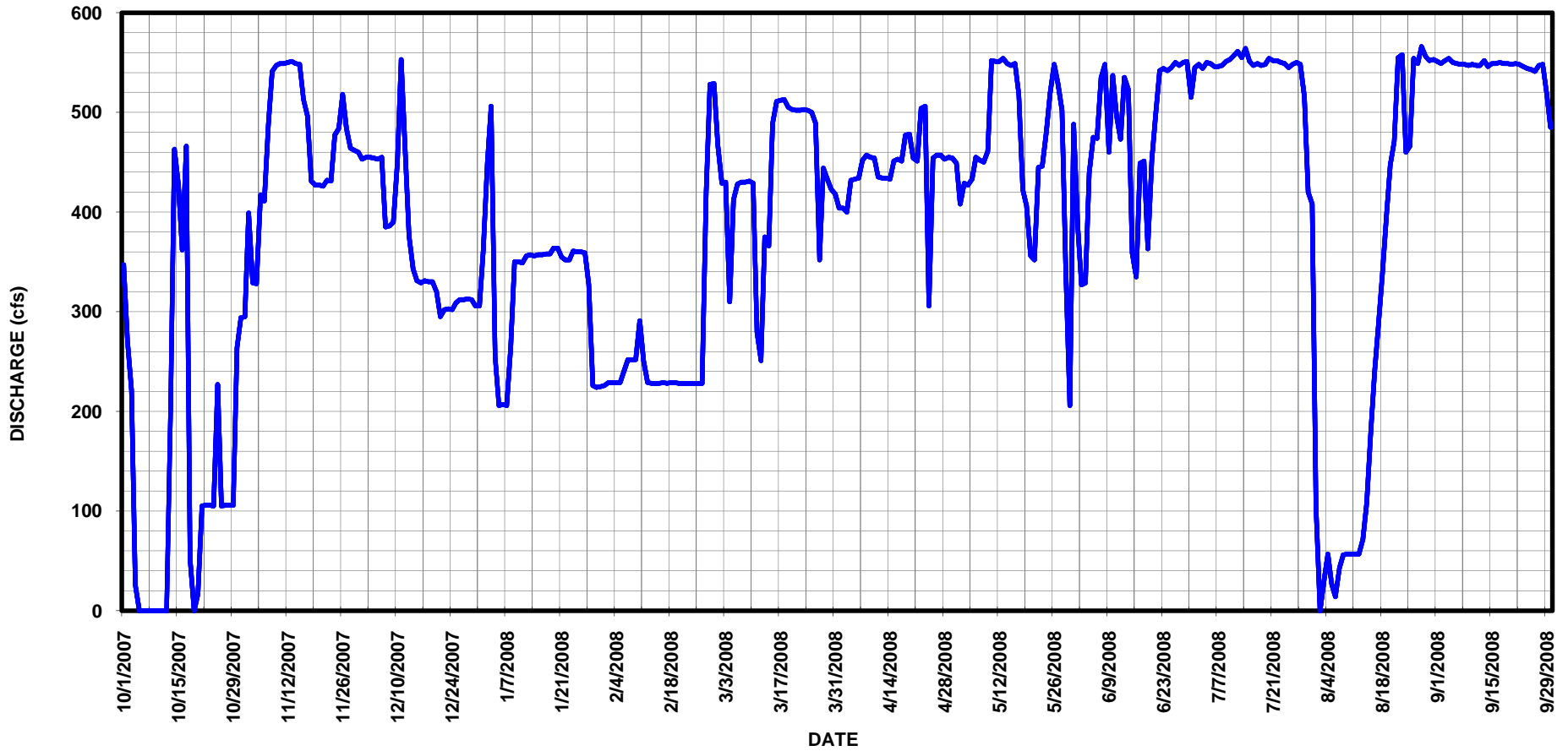
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	347	295	453	362	226	467	404	449	387	545	104	551
2	271	399	455	449	229	429	404	408	327	548	0	549
3	221	329	455	506	229	430	400	429	329	544	29	552
4	26	328	454	255	229	310	432	427	439	550	57	554
5	0	417	453	206	229	412	433	433	475	549	27	550
6	0	411	455	207	241	428	434	455	474	546	14	549
7	0	488	385	206	252	430	452	452	535	546	43	548
8	0	541	386	265	252	430	457	450	548	547	56	548
9	0	547	390	350	252	431	455	461	460	551	57	547
10	0	549	450	350	291	429	454	552	537	553	57	548
11	0	549	553	349	251	279	435	551	497	557	57	547
12	0	550	460	356	229	251	434	551	473	561	57	547
13	206	551	376	357	228	375	434	554	535	555	72	552
14	463	549	343	356	228	366	433	549	523	564	108	546
15	427	548	331	357	228	489	451	547	359	551	179	549
16	362	513	329	357	229	511	453	549	335	547	239	549
17	466	496	331	358	228	512	451	518	449	549	289	550
18	52	431	330	358	229	513	477	422	451	547	338	549
19	.05	427	330	364	229	505	478	406	363	548	396	549
20	17	427	320	364	228	503	454	356	452	554	447	548
21	105	426	295	355	228	502	451	352	497	552	471	549
22	106	432	302	352	228	502	504	445	542	552	555	548
23	106	431	303	352	228	503	506	446	544	550	558	546
24	105	477	302	361	228	502	306	480	542	549	460	544
25	227	484	309	360	228	500	454	519	545	545	466	543
26	105	518	312	360	228	489	457	548	550	548	554	541
27	106	484	312	359	420	352	457	529	547	550	549	547
28	106	464	313	327	528	444	453	502	550	548	566	548
29	106	462	312	226	529	433	455	341	551	516	556	518
30	264	460	306	224	---	423	454	206	515	420	552	485
31	294	---	306	225	---	418	---	488	---	408	553	---
TOTAL	4488.05	13983	11411	10233	7582	13568	13322	14375	14331	16750	8466	16351
MEAN	145	466	368	330	261	438	444	464	478	540	273	545
AC-FT	8900	27740	22630	20300	15040	26910	26420	28510	28430	33220	16790	32430
MAX	466	551	553	506	529	513	506	554	551	564	566	554
MIN	0	295	295	206	226	251	306	206	327	408	0	485
CAL YR 2007	TOTAL	132549.35	MEAN	363	MAX	558	MIN	0	AC-FT	262900		
WTR YR 2008	TOTAL	144860	MEAN	396	MAX	566	MIN	0	AC-FT	287300		

MAX DISCH: 592 CFS AT 09:15 ON Jul. 14, 2008 (COMPUTED: ADATUNCO peak flow minus Wind River Skim)  
MAX GH: 4.29 FT. AT 09:15 ON Jul. 14, 2008 (As recorded by ADATUNCO)



09013000 ALVA B. ADAMS TUNNEL (NET) AT EAST PORTAL NEAR ESTES PARK CO  
WY2008 HYDROGRAPH



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TRANSMOUNTAIN DIVERSION TO

PLATTE RIVER BASIN

09010000 GRAND RIVER DITCH AT LA POUVRE PASS, CO

**LOCATION.**--Lat 40°28'22", long 105°49'17", in NW¼ sec. 21, T.6 N., R.75 W., in Platte River Basin, to La Poudre Pass Creek, tributary to Cache La Poudre River.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a weekly chart recorder in a wooden shelter at a 10-foot Parshall flume. A drop tape is the primary reference gage. Gage is owned and maintained by Water Supply and Storage Company.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart backup. The record is complete and reliable, except for October 14, 22- 23, 2007, and May 20-28, 2008, due to ice and snow in the channel below the flume causing the flume to run in submergence. The record is good, except for periods of ice affected record, which are estimated and poor. Station maintained by Division I Hydrographic Staff and record developed by Lee Cunning.

**RATING TABLE.**--STD10FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

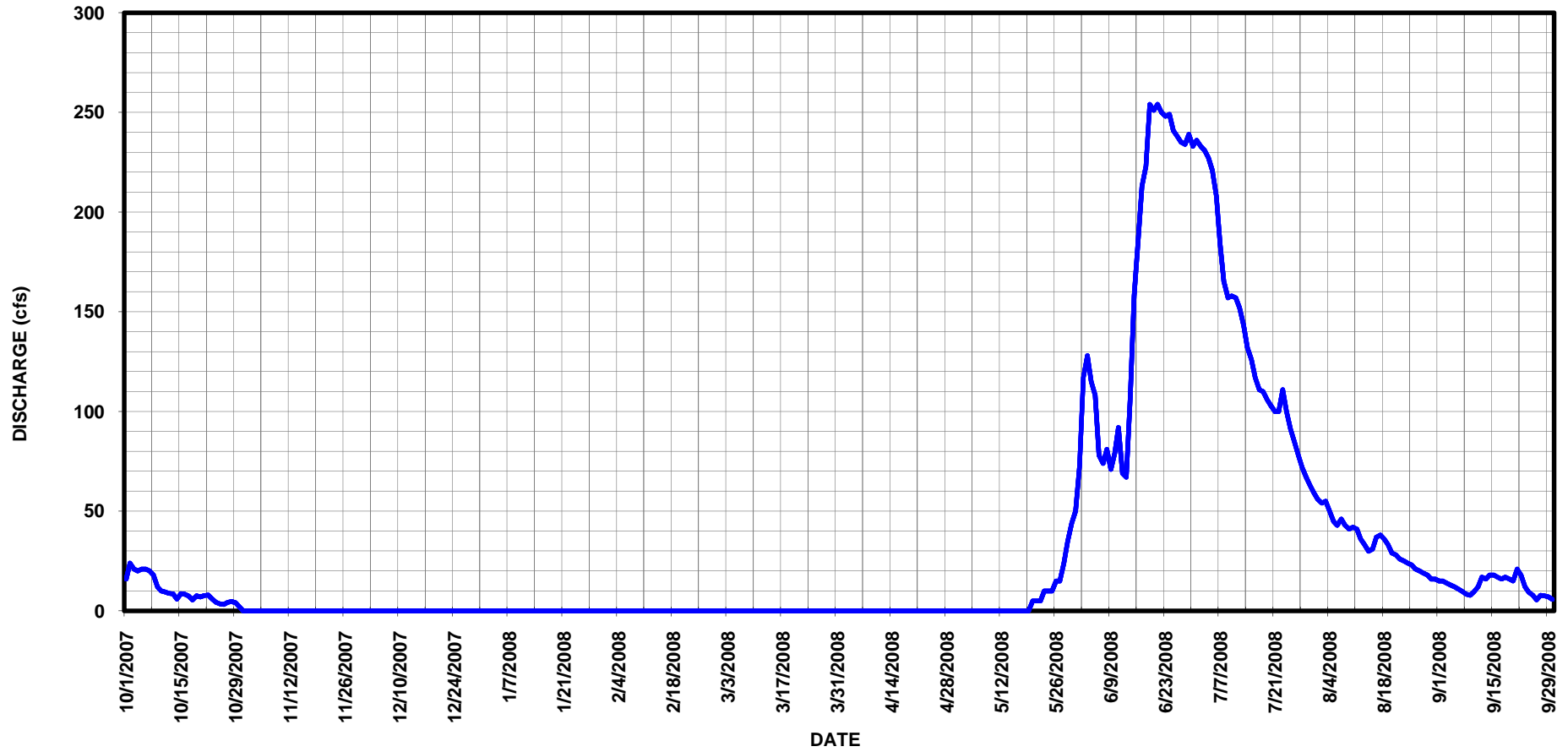
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	0	0	0	0	0	0	0	73	236	56	15
2	24	0	0	0	0	0	0	0	117	233	54	15
3	21	0	0	0	0	0	0	0	128	231	55	14
4	20	0	0	0	0	0	0	0	115	227	50	13
5	21	0	0	0	0	0	0	0	108	221	45	12
6	21	0	0	0	0	0	0	0	78	208	43	11
7	20	0	0	0	0	0	0	0	74	184	46	9.8
8	18	0	0	0	0	0	0	0	81	165	43	8.4
9	12	0	0	0	0	0	0	0	71	157	41	7.9
10	10	0	0	0	0	0	0	0	79	158	42	9.6
11	9.5	0	0	0	0	0	0	0	92	157	41	12
12	8.8	0	0	0	0	0	0	0	69	152	36	17
13	8.5	0	0	0	0	0	0	0	67	143	33	16
14	6.0	0	0	0	0	0	0	0	108	132	30	18
15	8.7	0	0	0	0	0	0	0	158	126	31	18
16	8.4	0	0	0	0	0	0	0	186	117	37	17
17	7.5	0	0	0	0	0	0	0	213	111	38	16
18	5.6	0	0	0	0	0	0	0	223	110	36	17
19	7.6	0	0	0	0	0	0	0	254	106	33	16
20	7.1	0	0	0	0	0	0	5.0	251	103	29	15
21	7.7	0	0	0	0	0	0	5.0	254	100	28	21
22	8.0	0	0	0	0	0	0	5.0	250	100	26	18
23	6.0	0	0	0	0	0	0	10	248	111	25	12
24	4.4	0	0	0	0	0	0	10	249	100	24	9.4
25	3.5	0	0	0	0	0	0	10	241	91	23	7.9
26	3.2	0	0	0	0	0	0	15	238	85	21	5.5
27	4.4	0	0	0	0	0	0	15	235	78	20	7.9
28	4.8	0	0	0	0	0	0	24	234	72	19	7.6
29	4.0	0	0	0	0	0	0	35	239	67	18	7.1
30	2.0	0	0	0	---	0	0	44	233	63	16	5.8
31	0	---	0	0	---	0	---	50	---	59	16	---
TOTAL	308.7	0	0	0	0	0	0	228.0	4966	4203	1055	379.9
MEAN	9.96	0	0	0	0	0	0	7.35	166	136	34.0	12.7
AC-FT	612	0	0	0	0	0	0	452	9850	8340	2090	754
MAX	24	0	0	0	0	0	0	50	254	236	56	21
MIN	0	0	0	0	0	0	0	0	67	59	16	5.5

CAL YR 2007 TOTAL 10412.7 MEAN 28.5 MAX 237 MIN 0 AC-FT 20650  
WTR YR 2008 TOTAL 11140 MEAN 30.4 MAX 254 MIN 0 AC-FT 22100

MAX DISCH: 286 CFS AT 17:45 ON Jun. 19, 2008 GH 3.45 FT. SHIFT 0 FT.  
MAX GH: 3.45 FT. AT 17:45 ON Jun. 19, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09010000 GRAND RIVER DITCH AT LA POUVRE PASS CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

PLATTE RIVER BASIN

06745500 CAMERON PASS DITCH AT CAMERON PASS, CO

**LOCATION.**--Lat 40°31'14", long 105°53'32"; Diverts water from Michigan River and tributaries, to Joe Wright Creek (tributary to Cache La Poudre River) in sec. 2, T.6 N., R.76 W.

**GAGE.**--Sutron Stage Discharge Recorder (SDR) in a wooden shelter and stilling well at a 2-ft Parshall flume. Primary reference gage is an outside staff gage in the flume.

**REMARKS.**--Primary record is hourly averages of 5-minute SDR data values. The record is complete and reliable. Record is good. Water was run from June 13 until July 22, 2008. Station maintained by Division I Hydrographic Staff and record developed by Lee Cunning.

**RATING TABLE.**--STD02FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

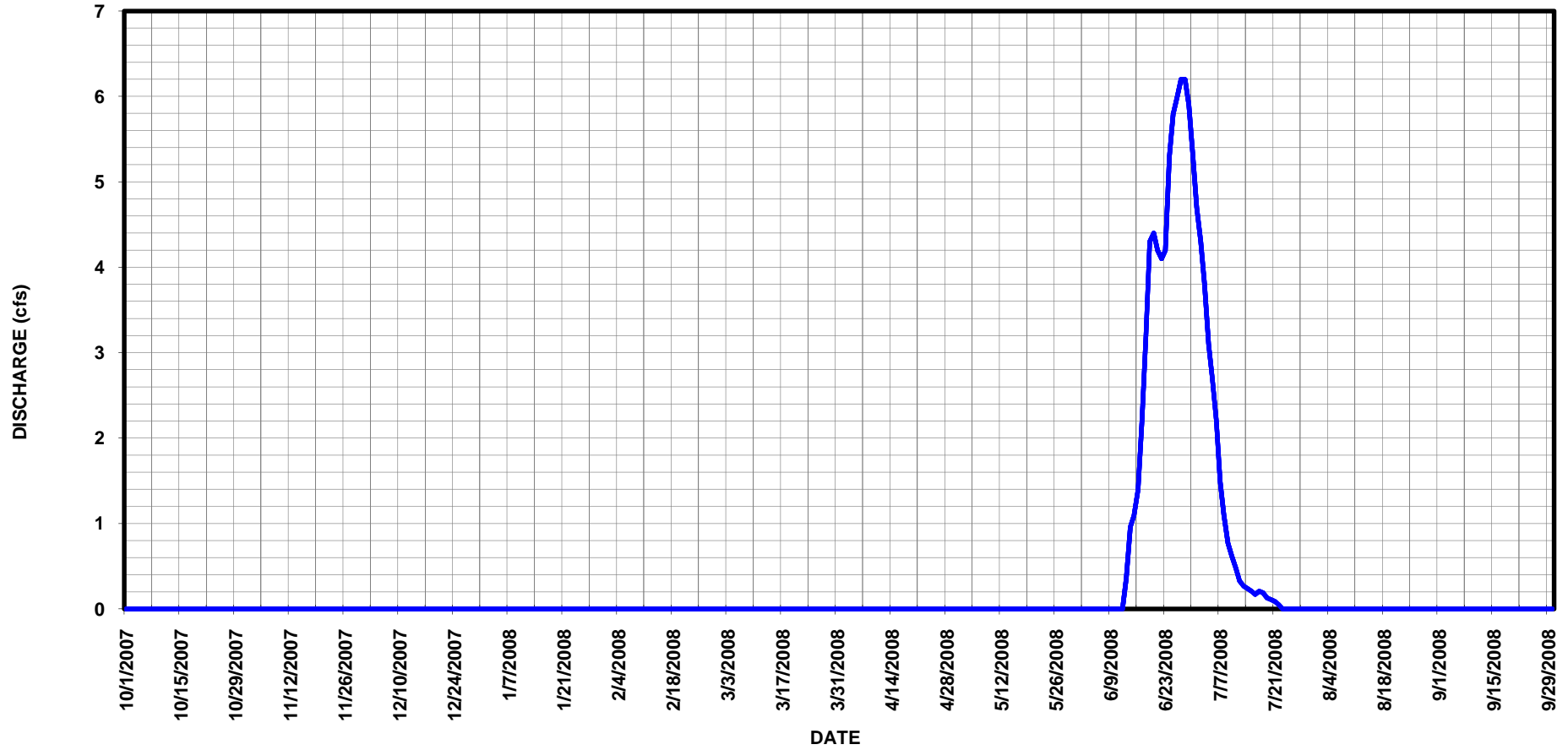
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	4.7	0	0
2	0	0	0	0	0	0	0	0	0	4.3	0	0
3	0	0	0	0	0	0	0	0	0	3.8	0	0
4	0	0	0	0	0	0	0	0	0	3.1	0	0
5	0	0	0	0	0	0	0	0	0	2.7	0	0
6	0	0	0	0	0	0	0	0	0	2.2	0	0
7	0	0	0	0	0	0	0	0	0	1.5	0	0
8	0	0	0	0	0	0	0	0	0	1.1	0	0
9	0	0	0	0	0	0	0	0	0	.77	0	0
10	0	0	0	0	0	0	0	0	0	.62	0	0
11	0	0	0	0	0	0	0	0	0	.48	0	0
12	0	0	0	0	0	0	0	0	0	.33	0	0
13	0	0	0	0	0	0	0	0	.36	.27	0	0
14	0	0	0	0	0	0	0	0	.96	.24	0	0
15	0	0	0	0	0	0	0	0	1.1	.21	0	0
16	0	0	0	0	0	0	0	0	1.4	.17	0	0
17	0	0	0	0	0	0	0	0	2.2	.21	0	0
18	0	0	0	0	0	0	0	0	3.2	.19	0	0
19	0	0	0	0	0	0	0	0	4.3	.13	0	0
20	0	0	0	0	0	0	0	0	4.4	.11	0	0
21	0	0	0	0	0	0	0	0	4.2	.09	0	0
22	0	0	0	0	0	0	0	0	4.1	.05	0	0
23	0	0	0	0	0	0	0	0	4.2	0	0	0
24	0	0	0	0	0	0	0	0	5.3	0	0	0
25	0	0	0	0	0	0	0	0	5.8	0	0	0
26	0	0	0	0	0	0	0	0	6.0	0	0	0
27	0	0	0	0	0	0	0	0	6.2	0	0	0
28	0	0	0	0	0	0	0	0	6.2	0	0	0
29	0	0	0	0	0	0	0	0	5.9	0	0	0
30	0	0	0	0	---	0	0	0	5.3	0	0	0
31	0	---	0	0	---	0	---	0	---	0	0	---
TOTAL	0	0	0	0	0	0	0	0	71.12	27.27	0	0
MEAN	0	0	0	0	0	0	0	0	2.37	.88	0	0
AC-FT	0	0	0	0	0	0	0	0	141	54	0	0
MAX	0	0	0	0	0	0	0	0	6.2	4.7	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0

CAL YR	2007	TOTAL	47.72	MEAN	.13	MAX	4.3	MIN	0	AC-FT	95
WTR YR	2008	TOTAL	98.39	MEAN	.27	MAX	6.2	MIN	0	AC-FT	195

MAX DISCH: 7.03 CFS AT 16:30 ON Jun. 26, 2008 GH 0.9 FT. SHIFT 0.02 FT.  
MAX GH: 0.9 FT. AT 16:30 ON Jun. 26, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06745500 CAMERON PASS DITCH AT CAMERON PASS CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

PLATTE RIVER BASIN

06746000 MICHIGAN DITCH AT CAMERON PASS, CO

**LOCATION.**--Lat 40°31'14", long 105°53'30"; Diverts water from Michigan River and tributaries, to Joe Wright Creek (tributary to Cache la Poudre River) in sec. 2, T.6 N., R. 76 W.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a weekly chart recorder in a log shelter with a PVC well at co-located 9-inch and 8 foot Parshall flumes. The primary reference gage is an electric tape gage located in the stilling well in the shelter. The 9-inch Parshall sits side by side with the 8-foot flume, allowing winter and low flows (flows below about 4.5 cfs) to be measured. Two tables are used and the crest height for both flumes is tied to the electric tape, as both flumes share a common stilling well. The shelter is heated by propane so that the flume and well are free of ice. Gage is owned and maintained by the City of Fort Collins. This year the city personnel put sections of halved 2-ft culverts in the ditch below the flume to stop the back water conditions experienced in the past.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite data with chart backup. Periods of use for each flume were: October 1, 2007 - May 21, 2008, and Sept 30, 2008, 9-inch Parshall; May 21 - Sept 30, 2008, 8-foot Parshall. The record is complete and reliable, except for May 7 - 15, 2008, when GH was affected by ice. The record is considered good, except periods of ice affected record, which are poor. Station maintained by Division I Hydrographic Staff and record developed by Lee Cunning.

**RATING TABLE.**--STD09INPF USED FROM 01-Oct-2007 TO 21-May-2008  
 STD08FTPF USED FROM 21-May-2008 TO 30-Sep-2008  
 STD09INPF USED FROM 30-Sep-2008 TO 30-Sep-2008

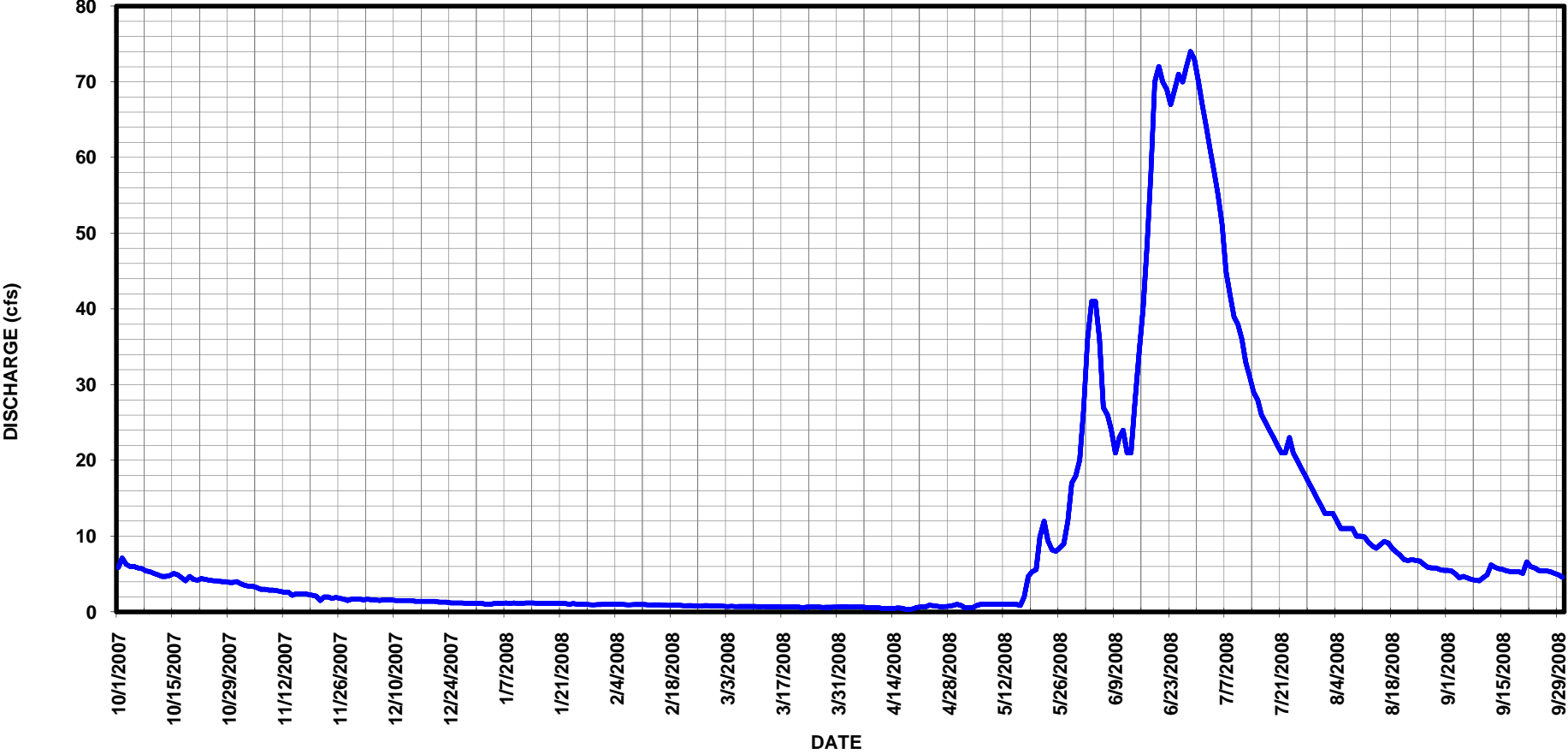
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	3.7	1.7	1.1	1.0	.78	.67	.86	27	67	13	5.5
2	7.1	3.5	1.6	1.0	1.0	.75	.67	.54	36	64	13	5.4
3	6.3	3.4	1.7	1.0	1.0	.73	.65	.52	41	61	13	5.0
4	6.0	3.4	1.6	1.1	1.0	.75	.63	.59	41	58	12	4.5
5	6.0	3.2	1.6	1.1	1.0	.73	.65	.85	36	55	11	4.7
6	5.8	3.0	1.5	1.1	.97	.73	.64	1.0	27	51	11	4.5
7	5.7	3.0	1.6	1.2	.95	.73	.61	1.0	26	45	11	4.3
8	5.4	2.9	1.6	1.1	.96	.73	.57	1.0	24	42	11	4.2
9	5.3	2.9	1.6	1.2	.97	.72	.62	1.0	21	39	10	4.1
10	5.1	2.8	1.5	1.1	.97	.71	.58	1.0	23	38	10	4.5
11	4.9	2.7	1.5	1.1	.96	.69	.47	1.0	24	36	9.9	4.9
12	4.7	2.6	1.5	1.2	.94	.70	.45	1.0	21	33	9.2	6.2
13	4.7	2.6	1.5	1.2	.94	.67	.45	1.0	21	31	8.7	5.9
14	4.8	2.2	1.5	1.2	.94	.67	.47	1.0	28	29	8.4	5.7
15	5.1	2.4	1.4	1.1	.94	.67	.53	1.0	34	28	8.9	5.6
16	4.9	2.4	1.4	1.1	.90	.67	.51	.88	40	26	9.3	5.4
17	4.5	2.4	1.4	1.1	.87	.66	.34	2.0	48	25	9.1	5.3
18	4.1	2.3	1.4	1.1	.87	.65	.32	4.7	58	24	8.4	5.3
19	4.7	2.2	1.4	1.1	.87	.64	.44	5.3	70	23	7.9	5.3
20	4.3	2.1	1.4	1.1	.86	.64	.62	5.6	72	22	7.5	5.1
21	4.2	1.5	1.3	1.1	.84	.64	.67	10	70	21	6.9	6.6
22	4.4	2.0	1.3	1.1	.84	.59	.64	12	69	21	6.8	6.0
23	4.3	2.0	1.3	1.0	.81	.63	.90	9.4	67	23	6.9	5.8
24	4.2	1.8	1.2	1.1	.80	.65	.81	8.2	69	21	6.8	5.5
25	4.1	1.9	1.2	1.0	.77	.65	.74	8.0	71	20	6.7	5.4
26	4.1	1.8	1.2	1.0	.81	.63	.69	8.5	70	19	6.3	5.4
27	4.0	1.7	1.2	1.0	.81	.61	.70	9.0	72	18	5.9	5.3
28	4.0	1.5	1.1	.98	.79	.61	.76	12	74	17	5.8	5.1
29	3.9	1.7	1.1	.94	.78	.62	.86	17	73	16	5.8	4.9
30	3.9	1.7	1.1	.97	---	.63	1.0	18	70	15	5.6	4.6
31	4.0	---	1.1	.98	---	.63	---	20	---	14	5.5	---
TOTAL	150.4	73.3	43.5	33.47	26.16	20.91	18.66	163.94	1423	1002	271.3	156.0
MEAN	4.85	2.44	1.40	1.08	.90	.67	.62	5.29	47.4	32.3	8.75	5.20
AC-FT	298	145	86	66	52	41	37	325	2820	1990	538	309
MAX	7.1	3.7	1.7	1.2	1.0	.78	1.0	20	74	67	13	6.6
MIN	3.9	1.5	1.1	.94	.77	.59	.32	.52	21	14	5.5	4.1
CAL YR 2007	TOTAL	2925	MEAN	8.01	MAX	61	MIN	0.47	AC-FT	5800		
WTR YR 2008	TOTAL	3385	MEAN	9.24	MAX	74	MIN	0.32	AC-FT	6710		

MAX DISCH: 9.07 CFS AT 21:30 ON Oct. 1, 2007 GH 2.03 FT. SHIFT 0 FT.  
 MAX GH: 2.03 FT. AT 21:30 ON Oct. 1, 2007

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06746000 MICHIGAN DITCH AT CAMERON PASS CO  
WY2008 HYDROGRAPH





TRANSMOUNTAIN DIVERSION TO

PLATTE RIVER BASIN

06746500 SKYLINE DITCH NEAR CHAMBERS LAKE, CO

**LOCATION.**--Lat 40°39'50", long 105°53'10"; Diverts water from West Branch Laramie River, to Chambers Lake (tributary to Cache la Poudre River) in sec. 31, T.8 N., R.75 W.

**GAGE.**--F-type graphic water-stage recorder in a wood shelter at a 10-ft. Parshall Flume. The primary reference gage is a drop tape from an adjustable reference point inside the shelter.

**REMARKS.**--The primary record is mean daily gage heights taken from the chart recorder. This is the only source. The charts are worked by the District 3 water commissioner and checked by hydrographer. No water was run during WY2008. Station maintained and record developed by Lee Cunning.

**RATING TABLE.**--STD10FTPF USED FROM 01-OCT-2007 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

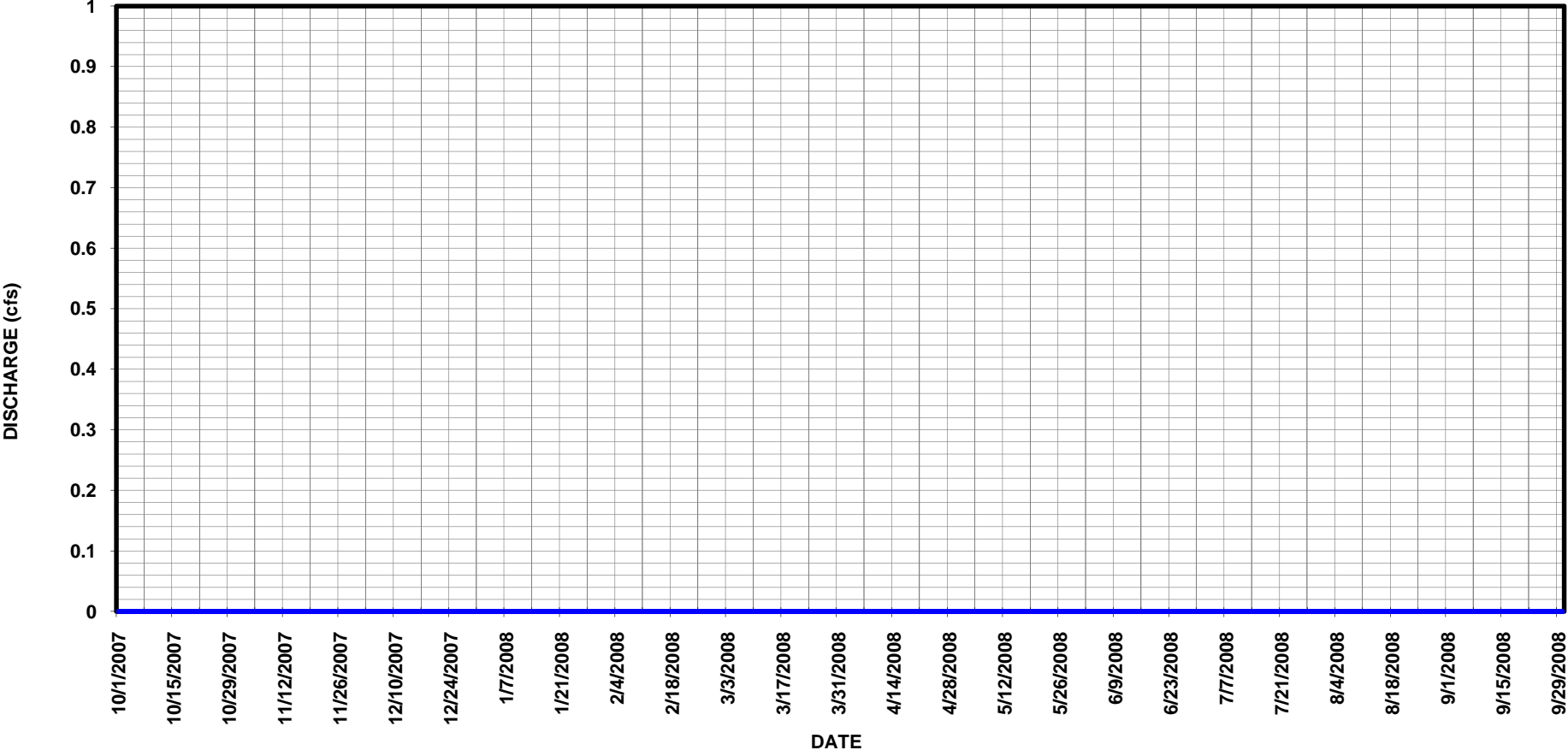
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	---	0	0	0	0	0	0	0
30	0	0	0	0	---	0	0	0	0	0	0	0
31	0	---	0	0	---	0	---	0	---	0	0	---
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	0	0	0	0	0
MAX	0	0	0	0	0	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0

CAL YR	2007	TOTAL	0	MEAN	0	MAX	0	MIN	0	AC-FT	0
WTR YR	2008	TOTAL	0	MEAN	0	MAX	0	MIN	0	AC-FT	0

MAX DISCH: ZERO FLOW.  
MAX GH: NOT DETERMINED.

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06746500 SKYLINE DITCH NEAR CHAMBERS LAKE CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

PLATTE RIVER BASIN

06747000 LARAMIE-POUDRE TUNNEL NEAR CHAMBERS LAKE, CO

**LOCATION.**--Lat 40°40'34", long 105°50'49"; Laramie-Poudre tunnel diverts water from Laramie River and tributaries to Cache la Poudre River in sec 9, T.8 N., R.75 W.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a weekly chart recorder at a 10-ft Parshall flume. The primary reference gage is a drop tape from an inside reference point with a supplemental outside staff gage.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite data with chart backup. The record is complete and reliable. The tunnel was started on May 19<sup>th</sup> and water was diverted until August 4<sup>th</sup> when it was turned off. Record is good. Station maintained and record developed by Lee Cunning.

**RATING TABLE.**--STD10FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

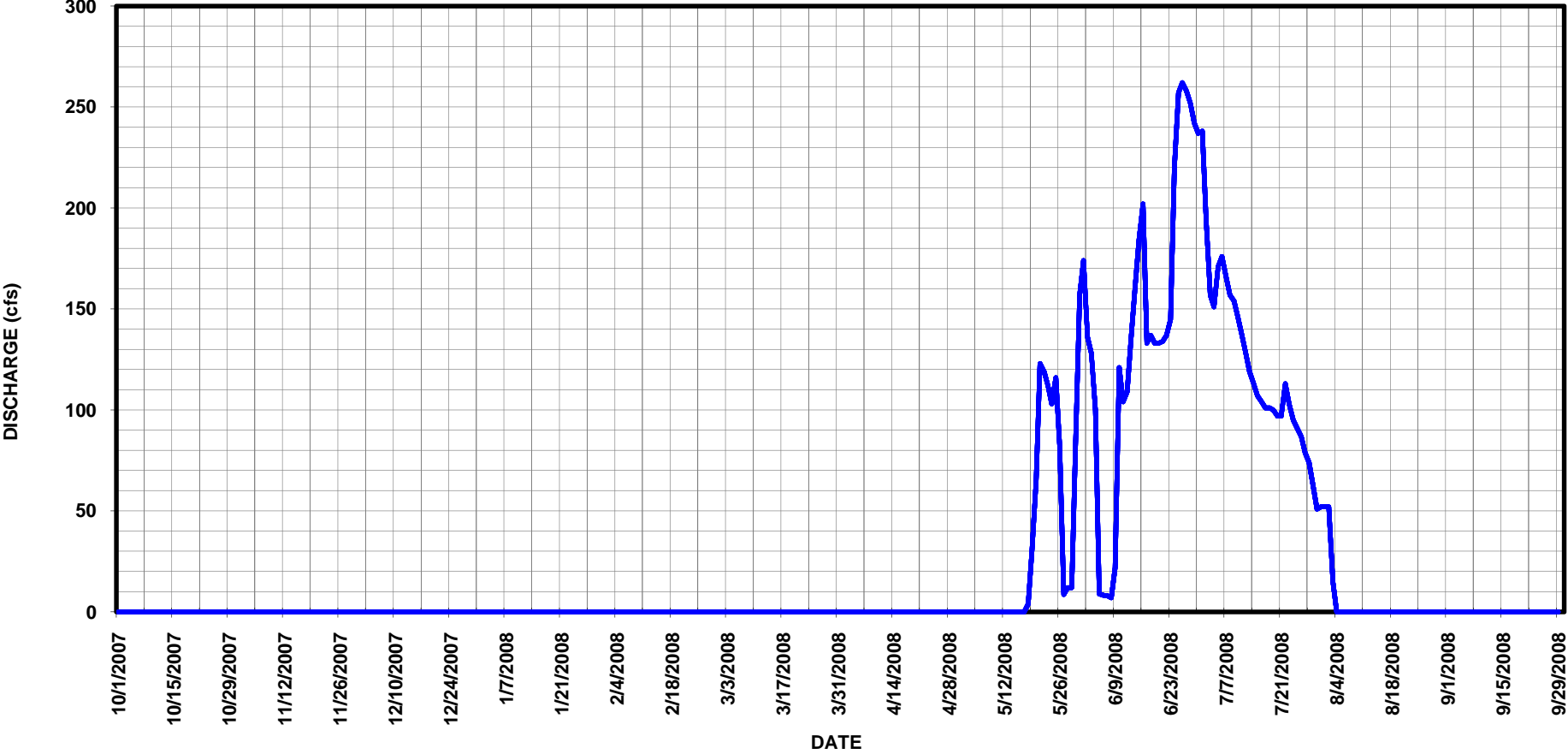
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	157	237	52	0
2	0	0	0	0	0	0	0	0	174	238	52	0
3	0	0	0	0	0	0	0	0	136	194	52	0
4	0	0	0	0	0	0	0	0	128	157	15	0
5	0	0	0	0	0	0	0	0	100	151	0	0
6	0	0	0	0	0	0	0	0	8.9	171	0	0
7	0	0	0	0	0	0	0	0	8.3	176	0	0
8	0	0	0	0	0	0	0	0	8.1	166	0	0
9	0	0	0	0	0	0	0	0	7.1	157	0	0
10	0	0	0	0	0	0	0	0	22	154	0	0
11	0	0	0	0	0	0	0	0	121	146	0	0
12	0	0	0	0	0	0	0	0	104	137	0	0
13	0	0	0	0	0	0	0	0	109	128	0	0
14	0	0	0	0	0	0	0	0	135	119	0	0
15	0	0	0	0	0	0	0	0	161	113	0	0
16	0	0	0	0	0	0	0	0	184	107	0	0
17	0	0	0	0	0	0	0	0	202	104	0	0
18	0	0	0	0	0	0	0	0	133	101	0	0
19	0	0	0	0	0	0	0	4.1	137	101	0	0
20	0	0	0	0	0	0	0	31	133	100	0	0
21	0	0	0	0	0	0	0	65	133	97	0	0
22	0	0	0	0	0	0	0	123	134	97	0	0
23	0	0	0	0	0	0	0	119	137	113	0	0
24	0	0	0	0	0	0	0	112	145	103	0	0
25	0	0	0	0	0	0	0	103	220	95	0	0
26	0	0	0	0	0	0	0	116	257	91	0	0
27	0	0	0	0	0	0	0	82	262	87	0	0
28	0	0	0	0	0	0	0	8.7	258	79	0	0
29	0	0	0	0	---	0	0	12	252	74	0	0
30	0	0	0	0	---	0	0	12	242	63	0	0
31	0	---	0	0	---	0	---	83	---	51	0	---
TOTAL	0	0	0	0	0	0	0	870.8	4208.4	3907	171	0
MEAN	0	0	0	0	0	0	0	28.1	140	126	5.52	0
AC-FT	0	0	0	0	0	0	0	1730	8350	7750	339	0
MAX	0	0	0	0	0	0	0	123	262	238	52	0
MIN	0	0	0	0	0	0	0	0	7.1	51	0	0

CAL YR	2007	TOTAL	9248.0	MEAN	25.3	MAX	235	MIN	0	AC-FT	18340
WTR YR	2008	TOTAL	9157.2	MEAN	25.1	MAX	262	MIN	0	AC-FT	18160

MAX DISCH: 295 CFS AT 19:00 ON Jun. 27, 2008 GH 3.52 FT. SHIFT 0 FT.  
MAX GH: 3.52 FT. AT 19:00 ON Jun. 27, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06747000 LARAMIE-POUDRE TUNNEL NEAR CHAMBERS LAKE CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

PLATTE RIVER BASIN

BOB CREEK DITCH NEAR GLENDEVEY, CO

LOCATION.--Lat 40°31'50", long 105°45'40" NESWNW, sec. 11, 9 N., 75 W.

GAGE.--Stevens F-type graphic water-stage recorder and Sutron Stage Discharge Recorder (SDR) in a metal shelter with stilling well at a 3-foot Parshall Flume owned by the City of Greeley. The primary reference gage is a metal drop tape with adjustable reference point with a supplemental staff gage in the flume. The gage is owned and maintained by the City of Greeley.

REMARKS.--Primary record is hourly averages of 5-minute SDR data with chart gage heights as back up. Access to this gage is very difficult. The gage was dug out and the recorder was installed on May 12, 2008, but water did not flow in the ditch until May 17, 2008. Water diverted from May 17, 2008 at 23:00 until July 2, 2008 at 11:00 AM. The record is good. Record developed by Lee Cuning.

RATING TABLE.-- STD03FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

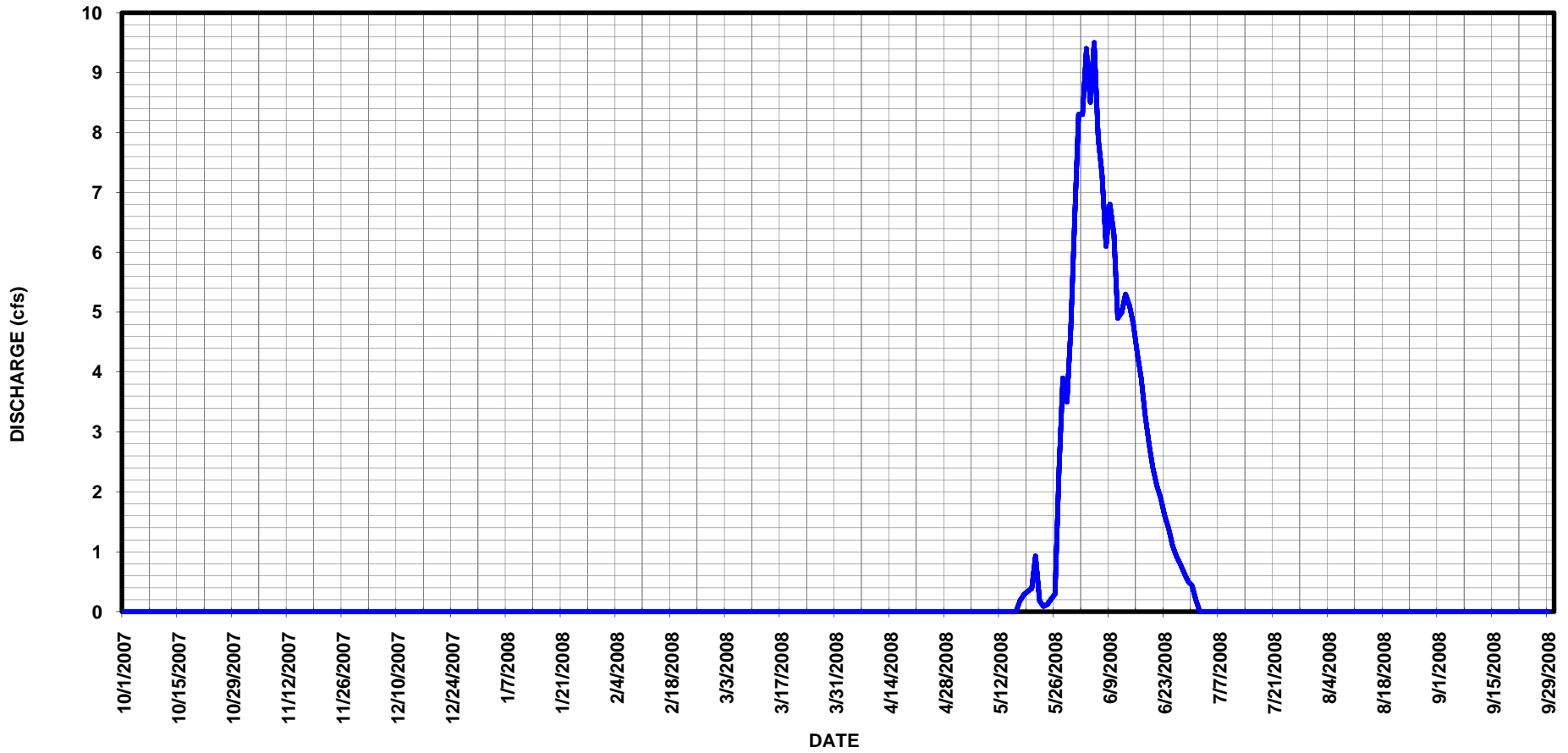
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	6.6	.44	0	0
2	0	0	0	0	0	0	0	0	8.3	.19	0	0
3	0	0	0	0	0	0	0	0	8.3	0	0	0
4	0	0	0	0	0	0	0	0	9.4	0	0	0
5	0	0	0	0	0	0	0	0	8.5	0	0	0
6	0	0	0	0	0	0	0	0	9.5	0	0	0
7	0	0	0	0	0	0	0	0	7.9	0	0	0
8	0	0	0	0	0	0	0	0	7.3	0	0	0
9	0	0	0	0	0	0	0	0	6.1	0	0	0
10	0	0	0	0	0	0	0	0	6.8	0	0	0
11	0	0	0	0	0	0	0	0	6.3	0	0	0
12	0	0	0	0	0	0	0	0	4.9	0	0	0
13	0	0	0	0	0	0	0	0	5.0	0	0	0
14	0	0	0	0	0	0	0	0	5.3	0	0	0
15	0	0	0	0	0	0	0	0	5.1	0	0	0
16	0	0	0	0	0	0	0	0	4.8	0	0	0
17	0	0	0	0	0	0	0	.01	4.3	0	0	0
18	0	0	0	0	0	0	0	.18	3.9	0	0	0
19	0	0	0	0	0	0	0	.29	3.3	0	0	0
20	0	0	0	0	0	0	0	.34	2.8	0	0	0
21	0	0	0	0	0	0	0	.39	2.4	0	0	0
22	0	0	0	0	0	0	0	.93	2.1	0	0	0
23	0	0	0	0	0	0	0	.18	1.9	0	0	0
24	0	0	0	0	0	0	0	.09	1.6	0	0	0
25	0	0	0	0	0	0	0	.12	1.4	0	0	0
26	0	0	0	0	0	0	0	.21	1.1	0	0	0
27	0	0	0	0	0	0	0	.30	.93	0	0	0
28	0	0	0	0	0	0	0	2.4	.79	0	0	0
29	0	0	0	0	---	0	0	3.9	.65	0	0	0
30	0	0	0	0	---	0	0	3.5	.50	0	0	0
31	0	---	0	0	---	0	---	4.7	---	0	0	---
TOTAL	0	0	0	0	0	0	0	17.54	137.77	.63	0	0
MEAN	0	0	0	0	0	0	0	.57	4.59	.020	0	0
AC-FT	0	0	0	0	0	0	0	35	273	1.2	0	0
MAX	0	0	0	0	0	0	0	4.7	9.5	.44	0	0
MIN	0	0	0	0	0	0	0	0	.50	0	0	0

CAL YR 2007	TOTAL	162.31	MEAN	.44	MAX	7.3	MIN	0	AC-FT	322
WTR YR 2008	TOTAL	155.94	MEAN	.43	MAX	9.5	MIN	0	AC-FT	309

MAX DISCH: 14.1 CFS AT 16:30 ON Jun. 2, 2008 GH 1.13 FT. SHIFT -0.02 FT.  
MAX GH: 1.13 FT. AT 16:30 ON Jun. 2, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

BOB CREEK DITCH NEAR GLENDEVEY CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

PLATTE RIVER BASIN

DEADMAN DITCH NEAR DEADMAN PARK, CO

**LOCATION.**--Lat 40°50'04", long 105°48'05", sec. 9, T. 10 N., R. 75 W., Diverts water from Laramie River and tributaries, to Sheep Creek (tributary to Cache La Poudre River) via Sand Creek.

**GAGE.**--Steven's F-type graphic water-stage recorder and a Sutron Stage Discharge Recorder (SDR) in a 24-inch metal pipe shelter and well at a 6-foot Parshall Flume. The primary reference is an outside staff gage in the flume. The gage is owned and maintained by the City of Greeley.

**REMARKS.**--The primary record is hourly averages of 5-minute SDR data with the chart as backup. The record is complete and reliable. Record is rated good. Water was run from May 19<sup>th</sup> until July 23, 2008. Record developed by Lee Cunning and Mark Simpson.

**RATING TABLE.**--STD06FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

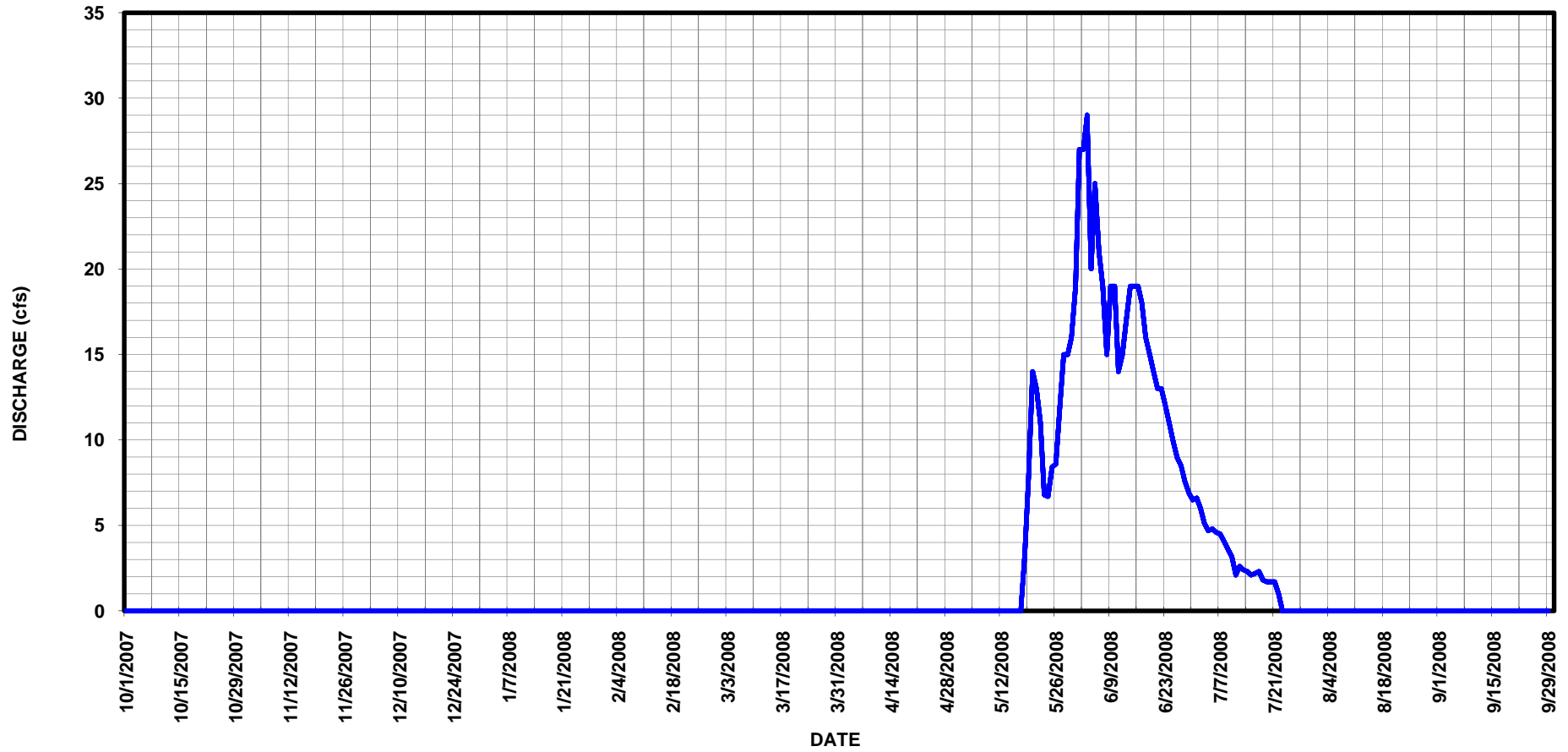
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	19	6.5	0	0
2	0	0	0	0	0	0	0	0	27	6.6	0	0
3	0	0	0	0	0	0	0	0	27	6.0	0	0
4	0	0	0	0	0	0	0	0	29	5.1	0	0
5	0	0	0	0	0	0	0	0	20	4.7	0	0
6	0	0	0	0	0	0	0	0	25	4.8	0	0
7	0	0	0	0	0	0	0	0	21	4.6	0	0
8	0	0	0	0	0	0	0	0	19	4.5	0	0
9	0	0	0	0	0	0	0	0	15	4.1	0	0
10	0	0	0	0	0	0	0	0	19	3.6	0	0
11	0	0	0	0	0	0	0	0	19	3.2	0	0
12	0	0	0	0	0	0	0	0	14	2.1	0	0
13	0	0	0	0	0	0	0	0	15	2.6	0	0
14	0	0	0	0	0	0	0	0	17	2.4	0	0
15	0	0	0	0	0	0	0	0	19	2.3	0	0
16	0	0	0	0	0	0	0	0	19	2.1	0	0
17	0	0	0	0	0	0	0	0	19	2.2	0	0
18	0	0	0	0	0	0	0	0	18	2.3	0	0
19	0	0	0	0	0	0	0	3.3	16	1.8	0	0
20	0	0	0	0	0	0	0	7.8	15	1.7	0	0
21	0	0	0	0	0	0	0	14	14	1.7	0	0
22	0	0	0	0	0	0	0	13	13	1.7	0	0
23	0	0	0	0	0	0	0	11	13	.98	0	0
24	0	0	0	0	0	0	0	6.8	12	0	0	0
25	0	0	0	0	0	0	0	6.7	11	0	0	0
26	0	0	0	0	0	0	0	8.4	9.9	0	0	0
27	0	0	0	0	0	0	0	8.6	9.0	0	0	0
28	0	0	0	0	0	0	0	12	8.5	0	0	0
29	0	0	0	0	---	0	0	15	7.6	0	0	0
30	0	0	0	0	---	0	0	15	6.9	0	0	0
31	0	---	0	0	---	0	---	16	---	0	0	---
TOTAL	0	0	0	0	0	0	0	137.6	496.9	77.58	0	0
MEAN	0	0	0	0	0	0	0	4.44	16.6	2.50	0	0
AC-FT	0	0	0	0	0	0	0	273	986	154	0	0
MAX	0	0	0	0	0	0	0	16	29	6.6	0	0
MIN	0	0	0	0	0	0	0	0	6.9	0	0	0

CAL YR	2007	TOTAL	605.69	MEAN	1.66	MAX	18	MIN	0	AC-FT	1200
WTR YR	2008	TOTAL	712.08	MEAN	1.95	MAX	29	MIN	0	AC-FT	1410

MAX DISCH: 46.3 CFS AT 18:40 ON Jun. 2, 2008 GH 1.51 FT. SHIFT 0 FT.  
MAX GH: 1.51 FT. AT 18:40 ON Jun. 2, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

DEADMAN DITCH NEAR DEADMAN PARK CO  
WY2008 HYDROGRAPH





TRANSMOUNTAIN DIVERSION TO

PLATTE RIVER BASIN

06750500 WILSON SUPPLY DITCH NEAR EATON RESERVOIR, CO

**LOCATION.**--Lat 40°54'31", long 105°46'43"; Diverts water from Sand Creek and Deadman Creek in Laramie River basin to Sheep Creek (tributary to North Fork Cache la Poudre River) in sec. 23, T.11 N., R.75 W., in the Cache la Poudre River basin.

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a weekly chart recorder in a 42-inch CMP shelter and well at a 10-foot Parshall flume. The primary reference gage is a metal drop tape with an adjustable RP and supplemental staff gage. The gage is owned and maintained by the City of Greeley.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite data with the chart as a backup. The record is complete and reliable. Record is good. Water was run from May 17 - July 23, 2008, when the ditch was shut off. Record developed by Lee Cunning.

**RATING TABLE.**--STD10FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

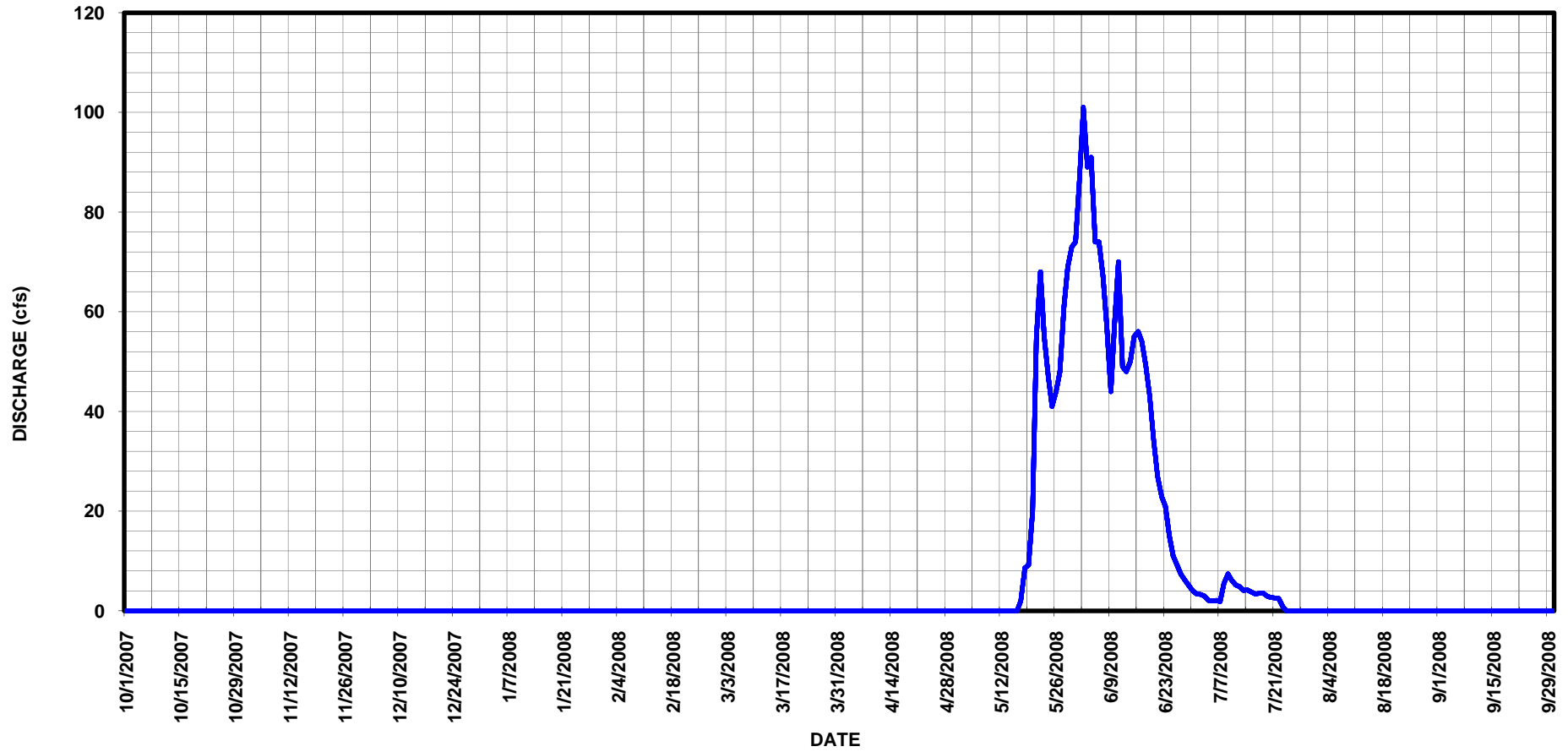
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	87	3.4	0	0
2	0	0	0	0	0	0	0	0	101	3.3	0	0
3	0	0	0	0	0	0	0	0	89	3.0	0	0
4	0	0	0	0	0	0	0	0	91	2.1	0	0
5	0	0	0	0	0	0	0	0	74	2.0	0	0
6	0	0	0	0	0	0	0	0	74	2.1	0	0
7	0	0	0	0	0	0	0	0	67	1.9	0	0
8	0	0	0	0	0	0	0	0	57	5.5	0	0
9	0	0	0	0	0	0	0	0	44	7.4	0	0
10	0	0	0	0	0	0	0	0	58	6.1	0	0
11	0	0	0	0	0	0	0	0	70	5.2	0	0
12	0	0	0	0	0	0	0	0	49	4.9	0	0
13	0	0	0	0	0	0	0	0	48	4.1	0	0
14	0	0	0	0	0	0	0	0	50	4.2	0	0
15	0	0	0	0	0	0	0	0	55	3.8	0	0
16	0	0	0	0	0	0	0	0	56	3.4	0	0
17	0	0	0	0	0	0	0	2.0	54	3.5	0	0
18	0	0	0	0	0	0	0	8.6	49	3.6	0	0
19	0	0	0	0	0	0	0	9.2	43	3.0	0	0
20	0	0	0	0	0	0	0	20	34	2.7	0	0
21	0	0	0	0	0	0	0	55	27	2.6	0	0
22	0	0	0	0	0	0	0	68	23	2.5	0	0
23	0	0	0	0	0	0	0	55	21	.89	0	0
24	0	0	0	0	0	0	0	47	15	0	0	0
25	0	0	0	0	0	0	0	41	11	0	0	0
26	0	0	0	0	0	0	0	44	9.1	0	0	0
27	0	0	0	0	0	0	0	48	7.3	0	0	0
28	0	0	0	0	0	0	0	61	6.1	0	0	0
29	0	0	0	0	0	0	0	69	5.1	0	0	0
30	0	0	0	0	---	0	0	73	4.0	0	0	0
31	0	---	0	0	---	0	---	74	---	0	0	---
TOTAL	0	0	0	0	0	0	0	674.8	1378.6	81.19	0	0
MEAN	0	0	0	0	0	0	0	21.8	46.0	2.62	0	0
AC-FT	0	0	0	0	0	0	0	1340	2730	161	0	0
MAX	0	0	0	0	0	0	0	74	101	7.4	0	0
MIN	0	0	0	0	0	0	0	0	4.0	0	0	0
CAL YR 2007	TOTAL	1777.10	MEAN	4.87	MAX	74	MIN	0	AC-FT	3520		
WTR YR 2008	TOTAL	2134.59	MEAN	5.83	MAX	101	MIN	0	AC-FT	4230		

MAX DISCH: 151 CFS AT 20:30 ON Jun. 2, 2008 GH 2.32 FT. SHIFT 0 FT.  
MAX GH: 2.32 FT. AT 20:30 ON Jun. 2, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

06750500 WILSON SUPPLY DITCH NEAR EATON RESERVOIR CO  
WY2008 HYDROGRAPH



REPUBLICAN RIVER BASIN

PIONEER DITCH AT HEADGATE NEAR LAIRD, CO

**LOCATION.**--Lat 40°05'05", long 102°08'30", SW-NE¼ sec. 2, T.1 N., R.43 W., Yuma County, 4 mi east of Wray, Co., 1000 ft south of U.S. Highway 34.

**DRAINAGE AREA.**--N/A

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a weekly chart recorder in a metal box enclosure and well section at a 5-ft Parshall flume. The flume is installed in concrete canal section. The primary reference gage is an outside staff gage. The canal is equipped with a timber suspended in the flow to slow down velocities into the flume. Station maintained by Pioneer Ditch Company.

**REMARKS.**--The primary record is hourly averages of 15-minute satellite data with chart back up. The record is complete and reliable. The canal was off from October 26, 2007 to April 18, 2008; April 27-28, August 19, 2008. The record is good. Station maintained and record developed by Devin Ridnour.

**RATING TABLE.**--STD05FTPF USED FROM 01-OCT-2007 TO 30-SEP-2008

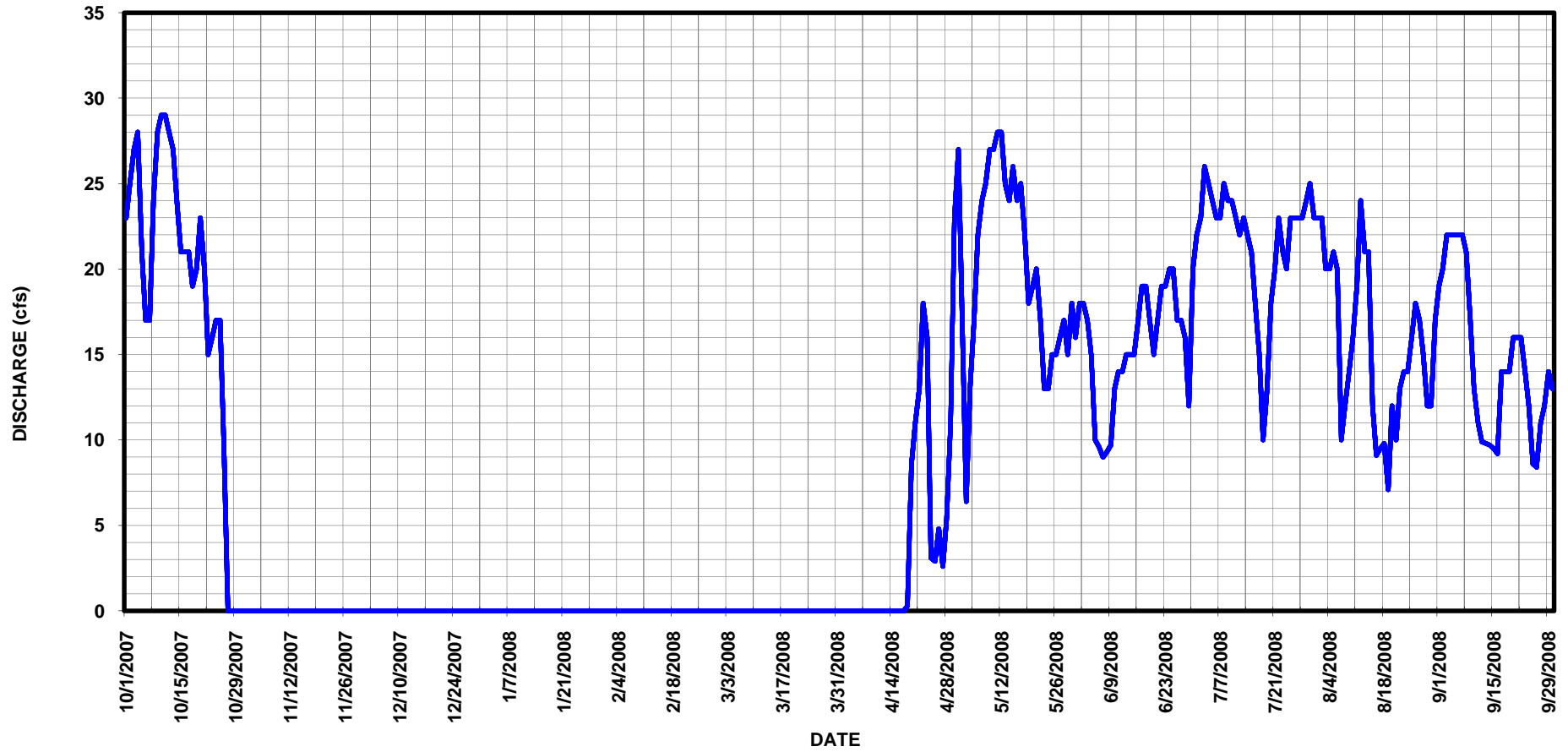
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	0	0	0	0	0	0	27	18	22	23	19
2	25	0	0	0	0	0	0	17	18	23	23	20
3	27	0	0	0	0	0	0	6.4	17	26	20	22
4	28	0	0	0	0	0	0	13	15	25	20	22
5	21	0	0	0	0	0	0	17	10	24	21	22
6	17	0	0	0	0	0	0	22	9.6	23	20	22
7	17	0	0	0	0	0	0	24	9.0	23	10	22
8	24	0	0	0	0	0	0	25	9.3	25	12	21
9	28	0	0	0	0	0	0	27	9.7	24	14	17
10	29	0	0	0	0	0	0	27	13	24	16	13
11	29	0	0	0	0	0	0	28	14	23	19	11
12	28	0	0	0	0	0	0	28	14	22	24	9.9
13	27	0	0	0	0	0	0	25	15	23	21	9.8
14	24	0	0	0	0	0	0	24	15	22	21	9.7
15	21	0	0	0	0	0	0	26	15	21	12	9.5
16	21	0	0	0	0	0	0	24	17	18	9.1	9.2
17	21	0	0	0	0	0	0	25	19	15	9.5	14
18	19	0	0	0	0	0	.30	22	19	10	9.8	14
19	20	0	0	0	0	0	8.6	18	17	13	7.1	14
20	23	0	0	0	0	0	11	19	15	18	12	16
21	20	0	0	0	0	0	13	20	17	20	10	16
22	15	0	0	0	0	0	18	17	19	23	13	16
23	16	0	0	0	0	0	16	13	19	21	14	14
24	17	0	0	0	0	0	3.1	13	20	20	14	12
25	17	0	0	0	0	0	2.9	15	20	23	16	8.6
26	9.7	0	0	0	0	0	4.8	15	17	23	18	8.4
27	0	0	0	0	0	0	2.6	16	17	23	17	11
28	0	0	0	0	0	0	5.4	17	16	23	15	12
29	0	0	0	0	0	0	11	15	12	24	12	14
30	0	0	0	0	---	0	23	18	20	25	12	13
31	0	---	0	0	---	0	---	16	---	23	17	---
TOTAL	566.7	0	0	0	0	0	119.70	619.4	465.6	672	481.5	442.1
MEAN	20.2	0	0	0	0	0	3.99	20.0	15.5	21.7	15.5	14.7
AC-FT	1120	0	0	0	0	0	237	1230	924	1330	955	877
MAX	29	0	0	0	0	0	23	28	20	26	24	22
MIN	0	0	0	0	0	0	0	6.4	9.0	10	7.1	8.4
CAL YR 2007	TOTAL		3533	MEAN	9.68	MAX	30	MIN	0	AC-FT	7010	
WTR YR 2008	TOTAL		3367	MEAN	9.28	MAX	29	MIN	0	AC-FT	6680	

MAX DISCH: 32.2 CFS AT 06:00 ON Jun. 5, 2008 GH 1.41 FT. SHIFT -0.06 FT.  
MAX GH: 1.41 FT. AT 06:00 ON Jun. 5, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

### PIONEER DITCH AT HEADGATE NEAR LAIRD CO WY2008 HYDROGRAPH



REPUBLICAN RIVER BASIN

PIONEER DITCH AT COLORADO-NEBRASKA STATE LINE

**LOCATION.**--Lat 40°03'25", long 102°03'10", SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 10, T.1 N., R.42 W., Yuma County; 1200 ft south of U.S. Highway 34 at Colorado/Nebraska State line.

**DRAINAGE AREA.**--N/A

**GAGE.**--Data Collection Platform (DCP), shaft encoder and a weekly chart recorder in a metal box shelter and well at a 4-ft Parshall flume. The gage is equipped with two outside vertical enameled steel staff gages (Ha-Hb, with the Hb staff set with 4.0 ft = 0.0). The primary reference gage is the outside staff gage located in the flume Ha position. Station maintained by Pioneer Ditch Company.

**REMARKS.**--Record is hourly averages of 15-minute satellite data with the chart as backup. The record is complete. The ditch did not run October 27, 2007 through April 19, 2008. Gage height record less than 0.07 ft was considered zero due to the float being beached on the mud in the stilling well. Hourly data points less than 0.07 ft are averages of four 15 minute data points, some of which are zero. If it is noted the ditch was off on visit logs and some residual GH's were between 0.00 and 0.17 ft, then flow was considered zero. Record is good. Station maintained and record developed by Devin Ridnour.

**RATING TABLE.**--STD04FTFP USED FROM 01-OCT-2007 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

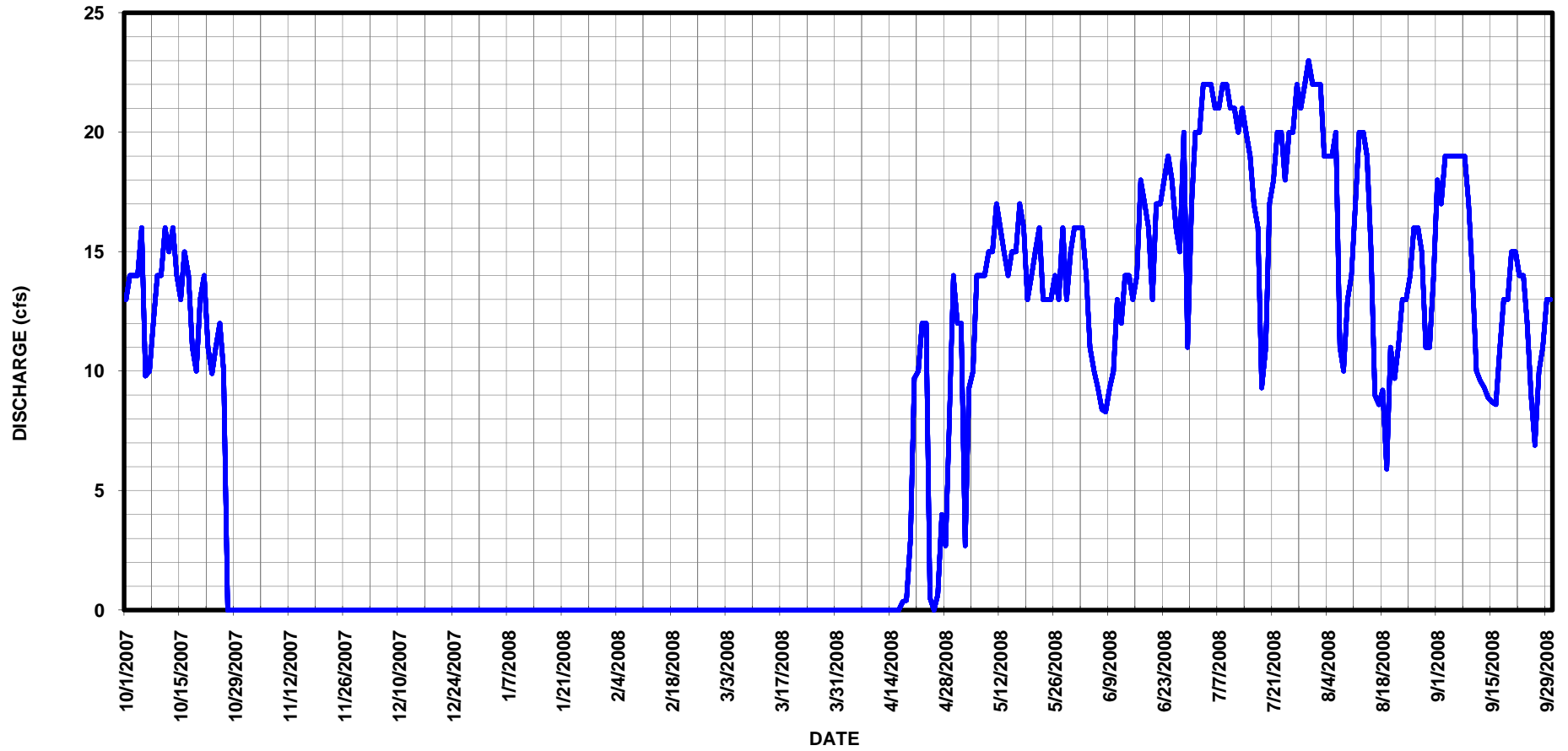
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	0	0	0	0	0	0	12	16	20	22	18
2	14	0	0	0	0	0	0	12	16	20	22	17
3	14	0	0	0	0	0	0	2.7	14	22	19	19
4	14	0	0	0	0	0	0	9.3	11	22	19	19
5	16	0	0	0	0	0	0	10	10	22	19	19
6	9.8	0	0	0	0	0	0	14	9.3	21	20	19
7	10	0	0	0	0	0	0	14	8.4	21	11	19
8	12	0	0	0	0	0	0	14	8.3	22	10	19
9	14	0	0	0	0	0	0	15	9.3	22	13	17
10	14	0	0	0	0	0	0	15	10	21	14	14
11	16	0	0	0	0	0	0	17	13	21	17	10
12	15	0	0	0	0	0	0	16	12	20	20	9.6
13	16	0	0	0	0	0	0	15	14	21	20	9.3
14	14	0	0	0	0	0	0	14	14	20	19	8.9
15	13	0	0	0	0	0	0	15	13	19	15	8.7
16	15	0	0	0	0	0	0	15	14	17	9.0	8.6
17	14	0	0	0	0	0	.35	17	18	16	8.6	11
18	11	0	0	0	0	0	.41	16	17	9.3	9.2	13
19	10	0	0	0	0	0	3.0	13	16	11	5.9	13
20	13	0	0	0	0	0	9.7	14	13	17	11	15
21	14	0	0	0	0	0	10	15	17	18	9.7	15
22	11	0	0	0	0	0	12	16	17	20	11	14
23	9.9	0	0	0	0	0	12	13	18	20	13	14
24	11	0	0	0	0	0	.51	13	19	18	13	12
25	12	0	0	0	0	0	0	13	18	20	14	8.9
26	10	0	0	0	0	0	.63	14	16	20	16	6.9
27	0	0	0	0	0	0	4.0	13	15	22	16	10
28	0	0	0	0	0	0	2.7	16	20	21	15	11
29	0	0	0	0	0	0	8.3	13	11	22	11	13
30	0	0	0	0	---	0	14	15	17	23	11	13
31	0	---	0	0	---	0	---	16	---	22	14	---
TOTAL	335.7	0	0	0	0	0	77.60	427.0	424.3	610.3	447.4	404.9
MEAN	10.8	0	0	0	0	0	2.59	13.8	14.1	19.7	14.4	13.5
AC-FT	666	0	0	0	0	0	154	847	842	1210	887	803
MAX	16	0	0	0	0	0	14	17	20	23	22	19
MIN	0	0	0	0	0	0	0	2.7	8.3	9.3	5.9	6.9

CAL YR	2007	TOTAL	2289.7	MEAN	6.27	MAX	25	MIN	0	AC-FT	4540
WTR YR	2008	TOTAL	2727.2	MEAN	7.45	MAX	23	MIN	0	AC-FT	5410

MAX DISCH: 26 CFS AT 07:30 ON Jul. 2, 2008 GH 1.29 FT. SHIFT 0.07 FT.  
MAX GH: 1.29 FT. AT 07:30 ON Jul. 2, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

PIONEER DITCH AT COLORADO-NEBRASKA STATE LINE CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07082500 LAKE FORK CREEK BELOW SUGAR LOAF DAM NEAR LEADVILLE, CO

**LOCATION.**--Lat 39°15'05" long 106°22'28", Lake County, SE¼NW¼NW¼ sec. 19, T.9 S., R.80 W., on right bank 4.2 miles upstream from junction of Lake Fork Creek and Arkansas River.

**GAGE.**--Sutron stage discharge recorder shaft encoder and satellite-monitored data collection platform (Sutron high data rate SatLink Logger) in 42-inch diameter corrugated metal pipe (CMP) shelter and concrete well. Shaft encoder set to inside electric tape gage mounted on instrument shelf. Hourly averages of 15-minute satellite data are primary record (graphic chart record is used for back-up purposes). Outside staff gage also used for reference purpose. Shelter is equipped with AC power for well heater. Control is a concrete weir with ogee lip, tapered lower from the left to right bank, located at the gage. Elevation of gage is 9,720 ft. from topographic map.

**REMARKS.**--Record is complete and reliable. Record good. Station maintained by L.R. Schultz and record developed by C. A. Hart.

**RATING TABLE.**--LFCBSLCO04A USED FROM 01-Oct-2007 TO 30-Sep-2008

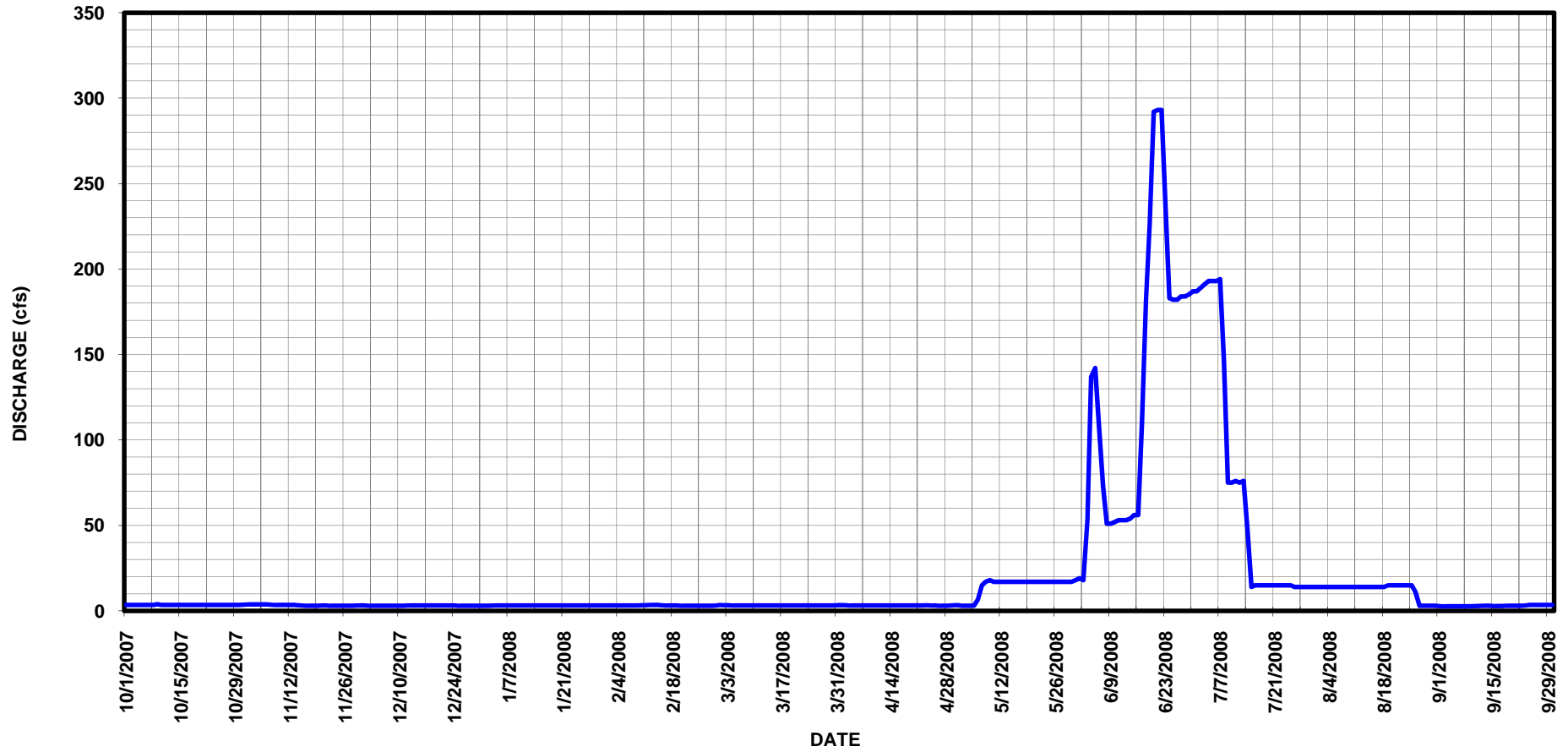
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	3.7	3.1	2.9	3.1	3.4	3.3	3.2	19	187	14	2.8
2	3.4	3.7	2.9	2.9	3.1	3.2	3.2	2.9	18	189	14	2.6
3	3.4	3.7	2.9	3.0	3.1	3.2	3.1	2.9	53	191	14	2.6
4	3.4	3.7	2.9	3.1	3.1	3.1	3.1	2.9	137	193	14	2.6
5	3.4	3.7	2.9	3.1	3.1	3.1	3.1	3.0	142	193	14	2.6
6	3.4	3.7	2.9	3.1	3.1	3.1	3.1	6.6	108	193	14	2.6
7	3.4	3.5	2.9	3.1	3.1	3.1	3.1	15	73	194	14	2.6
8	3.4	3.4	2.9	3.1	3.1	3.1	3.1	17	51	147	14	2.6
9	3.8	3.4	2.9	3.1	3.1	3.1	3.1	18	51	75	14	2.6
10	3.4	3.4	2.9	3.1	3.2	3.1	3.1	17	52	75	14	2.7
11	3.4	3.4	2.9	3.1	3.3	3.1	3.1	17	53	76	14	2.8
12	3.4	3.4	3.0	3.1	3.4	3.1	3.1	17	53	75	14	2.9
13	3.4	3.4	3.1	3.1	3.4	3.1	3.1	17	53	76	14	2.9
14	3.4	3.3	3.1	3.1	3.4	3.1	3.1	17	54	48	14	2.9
15	3.4	3.0	3.1	3.1	3.2	3.1	3.1	17	56	14	14	2.8
16	3.4	2.9	3.1	3.1	3.1	3.1	3.1	17	56	15	14	2.7
17	3.4	2.9	3.1	3.1	3.1	3.1	3.1	17	110	15	14	2.8
18	3.4	2.9	3.1	3.1	3.1	3.1	3.1	17	181	15	14	2.9
19	3.4	2.9	3.1	3.1	3.1	3.1	3.1	17	227	15	15	2.9
20	3.4	3.0	3.1	3.1	2.9	3.1	3.1	17	292	15	15	2.9
21	3.4	3.0	3.1	3.1	2.9	3.1	3.1	17	293	15	15	2.9
22	3.4	2.9	3.0	3.1	2.9	3.1	3.1	17	293	15	15	2.9
23	3.4	2.9	3.0	3.1	2.9	3.1	3.2	17	239	15	15	3.1
24	3.4	2.9	3.0	3.1	2.9	3.1	3.1	17	183	15	15	3.4
25	3.4	2.9	2.9	3.1	2.9	3.1	3.0	17	182	15	15	3.4
26	3.4	2.9	2.9	3.1	2.9	3.1	2.9	17	182	14	11	3.4
27	3.4	2.9	2.9	3.1	2.9	3.1	2.9	17	184	14	2.9	3.4
28	3.4	2.9	2.9	3.1	2.9	3.1	2.9	17	184	14	2.9	3.4
29	3.4	3.0	2.9	3.1	3.1	3.1	3.0	17	185	14	2.9	3.4
30	3.4	3.0	2.9	3.1	---	3.1	3.3	17	187	14	2.9	3.4
31	3.5	---	2.9	3.1	---	3.2	---	18	---	14	2.9	---
TOTAL	105.9	96.3	92.3	95.6	89.4	96.7	92.8	446.5	3951	2160	382.5	87.5
MEAN	3.42	3.21	2.98	3.08	3.08	3.12	3.09	14.4	132	69.7	12.3	2.92
AC-FT	210	191	183	190	177	192	184	886	7840	4280	759	174
MAX	3.8	3.7	3.1	3.1	3.4	3.4	3.3	18	293	194	15	3.4
MIN	3.4	2.9	2.9	2.9	2.9	3.1	2.9	2.9	18	14	2.9	2.6
CAL YR 2007	TOTAL	2952.2	MEAN	8.09	MAX	115	MIN	2.6	AC-FT	5860		
WTR YR 2008	TOTAL	7696.5	MEAN	21.0	MAX	293	MIN	2.6	AC-FT	15270		

MAX DISCH: 297 CFS AT 06:15 ON Jun. 22, 2008 GH 1.67 FT. SHIFT 0.11 FT.  
MAX GH: 1.67 FT. AT 06:15 ON Jun. 22, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

07082500 LAKE FORK CREEK BELOW SUGAR LOAF DAM NEAR LEADVILLE CO  
WY2008 HYDROGRAPH





ARKANSAS RIVER BASIN

07084500 LAKE CREEK ABOVE TWIN LAKES RESERVOIR, CO

**LOCATION.**--Lat 39°03'47", long 106°24'28", Lake County, Hydrologic Unit 11020001, on left bank 1.35 mi upstream from water line of Twin Lakes Reservoir at elevation 9,200 ft and 2.1 mi southwest of village of Twin Lakes.

**DRAINAGE AREA AND PERIOD OF RECORD.**--75 mi<sup>2</sup>. April 1946 to Sept. 1962, Oct. 1963 to current year. Monthly data only for some periods.

**GAGE.**--Satellite-monitored data collection platform (Sat-Link 2) and Accububble in a 4 ft x 4-ft steel shelter on the left bank at a refurbished concrete section and bridge over Lake Creek. Hourly averages of 15-minute satellite data are the primary record. Primary reference gage is a drop wire weight mounted on the pedestrian bridge near the left side. A temperature sensor is operated at the site.

**REMARKS.**--Record is complete and reliable, except for the following periods: Oct 22, Nov 3, 19, 2007 when ice affected the stage-discharge relationship; April 25, Sept 10-16, 2008, when data were missing from DCP; and Nov 20, 2007 - April 21, 2008, when the station was closed for the winter. Record is good, except periods of no gage height and ice affected record, which are poor. Station maintained by L.R. Schultz and record developed by C. A. Hart.

**RATING TABLE.**--LAKATLCO23 USED FROM 01-Oct-2007 TO 30-Sept-2008

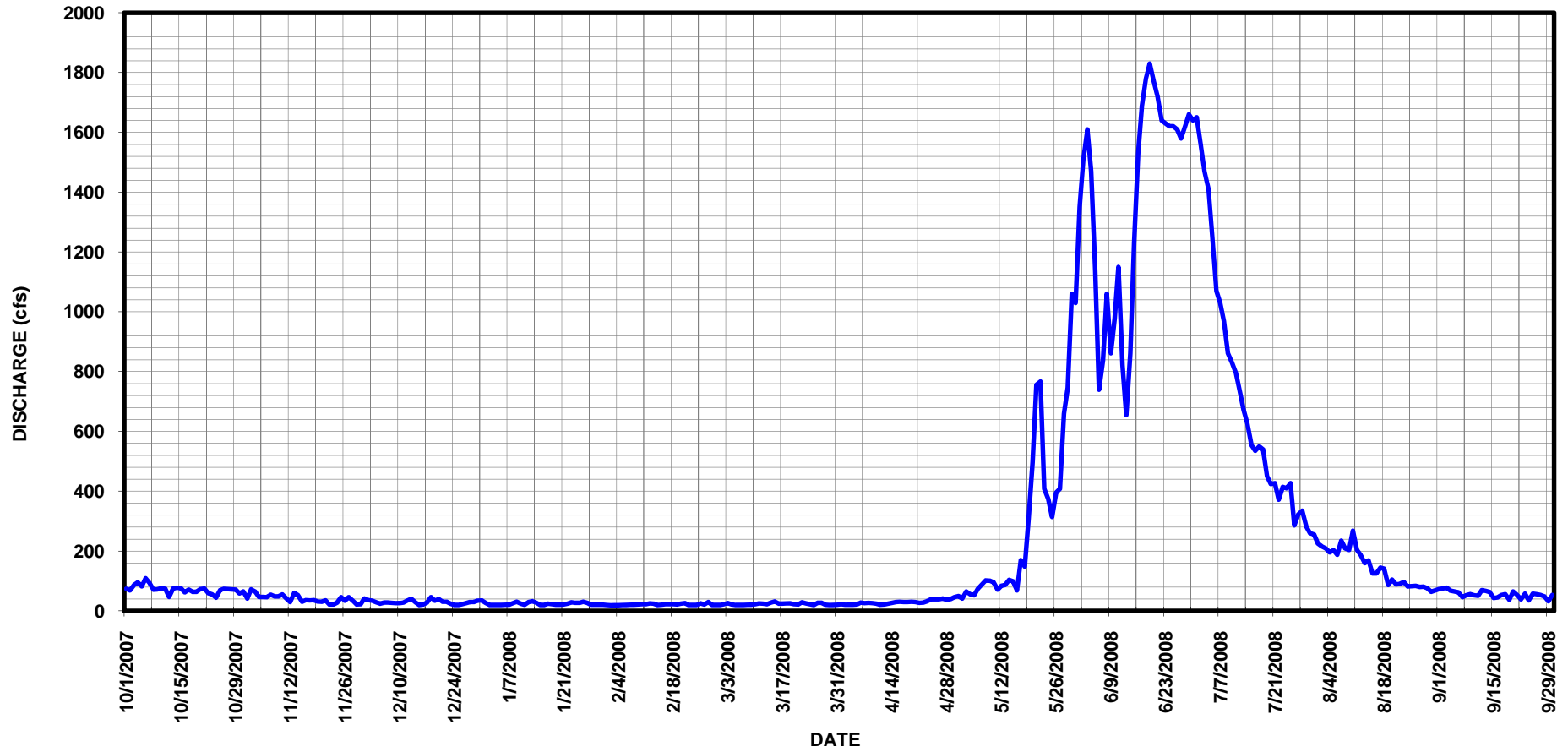
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	42	42	27	20	20	23	50	1350	1650	226	73
2	69	72	36	20	19	23	21	42	1510	1560	216	75
3	87	65	34	20	19	26	21	65	1610	1470	210	78
4	96	47	29	20	19	22	21	56	1470	1410	196	68
5	82	47	24	20	20	20	22	52	1140	1250	203	65
6	109	46	28	21	20	20	28	74	740	1070	188	62
7	93	54	28	21	21	20	26	89	839	1030	235	46
8	71	49	27	26	21	21	27	102	1060	968	210	52
9	72	49	26	31	22	21	26	101	862	861	204	56
10	76	55	26	24	23	23	24	96	977	832	268	52
11	74	42	28	21	23	25	21	71	1150	797	204	51
12	47	30	35	30	25	24	22	84	822	737	187	70
13	75	61	41	33	24	23	24	87	655	672	160	67
14	78	52	29	27	20	28	27	104	862	626	169	63
15	76	31	20	20	21	32	30	99	1230	555	126	43
16	62	36	22	20	23	24	31	69	1530	536	126	45
17	71	35	28	24	23	24	30	170	1690	550	145	53
18	64	36	46	23	23	25	30	148	1780	540	141	56
19	64	32	34	21	22	25	31	306	1830	450	87	37
20	73	31	40	21	24	23	30	498	1770	425	105	65
21	75	35	31	22	26	22	27	756	1720	427	89	53
22	60	22	31	24	20	29	28	767	1640	372	90	39
23	55	22	24	29	20	25	33	408	1630	415	97	58
24	44	28	20	27	20	23	39	374	1620	410	82	35
25	70	46	20	27	25	20	39	314	1620	427	83	58
26	74	34	23	31	22	27	39	396	1610	286	84	56
27	73	46	26	27	30	27	42	408	1580	323	80	53
28	72	34	30	21	20	21	37	659	1620	335	81	49
29	71	22	30	21	20	20	40	746	1660	283	76	33
30	59	23	34	21	---	20	46	1060	1640	260	64	53
31	65	---	35	21	---	21	---	1030	---	256	69	---
TOTAL	2231	1224	927	741	635	724	885	9281	41217	21783	4501	1664
MEAN	72.0	40.8	29.9	23.9	21.9	23.4	29.5	299	1374	703	145	55.5
AC-FT	4430	2430	1840	1470	1260	1440	1760	18410	81750	43210	8930	3300
MAX	109	72	46	33	30	32	46	1060	1830	1650	268	78
MIN	44	22	20	20	19	20	21	42	655	256	64	33
CAL YR 2007	TOTAL	62238	MEAN	170	MAX	1100	MIN	12	AC-FT	123400		
WTR YR 2008	TOTAL	85813	MEAN	234	MAX	1830	MIN	19	AC-FT	170200		

MAX DISCH: 2180 CFS AT 22:0 ON June 18, 2008 GH 6.22 FT. SHIFT 0.05 FT.  
MAX GH: 6.22 FT. AT 22:00 ON June 18, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

07084500 LAKE CREEK ABOVE TWIN LAKES RESERVOIR CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

LAKE CREEK BELOW TWIN LAKES RESERVOIR, CO

**LOCATION.**--Lat 39°04'34", long 106°18'35", in NE¼SE¼, sec. 22, T.11 S., R. 80 W., Lake County, on right bank 1.2 miles upstream from confluence of Lake Creek and Arkansas River and 1500 ft downstream of Twin Lakes Dam.

**GAGE.**--Satellite-monitored data collection platform (Sutron high data rate SatLink DCP), shaft encoder, and Sutron stage-discharge recorder in a concrete shelter and well. Primary record is hourly averages of 15-minute satellite data with the SDR log used for backup purposes. Shaft encoder and SDR are set to an inside electric tape-down mounted on instrument shelf. Outside staff gage installed in flume but generally used as backup to primary reference tape-down gage. Control is a 30-foot concrete Parshall flume. Elevation of gage is 9,200 ft. above mean sea level.

**REMARKS.**--Record is complete and reliable for the entire year. The maximum flow that can be safely waded in the flume is about 250 cfs (gage height = 1.61 ft). Flows up to about 400 cfs (gage height = 2.20 ft) can be waded about 150 ft downstream of the flume. There is no bridge at this flume. Record good, except for the periods from May 8-19, 23-31, Jun 1-30, Jul 1-9 and 12-25, 2008, which should be considered fair due to the inability to confirm the stage-discharge rating with high-water measurements. Station maintained by L.R. Schultz and record developed by C. A. Hart.

**RATING TABLE.**--STD30FTPF USED FROM 01-Oct-2007 TO 30-Sept-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	135	193	191	191	197	353	297	1220	1150	154	60
2	79	156	193	191	192	197	320	185	1190	1230	154	48
3	79	156	139	191	190	198	319	147	1170	1300	154	32
4	79	156	58	190	190	198	365	121	1270	1260	130	32
5	79	203	62	190	189	197	413	59	1230	1200	100	32
6	79	224	152	190	189	197	410	193	936	1150	100	31
7	79	226	206	189	189	197	409	375	615	1010	100	32
8	79	223	205	189	188	197	407	501	556	821	70	23
9	78	220	204	189	188	197	446	592	780	597	45	15
10	72	220	204	189	188	221	482	607	792	455	45	15
11	50	219	200	189	186	278	479	605	649	415	45	15
12	50	219	198	189	186	295	476	602	715	503	53	15
13	50	219	196	188	186	297	472	598	860	530	84	15
14	50	219	196	216	193	302	472	590	980	500	112	15
15	50	199	195	230	199	315	401	641	1060	633	129	15
16	50	194	195	229	199	313	366	677	1020	748	128	15
17	50	194	195	211	197	312	378	661	1170	720	128	15
18	50	193	195	198	196	315	387	653	1390	666	128	23
19	50	193	195	197	195	373	384	597	1410	659	81	28
20	49	193	195	195	196	414	382	473	1410	687	33	28
21	49	193	195	195	196	412	380	352	1420	699	52	28
22	49	193	195	195	195	410	376	322	1420	714	72	28
23	49	193	194	195	195	408	374	514	1380	711	72	32
24	49	193	193	195	195	385	386	676	1210	692	72	32
25	49	193	193	193	195	349	397	636	1170	569	72	32
26	50	193	193	193	196	347	395	471	1170	377	56	32
27	50	192	193	192	197	346	394	460	1240	304	37	32
28	50	193	193	191	198	361	393	626	1270	215	53	32
29	50	193	193	191	198	367	392	919	1180	189	60	24
30	39	194	192	191	---	365	390	1100	1140	191	60	15
31	70	---	191	191	---	367	---	1190	---	173	60	---

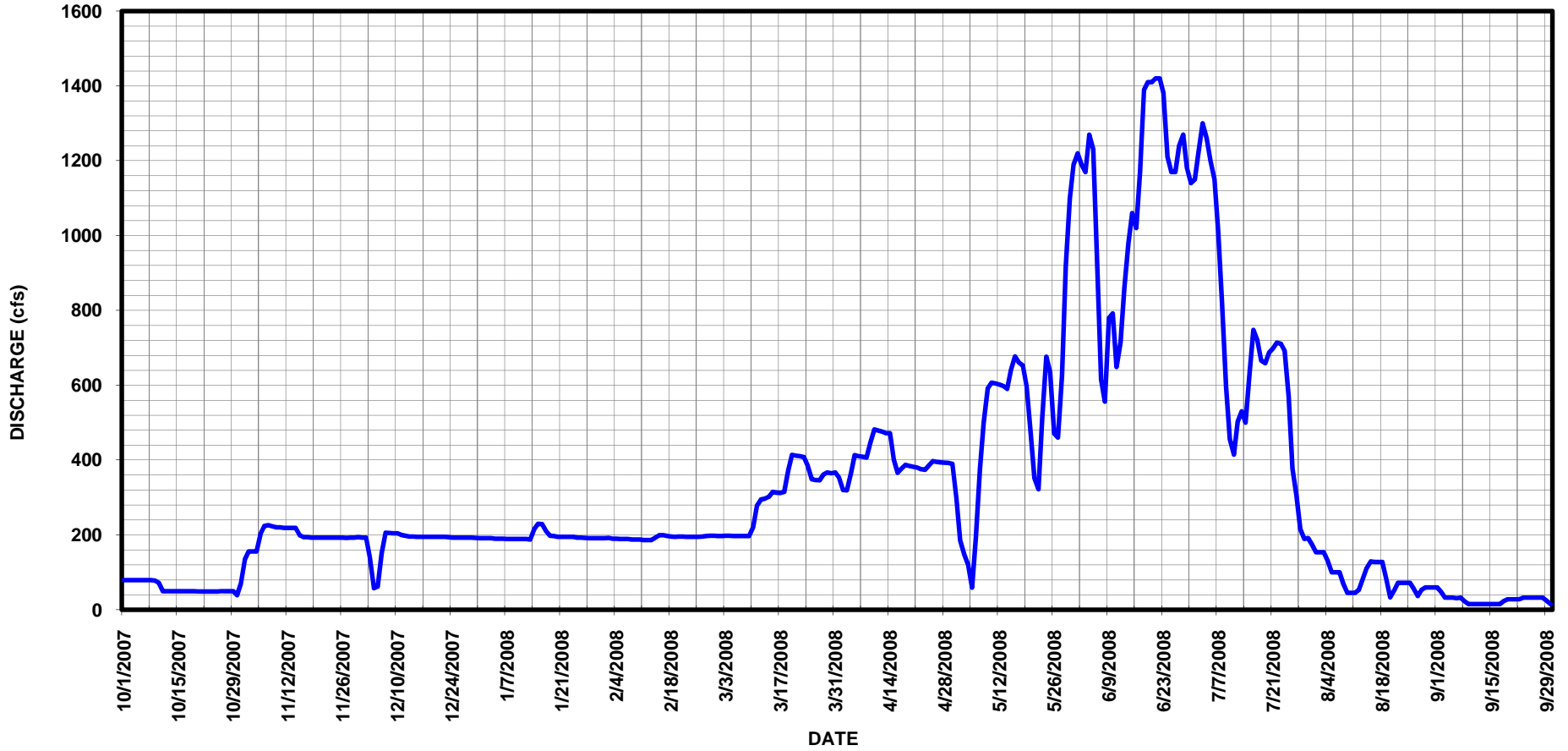
TOTAL	1835	5891	5701	6063	5592	9327	11998	16440	33023	21068	2639	791
MEAN	59.2	196	184	196	193	301	400	530	1101	680	85.1	26.4
AC-FT	3640	11680	11310	12030	11090	18500	23800	32610	65500	41790	5230	1570
MAX	79	226	206	230	199	414	482	1190	1420	1300	154	60
MIN	39	135	58	188	186	197	319	59	556	173	33	15

CAL YR 2007	TOTAL	79398	MEAN	217	MAX	1070	MIN	15	AC-FT	157500
WTR YR 2008	TOTAL	120368	MEAN	329	MAX	1420	MIN	15	AC-FT	238700

MAX DISCH: 1460 CFS AT 22:15 ON Jun. 22, 2008 GH 4.94 FT. SHIFT 0 FT.  
MAX GH: 4.94 FT. AT 22:15 ON Jun. 22, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

LAKE CREEK BELOW TWIN LAKES RESERVOIR CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07086000 ARKANSAS RIVER AT GRANITE, CO

**LOCATION.**--Lat 39°02'34", long 106°15'55", in SE¼SW¼ sec. 31, T.11 S., R.79 W., Chaffee County, Hydrologic Unit 11020001, on right bank at Granite, 100 ft east of U.S. Highway 24, 100 ft downstream from county bridge, and 200 ft upstream from Cache Creek.

**DRAINAGE AREA AND PERIOD OF RECORD.**--427 mi<sup>2</sup>. Sporadic data from April 1895 to May 1901. Complete data from April 1910 to current year. Monthly data for some periods only.

**GAGE.**--Graphic water-stage recorder, Sutron SatLink high data rate satellite-monitored data collection platform (DCP) and shaft encoder in a 4 ft x 4 ft steel shelter over a 42-inch diameter corrugated metal pipe (CMP) well. Shaft encoder and chart set to inside electric tape gage. Primary record is hourly averages of 15-minute satellite data (A-35 chart record is used for back-up purposes). Stock tank heater used inside well during periods of freezing weather to keep well open. Cableway approximately 100 feet downstream from gage. Elevation of gage is 8,914.86 ft above National Geodetic Vertical Datum of 1929, supplementary adjustment of 1960.

**REMARKS.**--Record is complete and reliable, except for the following periods: Dec. 10, 13, 2007, Feb. 6, 10, 16-20, 27, 2008, when stage-discharge relationship was affected by ice on the control. Dec. 14-17, 22, 25-28 2007, Jan. 1, 12-14, 17-24, 27, 31, Feb 2, 3, 7, 2008, when either the float tape was stuck or intakes were frozen. The shelter and well are situated on the right bank in calm water subject to significant shore ice, including complete channel and control freeze-over during periods of freezing weather. Record good, except during periods of no gage height record and ice effect, which are poor. Station maintained by L.R. Schultz and record developed by C. A. Hart.

**RATING TABLE.**--ARKGRNCO11 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

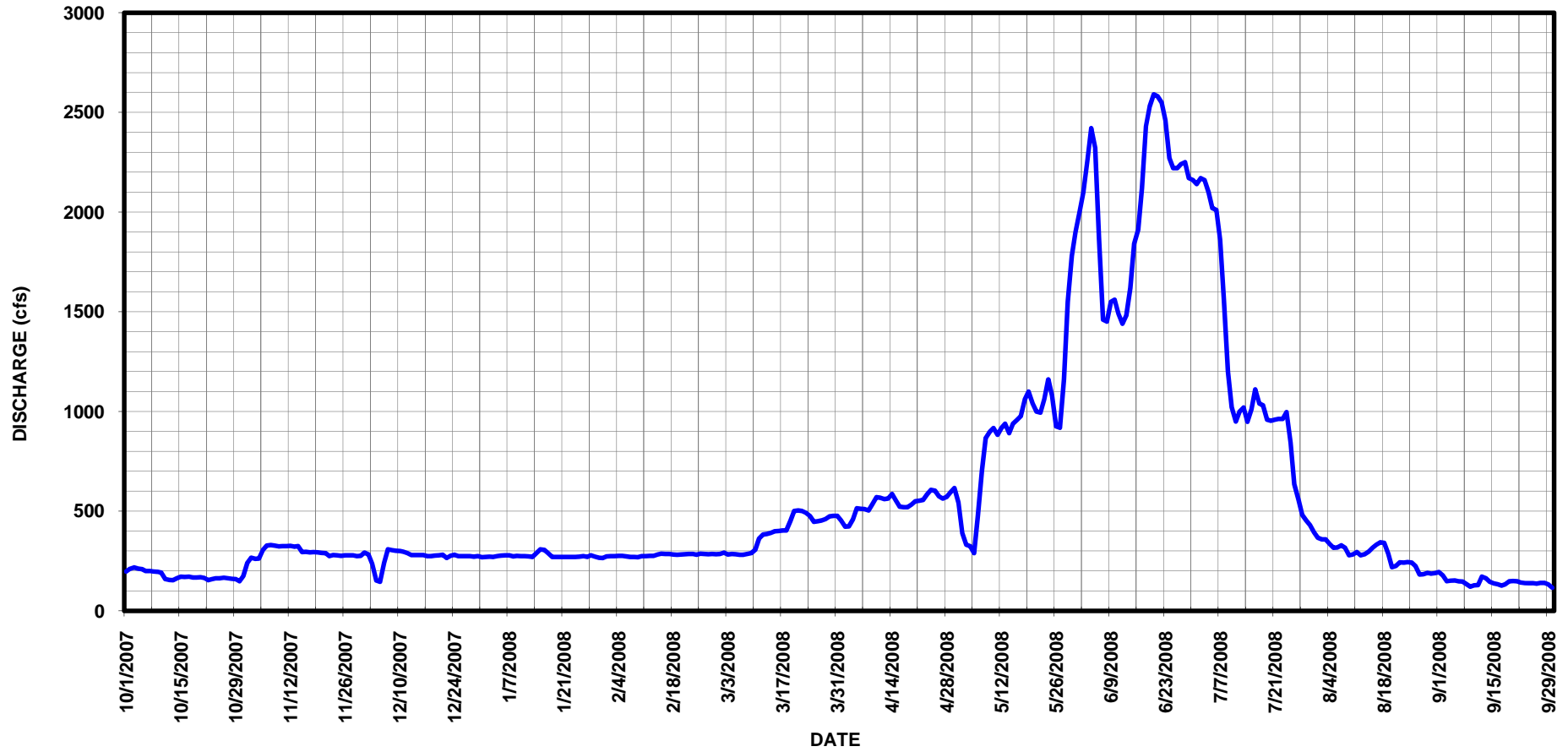
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	197	240	292	270	273	285	453	543	2000	2140	366	195
2	211	267	282	272	275	292	422	391	2100	2170	358	178
3	217	261	235	270	275	282	423	332	2260	2160	358	149
4	212	262	152	274	276	286	459	325	2420	2100	336	151
5	209	306	146	277	276	284	515	290	2320	2020	317	153
6	200	328	241	278	273	281	511	477	1870	2010	318	148
7	200	330	308	278	270	281	510	702	1460	1860	329	147
8	197	327	305	273	270	285	503	867	1450	1560	316	135
9	196	323	301	276	269	289	535	898	1550	1200	279	122
10	192	325	300	274	275	307	570	917	1560	1020	283	128
11	160	324	296	274	275	362	567	883	1490	949	295	130
12	155	326	289	273	276	383	561	917	1440	999	279	171
13	154	322	280	270	276	386	563	939	1480	1020	284	163
14	164	324	280	290	283	391	586	891	1620	948	296	146
15	171	295	280	308	287	399	554	939	1840	1010	316	138
16	170	296	280	306	285	400	523	957	1910	1110	332	133
17	171	294	275	290	285	403	520	977	2120	1040	344	127
18	168	295	275	270	282	403	520	1060	2430	1030	341	133
19	167	294	277	270	281	450	533	1100	2530	959	287	149
20	169	291	279	270	282	501	549	1040	2590	953	219	150
21	165	289	281	270	284	504	552	1000	2580	959	226	149
22	154	274	265	270	286	501	556	994	2550	963	243	142
23	160	280	276	270	285	491	585	1060	2460	963	242	139
24	164	279	281	270	281	476	607	1160	2270	997	245	139
25	164	276	275	272	287	447	602	1080	2220	844	242	139
26	166	278	275	274	286	449	575	925	2220	633	224	137
27	164	278	275	270	284	453	563	918	2240	559	182	140
28	161	279	275	278	286	460	571	1160	2250	482	184	141
29	160	275	272	272	284	474	596	1550	2170	454	190	132
30	149	276	274	266	---	477	616	1780	2160	430	187	116
31	174	---	269	265	---	476	---	1900	---	394	189	---
TOTAL	5461	8814	8391	8540	8107	12158	16200	28972	61560	35936	8607	4320
MEAN	176	294	271	275	280	392	540	935	2052	1159	278	144
AC-FT	10830	17480	16640	16940	16080	24120	32130	57470	122100	71280	17070	8570
MAX	217	330	308	308	287	504	616	1900	2590	2170	366	195
MIN	149	240	146	265	269	281	422	290	1440	394	182	116

CAL YR	2007	TOTAL	145630	MEAN	399	MAX	1740	MIN	89	AC-FT	288900
WTR YR	2008	TOTAL	207066	MEAN	566	MAX	2590	MIN	116	AC-FT	410700

MAX DISCH: 2660 CFS AT 02:45 ON Jun. 20, 2008 GH 5.68 FT. SHIFT 0.04 FT.  
MAX GH: 5.68 FT. AT 02:45 ON Jun. 20, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

07086000 ARKANSAS RIVER AT GRANITE CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07086500 CLEAR CREEK ABOVE CLEAR CREEK RESERVOIR, CO

**LOCATION.**--Lat 39°01'05", long 106°16'38", in SE¼ sec. 12, T,12 S., R.80 W., Chaffee County, Hydrologic Unit 11020001, on right bank 0.5 mi upstream from water line of Clear Creek Reservoir at elevation 8,875 ft, 1.5 mi downstream from unnamed tributary, and 1.9 mi southwest of Granite.

**DRAINAGE AREA.**--67.1 mi<sup>2</sup>.

**GAGE.**--Graphic water-stage recorder, satellite-monitored data collection platform (Sutron high data rate SaltLink Logger DCP) and shaft encoder in a 42-inch diameter corrugated metal pipe (CMP) shelter and well. Shaft encoder and chart set to inside drop tape gage with adjustable RP on instrument shelf. Primary record is hourly averages of 15-minute satellite data (graphic chart record is used for back-up purposes). Control is a concrete dam tapered lower towards the center, located approximately 15 feet downstream. An outside staff gage is used as a supplemental reference gage. However, since its installation, it does not agree with the inside tape, most likely due to draw-down.

**REMARKS.**--Record is complete and reliable, except for the following periods: Oct. 22, Nov. 6, 7, 9, 15, 2007, Apr. 8, 11-13, 18, May 2, 3, 2008, when the stage-discharge relationship was affected by ice; and, Nov. 16, 2007 to April 4, 2008, when the station was closed for the winter. Record good, except during periods of no gage height record and ice effect, which are poor. Station maintained and record developed by L.R. Schultz.

**RATING TABLE.**--CCACCRCO14 USED FROM 01-Oct-2007 TO 30-Sep-2008

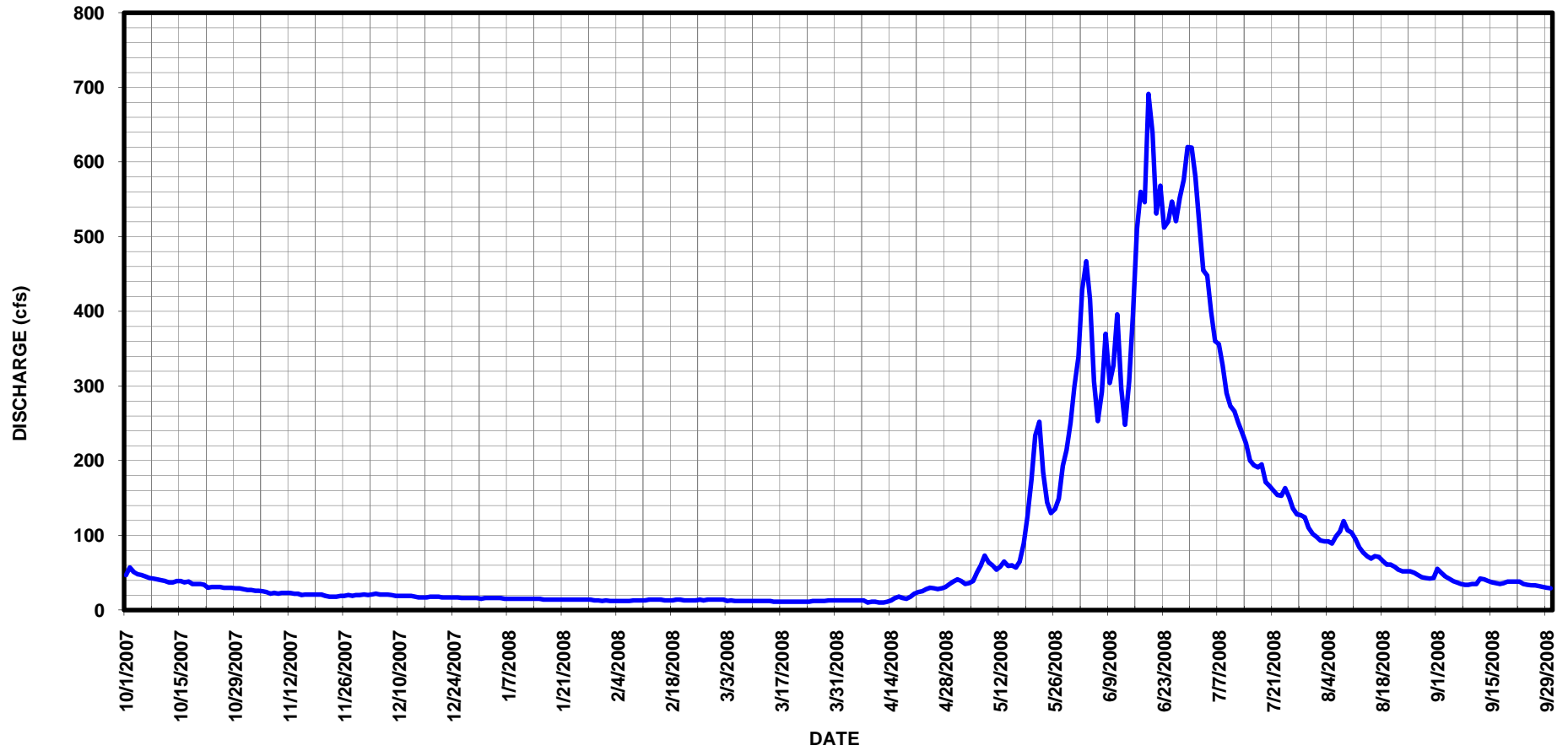
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	27	21	16	13	14	13	41	339	580	98	55
2	57	27	20	16	12	14	13	39	429	514	93	50
3	51	26	21	16	12	12	13	35	467	455	92	45
4	48	26	22	16	12	13	13	36	416	448	92	42
5	47	25	21	16	12	12	13	39	306	400	89	39
6	45	24	21	15	12	12	13	50	253	360	98	37
7	43	22	21	15	12	12	13	60	292	356	105	35
8	42	23	20	15	13	12	10	73	370	328	119	34
9	41	22	19	15	13	12	11	64	304	290	107	34
10	40	23	19	15	13	12	11	60	328	273	104	35
11	39	23	19	15	13	12	10	54	396	266	95	35
12	37	23	19	15	14	12	10	58	296	251	84	42
13	37	22	19	15	14	12	11	65	248	237	77	41
14	39	22	18	15	14	12	13	59	306	223	72	39
15	39	20	17	15	14	11	16	60	394	200	69	37
16	37	21	17	14	13	11	18	57	510	194	72	36
17	38	21	17	14	13	11	16	65	560	191	71	35
18	35	21	18	14	13	11	15	89	546	195	66	36
19	35	21	18	14	14	11	18	126	691	171	61	38
20	35	21	18	14	14	11	22	175	639	166	61	38
21	34	19	17	14	13	11	24	234	531	160	58	38
22	30	18	17	14	13	11	25	252	568	154	54	38
23	31	18	17	14	13	11	28	185	512	153	52	35
24	31	18	17	14	13	11	30	144	520	163	52	34
25	31	19	17	14	14	12	29	130	547	151	52	33
26	30	19	16	14	13	12	28	135	521	136	50	33
27	30	20	16	14	14	12	29	149	552	128	47	32
28	30	19	16	14	14	12	31	193	576	127	44	31
29	29	20	16	13	14	13	35	214	620	124	43	30
30	29	20	16	13	---	13	38	251	619	110	42	29
31	28	---	15	12	---	13	---	299	---	102	43	---
TOTAL	1165	650	565	450	381	370	569	3491	13656	7606	2262	1116
MEAN	37.6	21.7	18.2	14.5	13.1	11.9	19.0	113	455	245	73.0	37.2
AC-FT	2310	1290	1120	893	756	734	1130	6920	27090	15090	4490	2210
MAX	57	27	22	16	14	14	38	299	691	580	119	55
MIN	28	18	15	12	12	11	10	35	248	102	42	29
CAL YR 2007	TOTAL	22211.3	MEAN	60.9	MAX	290	MIN	7.5	AC-FT	44060		
WTR YR 2008	TOTAL	32281	MEAN	88.2	MAX	691	MIN	10	AC-FT	64030		

MAX DISCH: 831 CFS AT 03:00 ON Jun. 19, 2008 GH 4.75 FT. SHIFT 0.16 FT.  
MAX GH: 4.75 FT. AT 03:00 ON Jun. 19, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

07086500 CLEAR CREEK ABOVE CLEAR CREEK RESERVOIR CO  
WY2008 HYDROGRAPH





ARKANSAS RIVER BASIN

CLEAR CREEK BELOW CLEAR CREEK RESERVOIR, NEAR GRANITE, CO

**LOCATION.**--Lat 39°01'20", long 106°14'07", Lake County, on left bank 200 ft. upstream from junction Clear Creek and Arkansas River.

**DRAINAGE AREA.**--N/A.

**GAGE.**--Gage consists of a High-Data-Rate, Sutron Sat-Link 2 data collection platform logging an electronic shaft encoder in a wood frame shelter and concrete stilling well. Primary record is hourly averages of 15-minute satellite data. An A35 chart recorder was used for backup purposes for the majority of this water year. The chart recorder was replaced with a Sutron Stage Discharge Recorder on Sep. 16, 2008. The shaft encoder and chart/SDR are set to inside drop tape gage with adjustable RP on instrument shelf. Outside gage used as supplemental reference. Outside gage reads 0.01 ft low. Control is a 20-ft. wide, compound, thin plate weir located at the gage.

**REMARKS.**--Record is complete and reliable, except for the period of: Nov. 4, 2007 through May 1, 2008, when numerous construction projects related to Clear Creek Dam repairs and CDOT construction work to repair and install culverts under Hwy 24 approximately 100 ft upstream affected the operation of the gage. Record good, except for the period of gage problems from Nov. 4, 2007, through May 1, 2008, which is poor. Very low flows associated with dam repairs and then diversion of low flows around the gage during Hwy 24 culvert repair work prevented accurate gaging and measurements between Nov 4, 2007 and May 1, 2008. Station maintained and record developed by L.R. Schultz.

**RATING TABLE.**--CCBCCRCO04 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

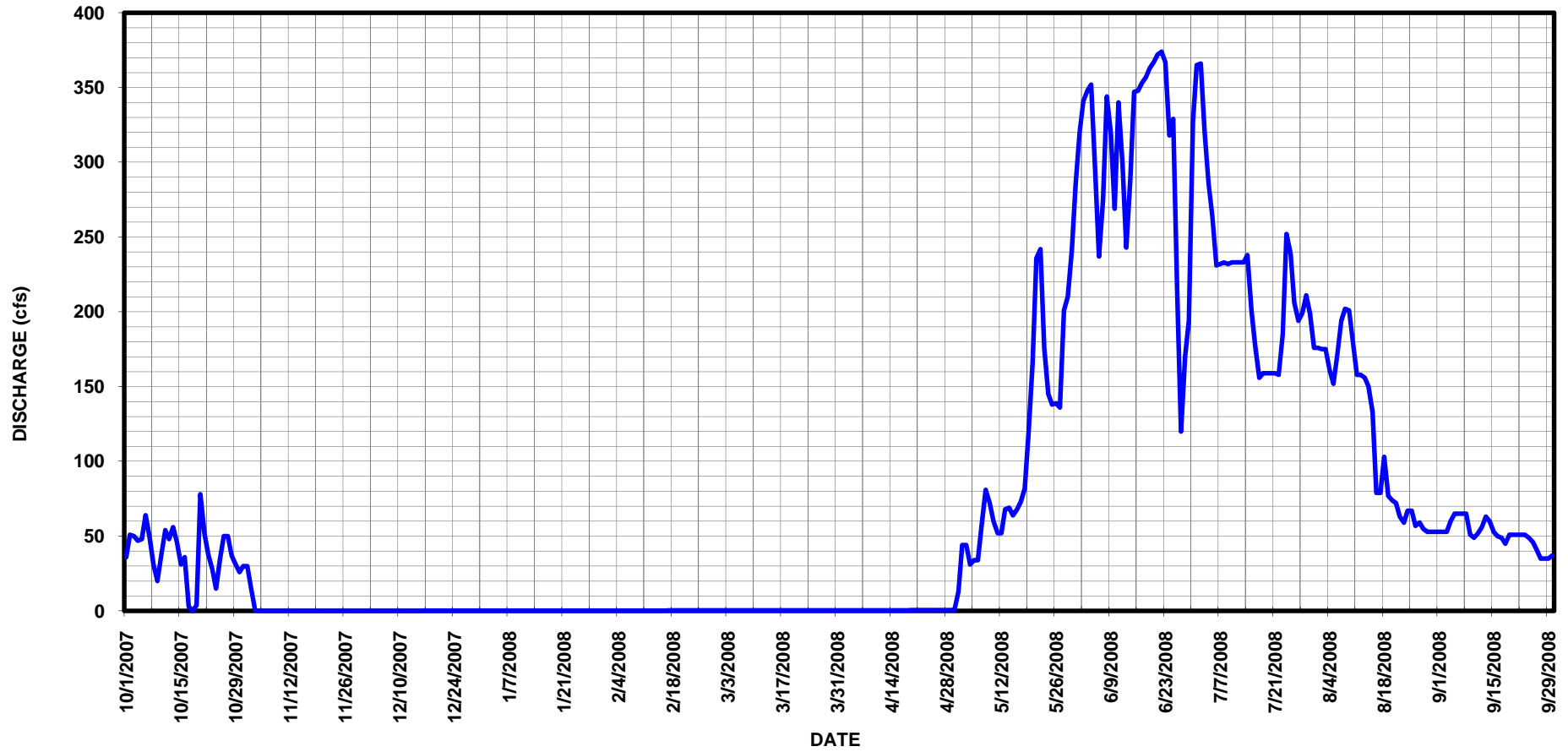
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	30	.07	.13	.21	.31	.41	13	320	365	176	53
2	51	15	.07	.13	.21	.31	.41	44	341	366	175	53
3	50	.28	.07	.14	.22	.32	.41	44	348	321	175	53
4	47	.08	.07	.14	.22	.32	.41	31	352	286	161	60
5	48	.01	.07	.14	.23	.32	.41	34	294	264	152	65
6	64	.01	.08	.14	.23	.32	.42	34	237	231	171	65
7	49	.02	.08	.14	.24	.33	.42	59	275	232	194	65
8	31	.02	.08	.14	.24	.33	.42	81	344	233	202	65
9	20	.02	.08	.14	.25	.33	.42	72	319	232	201	51
10	37	.02	.08	.14	.25	.34	.42	60	269	233	180	49
11	54	.02	.09	.14	.26	.34	.43	52	340	233	158	52
12	48	.03	.09	.14	.26	.34	.43	52	299	233	158	56
13	56	.03	.09	.15	.27	.34	.43	68	243	233	156	63
14	46	.03	.09	.15	.27	.35	.44	69	289	238	150	60
15	31	.03	.09	.16	.27	.35	.44	64	347	201	133	53
16	36	.03	.10	.16	.27	.35	.44	68	348	177	79	50
17	2.9	.04	.10	.16	.28	.35	.45	73	353	156	79	49
18	0	.04	.10	.16	.28	.36	.45	82	357	159	103	45
19	3.8	.04	.10	.17	.28	.36	.46	119	363	159	77	51
20	78	.04	.11	.17	.28	.36	.46	166	367	159	74	51
21	52	.05	.11	.17	.28	.37	.46	236	372	159	72	51
22	38	.05	.11	.18	.29	.38	.47	242	374	158	63	51
23	28	.05	.11	.18	.29	.38	.47	176	367	185	59	51
24	15	.05	.11	.18	.29	.39	.48	145	318	252	67	49
25	35	.05	.12	.19	.29	.39	.48	138	329	239	67	46
26	50	.06	.12	.19	.30	.40	.49	139	212	206	57	41
27	50	.06	.12	.19	.30	.40	.49	136	120	194	59	35
28	37	.06	.12	.20	.30	.40	.49	201	170	199	55	35
29	31	.06	.12	.20	.31	.40	.49	210	194	211	53	35
30	26	.06	.13	.20	---	.41	.49	241	327	199	53	37
31	30	---	.13	.21	---	.41	---	285	---	176	53	---
TOTAL	1180.7	46.34	3.01	5.03	7.67	11.06	13.39	3434	9188	6889	3612	1540
MEAN	38.1	1.54	.097	.16	.26	.36	.45	111	306	222	117	51.3
AC-FT	2340	92	6.0	10	15	22	27	6810	18220	13660	7160	3050
MAX	78	30	.13	.21	.31	.41	.49	285	374	366	202	65
MIN	0	.01	.07	.13	.21	.31	.41	13	120	156	53	35

CAL YR	2007	TOTAL	24744.05	MEAN	67.8	MAX	280	MIN	0	AC-FT	49080
WTR YR	2008	TOTAL	25930.2	MEAN	70.8	MAX	374	MIN	0	AC-FT	51430

MAX DISCH: 402 CFS AT 06:00 ON Jun. 30, 2008 GH 3.28 FT. SHIFT -0.01 FT.  
MAX GH: 3.28 FT. AT 06:00 ON Jun. 30, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

### CLEAR CREEK BELOW CLEAR CREEK RESERVOIR, NEAR GRANITE CO WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07089520 COTTONWOOD CREEK AT BUENA VISTA, CO

**LOCATION.**--Lat 38°50'08", long 106°07'17", in NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>, sec. 16, T.14 S., R. 78 W., in Chaffee County, on left bank, about 1500 ft. upstream from Arkansas River, and 1200 ft. upstream from bridge at Buena Vista High School.

**DRAINAGE AREA.**--N/A.

**GAGE.**--Graphic water-stage recorder, satellite-monitored data collection platform (Sutron SatLink HDR DCP) and shaft encoder in a 42-inch corrugated metal pipe shelter and well. Shaft encoder and chart set to inside drop tape gage with adjustable RP on instrument shelf. Outside staff gage used for supplemental reference. Primary record is hourly averages of 15-minute satellite data (graphic chart record is used for back-up purposes). Datum of gage 7930 ft. from topographic map.

**REMARKS.**--Record is complete and reliable, except for the following periods: Jan. 1-4, 11-14, 25-28, Feb. 3, 4, and 8-15, 2008, when the stilling well was frozen. Nov. 22-29, Dec 7-18, 20-31, 2007, Jan. 5-10, 15-24, 29-31, Feb. 1, 2, 5-7, 16-20, 26-27, Mar. 3-8, 15, 16, 19, 23, and Apr 1, 12, 2008, when ice on the control affected the stage-discharge relationship. Record good, except during periods of no gage height and ice affected record, which are poor. Station maintained by L.R. Schultz and record developed by M.A. Perry.

**RATING TABLE.**--COCRBVCO04 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

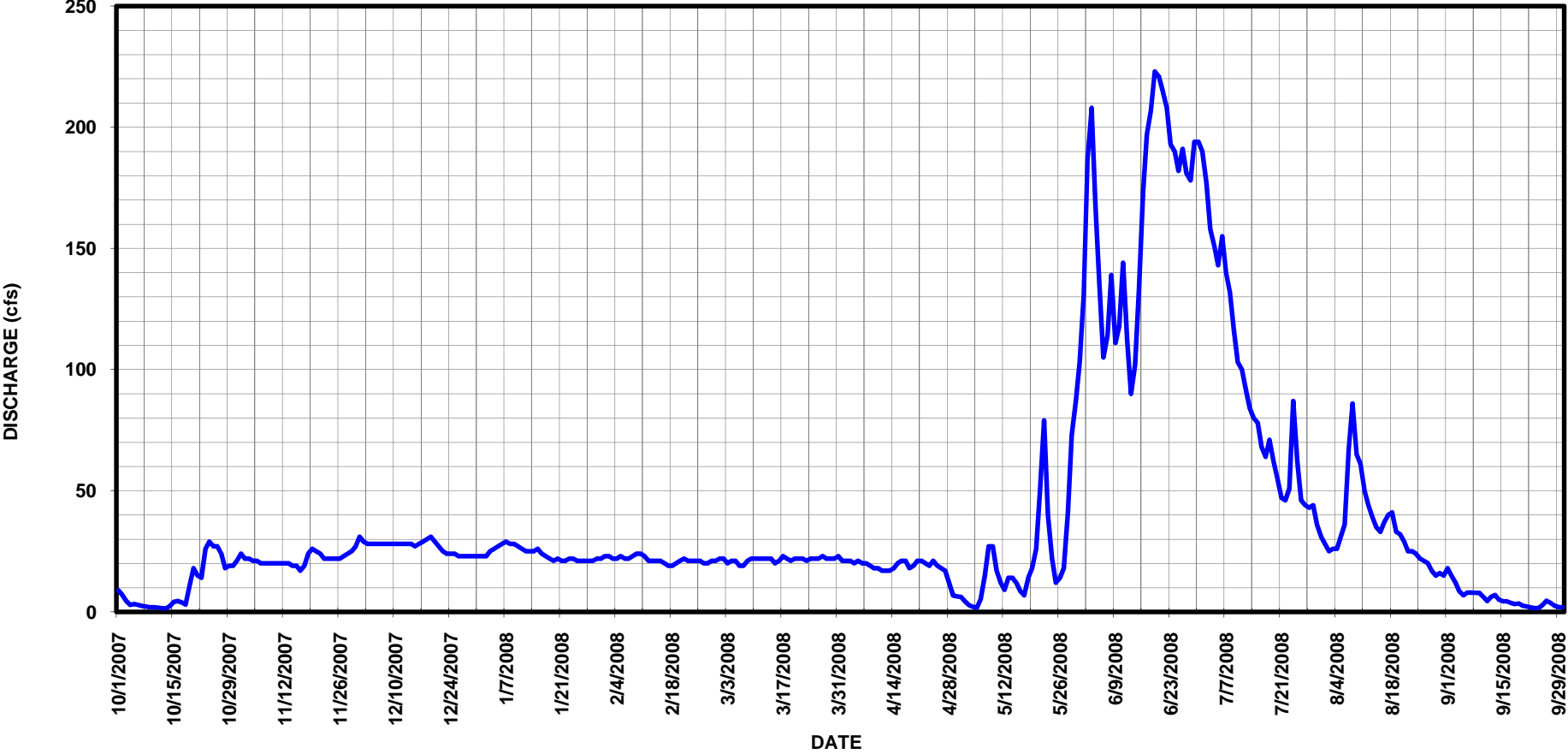
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	24	31	23	23	22	21	6.2	131	190	28	18
2	7.0	22	29	23	23	22	21	4.3	187	177	25	15
3	4.4	22	28	25	22	20	21	2.8	208	158	26	12
4	2.9	21	28	26	22	21	20	2.1	168	151	26	8.5
5	3.2	21	28	27	23	21	21	1.7	134	143	31	6.8
6	2.9	20	28	28	22	19	20	5.4	105	155	36	8.0
7	2.4	20	28	29	22	19	20	15	114	140	67	8.0
8	2.2	20	28	28	23	21	19	27	139	132	86	7.8
9	1.8	20	28	28	24	22	18	27	111	116	65	7.8
10	1.8	20	28	27	24	22	18	17	118	103	61	6.3
11	1.7	20	28	26	23	22	17	12	144	100	50	4.5
12	1.5	20	28	25	21	22	17	9.1	112	92	44	6.2
13	1.4	20	28	25	21	22	17	14	90	84	39	6.9
14	2.3	19	28	25	21	22	18	14	102	80	35	5.0
15	4.1	19	27	26	21	20	20	12	133	78	33	4.3
16	4.5	17	28	24	20	21	21	8.5	173	68	37	4.3
17	3.9	19	29	23	19	23	21	6.8	197	64	40	3.7
18	3.0	24	30	22	19	22	18	14	207	71	41	3.2
19	11	26	31	21	20	21	19	18	223	62	33	3.4
20	18	25	29	22	21	22	21	26	221	55	32	2.5
21	15	24	27	21	22	22	21	50	215	47	29	2.2
22	14	22	25	21	21	22	20	79	208	46	25	1.9
23	26	22	24	22	21	21	19	40	193	51	25	1.5
24	29	22	24	22	21	22	21	22	190	87	24	1.5
25	27	22	24	21	21	22	19	12	182	62	22	2.9
26	27	22	23	21	20	22	18	14	191	46	21	4.6
27	24	23	23	21	20	23	17	18	181	44	20	3.7
28	18	24	23	21	21	22	12	41	178	43	17	2.5
29	19	25	23	21	21	22	6.7	73	194	44	15	2.0
30	19	27	23	22	---	22	6.4	87	194	36	16	1.8
31	21	---	23	22	---	23	---	103	---	31	15	---
TOTAL	327.8	652	832	738	622	669	548.1	781.9	4943	2756	1064	166.8
MEAN	10.6	21.7	26.8	23.8	21.4	21.6	18.3	25.2	165	88.9	34.3	5.56
AC-FT	650	1290	1650	1460	1230	1330	1090	1550	9800	5470	2110	331
MAX	29	27	31	29	24	23	21	103	223	190	86	18
MIN	1.4	17	23	21	19	19	6.4	1.7	90	31	15	1.5

CAL YR 2007 TOTAL 8555.29 MEAN 23.4 MAX 134 MIN 0.89 AC-FT 16970  
WTR YR 2008 TOTAL 14100.6 MEAN 38.5 MAX 223 MIN 1.4 AC-FT 27970

MAX DISCH: 319 CFS AT 01:15 ON Jun. 3, 2008 GH 3.82 FT. SHIFT 0.09 FT.  
MAX GH: 3.82 FT. AT 01:15 ON Jun. 3, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

07089520 COTTONWOOD CREEK AT BUENA VISTA CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07091000 CHALK CREEK AT NATHROP, CO

**LOCATION.**--Lat 38°44'30", long 106°04'57", in SW¼SE¼NE¼SW¼ sec. 14, T.15 S., R.78 W., Chaffee County, on left bank, 640' north of the Junction of Co. Hwy. 162 and U.S. 285 on the frontage rd. parallel to U.S. 285, ¼ mi. south of Nathrop, Co., and 1 mi. west of the confluence of Chalk Creek and the Arkansas River.

**DRAINAGE AREA.**--N\A.

**GAGE.**--Graphic water-stage recorder, satellite-monitored data collection platform (Sutron SatLink Logger HDR DCP) and shaft encoder in 32-inch diameter corrugated metal pipe (CMP) shelter and well. Shaft encoder and chart set to inside drop tape gage with adjustable RP on instrument shelf. Primary record is hourly averages of 15-minute satellite data (graphic chart record is used for back-up purposes). Outside staff gage also used for reference purpose. Station also equipped with tipping bucket rain gage. Control is a concrete dam, tapered lower towards the center, located approximately 5 feet downstream. Elevation of gage 7680 ft. (from topographic map).

**REMARKS.**--Record is complete and reliable, except for the following periods: Dec. 10-17, 22-24, 26-30, 2007; Jan. 1-4, 10, 12-1-21, 24, 31; Feb. 6,7; Mar. 11, 2008, when ice affected the stage-discharge relationship. May 21-22 and Jun 1-2, 2008, when trash/debris on the control affected the stage-discharge relationship. Record good, except during periods of ice and trash/debris affecting the stage-discharge relationship, which are poor. Station maintained by L.R. Schultz and record developed by C. A. Hart.

**RATING TABLE.**--CHCRNACO07 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

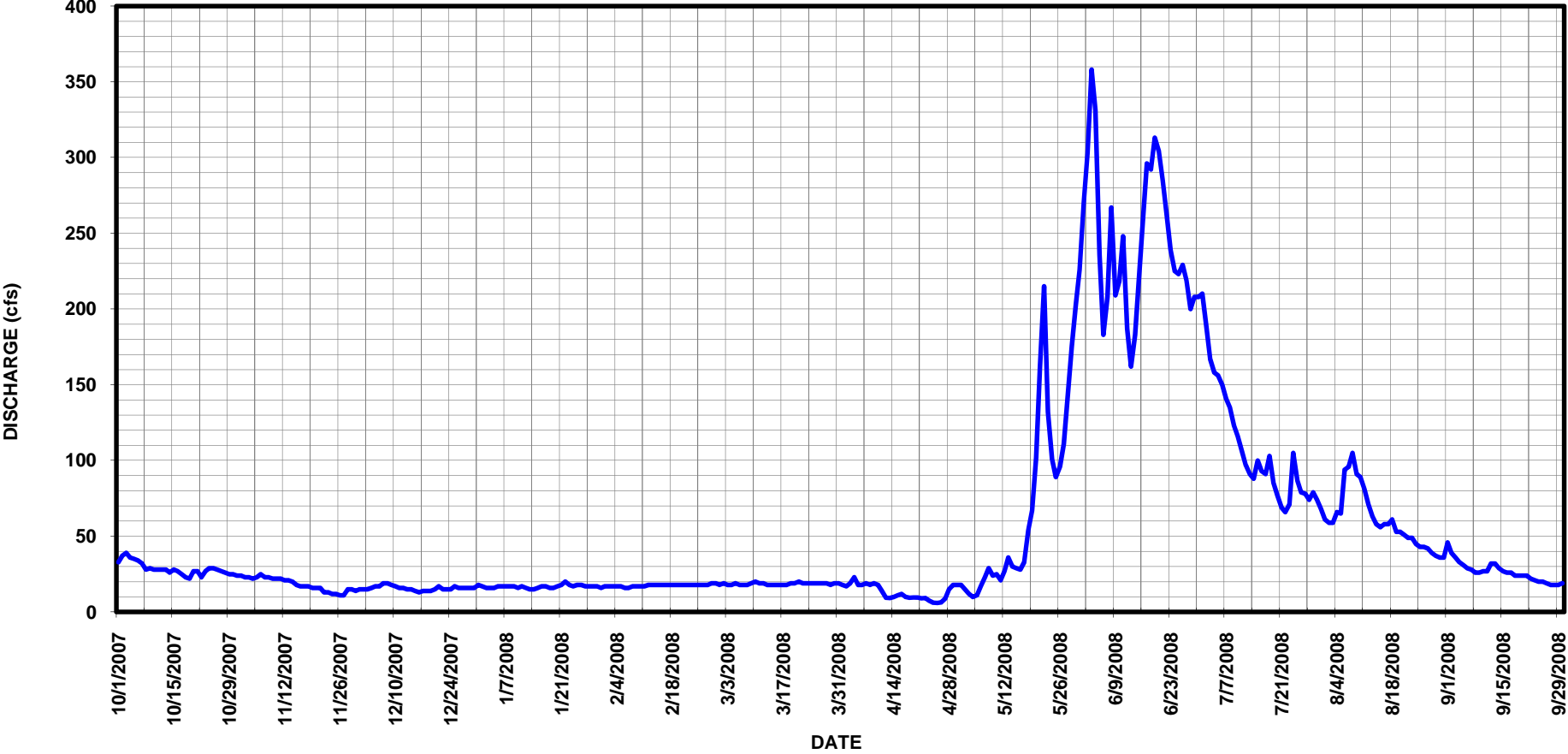
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	24	15	17	17	18	18	18	270	210	61	46
2	37	23	15	16	17	19	17	15	303	188	59	39
3	39	23	15	16	17	18	19	12	358	167	59	36
4	36	22	16	16	17	18	23	10	331	158	66	33
5	35	23	17	17	17	19	18	11	236	156	65	31
6	34	25	17	17	16	18	18	17	183	150	94	29
7	32	23	19	17	16	18	19	23	208	141	96	28
8	28	23	19	17	17	18	18	29	267	135	105	26
9	29	22	18	17	17	19	19	24	209	123	91	26
10	28	22	17	16	17	20	18	25	218	116	89	27
11	28	22	16	17	17	19	14	21	248	106	81	27
12	28	21	16	16	18	19	9.4	27	187	97	71	32
13	28	21	15	15	18	18	9.2	36	162	91	63	32
14	26	20	15	15	18	18	9.9	30	183	88	58	29
15	28	18	14	16	18	18	11	29	220	100	56	27
16	27	17	13	17	18	18	12	28	260	93	58	26
17	25	17	14	17	18	18	10	33	296	91	58	26
18	23	17	14	16	18	18	9.4	54	292	103	61	24
19	22	16	14	16	18	19	9.6	67	313	85	53	24
20	27	16	15	17	18	19	9.6	102	304	77	53	24
21	27	16	17	18	18	20	9.1	162	285	69	51	24
22	23	13	15	20	18	19	9.3	215	262	66	49	22
23	27	13	15	18	18	19	7.4	132	239	71	49	21
24	29	12	15	17	18	19	6.2	101	225	105	45	20
25	29	12	17	18	18	19	6.0	89	223	87	43	20
26	28	11	16	18	18	19	6.3	96	229	79	43	19
27	27	11	16	17	18	19	8.9	111	219	78	42	18
28	26	15	16	17	19	19	15	144	200	74	39	18
29	25	15	16	17	19	18	18	175	208	79	37	18
30	25	14	16	17	---	19	18	203	208	74	36	19
31	24	---	18	16	---	19	---	226	---	68	36	---
TOTAL	883	547	491	521	511	578	395.3	2265	7346	3325	1867	791
MEAN	28.5	18.2	15.8	16.8	17.6	18.6	13.2	73.1	245	107	60.2	26.4
AC-FT	1750	1080	974	1030	1010	1150	784	4490	14570	6600	3700	1570
MAX	39	25	19	20	19	20	23	226	358	210	105	46
MIN	22	11	13	15	16	18	6.0	10	162	66	36	18

CAL YR	2007	TOTAL	17069.3	MEAN	46.8	MAX	207	MIN	6.2	AC-FT	33860
WTR YR	2008	TOTAL	19520.3	MEAN	53.3	MAX	358	MIN	6.0	AC-FT	38720

MAX DISCH: 402 CFS AT 01:00 ON Jun. 3, 2008 GH 4.88 FT. SHIFT 0.03 FT.  
MAX GH: 4.88 FT. AT 01:00 ON Jun. 3, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

07091000 CHALK CREEK AT NATHROP CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07091500 ARKANSAS RIVER AT SALIDA, CO

**LOCATION.**--Lat 38°32'45", long 106°00'36", in NE¼ sec. 31, T.50 N., R.9 E., Chaffee County on right bank at Salida, 450 ft. upstream from bridge on State Highway 291, and 2.7 mi. upstream from S. Arkansas River.

**DRAINAGE AREA.**--1,218 mi<sup>2</sup>.

**GAGE.**--Graphic water-stage recorder, satellite-monitored data collection platform (Sutron SatLink 2) and shaft encoder in a 4'x 4' steel shelter placed over a CMP stilling well. Shaft encoder and chart set to inside drop tape from an adjustable RP on instrument shelf. Primary record is hourly averages of 15-minute satellite data (A-35 chart used for back-up purposes). Cableway approximately 35 feet downstream from gage. Cableway left mass anchor, main cable, backstays, and hardware were replaced in May 2008. A boulder control structure was installed approximately 80-ft downstream of the gage in Dec. 2007 in order to back water up and create a better measuring section at the cableway. The new control was unstable during WY08 as it adjusted during high flows. Datum of gage is 7,050.45 ft.

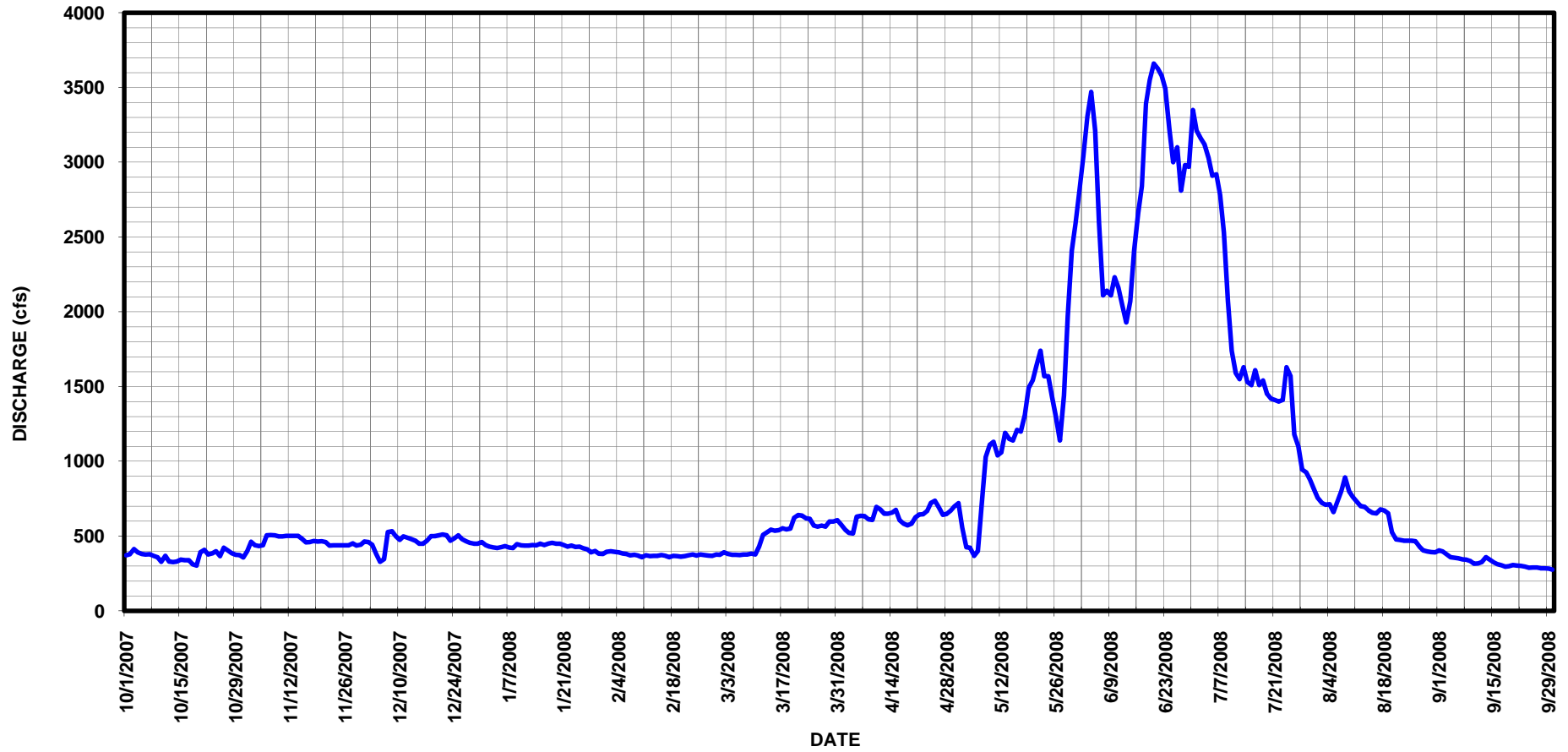
**REMARKS.**--Record is complete and reliable, except for: Dec 9-31, 2007; Jan 1-4, 8-27, 29-31; Feb 1-10, 17-20; Mar 3, 7, 2008; when gage height was affected by ice on the control. The new boulder control structure allowed ice to bridge between the boulders and caused more ice-affect than has occurred historically at this gage. Dec 5, 2007 - end of WY08: A new boulder weir control was installed on Dec 5, 2007. The weir was unstable as boulders settled and moved, especially during the high peak flows seen this WY. This resulted in large shift changes and a less reliable record than usual. Dec. 2007 - end of WY08: Isopar leaked from an oil tube into the stilling well throughout Spring 2008. The leaking isopar introduced errors to the drop tape reference gage readings. These errors are absorbed into measurement shifts so that computed discharges are accurate but the gage height-discharge relationship for this period is uncertain. Record is considered good from the beginning of the water year until Dec. 5, 2007, when the control was changed. From Dec. 5, 2007, through the rest of the water year the record is considered fair due to the unstable control and large shift changes. Periods of ice affected record are considered poor. Station maintained by L.R. Schultz and record developed by C. A. Hart.

**RATING TABLE.**--ARKSALCO29 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	371	401	464	440	395	375	578	721	2820	3210	755	405
2	379	462	460	430	398	391	543	556	3040	3160	723	397
3	414	438	442	425	396	380	522	426	3310	3120	710	377
4	391	434	379	420	392	375	518	422	3470	3030	713	359
5	381	439	329	426	385	375	630	368	3210	2910	661	355
6	378	505	347	433	380	373	636	400	2600	2920	727	351
7	379	507	528	425	372	378	634	729	2110	2780	800	344
8	368	506	532	420	375	377	612	1030	2140	2530	892	343
9	359	499	500	445	370	382	609	1110	2110	2070	800	333
10	329	499	475	438	360	378	695	1130	2230	1740	762	315
11	369	501	498	436	371	429	679	1040	2160	1590	730	317
12	330	501	490	436	367	509	650	1060	2040	1550	700	327
13	327	501	480	441	369	526	650	1190	1930	1630	696	360
14	330	501	470	439	368	543	657	1150	2070	1530	671	343
15	343	482	450	450	373	537	675	1140	2410	1510	656	324
16	340	459	450	440	368	540	607	1210	2660	1610	652	312
17	340	461	470	450	360	552	584	1200	2840	1510	679	305
18	313	468	500	455	369	546	572	1310	3390	1540	672	295
19	304	463	500	450	367	551	584	1490	3550	1450	651	300
20	392	465	505	450	362	623	624	1540	3660	1420	525	306
21	407	461	510	440	367	641	644	1640	3630	1410	478	303
22	378	436	505	430	371	638	646	1740	3580	1400	475	301
23	384	439	470	436	378	619	668	1570	3490	1410	469	295
24	399	439	485	427	370	615	722	1570	3220	1630	469	289
25	367	439	505	430	377	570	737	1430	3000	1570	470	290
26	423	438	480	418	374	563	693	1290	3100	1180	465	290
27	405	439	465	412	370	571	643	1140	2810	1100	429	285
28	387	451	455	392	369	563	649	1440	2980	944	405	285
29	375	437	450	400	377	597	669	1970	2970	926	397	284
30	373	443	450	383	---	598	698	2410	3350	877	393	276
31	357	---	460	380	---	607	---	2590	---	813	391	---
TOTAL	11392	13914	14504	13297	10850	15722	19028	38012	85880	56070	19016	9666
MEAN	367	464	468	429	374	507	634	1226	2863	1809	613	322
AC-FT	22600	27600	28770	26370	21520	31180	37740	75400	170300	111200	37720	19170
MAX	423	507	532	455	398	641	737	2590	3660	3210	892	405
MIN	304	401	329	380	360	373	518	368	1930	813	391	276
CAL YR 2007	TOTAL	233214	MEAN	639	MAX	2250	MIN	241	AC-FT	462600		
WTR YR 2008	TOTAL	307351	MEAN	840	MAX	3660	MIN	276	AC-FT	609600		
MAX DISCH:	3780 CFS AT	08:30	ON	Jun. 20,	2008	GH	6.52 FT.	SHIFT	-0.25 FT.			
MAX GH:	6.52 FT. AT	08:30	ON	Jun. 20,	2008							

07091500 ARKANSAS RIVER AT SALIDA CO  
WY2008 HYDROGRAPH





ARKANSAS RIVER BASIN

07093700 ARKANSAS RIVER NEAR WELLSVILLE, CO

**LOCATION.**--Lat 38°30'10", long 105°56'21", in SW<sup>1</sup>NE<sup>4</sup> sec. 14, T.49 N., R.9 E., Chaffee County, Hydrologic Unit 11020001, on right bank 50 ft upstream from Chaffee-Fremont County line, 2.0 mi northwest of Wellsville, 2.8 mi downstream from South Arkansas River, and 3.5 mi southeast of Salida.

**DRAINAGE AREA AND PERIOD OF RECORD.**--1,485 mi<sup>2</sup>. April 1961 to current year.

**GAGE.**--Station is equipped with a satellite-monitored data collection platform (Sutron 8210 DCP) with a Sutron Constant Flow Bubbler (CFB). Primary record is hourly averages of 15-minute satellite data, with the DCP log used as backup. The CFB is set to an outside horizontal chain weight gage. The gage is also equipped with air temperature and rainfall (tipping bucket) sensors. Cableway located 400 feet downstream from gage. The CFB stage sensor was installed on Oct 18, 2007 and replaced a Sutron Accububbler. The change was made in order to reduce 'ice spikes' due to ice blockages in orifice line. Datum of gage is 6,883.4 ft above National Geodetic Vertical Datum of 1929 (river-profile survey).

**REMARKS.**-- Record is complete and reliable, except for the following periods: Dec. 26, 27, 2007; Jan. 10, 18, 19, 27, 30; Feb. 5, 9; and Mar. 7, 2008, due to equipment problems; and Dec. 15-17, 24, 29-31, 2007; Jan 1, 2, 15-17, and 29, 2008, when gage heights were affected by ice. Record good, except for periods of no gage height record (equipment problems) and ice affected record, which are poor. Station maintained by L.R. Schultz and record developed by C. A. Hart.

**RATING TABLE.**--ARKWELCO06A USED FROM 01-Oct-2007 TO 30-Sep-2008

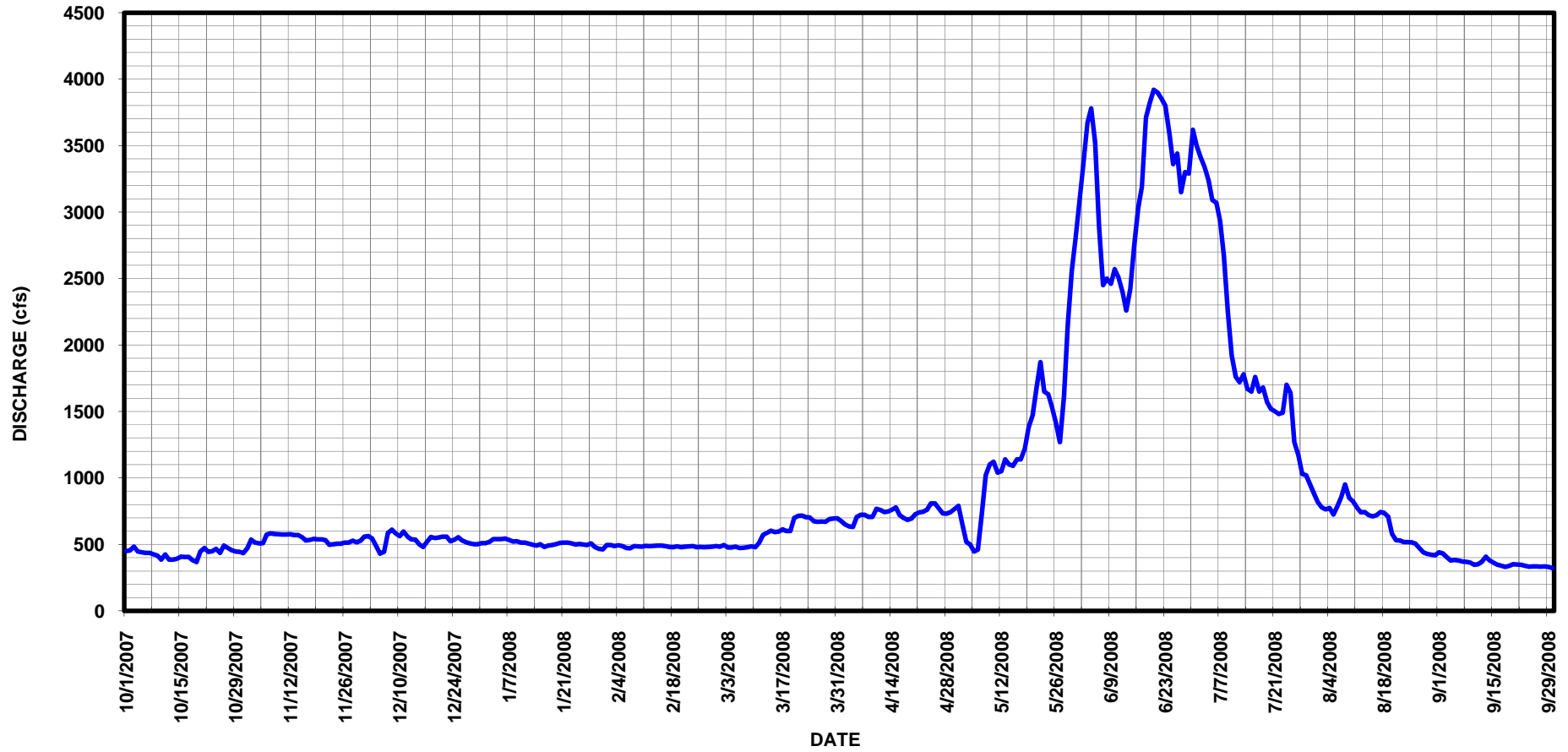
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	450	471	558	510	494	483	675	790	3090	3500	818	440
2	455	535	561	520	494	494	649	653	3360	3410	777	431
3	482	513	544	540	486	477	635	519	3670	3340	764	403
4	447	507	486	540	493	477	630	499	3780	3240	774	378
5	440	510	430	539	487	482	707	446	3520	3090	725	382
6	435	575	443	543	473	472	723	460	2900	3070	783	378
7	436	582	587	534	471	475	722	737	2450	2930	856	370
8	426	579	611	522	487	478	706	1020	2500	2670	950	369
9	415	576	583	523	484	484	706	1100	2460	2240	850	362
10	384	574	562	513	482	478	767	1120	2570	1920	824	346
11	424	575	596	514	489	511	760	1040	2510	1760	778	351
12	386	576	558	505	486	572	742	1050	2400	1720	741	368
13	386	570	537	496	489	587	746	1140	2260	1780	743	407
14	391	571	535	491	490	602	761	1100	2420	1670	721	379
15	407	554	500	500	491	593	778	1090	2740	1650	710	360
16	406	530	480	480	486	597	721	1140	3030	1760	719	346
17	405	533	520	490	480	612	698	1140	3190	1650	742	338
18	380	542	555	495	479	600	684	1220	3710	1680	736	331
19	367	537	547	500	485	601	694	1380	3820	1570	709	339
20	446	538	552	512	478	698	727	1470	3920	1520	581	350
21	473	531	558	514	483	715	741	1670	3900	1500	532	349
22	443	496	557	514	484	716	745	1870	3850	1480	530	346
23	449	500	524	507	487	705	762	1650	3800	1490	518	339
24	467	504	535	498	478	703	807	1630	3590	1700	517	333
25	435	504	553	502	480	674	808	1530	3360	1640	516	334
26	490	513	530	499	479	669	772	1410	3440	1270	505	335
27	473	514	515	495	481	672	732	1270	3150	1170	470	332
28	456	528	507	506	483	669	731	1610	3300	1030	440	334
29	446	515	500	478	487	689	743	2150	3290	1020	428	330
30	443	528	500	466	---	694	765	2560	3620	953	421	322
31	434	---	510	462	---	696	---	2800	---	882	417	---
TOTAL	13377	16081	16534	15708	14046	18375	21837	39264	95600	60305	20595	10782
MEAN	432	536	533	507	484	593	728	1267	3187	1945	664	359
AC-FT	26530	31900	32800	31160	27860	36450	43310	77880	189600	119600	40850	21390
MAX	490	582	611	543	494	716	808	2800	3920	3500	950	440
MIN	367	471	430	462	471	472	630	446	2260	882	417	322
CAL YR 2007	TOTAL	259920	MEAN	712	MAX	2350	MIN	294	AC-FT	515500		
WTR YR 2008	TOTAL	342504	MEAN	936	MAX	3920	MIN	322	AC-FT	679400		

MAX DISCH: 4240 CFS AT 08:00 ON June 20, 2008 GH 7.28 FT. SHIFT 0.07 FT.  
MAX GH: 7.28 FT. AT 08:00 ON June 20, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

07093700 ARKANSAS RIVER NEAR WELLSVILLE CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07095000 GRAPE CREEK NEAR WESTCLIFFE, CO

**LOCATION.**--Lat 38°11'10", long 105°28'59", in NW¼NW¼ sec. 31, T.21 S., R.72 W., Custer County, Hydrologic Unit 110200001, on left bank 0.5 mi upstream from water line of De Weese Reservoir at elevation 7,665 ft, 0.5 mi downstream from Swift Creek, and 3.6 mi northwest of Westcliffe.

**DRAINAGE AREA.**--320 mi².

**GAGE.**--Graphic water stage recorder, satellite monitored data collection platform (Sutron Model 8210 DCP) and shaft encoder in a 48-inch diameter metal pipe (CMP) shelter and well. Primary record is hourly averages of 15-minute satellite data with the graphic chart recorder used for backup purposes. Primary reference gage is electric drop tape inside well. No outside staff gage. An air temperature sensor, installed in radiation shield, and a tipping bucket raingage are also installed at the gage and monitored by the DCP. The air temperature sensor was replaced on November 29, 2007. The control is a compound, broad-crested weir located 17 ft. downstream from the gage. Elevation of gage is 7,690 ft, from topographic map. Prior to Mar, 17. 1939, at site 30 ft upstream at present datum.

**REMARKS.**--Record is complete and reliable, except for the following periods: November 23-30; December 8-12, 2007; and March 15-19, 2008, when the stage-discharge relationship was affected by shore ice and ice on the control. December 13-31, 2007; January 1-31; February 1-29; and March 1-12, 2008, when the chart and shaft encoder floats were frozen in ice in the well, the well was frozen, intakes were frozen, and the control/weir pool was frozen over. Record good, except for periods of ice effect and no gage height record, which are poor. Station maintained and record developed by T.W. Ley.

**RATING TABLE.**--GAWESCO09 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

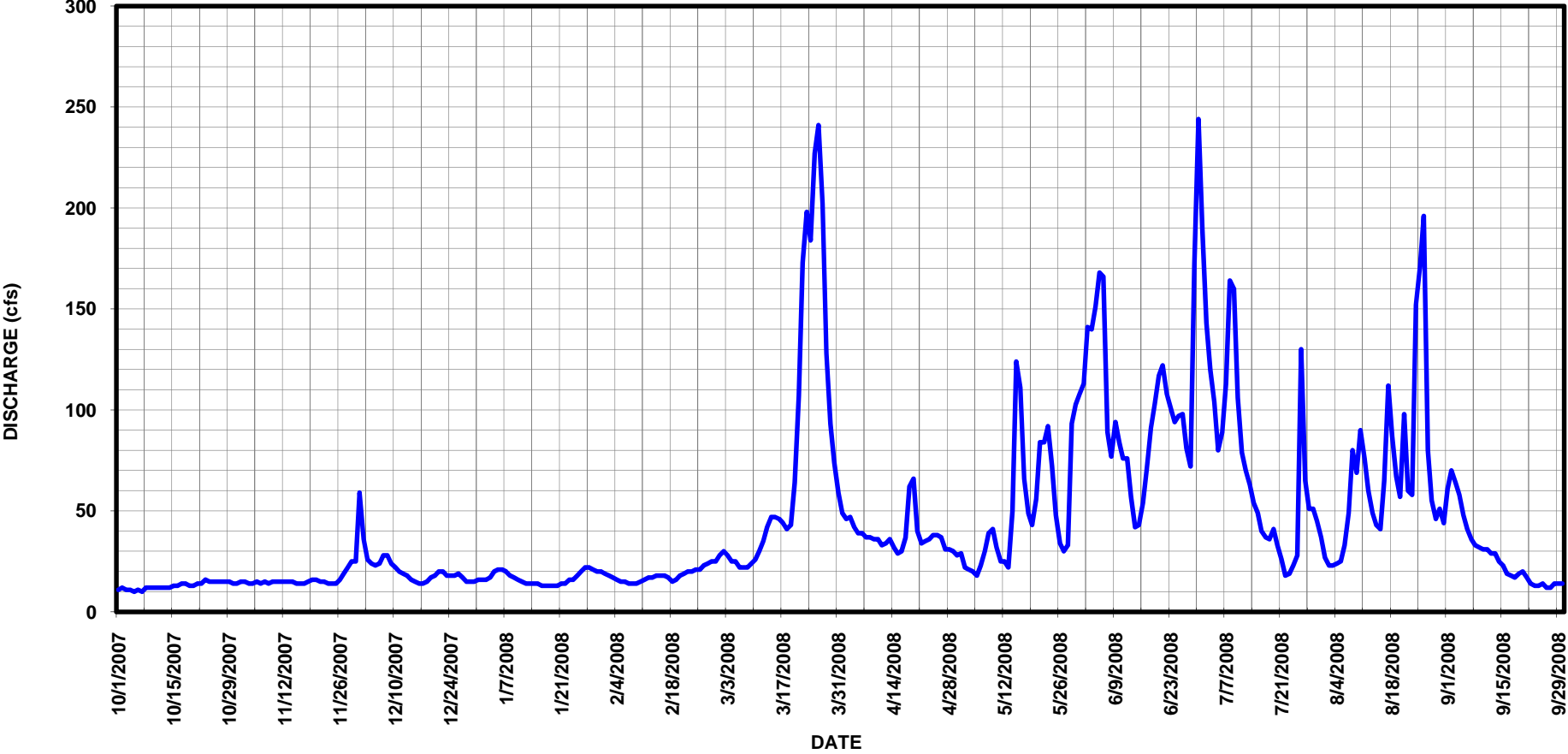
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	15	59	16	19	28	49	29	113	190	27	61
2	12	15	36	16	18	30	46	22	141	143	23	70
3	11	14	26	17	17	28	47	21	140	120	23	64
4	11	14	24	20	16	25	42	20	151	104	24	58
5	10	15	23	21	15	25	39	18	168	80	25	48
6	11	14	24	21	15	22	39	23	166	89	33	41
7	10	15	28	20	14	22	37	30	89	113	49	36
8	12	14	28	18	14	22	37	39	77	164	80	33
9	12	15	24	17	14	24	36	41	94	160	69	32
10	12	15	22	16	15	26	36	32	84	106	90	31
11	12	15	20	15	16	30	33	25	76	79	76	31
12	12	15	19	14	17	35	34	25	76	70	60	29
13	12	15	18	14	17	42	36	22	57	63	49	29
14	12	15	16	14	18	47	32	50	42	54	43	25
15	13	14	15	14	18	47	29	124	43	49	41	23
16	13	14	14	13	18	46	30	111	54	40	65	19
17	14	14	14	13	17	44	37	66	71	37	112	18
18	14	15	15	13	15	41	62	49	91	36	87	17
19	13	16	17	13	16	43	66	43	103	41	67	19
20	13	16	18	13	18	64	40	56	117	33	57	20
21	14	15	20	14	19	107	34	84	122	26	98	17
22	14	15	20	14	20	173	35	84	108	18	60	14
23	16	14	18	16	20	198	36	92	101	19	58	13
24	15	14	18	16	21	184	38	72	94	23	152	13
25	15	14	18	18	21	227	38	48	97	28	171	14
26	15	16	19	20	23	241	37	34	98	130	196	12
27	15	19	17	22	24	202	31	30	81	65	80	12
28	15	22	15	22	25	128	31	33	72	51	55	14
29	15	25	15	21	25	93	30	93	172	51	46	14
30	14	25	15	20	---	74	28	103	244	45	51	14
31	14	---	16	20	---	59	---	108	---	37	44	---
TOTAL	402	474	651	521	525	2377	1145	1627	3142	2264	2111	841
MEAN	13.0	15.8	21.0	16.8	18.1	76.7	38.2	52.5	105	73.0	68.1	28.0
AC-FT	797	940	1290	1030	1040	4710	2270	3230	6230	4490	4190	1670
MAX	16	25	59	22	25	241	66	124	244	190	196	70
MIN	10	14	14	13	14	22	28	18	42	18	23	12

CAL YR 2007 TOTAL 18201 MEAN 49.9 MAX 326 MIN 10 AC-FT 36100  
WTR YR 2008 TOTAL 16080 MEAN 43.9 MAX 244 MIN 10 AC-FT 31890

MAX DISCH: 376 CFS AT 21:30 ON Mar. 25, 2008 GH 2.46 FT. SHIFT -0.03 FT.  
MAX GH: 2.46 FT. AT 21:30 ON Mar. 25, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

07095000 GRAPE CREEK NEAR WESTCLIFFE CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07096000 ARKANSAS RIVER AT CANON CITY, CO

**LOCATION.**--Lat 38°26'02", long 105°15'24", in SE¼SE¼ sec. 31, T.18 S., R.70 W., Fremont County, Hydrologic Unit 11020002, on right bank 800 ft upstream from Sand Creek, 0.7 mi downstream from Grape Creek, and 0.7 mi upstream from First Street Bridge in Canon City.

**DRAINAGE AREA AND PERIOD OF RECORD.**--3,117 mi<sup>2</sup>. January 1888 to current year. Monthly data only for some periods. Published as near Canyon 1900-1906.

**GAGE.**--Graphic water-stage recorder, with high data rate DCP (Sutron 8210) and SDI shaft encoder in 42-inch diameter CMP shelter and well. Primary reference gage is electric drop tape inside well. Primary record is hourly averages of 15-minute DCP log data with the graphic chart recorder and satellite data used for backup purposes. Control is man-made concrete diversion dam located approximately 200 feet downstream. Cableway 15-20 feet downstream from gage. USGS Hydrolab is co-located at gage. The DCP setup was modified on 16 Nov 07 in order to measure and transmit all parameters at 15-minute intervals. Previously USGS Water Quality Lab parameters were measured at 30-minute intervals, and all parameters were transmitted to satellite at 30-minute intervals. This limited resolution of real time data for water administration purposes and limited the resolution of the satellite backup dataset, which is used in the event that DCP data is lost. On 26 Oct 07 repairs were made to the cableway frame on the right bank in order to stiffen structural members and reinforce connections. Datum of gage is 5,342.13 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Record is complete and reliable, except for the following days when ice affected the gage height: Nov. 22-25, 29; Dec. 8-18, 26-31, 2007; Jan. 1-3, 8-31, Feb. 1-9, 15, 16, 18, 19, 21, 2008. Record good, except for days on which ice affected the stage-discharge relationship. Record during this period should be considered poor. Station maintained and record developed by M. A. Perry.

**RATING TABLE.**--ARCCANCO23 USED FROM 01-Oct-2007 TO 30-Sep-2008

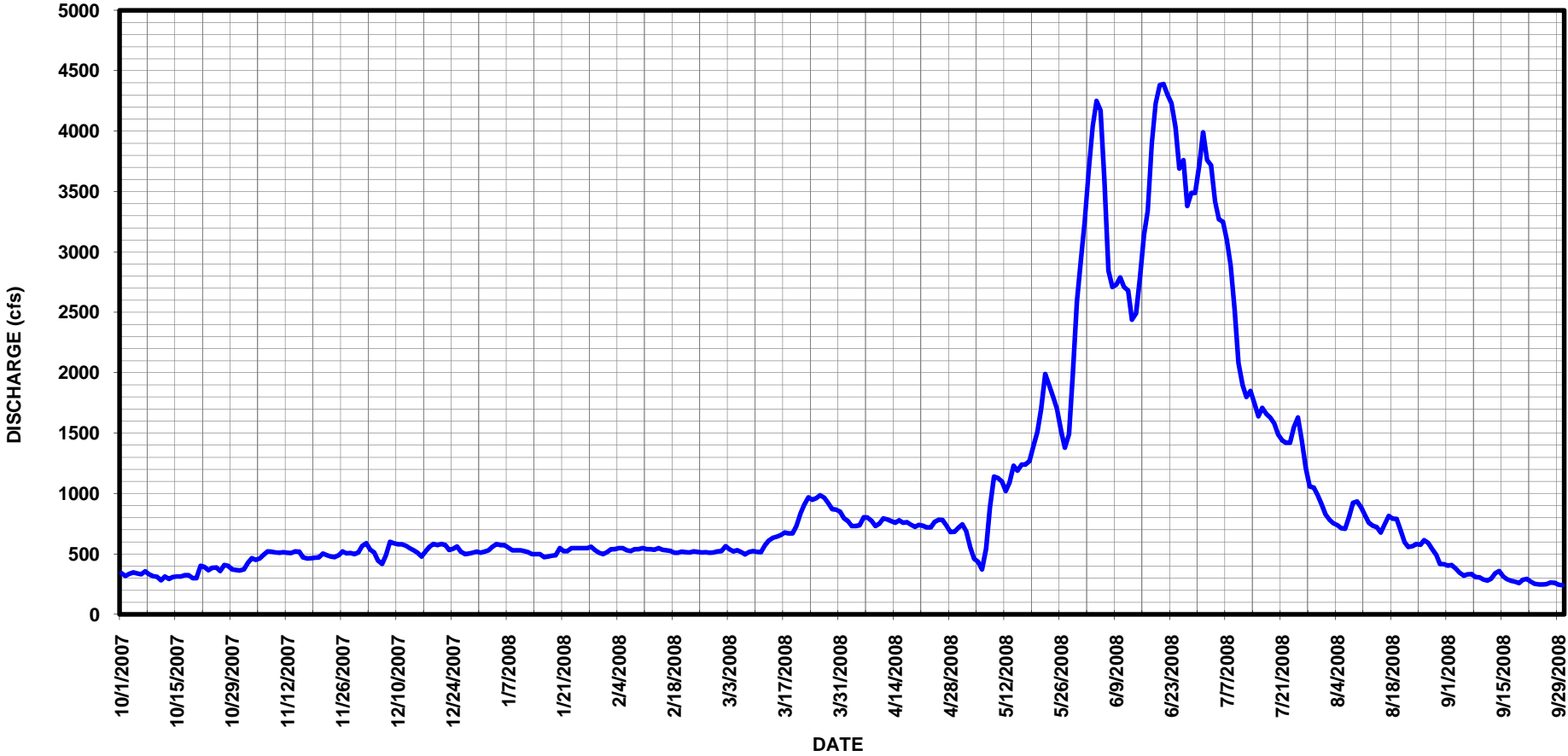
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	341	373	567	520	515	524	797	746	3260	3990	830	405
2	318	426	590	530	540	564	773	688	3660	3760	785	410
3	337	465	538	560	540	541	733	554	4040	3720	754	379
4	348	452	514	582	550	522	733	461	4250	3420	739	345
5	338	463	445	574	550	530	739	435	4170	3270	713	321
6	333	493	418	575	530	516	804	373	3600	3250	709	333
7	357	522	490	553	525	497	801	544	2840	3100	810	334
8	333	519	600	530	540	518	776	886	2710	2890	924	310
9	317	512	590	530	540	524	733	1140	2730	2520	936	308
10	311	511	580	530	549	517	752	1130	2790	2080	890	290
11	283	515	580	525	541	515	796	1100	2710	1900	822	281
12	315	510	570	515	540	574	787	1020	2680	1800	760	296
13	295	508	550	500	536	613	772	1090	2440	1850	734	341
14	310	521	530	500	548	636	759	1230	2490	1750	724	359
15	315	520	510	500	535	643	780	1190	2780	1640	678	314
16	315	473	480	475	530	657	758	1240	3140	1710	745	292
17	325	464	520	480	527	677	764	1240	3340	1660	816	278
18	325	465	560	485	510	672	744	1270	3900	1630	794	272
19	300	471	582	490	510	671	725	1390	4230	1580	791	260
20	300	472	573	550	520	731	740	1510	4380	1490	701	287
21	403	504	582	525	515	835	735	1700	4390	1440	598	295
22	393	490	574	525	512	907	720	1990	4300	1420	557	272
23	366	480	534	550	523	968	720	1900	4230	1420	566	253
24	386	475	544	550	518	949	765	1800	4030	1550	584	249
25	389	490	562	550	514	963	783	1700	3690	1630	576	248
26	360	521	520	550	516	988	781	1520	3760	1440	615	252
27	410	506	500	550	510	967	734	1380	3380	1210	591	265
28	403	509	505	560	512	923	682	1490	3490	1060	542	263
29	372	500	510	530	523	872	684	1990	3490	1050	496	246
30	369	514	520	510	---	867	716	2590	3720	989	419	242
31	365	---	510	500	---	851	---	2920	---	911	415	---
TOTAL	10632	14644	16648	16404	15319	21732	22586	40217	104620	63130	21614	9000
MEAN	343	488	537	529	528	701	753	1297	3487	2036	697	300
AC-FT	21090	29050	33020	32540	30390	43110	44800	79770	207500	125200	42870	17850
MAX	410	522	600	582	550	988	804	2920	4390	3990	936	410
MIN	283	373	418	475	510	497	682	373	2440	911	415	242

CAL YR 2007 TOTAL 277558 MEAN 760 MAX 2540 MIN 283 AC-FT 550500  
WTR YR 2008 TOTAL 356546 MEAN 974 MAX 4390 MIN 242 AC-FT 707200

MAX DISCH: 4530 CFS AT 17:30 ON Jun. 20, 2008 GH 9.39 FT. SHIFT 0.12 FT.  
MAX GH: 9.39 FT. AT 17:30 ON Jun. 20, 2008

07096000 ARKANSAS RIVER AT CANON CITY CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07097000 ARKANSAS RIVER AT PORTLAND, CO

**LOCATION.**--Lat 38°23'18", long 105°00'56", in NE¼NE¼ sec. 20, T.19 S., R.68 W., Fremont County, Hydrologic Unit 11020002, on right bank at bridge on State Highway 120 at Portland and 1 mi downstream from Hardscrabble Creek.

**DRAINAGE AREA.**--4,024 mi<sup>2</sup>.

**GAGE.**--Sutron 8210 satellite-monitored data collection platform (DCP) and high data rate transmitter (HDR) with shaft encoder and a graphic water-stage recorder in 36-inch diameter CMP shelter and well. Primary record is hourly averages of 15-minute satellite data with the graphic chart recorder used for backup purposes. Primary reference gage is a drop tape referenced to an adjustable RP mounted on the instrument shelf inside the shelter. A cablecar is suspended from a monorail attached to upstream side of Hwy 120 bridge 10-15 feet downstream from gage. USGS Hydrolab monitored by DCP for water temperature and specific conductance. The shaft encoder was replaced on Dec 17, 2007. In April 2008, a Constant Flow Bubbler was installed at the same channel section. The bubbler unit was installed in a new shelter higher up on the channel bank. The DCP and other satellite telemetry equipment were also moved up to the new shelter in order to floodproof the gage. For WY08 the primary record is 8210 data log of the shaft encoder with the graphic chart recorder, satellite data, and the Constant Flow Bubbler log used for backup purposes.

**REMARKS.**--Record is complete and reliable, except for: Nov. 24-25; Dec. 10-18, 22-24, 26-31, 2007; Jan. 1-3, 8, 17-25, 31; Feb. 1, 6; Mar. 6, 2008, when ice on the control and in the channel affected the stage-discharge relationship. Record is considered good, except during periods of estimated (ice-affected) flows, which are poor. Station maintained and record developed by M.A. Perry.

**RATING TABLE.**--ARKPORCO10 USED FROM 01-Oct-2007 TO 30-Sep-2008

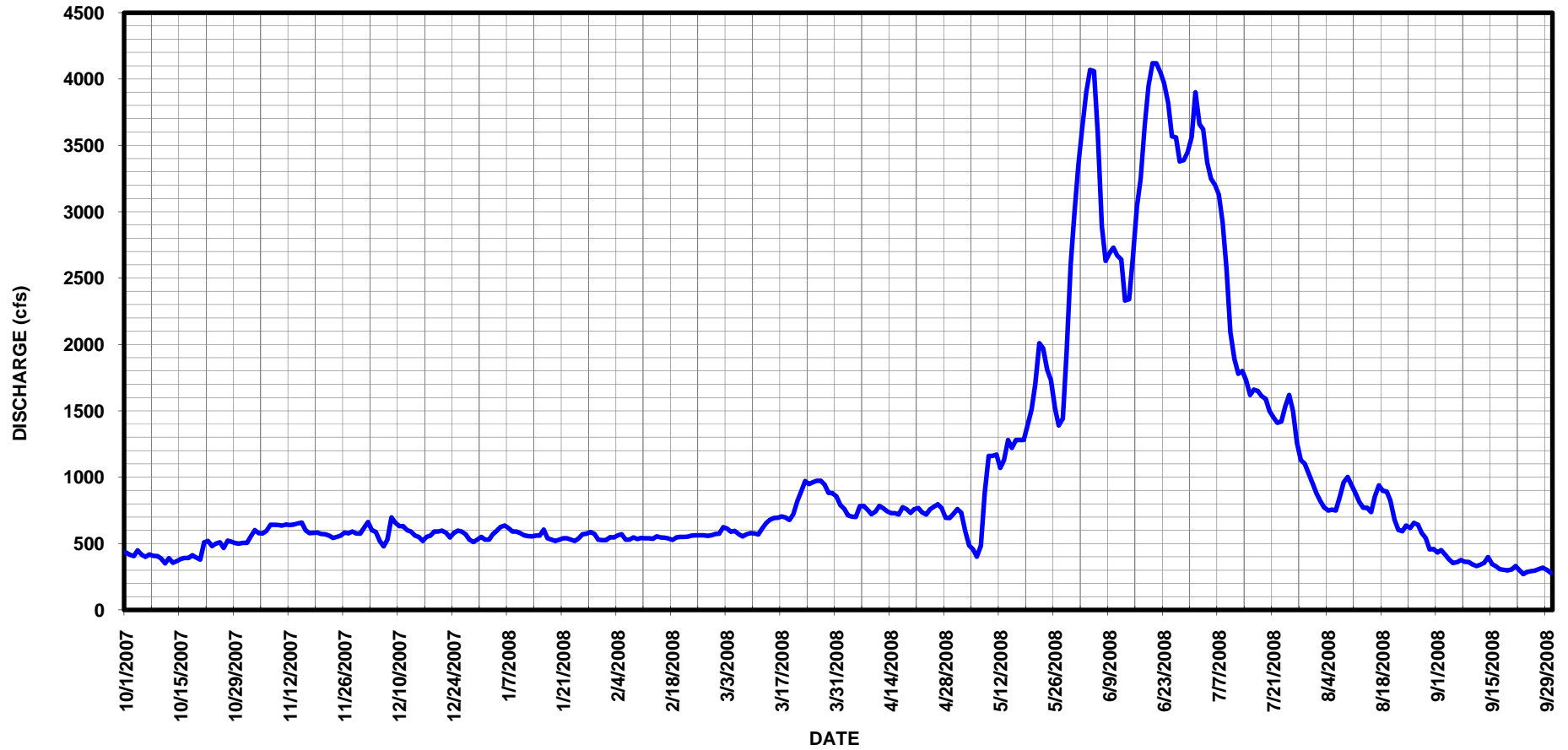
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	432	504	617	530	525	575	791	759	3360	3900	879	432
2	416	553	662	530	548	622	761	733	3630	3660	817	450
3	406	601	600	570	546	612	713	593	3900	3620	771	416
4	447	579	587	596	562	588	702	487	4070	3370	749	380
5	415	577	522	625	569	594	700	456	4060	3250	755	352
6	400	595	479	635	530	570	781	402	3590	3200	748	359
7	418	642	530	617	530	553	783	483	2890	3130	853	374
8	407	642	696	590	546	569	753	874	2630	2920	960	363
9	406	639	658	591	533	578	720	1160	2690	2560	1000	360
10	387	635	630	579	542	577	741	1160	2730	2090	943	342
11	351	643	630	562	540	568	783	1170	2670	1890	879	329
12	389	639	600	556	540	614	765	1070	2640	1780	813	340
13	355	643	590	554	536	654	743	1130	2330	1800	770	355
14	367	652	560	559	554	679	729	1280	2340	1730	769	397
15	382	658	550	559	545	691	729	1220	2660	1620	736	344
16	392	600	520	604	544	694	719	1280	3040	1660	857	327
17	392	579	550	540	538	704	773	1280	3250	1650	938	306
18	412	580	560	530	528	696	759	1280	3650	1610	897	302
19	393	583	590	520	546	678	731	1390	3950	1590	892	297
20	379	571	591	530	549	721	758	1510	4120	1500	819	303
21	509	570	596	540	550	819	767	1700	4120	1450	680	329
22	520	559	580	540	551	892	735	2010	4050	1410	602	300
23	481	542	545	530	559	970	718	1970	3970	1420	592	269
24	499	550	580	520	562	948	756	1810	3820	1530	635	286
25	509	560	596	540	562	962	778	1730	3570	1620	616	291
26	466	582	590	570	561	973	796	1520	3560	1500	656	295
27	521	576	570	573	557	973	766	1390	3380	1260	641	308
28	513	591	530	586	561	945	694	1440	3390	1130	579	317
29	503	577	510	572	571	880	692	1940	3450	1100	539	302
30	499	573	530	529	---	878	723	2600	3560	1030	457	280
31	505	---	550	525	---	855	---	2990	---	952	459	---
TOTAL	13471	17795	17899	17402	15885	22632	22359	40817	101070	62932	23301	10105
MEAN	435	593	577	561	548	730	745	1317	3369	2030	752	337
AC-FT	26720	35300	35500	34520	31510	44890	44350	80960	200500	124800	46220	20040
MAX	521	658	696	635	571	973	796	2990	4120	3900	1000	450
MIN	351	504	479	520	525	553	692	402	2330	952	457	269

CAL YR 2007 TOTAL 305892 MEAN 836 MAX 2690 MIN 351 AC-FT 606700  
WTR YR 2008 TOTAL 365668 MEAN 999 MAX 4120 MIN 269 AC-FT 725300

MAX DISCH: 4250 CFS AT 19:30 ON Jun. 4, 2008 GH 6.33 FT. SHIFT 0.13 FT.  
MAX GH: 6.33 FT. AT 19:30 ON Jun. 4, 2008

07097000 ARKANSAS RIVER AT PORTLAND CO  
WY2008 HYDROGRAPH





ARKANSAS RIVER BASIN

07099400 ARKANSAS RIVER ABOVE PUEBLO, CO

**LOCATION.**--Lat 38°16'18", long 104°43'03", in SE¼NE¼ sec. 36, T.20 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, on left bank of Arkansas River, 200' downstream from NE corner of Arkansas River bridge, approx. 0.4 mi. downstream from Pueblo Dam, and 7 mi. West of Pueblo.

**DRAINAGE AREA AND PERIOD OF RECORD.**--4,670 mi<sup>2</sup>. October 1965 to current year. Periodic water quality and sediment data available Oct. 1965 to current year.

**GAGE.**--Satellite-monitored data collection platform (high data rate Sutron 8210 DCP), Sutron Accububble, shaft encoder and chart recorder in a 4 ft x 4 ft concrete block shelter over a stilling well. The graphic chart recorder and shaft encoder data are used for backup purposes when the stilling well has good contact with the river (gage height 1.80 ft and above). Primary reference gage is outside staff gage for lower flows (maximum gage height of 2.69 feet), and an electric drop tape referenced to a fixed index mounted on the instrument shelf inside the shelter for higher flows (gage height 2.69 ft and above). Cableway approximately 20 feet upstream from gage. USGS Hydrolab collecting water temperature, pH, and specific conductance also monitored by DCP. Elevation of gage is 4740 ft above NGV Datum of 1929.

**REMARKS.**--Primary record is hourly averages of 15-minute DCP log of accububble data. Record is complete and reliable, except for January 28 - February 1, when the well was isolated, the float was hung up, and the orifice line was rerun to open the bottom intake and the Accububble fitting was not tightened. Estimates were made from reservoir release data. May 22, 2008 through the end of the water year the shaft encoder was used for record purposes as there were problems with the Accububble. Record good, except the period January 28 to February 1, which is considered poor due to equipment problems. Station maintained and record developed by A.D. Gutierrez.

**RATING TABLE.**--ARKPUECO17 USED FROM 01-Oct-2007 TO 30-Sep-2008

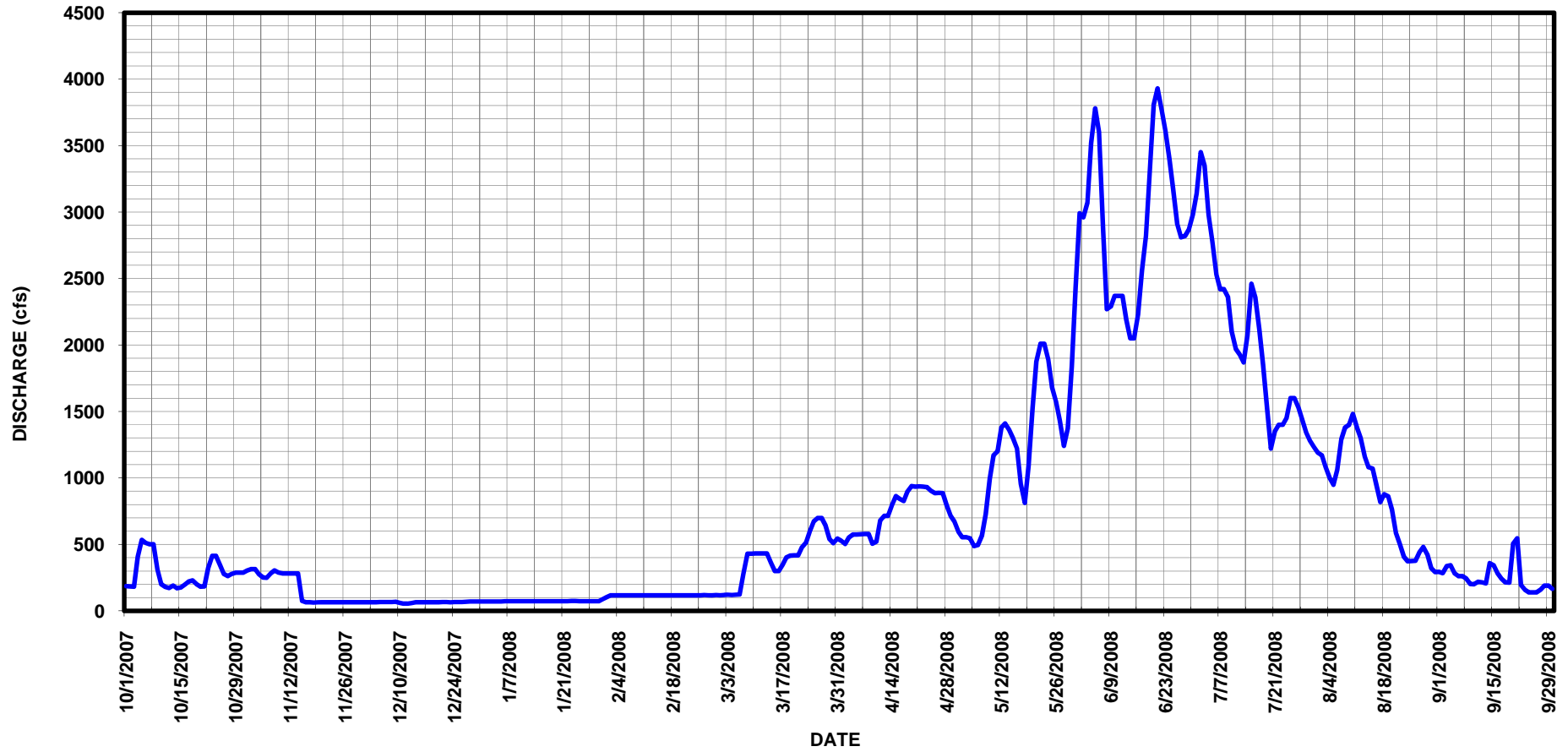
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	186	304	64	71	102	118	527	595	2990	3140	1190	293
2	184	315	64	71	116	120	504	554	2960	3450	1170	283
3	183	315	64	71	116	121	551	554	3070	3350	1080	337
4	408	275	64	71	117	120	574	545	3520	2980	1000	342
5	533	251	66	71	116	122	574	486	3780	2780	949	282
6	512	249	66	72	116	123	576	495	3600	2530	1060	262
7	502	282	66	72	116	280	579	567	2880	2420	1290	261
8	501	304	66	72	116	429	579	727	2270	2420	1380	244
9	310	288	68	72	116	430	505	994	2290	2360	1400	203
10	201	281	60	72	117	432	521	1170	2370	2100	1480	201
11	181	281	54	72	117	432	681	1200	2370	1970	1380	218
12	172	282	54	72	117	432	715	1380	2370	1930	1300	215
13	190	281	59	72	117	433	714	1410	2190	1870	1160	207
14	169	282	64	72	118	361	797	1360	2050	2070	1080	359
15	175	75	64	72	117	299	862	1300	2050	2460	1070	342
16	197	64	64	73	117	299	842	1220	2230	2360	948	283
17	221	64	64	72	118	346	826	954	2560	2120	818	242
18	228	63	64	72	118	401	897	813	2820	1850	878	215
19	200	64	64	73	118	415	939	1090	3300	1520	861	213
20	183	64	65	73	118	417	935	1530	3810	1220	761	506
21	184	64	66	73	118	417	937	1880	3930	1350	583	546
22	322	64	66	73	118	479	934	2010	3770	1400	502	195
23	414	64	65	74	118	513	930	2010	3610	1400	408	157
24	413	64	66	74	118	598	904	1890	3400	1450	373	139
25	344	64	66	72	118	674	885	1680	3170	1600	375	139
26	277	64	66	73	119	699	888	1570	2910	1600	378	139
27	262	64	69	73	118	699	886	1430	2810	1530	443	159
28	278	65	71	73	118	644	795	1240	2820	1440	480	191
29	288	65	70	72	119	540	715	1370	2870	1340	424	191
30	288	65	71	72	---	509	672	1840	2980	1280	323	166
31	288	---	70	88	---	544	---	2430	---	1230	291	---
TOTAL	8794	5027	2010	2255	3387	12446	22244	38294	87750	62520	26835	7530
MEAN	284	168	64.8	72.7	117	401	741	1235	2925	2017	866	251
AC-FT	17440	9970	3990	4470	6720	24690	44120	75960	174100	124000	53230	14940
MAX	533	315	71	88	119	699	939	2430	3930	3450	1480	546
MIN	169	63	54	71	102	118	504	486	2050	1220	291	139

CAL YR 2007 TOTAL 222896 MEAN 609 MAX 3040 MIN 21 AC-FT 442100  
WTR YR 2008 TOTAL 279092 MEAN 763 MAX 3930 MIN 54 AC-FT 553600

MAX DISCH: 3980 CFS AT 15:30 ON Jun. 20, 2008 GH 6.73 FT. SHIFT 0.19 FT. DATUM 0.00  
MAX GH: 6.73 FT. AT 15:30 ON Jun. 20, 2008

07099400 ARKANSAS RIVER ABOVE PUEBLO CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07111000 HUERFANO RIVER AT MANZANARES CROSSING NEAR REDWING, CO

**LOCATION.**--Lat 37°43'40", long 105°21'03", in sec 5, T.27 S., R.71 W., Huerfano County, on left bank at Manzanares crossing, 500 ft downstream from private bridge, .2 mi downstream from Manzanares Creek, and 3.5 mi southwest of Redwing.

**DRAINAGE AREA.**--73 mi<sup>2</sup>.

**GAGE.**--Sutron 8210 satellite-monitored high data rate data collection platform (DCP) with shaft encoder and graphic water-stage recorder, inside a 48-inch diameter corrugated metal pipe (CMP) shelter and well. Shaft encoder and chart set to inside electric tape gage. Primary record is hourly averages of 15-minute satellite data with DCP log and A-35 chart record used for back-up purposes. Station is also equipped with an air temperature sensor and a tipping bucket raingage. The temperature sensor was replaced on Feb 19, 2008. Elevation of gage approximately 8190 ft MSL (from topographic map).

**REMARKS.**--The record is complete and reliable, except for the following periods: November 22-25, 27, 29, December 12-15, 22, 23, 27-31, 2007, January 1, 8-10, 12, 14, 16, 17, 29-31, March 6, 7, 2008, when the stage-discharge relationship was affected by ice. The lower intake was cleared on March 25, 2008, resulting in a -0.12 ft flush correction. This correction was applied back in time to Mar. 24, 2008. Record fair, except for periods of partial intake plugging and ice affected record, which should be considered poor. Station maintained by A.D. Gutierrez and record developed by T. W. Ley.

**RATING TABLE.**--HURREDCO24 USED FROM 01-Oct-2007 TO 30-Sep-2008

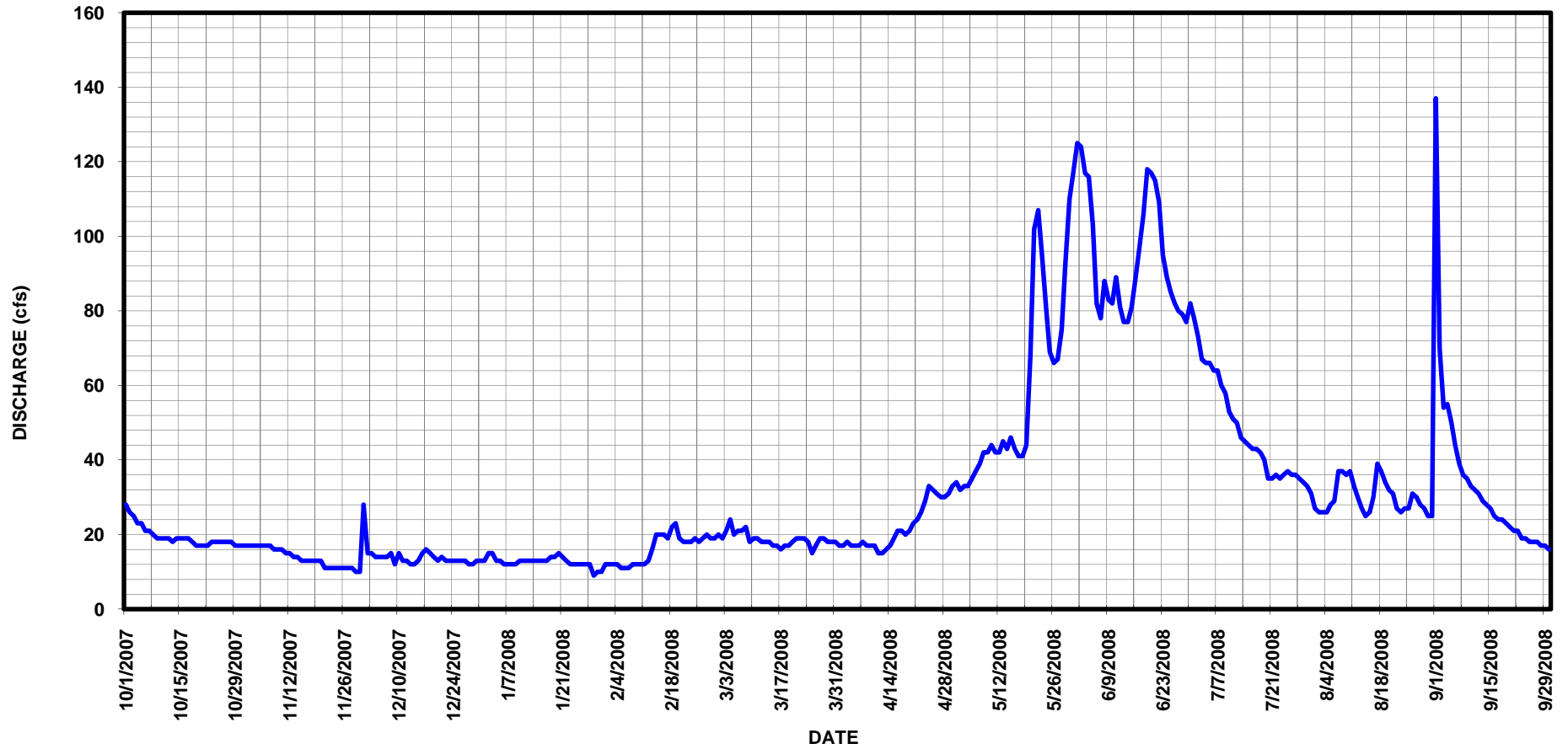
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	17	28	13	12	20	17	34	125	78	27	137
2	26	17	15	15	12	19	17	32	124	73	26	70
3	25	17	15	15	12	21	18	33	117	67	26	54
4	23	17	14	13	12	24	17	33	116	66	26	55
5	23	17	14	13	11	20	17	35	103	66	28	50
6	21	17	14	12	11	21	17	37	82	64	29	44
7	21	17	14	12	11	21	18	39	78	64	37	39
8	20	16	15	12	12	22	17	42	88	60	37	36
9	19	16	12	12	12	18	17	42	83	58	36	35
10	19	16	15	13	12	19	17	44	82	53	37	33
11	19	15	13	13	12	19	15	42	89	51	33	32
12	19	15	13	13	13	18	15	42	81	50	30	31
13	18	14	12	13	16	18	16	45	77	46	27	29
14	19	14	12	13	20	18	17	43	77	45	25	28
15	19	13	13	13	20	17	19	46	81	44	26	27
16	19	13	15	13	20	17	21	43	89	43	30	25
17	19	13	16	13	19	16	21	41	97	43	39	24
18	18	13	15	14	22	17	20	41	106	42	37	24
19	17	13	14	14	23	17	21	44	118	40	34	23
20	17	13	13	15	19	18	23	68	117	35	32	22
21	17	11	14	14	18	19	24	102	115	35	31	21
22	17	11	13	13	18	19	26	107	109	36	27	21
23	18	11	13	12	18	19	29	95	95	35	26	19
24	18	11	13	12	19	18	33	81	89	36	27	19
25	18	11	13	12	18	15	32	69	85	37	27	18
26	18	11	13	12	19	17	31	66	82	36	31	18
27	18	11	13	12	20	19	30	67	80	36	30	18
28	18	11	12	12	19	19	30	75	79	35	28	17
29	17	10	12	9.0	19	18	31	93	77	34	27	17
30	17	10	13	10	---	18	33	110	82	33	25	16
31	17	---	13	10	---	18	---	117	---	31	25	---
TOTAL	602	411	434	392.0	469	579	659	1808	2823	1472	926	1002
MEAN	19.4	13.7	14.0	12.6	16.2	18.7	22.0	58.3	94.1	47.5	29.9	33.4
AC-FT	1190	815	861	778	930	1150	1310	3590	5600	2920	1840	1990
MAX	28	17	28	15	23	24	33	117	125	78	39	137
MIN	17	10	12	9.0	11	15	15	32	77	31	25	16
CAL YR 2007	TOTAL	10725.6	MEAN	29.3	MAX	122	MIN	6.8	AC-FT	21270		
WTR YR 2008	TOTAL	11577	MEAN	31.6	MAX	137	MIN	9	AC-FT	22960		

MAX DISCH: 189 CFS AT 12:30 ON Sep. 1, 2008 GH 3.03 FT. SHIFT 0.07 FT.  
MAX GH: 3.03 FT. AT 12:30 ON Sep. 1, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

07111000 HUERFANO RIVER AT MANZANARES CROSSING NEAR REDWING CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

HUERFANO RIVER AT BADITO, CO

**LOCATION.**--Latitude 37° 43' 39", Longitude 105° 00' 50" (Farisita, Colorado quadrangle, 1:24000 scale) in the E½ SE¼ Sec.5, T27S, R68W, Huerfano County on left bank, 30 feet downstream of the crossing of CR 616 bridge and Huerfano River.

**DRAINAGE AREA.**--532 sq mi.

**GAGE.**--Sutron SatLink 2 high data rate satellite-monitored data collection platform (DCP) and Sutron Accubar with constant nitrogen bubbling using a site feed assembly in a 4 ft x 6 ft steel shelter. The primary record is hourly averages of 15-minute DCP log data with satellite data used for backup. The primary reference gage is a concrete slope gage immediately below the orifice. Elevation of gage is approximately 6,435 ft above mean sea level from topographic map.

**REMARKS.**--Gage height record is complete, but the reliability is questionable due to Accubar equipment problems throughout the entire water year that resulted in erratic and highly variable gage heights. The following particular periods of record experienced additional problems. November 22 - 30; December 1-4, 8 - 12, 2007; March 3 - 8; and April 11 - 12, 2008: Ice on the control affected the stage-discharge relationship. Dec 13 -31, 2007; Jan 1 -31; Feb 1 -22, 2008: Accubar equipment problems caused by ice and/or mud. On July 23, 2008, the peak gage height measured by the Accubar was 6.83 ft, however the visit on August 12, 2008, showed a mud line gage height of ~5.18 feet on the slope-gage. The Accubar reading was considered unreliable due to problems with the Accubar and due to the fact that the flow may have contained debris caused by an upstream dam break. Record is considered poor due to Accubar sensor problems resulting in a poor gage-height record, due to the lack of high water measurements, and ice affected stage-discharge relationship. The peak gage height was estimated and should be considered poor. Station maintained and record developed by A.D. Gutierrez.

**RATING TABLE.**-- HUEBADCO02A USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

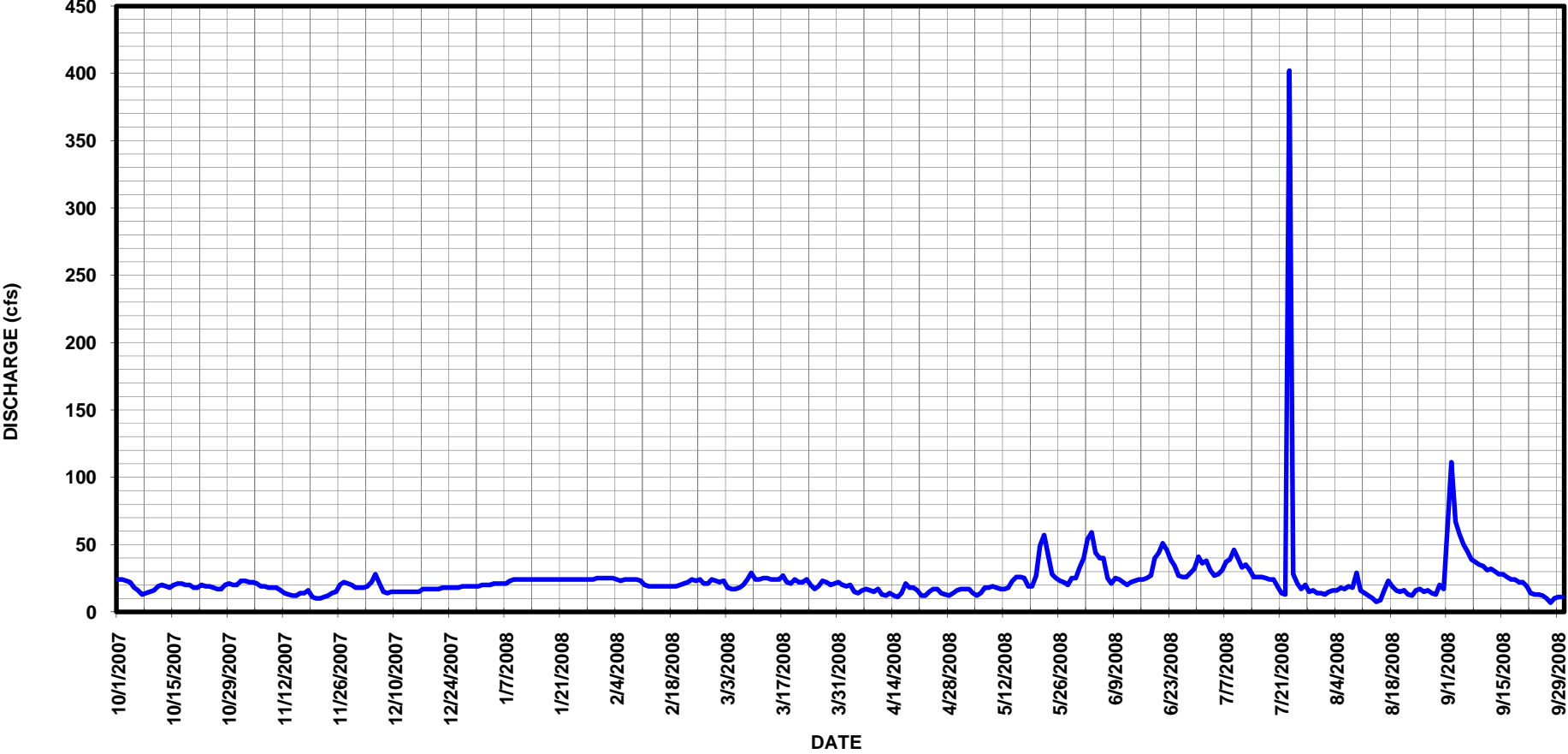
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	23	18	20	25	22	20	17	40	36	13	64
2	24	23	18	20	25	23	19	17	54	38	15	111
3	23	22	19	20	25	18	20	17	59	31	16	67
4	22	22	22	21	24	17	15	14	44	27	16	58
5	18	21	28	21	23	17	14	12	40	28	18	50
6	16	19	21	21	24	18	16	14	40	31	17	45
7	13	19	15	21	24	20	17	18	25	37	19	39
8	14	18	14	23	24	24	16	18	21	39	18	37
9	15	18	15	24	24	29	15	19	25	46	29	35
10	16	18	15	24	23	24	17	18	24	40	16	34
11	19	16	15	24	20	24	13	17	22	33	14	31
12	20	14	15	24	19	25	12	17	20	35	12	32
13	19	13	15	24	19	25	14	18	22	31	10	30
14	18	12	15	24	19	24	12	23	23	26	7.5	28
15	20	12	15	24	19	24	11	26	24	26	8.6	28
16	21	14	15	24	19	24	14	26	24	26	16	26
17	21	14	17	24	19	27	21	25	25	25	23	24
18	20	16	17	24	19	22	18	19	27	24	19	24
19	20	11	17	24	19	21	18	19	40	24	16	22
20	18	10	17	24	20	24	16	27	44	19	15	22
21	18	10	17	24	21	22	12	49	51	14	16	19
22	20	11	18	24	22	22	12	57	46	13	13	14
23	19	12	18	24	24	24	15	43	39	402	12	13
24	19	14	18	24	23	20	17	28	34	28	16	13
25	18	15	18	24	24	17	17	25	27	21	17	12
26	17	20	18	24	21	19	14	23	26	17	15	10
27	17	22	19	24	21	23	13	22	26	20	16	6.8
28	20	21	19	24	24	22	12	20	29	15	14	10
29	21	20	19	24	23	20	14	25	32	16	13	11
30	20	18	19	25	---	21	16	25	41	14	20	11
31	20	---	19	25	---	22	---	33	---	14	17	---
TOTAL	590	498	545	721	636	684	460	731	994	1196	487.1	926.8
MEAN	19.0	16.6	17.6	23.3	21.9	22.1	15.3	23.6	33.1	38.6	15.7	30.9
AC-FT	1170	988	1080	1430	1260	1360	912	1450	1970	2370	966	1840
MAX	24	23	28	25	25	29	21	57	59	402	29	111
MIN	13	10	14	20	19	17	11	12	20	13	7.5	6.8

CAL YR	2007	TOTAL	8125.6	MEAN	22.3	MAX	273	MIN	3.2	AC-FT	16120
WTR YR	2008	TOTAL	8468.9	MEAN	23.1	MAX	402	MIN	6.8	AC-FT	16800

MAX DISCH: UNDETERMINED.

MAX GH: 5.18 FT. (ESTIMATED) AT 18:45 ON Jul. 23, 2008

HUERFANO RIVER AT BADITO CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07114000 CUCCHARAS RIVER AT BOYD RANCH NEAR LA VETA, CO

**LOCATION.**--Lat 37°25'12", long 105°03'08", in SE¼NE¼SE¼ sec. 24, T.30 S., R.69 W., Huerfano County, on left bank at Boyd Ranch, 29 ft. downstream from private bridge, 1.4 mi downstream from Chaparral Creek, and 6.5 mi southwest of La Veta.

**DRAINAGE AREA.**--56 mi<sup>2</sup>.

**GAGE.**--Sutron model 8210 satellite-monitored data collection platform (DCP) with a High Data Rate (HDR) radio transmitter, with shaft encoder and graphic water-stage recorder in a 42-inch diameter corrugated metal pipe (CMP) shelter over 48-inch corrugated pipe well. Shaft encoder and chart are set using a drop-tape from a reference mark on the front of the equipment shelf. Primary record is hourly averages of 15-minute DCP log data with graphic chart record and satellite data used for back-up purposes. Station is also equipped with an air temperature sensor. This sensor was replaced February 13, 2008. Supplemental outside staff gage is not currently used.

**REMARKS.**--Record is complete and reliable, except for the following periods: October 21, 22; November 15, 21 - 30, December 1 - 3, 7 - 26, 2007; February 26- 29, and March 2 - 12, 15-19; April 11 - 12, and 18, 2008, when the stage-discharge relationship was affected by ice. December 27 - 31, 2007; January 1 - 31, February 1 - 25, 2008, when the well was frozen. Record considered good, except during periods of no gage height and ice affected record, which are poor. Station maintained and record developed by A.D. Gutierrez.

**RATING TABLE.**--CRBRLVCO14 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

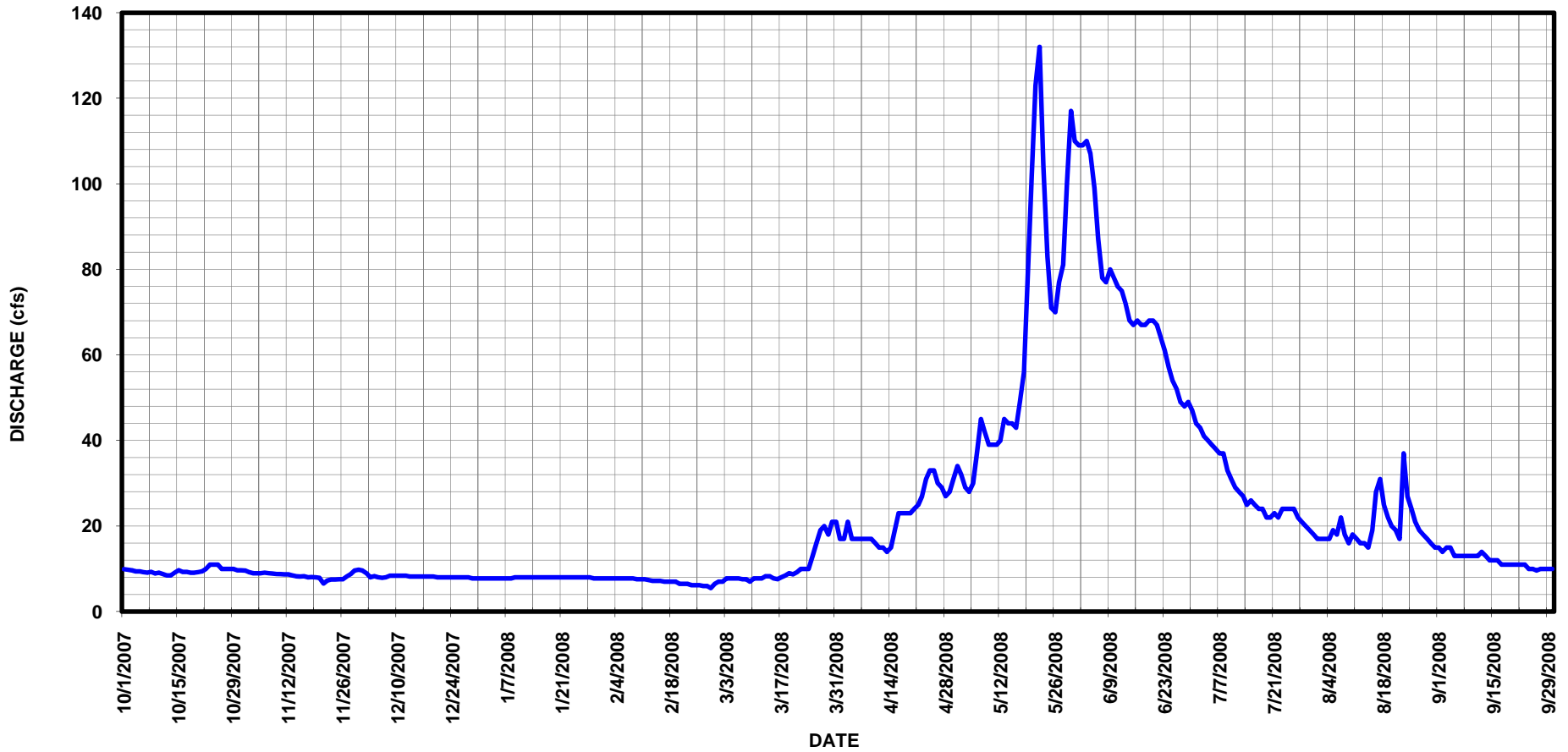
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	9.6	9.6	7.8	7.8	7.0	17	34	109	44	17	15
2	9.8	9.2	9.0	7.8	7.8	7.0	17	32	109	43	17	14
3	9.7	9.0	8.0	7.8	7.8	7.8	21	29	110	41	17	15
4	9.4	9.0	8.3	7.8	7.8	7.8	17	28	107	40	17	15
5	9.4	9.0	8.0	7.8	7.8	7.8	17	30	99	39	19	13
6	9.2	9.1	7.9	7.8	7.8	7.8	17	37	87	38	18	13
7	9.1	9.0	8.0	7.8	7.8	7.6	17	45	78	37	22	13
8	9.3	8.9	8.4	7.8	7.8	7.6	17	42	77	37	18	13
9	8.9	8.8	8.4	8.0	7.6	7.0	17	39	80	33	16	13
10	9.1	8.8	8.4	8.0	7.6	7.8	16	39	78	31	18	13
11	8.8	8.7	8.4	8.0	7.6	7.8	15	39	76	29	17	13
12	8.5	8.7	8.4	8.0	7.4	7.8	15	40	75	28	16	14
13	8.5	8.5	8.2	8.0	7.2	8.3	14	45	72	27	16	13
14	9.1	8.3	8.2	8.0	7.2	8.3	15	44	68	25	15	12
15	9.7	8.2	8.2	8.0	7.2	7.8	19	44	67	26	19	12
16	9.3	8.3	8.2	8.0	7.0	7.6	23	43	68	25	28	12
17	9.3	8.0	8.2	8.0	7.0	8.0	23	49	67	24	31	11
18	9.1	8.1	8.2	8.0	7.0	8.4	23	56	67	24	25	11
19	9.1	8.0	8.2	8.0	7.0	9.0	23	78	68	22	22	11
20	9.2	7.9	8.0	8.0	6.5	8.7	24	102	68	22	20	11
21	9.4	6.6	8.0	8.0	6.5	9.2	25	123	67	23	19	11
22	10	7.3	8.0	8.0	6.5	10	27	132	64	22	17	11
23	11	7.5	8.0	8.0	6.2	10	31	104	61	24	37	11
24	11	7.5	8.0	8.0	6.2	10	33	83	57	24	27	10
25	11	7.6	8.0	8.0	6.2	13	33	71	54	24	24	10
26	10	7.6	8.0	8.0	6.0	16	30	70	52	24	21	9.6
27	10	8.2	8.0	8.0	6.0	19	29	77	49	22	19	10
28	10	8.8	8.0	8.0	5.5	20	27	81	48	21	18	10
29	10	9.6	7.8	7.8	6.5	18	28	100	49	20	17	10
30	9.7	9.8	7.8	7.8	---	21	31	117	47	19	16	10
31	9.7	---	7.8	7.8	---	21	---	110	---	18	15	---
TOTAL	296.2	253.6	253.6	245.8	204.3	324.1	661	1963	2178	876	618	359.6
MEAN	9.55	8.45	8.18	7.93	7.04	10.5	22.0	63.3	72.6	28.3	19.9	12.0
AC-FT	588	503	503	488	405	643	1310	3890	4320	1740	1230	713
MAX	11	9.8	9.6	8.0	7.8	21	33	132	110	44	37	15
MIN	8.5	6.6	7.8	7.8	5.5	7.0	14	28	47	18	15	9.6

CAL YR	2007	TOTAL	9836.0	MEAN	27.0	MAX	137	MIN	3.1	AC-FT	19510
WTR YR	2008	TOTAL	8233.2	MEAN	22.5	MAX	132	MIN	5.5	AC-FT	16330

MAX DISCH: 142 CFS AT 05:00 ON May. 22, 2008 GH 1.76 FT. SHIFT -0.16 FT.  
MAX GH: 1.76 FT. AT 05:00 ON May. 22, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

07114000 CUCCHARAS RIVER AT BOYD RANCH NEAR LA VETA CO  
WY2008 HYDROGRAPH





ARKANSAS RIVER BASIN

CUCHARAS RIVER AT HARRISON BRIDGE NEAR LA VETA, CO

**LOCATION.**--Lat 37° 33' 02", Long 104° 56' 11", in the NE¼ SW¼ Sec.6, T29S, R67W Huerfano County, on right bank at the Valley Road Harrison Bridge crossing of Cucharas River approximately ¾ mile south of the intersection of Valley Road and Highway 160.

**DRAINAGE AREA.**--N/A.

**GAGE.**--Sutron 8210 data collection platform (DCP) and shaft encoder. The shaft encoder is housed inside of a 20" x 30" metal shelter atop an 18-inch stilling well attached to the center bridge pier. DCP is in a 4 ft x 4 ft steel shelter approximately 150 feet south of the right bank. Primary reference gage is an electric tape gage inside the well. A drop tape from a reference mark on the bridge guardrail 20 feet to the right of the stilling well serves as backup. Primary record is hourly averages of 15-minute DCP log data with satellite data used for back-up purposes. Elevation of gage is 6648 ft MSL from topographic map.

**REMARKS.**--Record is complete and reliable, except for the following periods: Oct 22, 23; Nov 16, 23 - 30; Dec 1-3, 9 - 13, 2007; Mar 5-10, 16-18, Apr 12 - 14, 2008, when the stage-discharge relationship was affected by ice on the control. Dec 14 - 31, 2007; Jan 1 - 31, Feb 1 - 29; Mar 1 - 4, 2008, when the well was frozen. Record fair, except during periods of ice effect and no gage height, which are poor. Station maintained and record developed by A.D. Gutierrez.

**RATING TABLE.**--CRHBLVCO02 USED FROM 01-Oct-2007 TO 30-SEP-2008

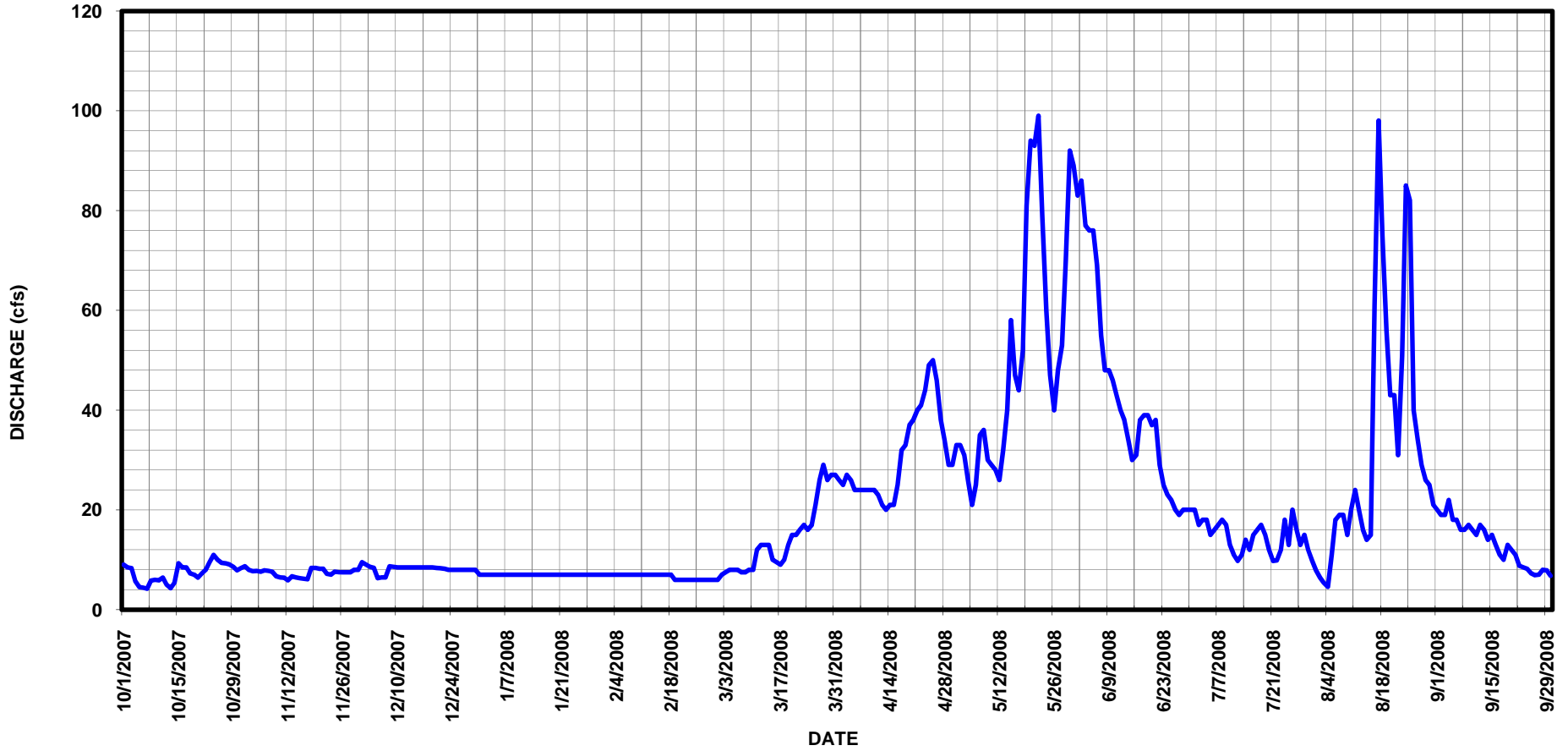
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	8.7	9.5	7.0	7.0	6.0	26	33	83	20	7.9	20
2	8.5	8.0	9.0	7.0	7.0	7.0	25	33	86	17	6.4	19
3	8.3	7.7	8.6	7.0	7.0	7.5	27	31	77	18	5.4	19
4	5.7	7.8	8.4	7.0	7.0	8.0	26	26	76	18	4.6	22
5	4.5	7.6	6.3	7.0	7.0	8.0	24	21	76	15	11	18
6	4.4	7.9	6.5	7.0	7.0	8.0	24	25	69	16	18	18
7	4.2	7.8	6.5	7.0	7.0	7.5	24	35	55	17	19	16
8	5.8	7.6	8.7	7.0	7.0	7.5	24	36	48	18	19	16
9	6.0	6.7	8.6	7.0	7.0	8.0	24	30	48	17	15	17
10	5.9	6.5	8.5	7.0	7.0	8.0	24	29	46	13	20	16
11	6.4	6.4	8.5	7.0	7.0	12	23	28	43	11	24	15
12	5.0	5.9	8.5	7.0	7.0	13	21	26	40	9.8	20	17
13	4.3	6.7	8.5	7.0	7.0	13	20	32	38	11	16	16
14	5.4	6.5	8.5	7.0	7.0	13	21	40	34	14	14	14
15	9.3	6.3	8.5	7.0	7.0	10	21	58	30	12	15	15
16	8.5	6.2	8.5	7.0	7.0	9.5	25	47	31	15	61	13
17	8.5	6.1	8.5	7.0	7.0	9.0	32	44	38	16	98	11
18	7.3	8.4	8.5	7.0	7.0	10	33	52	39	17	75	10
19	7.0	8.4	8.5	7.0	6.0	13	37	81	39	15	56	13
20	6.4	8.2	8.4	7.0	6.0	15	38	94	37	12	43	12
21	7.3	8.2	8.3	7.0	6.0	15	40	93	38	9.8	43	11
22	8.0	7.2	8.2	7.0	6.0	16	41	99	29	9.9	31	8.8
23	9.6	7.0	8.0	7.0	6.0	17	44	79	25	12	51	8.5
24	11	7.6	8.0	7.0	6.0	16	49	60	23	18	85	8.2
25	10	7.5	8.0	7.0	6.0	17	50	47	22	13	82	7.3
26	9.4	7.5	8.0	7.0	6.0	21	46	40	20	20	40	6.9
27	9.3	7.5	8.0	7.0	6.0	26	38	48	19	16	34	7.0
28	9.1	7.5	8.0	7.0	6.0	29	34	53	20	13	29	8.0
29	8.6	8.0	8.0	7.0	6.0	26	29	70	20	15	26	7.9
30	7.9	8.0	8.0	7.0	---	27	29	92	20	12	25	6.8
31	8.3	---	7.0	7.0	---	27	---	89	---	9.8	21	---
TOTAL	228.9	221.4	253.0	217.0	192.0	430.0	919	1571	1269	450.3	1015.3	397.4
MEAN	7.38	7.38	8.16	7.00	6.62	13.9	30.6	50.7	42.3	14.5	32.8	13.2
AC-FT	454	439	502	430	381	853	1820	3120	2520	893	2010	788
MAX	11	8.7	9.5	7.0	7.0	29	50	99	86	20	98	22
MIN	4.2	5.9	6.3	7.0	6.0	6.0	20	21	19	9.8	4.6	6.8
CAL YR 2007	TOTAL	13374.7	MEAN	36.6	MAX	260	MIN	0.80	AC-FT	26500		
WTR YR 2008	TOTAL	7164.3	MEAN	19.6	MAX	99	MIN	4.2	AC-FT	14210		

MAX DISCH: 491 CFS AT 23:30 ON Aug. 24, 2008 GH 3.75 FT. SHIFT -0.19 FT.  
MAX GH: 3.75 FT. AT 23:30 ON Aug. 24, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

CUCHARAS RIVER AT HARRISON BRIDGE NEAR LA VETA CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

OXFORD FARMERS DITCH NEAR NEPESTA, CO

**LOCATION.**--Lat 38° 10' 34", Long 104° 8' 42", in the NE¼ NW¼ SW¼ Sec.32, T21S, R60W Pueblo County, Hydrologic Unit 11020005, approximately 0.33 mi upstream from Arkansas River at Nepesta Rd. Bridge river gage.

**DRAINAGE AREA.**--N/A.

**GAGE.**--Sutron SatLink DCP/logger with High Data Rate radio, which monitors a shaft encoder in a stilling well inside a wood frame shelter at a standard 12-foot concrete Parshall Flume. A float-activated A-35 graphic water-stage recorder is also in the stilling well. Primary record is hourly averages of 15-minute DCP log data with satellite-monitored data and the graphic chart recorder used for backup purposes. Primary reference gage is outside staff gage installed in flume.

**REMARKS.**--Record is complete and reliable. The period from November 15 to March 15 there is no flow. Record is considered fair due to the sand and moss buildup that occurs in the flume during the irrigation season and possible undocumented cleaning by the ditch rider, which would introduce uncertainty into the actual shift that should be applied afterwards, and also due to the poor precision of the gage heights (chatter) measured in the stilling well. Record developed by A.D. Gutierrez.

**RATING TABLE.**--STD12FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

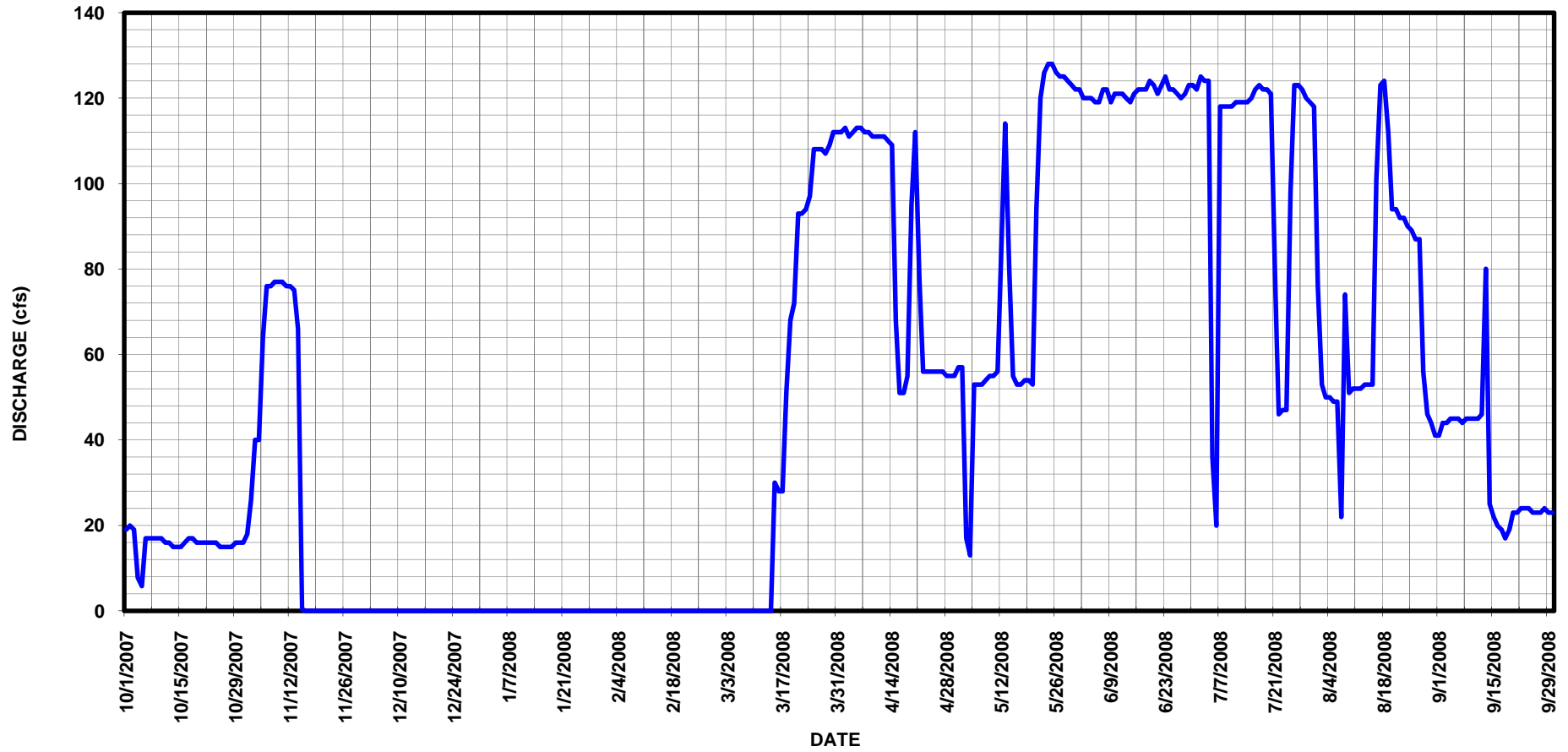
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	18	0	0	0	0	112	57	122	122	76	41
2	20	26	0	0	0	0	113	57	120	125	53	44
3	19	40	0	0	0	0	111	17	120	124	50	44
4	7.8	40	0	0	0	0	112	13	120	124	50	45
5	5.8	64	0	0	0	0	113	53	119	36	49	45
6	17	76	0	0	0	0	113	53	119	20	49	45
7	17	76	0	0	0	0	112	53	122	118	22	44
8	17	77	0	0	0	0	112	54	122	118	74	45
9	17	77	0	0	0	0	111	55	119	118	51	45
10	17	77	0	0	0	0	111	55	121	118	52	45
11	16	76	0	0	0	0	111	56	121	119	52	45
12	16	76	0	0	0	0	111	85	121	119	52	46
13	15	75	0	0	0	0	110	114	120	119	53	80
14	15	66	0	0	0	0	109	80	119	119	53	25
15	15	.39	0	0	0	30	68	55	121	120	53	22
16	16	0	0	0	0	28	51	53	122	122	101	20
17	17	0	0	0	0	28	51	53	122	123	123	19
18	17	0	0	0	0	51	55	54	122	122	124	17
19	16	0	0	0	0	68	95	54	124	122	112	19
20	16	0	0	0	0	72	112	53	123	121	94	23
21	16	0	0	0	0	93	78	94	121	79	94	23
22	16	0	0	0	0	93	56	120	123	46	92	24
23	16	0	0	0	0	94	56	126	125	47	92	24
24	16	0	0	0	0	97	56	128	122	47	90	24
25	15	0	0	0	0	108	56	128	122	98	89	23
26	15	0	0	0	0	108	56	126	121	123	87	23
27	15	0	0	0	0	108	56	125	120	123	87	23
28	15	0	0	0	0	107	55	125	121	122	56	24
29	16	0	0	0	0	109	55	124	123	120	46	23
30	16	0	0	0	---	112	55	123	123	119	44	23
31	16	---	0	0	---	112	---	122	---	118	41	---
TOTAL	487.6	864.39	0	0	0	1418	2572	2465	3640	3271	2161	993
MEAN	15.7	28.8	0	0	0	45.7	85.7	79.5	121	106	69.7	33.1
AC-FT	967	1710	0	0	0	2810	5100	4890	7220	6490	4290	1970
MAX	20	77	0	0	0	112	113	128	125	125	124	80
MIN	5.8	0	0	0	0	0	51	13	119	20	22	17

CAL YR	2007	TOTAL	15374.73	MEAN	42.0	MAX	129	MIN	0	AC-FT	30500
WTR YR	2008	TOTAL	17871.99	MEAN	48.8	MAX	128	MIN	0	AC-FT	35450

MAX DISCH: 132 CFS AT 08:00 ON Jun. 23, 2008 GH 1.96 FT. SHIFT -0.05 FT.  
MAX GH: 1.96 FT. AT 08:00 ON Jun. 23, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

OXFORD FARMERS DITCH NEAR NEPESTA CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07117000 ARKANSAS RIVER AT NEPESTA ROAD BRIDGE NEAR NEPESTA, CO (RIVER ONLY)

**LOCATION.**--Lat 38° 10' 44", Long 104° 8' 20", in the NE¼ SE¼ NW¼ Sec.32, T21S, R60W Pueblo County, Hydrologic Unit 11020005, on the left bank downstream side of the Nepesta Road Bridge crossing the Arkansas River, 0.8 mi downstream of Kramer Creek, 9 mi downstream from Huerfano River, 1 mile NNW of the Nepesta Cemetery.

**DRAINAGE AREA.**--9,345 mi<sup>2</sup>.

**GAGE.**--Sutron 8210 High Data Rate satellite-monitored data collection platform (DCP) with data logger and Sutron Accubar with constant nitrogen bubbling using a site feed assembly in a 4 ft x 4 ft steel shelter. The primary record is hourly averages of 15-minute DCP log data with satellite data used for backup. The primary reference gage is a wire weight gage attached to the bridge approximately 120 ft south of the shelter. A temperature sensor was installed January 25, 2008 which is monitored and logged by the DCP. Elevation of gage is 4,355 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Record is complete and reliable, except for the periods: November 21 - 25; December 12 -19, 22 -31, 2007; January 1 - 4, 16 -27, 30, 31; February 1-3, 5- 11; March 5 - 7, 2008 when ice affected the stage-discharge relationship. January 5, 8-11; Feb 27-28; June 9-10, 2008 when Accubar malfunction ("painting") caused large variations in 15-minute GH data. Record is considered good due to the large number of discharge measurements made this water year, except for periods of ice affected gage height and Accubar malfunction, during which the record is considered poor. The stage-discharge relationship has shifted left (indicative of channel fill) since the drought of 2002. Station maintained and record developed by A.D. Gutierrez.

**RATING TABLE.**--ARKNEPC015 USED FROM 01-Oct-2007 TO 30-Sep-2008

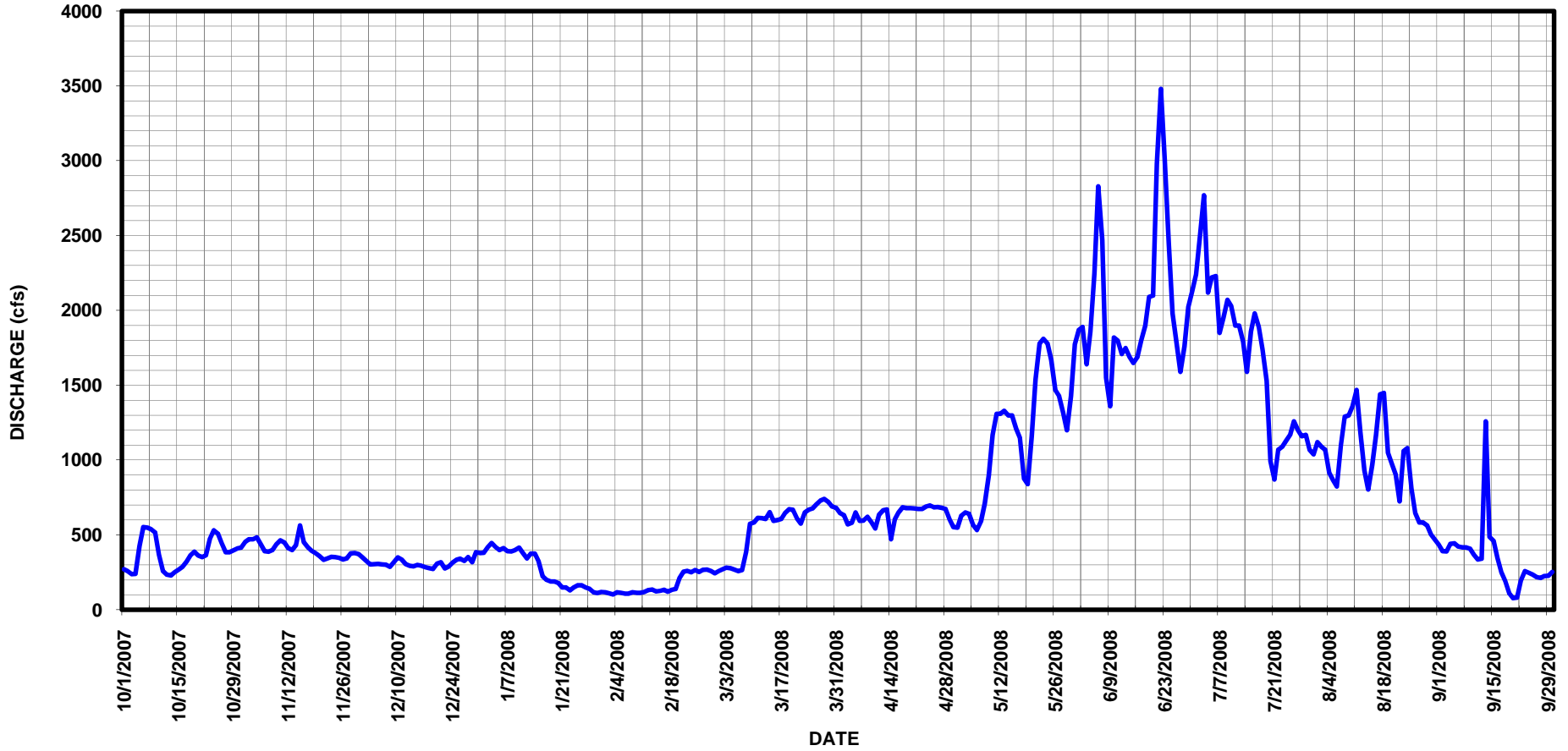
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	272	454	351	382	118	258	648	550	1870	2240	1120	436
2	259	472	325	420	110	271	632	629	1890	2510	1090	393
3	239	471	303	447	103	283	571	650	1640	2770	1070	391
4	241	484	305	420	118	278	582	641	1860	2120	915	442
5	426	437	307	400	115	270	650	565	2250	2220	865	444
6	554	392	304	412	109	258	595	533	2830	2230	825	423
7	550	388	302	393	108	265	596	591	2470	1850	1100	417
8	539	400	287	390	118	387	621	711	1550	1950	1290	418
9	517	440	319	400	115	574	587	900	1360	2070	1300	408
10	369	464	351	415	115	583	544	1170	1820	2030	1360	368
11	259	451	337	380	120	614	636	1310	1800	1900	1470	336
12	235	412	305	344	133	613	665	1310	1710	1900	1190	342
13	229	400	294	376	135	607	671	1330	1750	1790	931	1260
14	251	432	292	376	124	652	471	1300	1690	1590	804	489
15	269	564	300	323	126	594	603	1300	1650	1860	968	461
16	288	452	294	225	134	601	651	1210	1690	1980	1170	348
17	322	417	285	200	121	608	685	1150	1800	1890	1440	250
18	364	395	278	190	134	648	679	879	1900	1740	1450	193
19	389	378	273	190	140	673	680	841	2090	1530	1050	110
20	363	360	310	180	212	668	677	1160	2100	996	977	78
21	352	335	318	150	255	611	675	1540	2980	871	902	82
22	365	343	277	150	260	576	674	1780	3480	1070	725	196
23	477	354	289	130	252	651	690	1810	3010	1090	1060	259
24	532	352	317	150	265	669	697	1780	2450	1130	1080	247
25	509	348	335	165	254	678	685	1670	1980	1170	811	236
26	447	336	342	165	268	705	686	1470	1780	1260	647	219
27	386	343	328	150	270	730	682	1430	1590	1200	584	214
28	385	378	352	141	260	741	675	1320	1760	1160	584	226
29	398	380	319	118	244	722	603	1200	2020	1170	564	228
30	410	373	385	112	---	690	553	1430	2130	1070	505	254
31	416	---	380	120	---	681	---	1770	---	1040	469	---
TOTAL	11612	12205	9764	8414	4836	17159	19064	35930	60900	51397	30316	10168
MEAN	375	407	315	271	167	554	635	1159	2030	1658	978	339
AC-FT	23030	24210	19370	16690	9590	34030	37810	71270	120800	101900	60130	20170
MAX	554	564	385	447	270	741	697	1810	3480	2770	1470	1260
MIN	229	335	273	112	103	258	471	533	1360	871	469	78
CAL YR 2007	TOTAL	260476	MEAN	712	MAX	3170	MIN	51	AC-FT	516700		
WTR YR 2008	TOTAL	271765	MEAN	743	MAX	3480	MIN	78	AC-FT	539000		

MAX DISCH: 3720 CFS AT 13:15 ON Jun. 22, 2008 GH 14.68 FT. GH CORR. -0.01 FT SHIFT -0.98 FT.  
MAX GH: 14.67 FT. (GH CORR. -0.01 FT APPLIED) AT 13:15 ON Jun. 22, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

07117000 ARKANSAS RIVER AT NEPESTA ROAD BRIDGE NEAR NEPESTA CO (RIVER ONLY)  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07117000 ARKANSAS RIVER AT NEPESTA ROAD BRIDGE NEAR NEPESTA, CO (COMBINED)

**LOCATION.**--Lat 38° 10' 44", Long 104° 8' 20", in the NE¼ SE¼ NW¼ Sec.32, T21S, R60W Pueblo County, Hydrologic Unit 11020005, on the left bank downstream side of the Nepesta Road Bridge crossing the Arkansas River, 0.8 mi downstream of Kramer Creek, 9 mi downstream from Huerfano River, 1 mile NNW of the Nepesta Cemetery.

**DRAINAGE AREA.**--9,345 mi<sup>2</sup>.

**REMARKS.**-- The combined record of mean daily discharge was obtained by the addition of Oxford Farmers Ditch mean daily flows to the corresponding mean daily flows in the Arkansas River at Nepesta Road Bridge. The peak discharge for the year was 3840 cfs at 13:15 June 22, 2008. Combined record is fair, except during periods of estimated flow, which should be considered poor. The Arkansas River near Nepesta CO gaging station was moved from above the Oxford Farmers Ditch diversion to the Nepesta Road bridge below the diversion beginning October 1, 2000. For consistency and comparison with previously published historical record in this reach of the Arkansas River, the total Arkansas River flow is computed by combining the Oxford Ditch mean daily discharge with the mean daily discharge measured at Arkansas River at Nepesta Road Bridge near Nepesta CO gaging station. Record developed by Div. II Hydrographic Staff.

ARKANSAS RIVER AT NEPESTA BRIDGE AND OXFORD FARMERS DITCH (COMBINED)

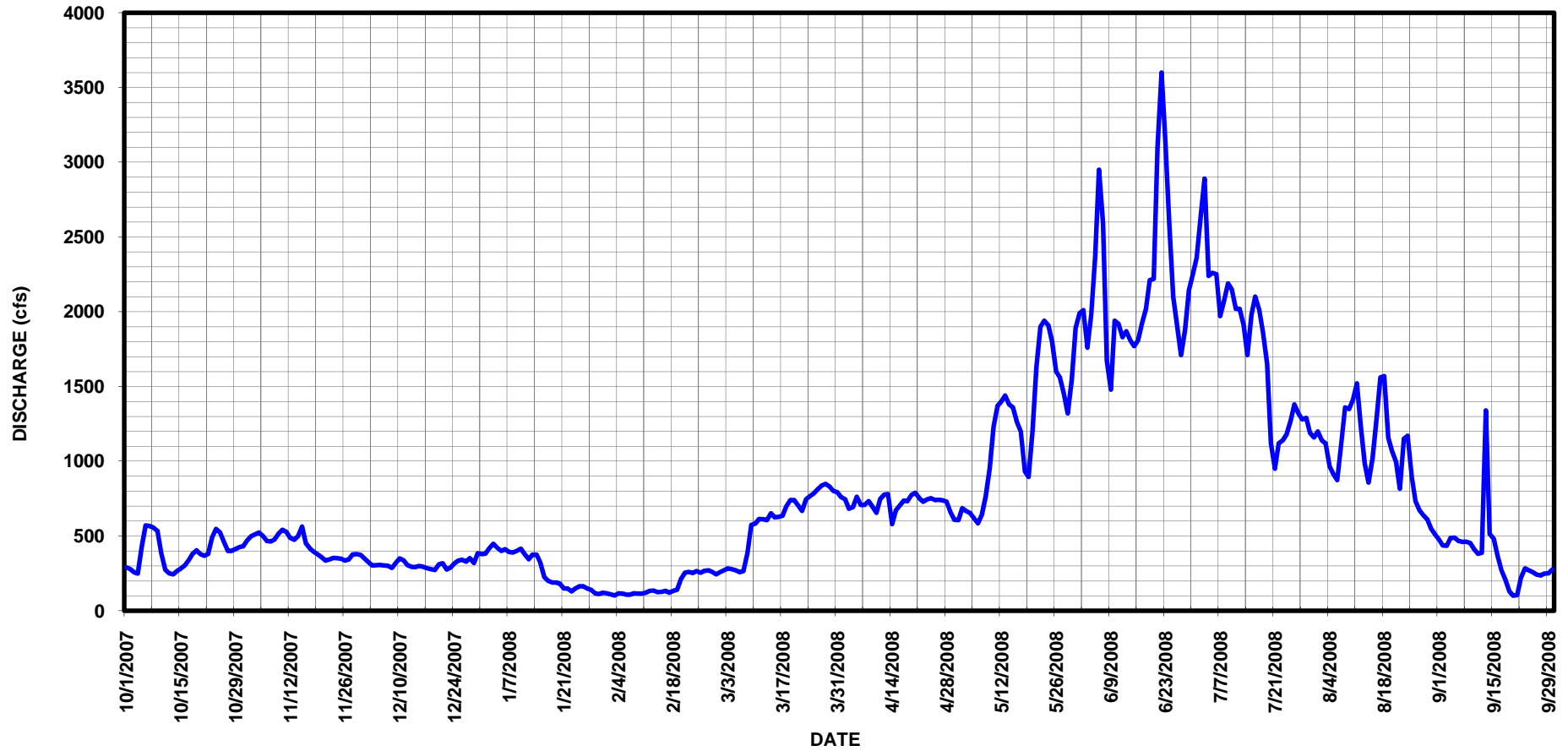
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	291	472	351	382	118	258	760	607	1990	2360	1200	477
2	279	498	325	420	110	271	745	686	2010	2640	1140	437
3	258	511	303	447	103	283	682	667	1760	2890	1120	435
4	249	524	305	420	118	278	694	654	1980	2240	965	487
5	432	501	307	400	115	270	763	618	2370	2260	914	489
6	571	468	304	412	109	258	708	586	2950	2250	874	468
7	567	464	302	393	108	265	708	644	2590	1970	1120	461
8	556	477	287	390	118	387	733	765	1670	2070	1360	463
9	534	517	319	400	115	574	698	955	1480	2190	1350	453
10	386	541	351	415	115	583	655	1230	1940	2150	1410	413
11	275	527	337	380	120	614	747	1370	1920	2020	1520	381
12	251	488	305	344	133	613	776	1400	1830	2020	1240	388
13	244	475	294	376	135	607	781	1440	1870	1910	984	1340
14	266	498	292	376	124	652	580	1380	1810	1710	857	514
15	284	564	300	323	126	624	671	1360	1770	1980	1020	483
16	304	452	294	225	134	629	702	1260	1810	2100	1270	368
17	339	417	285	200	121	636	736	1200	1920	2010	1560	269
18	381	395	278	190	134	699	734	933	2020	1860	1570	210
19	405	378	273	190	140	741	775	895	2210	1650	1160	129
20	379	360	310	180	212	740	789	1210	2220	1120	1070	101
21	368	335	318	150	255	704	753	1630	3100	950	996	105
22	381	343	277	150	260	669	730	1900	3600	1120	817	220
23	493	354	289	130	252	745	746	1940	3140	1140	1150	283
24	548	352	317	150	265	766	753	1910	2570	1180	1170	271
25	524	348	335	165	254	786	741	1800	2100	1270	900	259
26	462	336	342	165	268	813	742	1600	1900	1380	734	242
27	401	343	328	150	270	838	738	1560	1710	1320	671	237
28	400	378	352	141	260	848	730	1450	1880	1280	640	250
29	414	380	319	118	244	831	658	1320	2140	1290	610	251
30	426	373	385	112	---	802	608	1550	2250	1190	549	277
31	432	---	380	120	---	793	---	1890	---	1160	510	---
TOTAL	12100	13069	9764	8414	4836	18577	21636	38410	64510	54680	32451	11161
MEAN	390	436	315	271	167	599	721	1239	2150	1764	1047	372
AC-FT	24000	25920	19370	16690	9590	36850	42920	76190	128000	108500	64370	22140
MAX	571	564	385	447	270	848	789	1940	3600	2890	1570	1340
MIN	244	335	273	112	103	258	580	586	1480	950	510	101
CAL YR 2007	TOTAL	276559	MEAN	756	MAX	3260	MIN	54	AC-FT	548500		
WTR YR 2008	TOTAL	289608	MEAN	791	MAX	3600	MIN	101	AC-FT	574400		

MAX DISCHARGE: 3840 CFS AT 13:15 ON Jun 22,2008.

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

07117000 ARKANSAS RIVER AT NEPESTA ROAD BRIDGE NEAR NEPESTA CO (COMBINED)  
WY2008 HYDROGRAPH





ARKANSAS RIVER BASIN

07119700 ARKANSAS RIVER BELOW CATLIN DAM, NEAR FOWLER, CO

**LOCATION.**--Lat 38°07'33", long 103°54'41", in NW¼NW¼ sec. 21, T.22 S., R.58 W., Otero County, Hydrologic Unit 11020005, at the Catlin Canal flume, on right bank 2.2 mi downstream from diversion dam for Catlin Canal, 2.3 mi downstream from Apishapa River, and 6.0 mi east of Fowler.

**DRAINAGE AREA AND PERIOD OF RECORD.**--10,901 mi<sup>2</sup>. October 1964 to current year.

**GAGE.**--Satellite-monitored data collection platform (Sutron Model 8210 HDR DCP), and Accubar in 8 ft by 8 ft shelter. Primary record is hourly averages of 15-minute DCP log data, with satellite-monitored data used for backup purposes. Outside staff gage is primary reference gage. Cableway approximately 2.0 mile upstream. Catlin Canal flume gage height and USGS water quality monitor also monitored by this DCP. On Aug 26, 2008 replaced Accubar with a Sutron Constant Flow Bubbler.

**REMARKS.**--Record is complete and reliable, except for the following periods: Dec 7-18, 22-31, 2007; Jan 1-7, 14-18, and Feb. 1-11, 2008 due to ice affecting the stage-discharge relationship. Record good, except for periods of ice effect, which should be considered poor. Station maintained and record developed by A. Adame.

**RATING TABLE.**--ARKCATC011 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

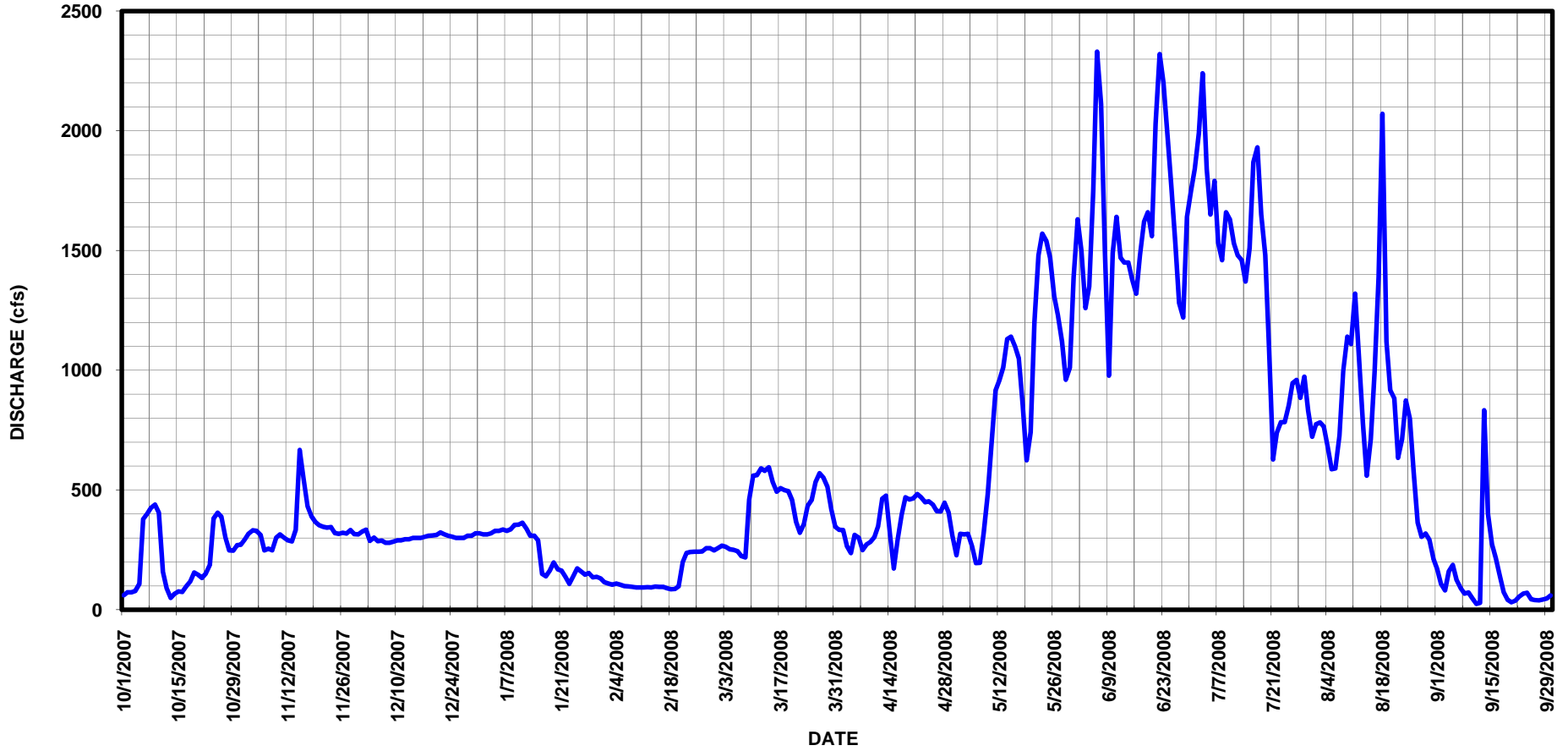
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	295	326	315	115	258	334	228	1630	1840	775	171
2	73	319	334	315	110	268	333	317	1500	1990	782	108
3	74	332	288	320	105	263	267	315	1260	2240	765	82
4	79	330	302	330	110	253	237	317	1350	1840	677	161
5	109	313	287	330	105	251	313	265	1750	1650	587	187
6	378	248	289	335	100	245	302	195	2330	1790	591	124
7	401	255	280	330	98	225	250	197	2110	1530	727	90
8	426	248	280	337	96	219	273	322	1500	1460	998	68
9	439	302	285	355	94	461	283	483	978	1660	1140	72
10	406	315	290	356	94	560	304	694	1490	1630	1110	49
11	160	302	290	364	94	562	350	917	1640	1530	1320	25
12	90	290	295	339	95	590	464	959	1470	1480	1060	29
13	50	286	295	309	94	580	477	1010	1450	1460	778	833
14	67	333	300	310	97	595	313	1130	1450	1370	560	403
15	77	667	300	290	96	534	173	1140	1380	1510	713	275
16	75	550	300	150	96	494	292	1100	1320	1870	990	216
17	98	432	305	140	91	508	397	1050	1480	1930	1390	141
18	117	392	310	165	86	500	470	851	1620	1650	2070	75
19	156	367	311	198	87	496	461	624	1660	1480	1120	42
20	147	353	313	169	98	459	465	742	1560	1090	917	32
21	133	347	323	164	199	367	483	1200	2030	628	883	39
22	151	343	315	139	237	322	470	1480	2320	740	634	56
23	188	346	310	109	242	358	449	1570	2200	784	712	68
24	382	321	305	139	243	435	453	1540	1980	783	874	71
25	405	317	300	173	243	460	439	1470	1770	854	797	44
26	389	322	300	161	244	533	412	1310	1530	946	576	41
27	302	319	300	147	258	570	411	1230	1280	960	363	40
28	248	333	310	154	257	552	447	1120	1220	885	305	43
29	247	316	310	136	248	514	406	961	1640	973	319	48
30	270	315	320	138	---	421	309	1010	1750	831	292	60
31	272	---	320	131	---	347	---	1390	---	723	213	---
TOTAL	6470	10208	9393	7348	4132	13200	11037	27137	48648	42107	25038	3693
MEAN	209	340	303	237	142	426	368	875	1622	1358	808	123
AC-FT	12830	20250	18630	14570	8200	26180	21890	53830	96490	83520	49660	7330
MAX	439	667	334	364	258	595	483	1570	2330	2240	2070	833
MIN	50	248	280	109	86	219	173	195	978	628	213	25

CAL YR	2007	TOTAL	214412	MEAN	587	MAX	2520	MIN	50	AC-FT	425280
WTR YR	2008	TOTAL	208411	MEAN	569	MAX	2330	MIN	25	AC-FT	413400

MAX DISCH: 2820 CFS AT 07:30 ON Aug. 18, 2008 GH 5.42 FT. SHIFT -0.25 FT.  
MAX GH: 5.42 FT. AT 07:30 ON Aug. 18, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

07119700 ARKANSAS RIVER BELOW CATLIN DAM, NEAR FOWLER CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07119705 CATLIN CANAL NEAR FOWLER, CO

**LOCATION.**--Lat 38°07'33", long 103°54'41", in NW¼NW¼ sec. 21, T.22 S., R.58 W., Otero County, Hydrologic Unit 11020005, at river gage.

**DRAINAGE AREA.**--N/A.

**GAGE.**--Float-activated graphic water-stage recorder and shaft encoder in 8' x 8' shelter with well (with equipment for Arkansas River below Catlin Dam near Fowler CO river gage). Shaft encoder is connected to satellite-monitored data collection platform (DCP) used for river gage. Primary record is hourly averages of 15-minute DCP log data with the graphic chart recorder used for backup purposes. A Sutron stage discharge recorder (SDR) was installed on July 8, 2008. Fifteen-foot standard concrete Parshall flume is the control. Primary reference gage is outside staff gage installed in flume. Elevation of canal gage is 4,257.87 ft. above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Record is complete and reliable. Record good. Station maintained and record developed by A. Adame.

**RATING TABLE.**--STD15FTPF USED FROM 01-OCT-2007 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

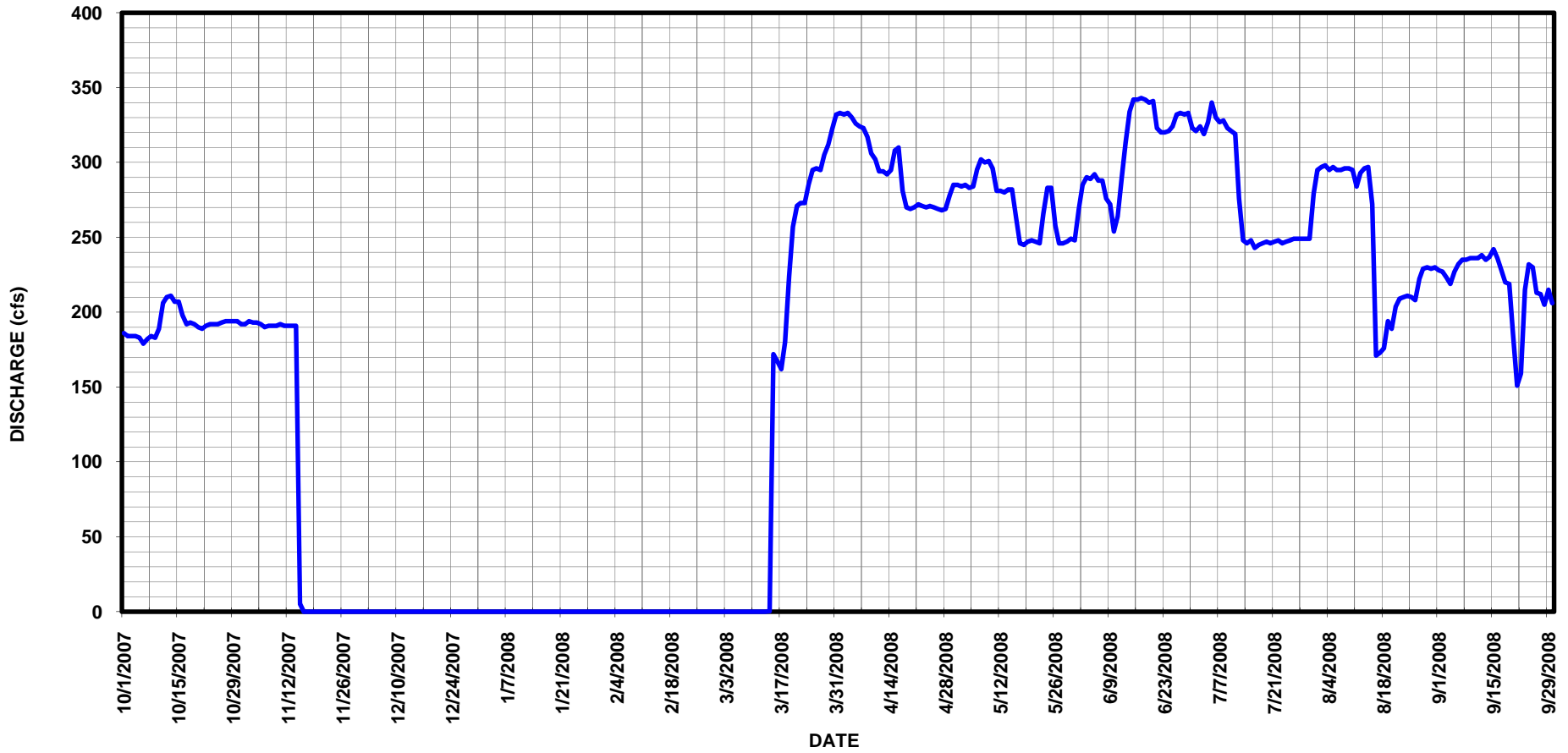
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	186	192	0	0	0	0	333	285	269	321	295	228
2	184	194	0	0	0	0	332	284	285	324	297	227
3	184	193	0	0	0	0	333	285	290	319	298	223
4	184	193	0	0	0	0	330	283	289	327	295	219
5	183	192	0	0	0	0	326	284	292	340	297	227
6	179	190	0	0	0	0	324	295	288	330	295	232
7	182	191	0	0	0	0	323	302	288	327	295	235
8	184	191	0	0	0	0	317	300	276	328	296	235
9	183	191	0	0	0	0	306	301	272	323	296	236
10	189	192	0	0	0	0	302	296	254	321	295	236
11	206	191	0	0	0	0	294	281	264	319	284	236
12	210	191	0	0	0	0	294	281	290	276	293	238
13	211	191	0	0	0	0	292	280	313	248	296	235
14	207	191	0	0	0	.34	295	282	334	246	297	237
15	207	5.3	0	0	0	172	308	282	342	248	272	242
16	198	0	0	0	0	167	310	263	342	243	171	236
17	192	0	0	0	0	162	281	246	343	245	173	228
18	193	0	0	0	0	180	270	245	342	246	176	220
19	192	0	0	0	0	224	269	247	340	247	194	219
20	190	0	0	0	0	257	270	248	341	246	189	185
21	189	0	0	0	0	271	272	247	323	247	204	151
22	191	0	0	0	0	273	271	246	320	248	209	159
23	192	0	0	0	0	273	270	266	320	246	210	215
24	192	0	0	0	0	285	271	283	321	247	211	232
25	192	0	0	0	0	295	270	283	324	248	210	230
26	193	0	0	0	0	296	269	258	332	249	208	213
27	194	0	0	0	0	295	268	246	333	249	222	212
28	194	0	0	0	0	305	269	246	332	249	229	205
29	194	0	0	0	0	312	278	247	333	249	230	215
30	194	0	0	0	---	322	285	249	323	249	229	206
31	192	---	0	0	---	332	---	248	---	279	230	---
TOTAL	5961	2688.3	0	0	0	4421.34	8832	8389	9315	8584	7696	6612
MEAN	192	89.6	0	0	0	143	294	271	311	277	248	220
AC-FT	11820	5330	0	0	0	8770	17520	16640	18480	17030	15270	13110
MAX	211	194	0	0	0	332	333	302	343	340	298	242
MIN	179	0	0	0	0	0	268	245	254	243	171	151

CAL YR 2007 TOTAL 54033.82 MEAN 148 MAX 298 MIN 0 AC-FT 107200  
WTR YR 2008 TOTAL 62498.64 MEAN 171 MAX 343 MIN 0 AC-FT 124000

MAX DISCH: 348 CFS AT 15:00 ON Jul. 5, 2008 GH 3.06 FT. GH CORR. 0.01 FT. SHIFT 0 FT.  
MAX GH: 3.07 FT. (GH CORR. +0.01 FT APPLIED) AT 15:00 ON Jul. 5, 2008.

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

07119705 CATLIN CANAL NEAR FOWLER CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07119700 ARKANSAS RIVER BELOW CATLIN DAM NEAR FOWLER, CO (COMBINED)

LOCATION.--Lat 38°07'33", long 103°54'41", in NW¼NW¼ sec. 21, T.22 S., R.58 W., Otero County.

DRAINAGE AREA.--10,901 mi<sup>2</sup>.

REMARKS.--The combined record of discharges was obtained by the addition of Catlin Canal daily flows to the corresponding daily flows in the Arkansas River below Catlin Dam. The peak discharge for the year was 2990 cfs at 07:30 on August 18, 2008. Combined record is good, except during periods of estimated flow, which should be considered poor. Record developed by Div. II Hydrographic Staff.

ARKANSAS RIVER AND CATLIN CANAL (COMBINED)

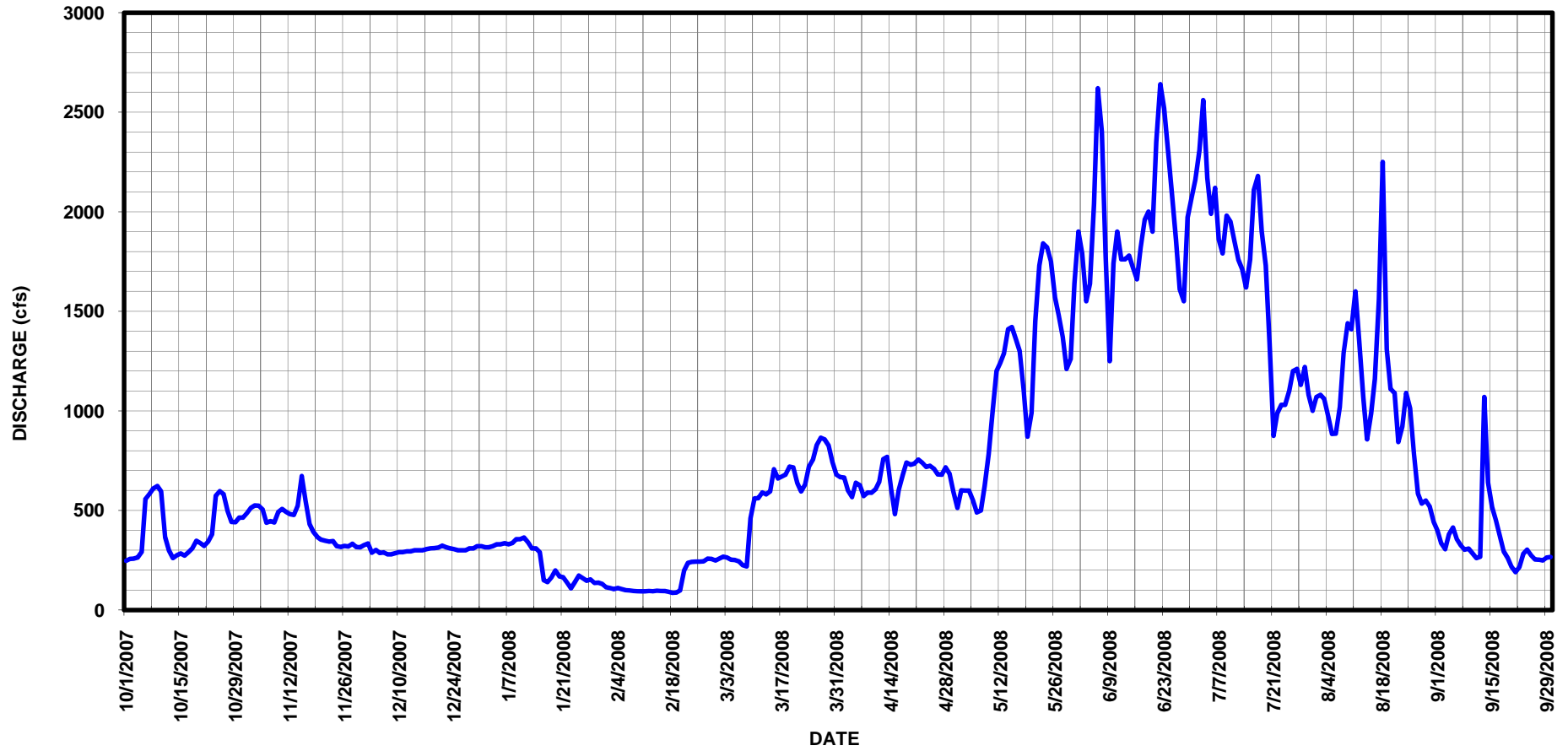
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	247	487	326	315	115	258	667	513	1900	2160	1070	399
2	257	513	334	315	110	268	665	601	1790	2310	1080	335
3	258	525	288	320	105	263	600	600	1550	2560	1060	305
4	263	523	302	330	110	253	567	600	1640	2170	972	380
5	292	505	287	330	105	251	639	549	2040	1990	884	414
6	557	438	289	335	100	245	626	490	2620	2120	886	356
7	583	446	280	330	98	225	573	499	2400	1860	1020	325
8	610	439	280	337	96	219	590	622	1780	1790	1290	303
9	622	493	285	355	94	461	589	784	1250	1980	1440	308
10	595	507	290	356	94	560	606	990	1740	1950	1410	285
11	366	493	290	364	94	562	644	1200	1900	1850	1600	261
12	300	481	295	339	95	590	758	1240	1760	1760	1350	267
13	261	477	295	309	94	580	769	1290	1760	1710	1070	1070
14	274	524	300	310	97	595	608	1410	1780	1620	857	640
15	284	672	300	290	96	706	481	1420	1720	1760	985	517
16	273	550	300	150	96	661	602	1360	1660	2110	1160	452
17	290	432	305	140	91	670	678	1300	1820	2180	1560	369
18	310	392	310	165	86	680	740	1100	1960	1900	2250	295
19	348	367	311	198	87	720	730	871	2000	1730	1310	261
20	337	353	313	169	98	716	735	990	1900	1340	1110	217
21	322	347	323	164	199	638	755	1450	2350	875	1090	190
22	342	343	315	139	237	595	741	1730	2640	988	843	215
23	380	346	310	109	242	631	719	1840	2520	1030	922	283
24	574	321	305	139	243	720	724	1820	2300	1030	1090	303
25	597	317	300	173	243	755	709	1750	2090	1100	1010	274
26	582	322	300	161	244	829	681	1570	1860	1200	784	254
27	496	319	300	147	258	865	679	1480	1610	1210	585	252
28	442	333	310	154	257	857	716	1370	1550	1130	534	248
29	441	316	310	136	248	826	684	1210	1970	1220	549	263
30	464	315	320	138	---	743	594	1260	2070	1080	521	266
31	464	---	320	131	---	679	---	1640	---	1000	443	---
TOTAL	12431	12896	9393	7348	4132	17621	19869	35549	57930	50713	32735	10307
MEAN	401	430	303	237	142	568	662	1147	1931	1636	1056	344
AC-FT	24660	25580	18630	14570	8200	34950	39410	70510	114900	100600	64930	20440
MAX	622	672	334	364	258	865	769	1840	2640	2560	2250	1070
MIN	247	315	280	109	86	219	481	490	1250	875	443	190
CAL YR 2007	TOTAL	268531	MEAN	736	MAX	2720	MIN	98	AC-FT	532600		
WTR YR 2008	TOTAL	270924	MEAN	740	MAX	2640	MIN	86	AC-FT	537400		

MAX. DISCHARGE: 2990 CFS AT 07:30 ON AUG. 18, 2008.

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

07119700 ARKANSAS RIVER BELOW CATLIN DAM NEAR FOWLER CO (COMBINED)  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07120500 ARKANSAS RIVER NEAR ROCKY FORD, CO

**LOCATION.**--Lat 38°03'52", Long 103°41'24" in SE ¼, NW ¼, Sec. 9, T23S, R56W, Hydrologic Unit 11020005, Otero County, on right bank of Arkansas River, approximately 250 feet upstream from State Highway 266, and approximately 1.6 miles NE of Rocky Ford, Colorado.

**DRAINAGE AREA AND PERIOD OF RECORD.**--Undetermined. Gage established October 8, 1992.

**GAGE.**--High data rate Sutron 8210 DCP and Accububble in a 4' x 4' steel gage shelter. A wire weight gage installed on upstream side of Hwy 266 bridge is the primary reference gage from the beginning of WY08 until September 25, 2008, when an angle iron was installed on the floodblock and a drop tape RP was surveyed in. The drop tape is the primary reference gage from September 25, 2008 forward. The new reference gage is installed in the same river section as the bubbler gage (the wire weight reference gage was downstream). Primary record is hourly averages of 15-minute DCP log data with satellite-monitored data used for backup purposes. On July 9, 2008 replaced Accububble with a Sutron Constant Flow Bubbler. Elevation of gage datum is 4130.46 ft MSL.

**REMARKS.**--Record is complete and reliable for the entire water year, except for the following period(s): Dec 9-18, 22-31, 2007; Jan 1-5,14-17, 20-26 and Feb 5-9, 2008, due to ice affecting the stage-discharge relationship. Record is fair except for periods of ice effect which should be considered poor. Station maintained and record developed by A. Adame.

**RATING TABLE.**--ARKROCCO02 USED FROM 01-Oct-2007 TO 30-SEP-2008

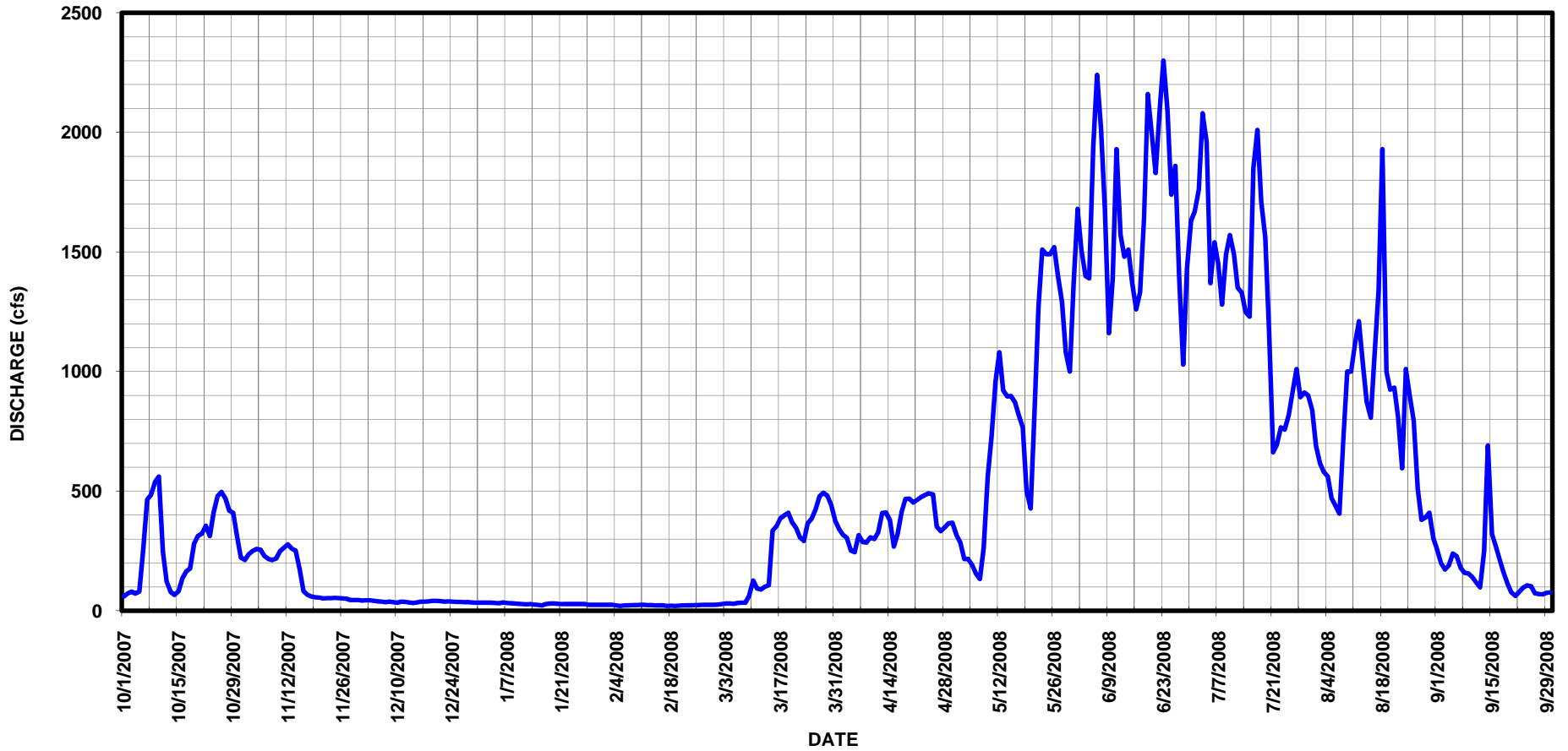
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	212	43	34	25	26	342	317	1680	1670	690	255
2	72	236	44	33	24	28	317	286	1510	1760	616	200
3	80	250	44	33	24	30	305	216	1400	2080	580	173
4	72	258	41	32	22	30	251	216	1390	1960	561	189
5	81	255	39	31	20	29	245	192	1940	1370	470	239
6	253	229	38	35	22	32	316	155	2240	1540	439	228
7	465	216	36	32	22	33	288	133	2010	1450	406	179
8	484	212	38	31	23	34	285	264	1680	1280	710	159
9	538	219	36	30	23	63	307	562	1160	1490	1000	156
10	561	249	34	29	24	126	300	728	1390	1570	1000	141
11	247	264	38	28	24	93	327	962	1930	1490	1120	117
12	123	278	37	27	23	89	408	1080	1570	1350	1210	98
13	79	259	35	28	23	100	411	921	1480	1330	1030	249
14	66	251	32	26	22	107	377	896	1510	1250	873	691
15	81	172	35	25	22	335	268	897	1370	1230	807	321
16	134	82	38	22	22	354	321	871	1260	1850	1070	271
17	165	66	38	28	20	387	414	817	1330	2010	1340	212
18	177	60	39	30	21	398	467	766	1640	1710	1930	160
19	281	56	41	30	20	410	468	500	2160	1560	1000	112
20	312	55	41	29	21	370	453	428	1990	1170	924	76
21	323	52	40	28	22	346	464	821	1830	663	933	62
22	355	53	38	28	22	307	475	1270	2090	694	812	79
23	313	53	39	28	22	292	484	1510	2300	766	596	97
24	411	54	38	28	23	365	491	1490	2090	757	1010	106
25	480	53	37	28	23	386	486	1490	1740	818	894	103
26	497	52	37	28	24	423	352	1520	1860	913	795	73
27	469	51	36	28	25	478	333	1400	1400	1010	511	70
28	419	45	36	24	25	493	347	1290	1030	893	380	68
29	409	45	35	24	25	481	366	1080	1430	912	390	75
30	310	45	34	24	---	442	368	1000	1630	900	410	77
31	222	---	34	24	---	376	---	1370	---	839	302	---
TOTAL	8539	4382	1171	885	658	7463	11036	25448	50040	40285	24809	5036
MEAN	275	146	37.8	28.5	22.7	241	368	821	1668	1300	800	168
AC-FT	16940	8690	2320	1760	1310	14800	21890	50480	99250	79910	49210	9990
MAX	561	278	44	35	25	493	491	1520	2300	2080	1930	691
MIN	60	45	32	22	20	26	245	133	1030	663	302	62
CAL YR 2007	TOTAL	175896	MEAN	482	MAX	2440	MIN	32	AC-FT	348900		
WTR YR 2008	TOTAL	179752	MEAN	491	MAX	2300	MIN	20	AC-FT	356500		

MAX DISCH: 2760 CFS AT 15:30 ON Aug. 18, 2008 GH 3.97 FT. SHIFT 0.19 FT.  
MAX GH: 3.97 FT. AT 15:30 ON Aug. 18, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

07120500 ARKANSAS RIVER NEAR ROCKY FORD CO  
WY2008 HYDROGRAPH





ARKANSAS RIVER BASIN

07122400 CROOKED ARROYO NEAR SWINK, CO

**LOCATION.**--Lat 37°58'56", long 103°35'52", in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 5, T.24 S., R.55 W., Otero County, on right bank 54 ft. downstream from bridge on State Highway 10, 2.0 mi. upstream from mouth, and 2.8 mi. southeast of Swink.

**DRAINAGE AREA.**--108 mi<sup>2</sup>.

**GAGE.**--High data rate Sutron 8210 DCP and Accububble installed in a 4' x 4' steel shelter. Primary record is hourly averages of 15-minute DCP log data with satellite-monitored data used for backup. Primary reference gage is a staff gage. On August 26, 2008, the Accububble was replaced with a Sutron Constant Flow Bubbler. Elevation of gage is 4,100 ft. above sea level.

**REMARKS.**--Record is complete and reliable, except for the following period(s): Feb 5-9, 2008 due to ice affecting the stage-discharge relationship. Aug 15-16, 2008 due to beaver dam activity downstream creating backwater at the gage. Record is rated fair for the entire water year, except for periods of ice effect and the runoff event of August 15 and 16, 2008 (when downstream beaver dam created backwater at the gage), during which the record is rated poor. Station maintained and record developed by Adam Adame.

**RATING TABLE.**--CANSWKCO07 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

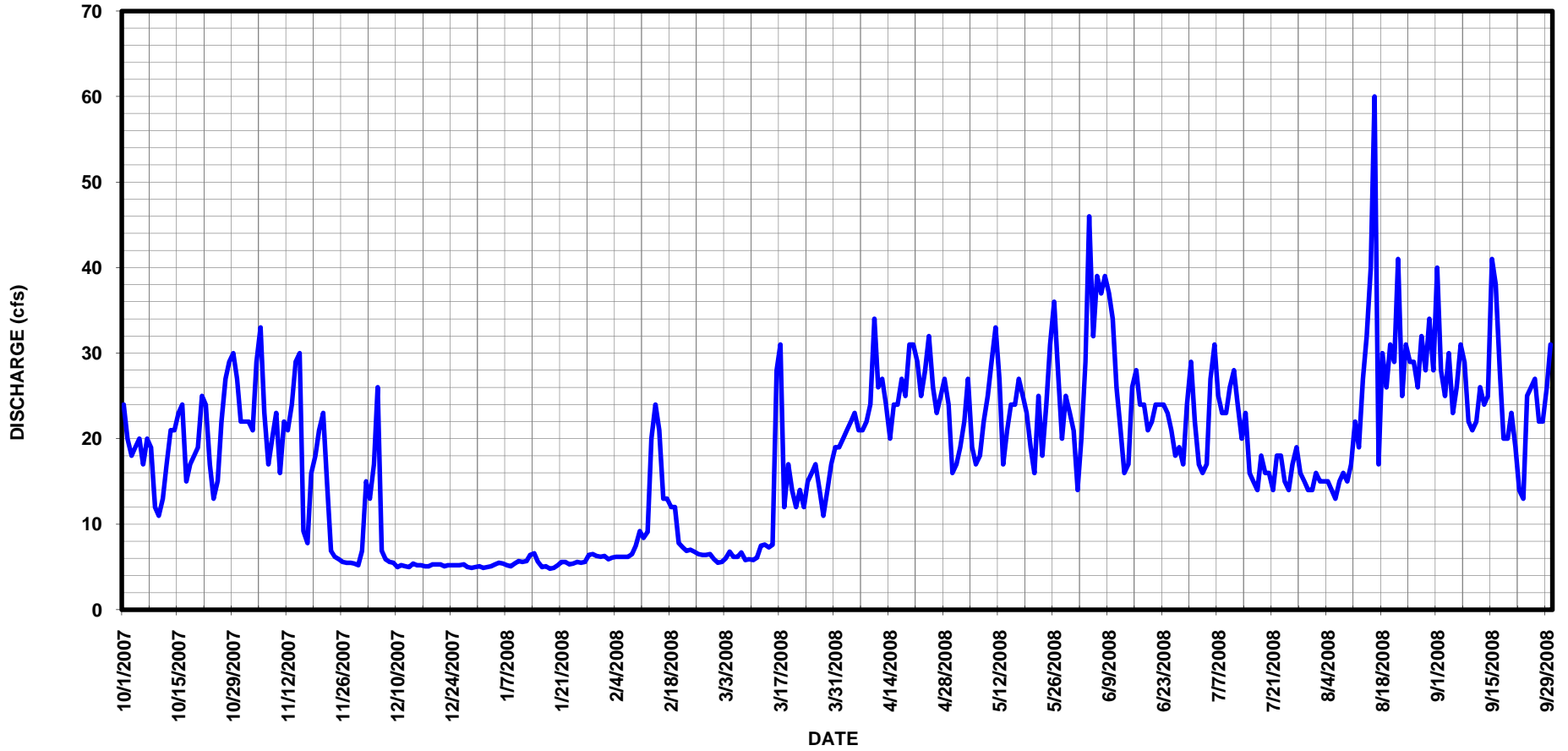
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	22	6.9	4.9	6.3	5.5	19	17	14	22	16	40
2	20	22	15	5.0	5.9	5.6	20	19	20	17	15	28
3	18	21	13	5.1	6.1	6.0	21	22	29	16	15	25
4	19	29	17	5.3	6.2	6.8	22	27	46	17	15	30
5	20	33	26	5.5	6.2	6.2	23	19	32	27	14	23
6	17	23	6.9	5.4	6.2	6.2	21	17	39	31	13	26
7	20	17	5.9	5.2	6.2	6.7	21	18	37	25	15	31
8	19	20	5.6	5.1	6.5	5.8	22	22	39	23	16	29
9	12	23	5.5	5.4	7.5	5.9	24	25	37	23	15	22
10	11	16	5.0	5.7	9.2	5.8	34	29	34	26	17	21
11	13	22	5.2	5.6	8.4	6.1	26	33	26	28	22	22
12	17	21	5.1	5.7	9.1	7.5	27	27	21	24	19	26
13	21	24	5.0	6.4	20	7.6	24	17	16	20	27	24
14	21	29	5.4	6.6	24	7.3	20	21	17	23	32	25
15	23	30	5.2	5.6	21	7.6	24	24	26	16	40	41
16	24	9.2	5.2	5.0	13	28	24	24	28	15	60	38
17	15	7.8	5.1	5.1	13	31	27	27	24	14	17	28
18	17	16	5.1	4.8	12	12	25	25	24	18	30	20
19	18	18	5.3	4.9	12	17	31	23	21	16	26	20
20	19	21	5.3	5.2	7.8	14	31	19	22	16	31	23
21	25	23	5.3	5.6	7.3	12	29	16	24	14	29	19
22	24	15	5.1	5.6	6.9	14	25	25	24	18	41	14
23	17	6.9	5.2	5.3	7.0	12	28	18	24	18	25	13
24	13	6.2	5.2	5.4	6.8	15	32	24	23	15	31	25
25	15	5.9	5.2	5.6	6.5	16	26	31	21	14	29	26
26	22	5.6	5.2	5.5	6.4	17	23	36	18	17	29	27
27	27	5.5	5.3	5.6	6.4	14	25	28	19	19	26	22
28	29	5.5	5.0	6.4	6.5	11	27	20	17	16	32	22
29	30	5.4	4.9	6.5	5.9	14	24	25	24	15	28	26
30	27	5.2	5.0	6.3	---	17	16	23	29	14	34	31
31	22	---	5.1	6.2	---	19	---	21	---	14	28	---
TOTAL	619	508.2	215.2	171.5	266.3	359.6	741	722	775	591	787	767
MEAN	20.0	16.9	6.94	5.53	9.18	11.6	24.7	23.3	25.8	19.1	25.4	25.6
AC-FT	1230	1010	427	340	528	713	1470	1430	1540	1170	1560	1520
MAX	30	33	26	6.6	24	31	34	36	46	31	60	41
MIN	11	5.2	4.9	4.8	5.9	5.5	16	16	14	14	13	13
CAL YR 2007	TOTAL	6177.0	MEAN	16.9	MAX	71	MIN	1.4	AC-FT	12250		
WTR YR 2008	TOTAL	6522.8	MEAN	17.8	MAX	60	MIN	4.8	AC-FT	12940		

MAX DISCH: UNDETERMINED

MAX GH: 6.29 FT. AT 01:00 ON Aug. 16, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

07122400 CROOKED ARROYO NEAR SWINK CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07123000 ARKANSAS RIVER AT LA JUNTA, CO

**LOCATION.**--Lat 37°59'26", long 103°31'55" (NAD83), in SW1/4 SE1/4 NE1/4 sec. 2, T.24 S., R.55 W., Otero County, Hydrologic Unit 11020005, on right bank at upstream side of bridge on State Highway 109 in La Junta, 450 ft upstream from King Arroyo at La Junta CO.

**DRAINAGE AREA AND PERIOD OF RECORD.**--12,210 mi<sup>2</sup>. Staff gage originally established by USGS in 1889, with sporadic data and various locations. Water stage recorder in use since Oct. 1933 at several locations also. Gage site in continuous use since then. See WSP 1711 or 1731 for history of changes prior to June 13, 1940. June 13, 1940, to June 6, 1967, water-stage recorder at site 300 ft upstream at present datum.

**GAGE.**--Satellite-monitored data collection platform (high data rate Sutron 8210 DCP) and Sutron Constant Flow Bubbler in 4' x 4' steel shelter. Primary record is hourly averages of 15-minute DCP log data with the satellite-monitored data used for backup purposes. A wire-weight gage on the Hwy 109 bridge serves as the primary reference gage. A staff gage was mounted on the southern Hwy 109 bridge pier on May 20, 2008. The purpose of the staff gage is to allow emergency management personnel to monitor the river stage continuously during flood events. Datum of gage is 4040.98 ft above mean sea level, NAVD 88 (computed at 10/4/07 level run from NGS benchmark on north side of Hwy 109 bridge).

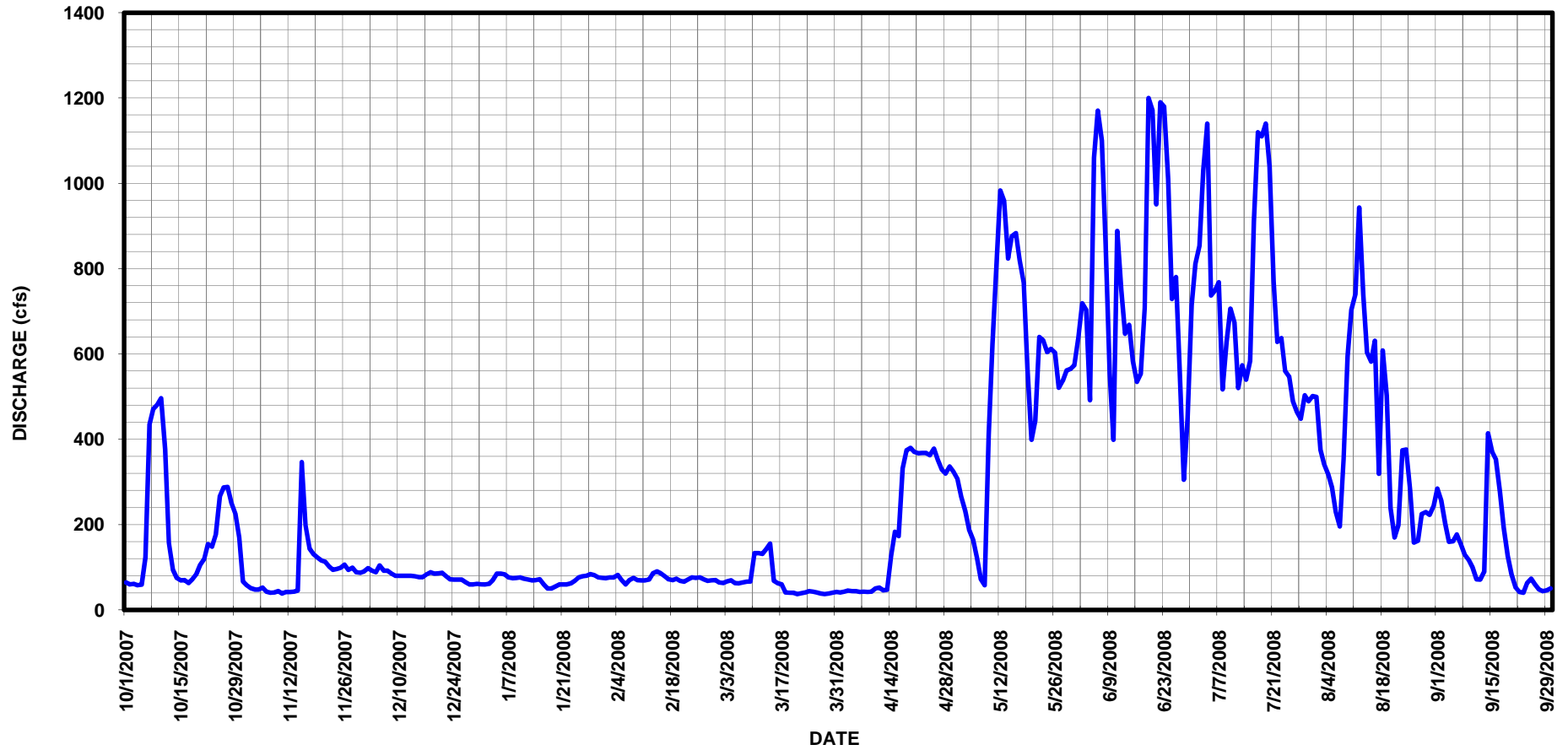
**REMARKS.**--Record is complete and reliable, except for: Dec 9-16, 24-31, 2007, Jan 1-3, 16-24 and Feb 5-7, 17-18, 2008, when ice affected the stage-discharge relationship. The record is considered to be fair due to the dynamic nature of the sand channel control, quality of high-flow measurements, and due to significant channel changes that have occurred since the development of the current stage-discharge rating. The error in the rating yields technical limitations on application of shifts that vary in-time and by gage height simultaneously, thereby limiting the accuracy of the record. Periods of ice-affected gage height should be considered poor. Station maintained by A. Adame and record developed by M.A. Perry.

**RATING TABLE.**--ARKLAJCO41 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	57	90	60	74	64	41	307	640	812	499	284
2	60	51	98	61	76	63	43	265	719	853	376	257
3	61	48	92	70	76	67	45	232	703	1030	341	202
4	58	48	88	85	82	69	44	189	492	1140	317	160
5	59	52	104	85	70	63	44	165	1060	737	287	161
6	123	43	92	83	60	62	42	123	1170	749	229	177
7	434	40	92	76	70	64	43	72	1100	768	196	154
8	471	41	85	74	75	66	42	58	858	517	354	130
9	481	44	80	75	70	67	43	410	555	629	595	117
10	496	38	80	76	69	133	50	623	399	706	704	100
11	376	42	80	73	69	133	52	811	888	674	741	72
12	157	42	80	71	71	131	46	983	750	520	943	71
13	94	43	80	69	86	142	47	959	647	573	739	90
14	75	45	79	70	90	155	127	824	668	540	603	414
15	69	346	77	72	86	68	183	876	583	583	582	371
16	70	198	77	60	79	62	173	883	535	911	631	353
17	63	144	83	50	72	60	333	819	553	1120	319	277
18	72	131	88	50	70	41	374	767	708	1110	608	193
19	84	123	85	55	73	40	380	566	1200	1140	502	126
20	105	116	86	60	68	40	370	399	1170	1040	239	83
21	119	113	87	60	66	37	367	444	951	770	170	53
22	154	102	79	60	71	39	368	640	1190	628	198	42
23	148	94	72	62	76	41	368	632	1180	637	374	40
24	177	96	71	68	75	44	363	604	1010	560	376	63
25	266	99	71	76	76	43	378	612	729	547	280	73
26	287	106	71	79	72	41	352	603	780	489	158	60
27	288	94	65	80	68	38	329	521	557	464	162	48
28	251	99	60	84	69	37	320	537	305	448	225	44
29	225	88	60	81	70	38	336	561	450	503	229	46
30	170	87	61	76	---	40	324	565	714	489	223	50
31	67	---	60	75	---	42	---	574	---	501	244	---
TOTAL	5624	2670	2473	2176	2129	2030	6027	16624	23264	22188	12444	4311
MEAN	181	89.0	79.8	70.2	73.4	65.5	201	536	775	716	401	144
AC-FT	11160	5300	4910	4320	4220	4030	11950	32970	46140	44010	24680	8550
MAX	496	346	104	85	90	155	380	983	1200	1140	943	414
MIN	58	38	60	50	60	37	41	58	305	448	158	40
CAL YR 2007	TOTAL	95890	MEAN	263	MAX	1880	MIN	35	AC-FT	190200		
WTR YR 2008	TOTAL	101960	MEAN	279	MAX	1200	MIN	37	AC-FT	202200		
MAX DISCH:	1440 CFS AT	23:45 ON	Aug. 18, 2008	GH	9.70 FT.	SHIFT	-1.48 FT.					
MAX GH:	9.70 FT. AT	23:45 ON	Aug. 18, 2008									

07123000 ARKANSAS RIVER AT LA JUNTA CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07123675 HORSE CREEK AT HIGHWAY 194 NEAR LAS ANIMAS, CO

**LOCATION.**--Lat 38°05'06", long 103°21'12", in SE1/4,SW1/4, sec. 33, T.22S., R.53 W., Bent County, Hydrological Unit 11020008, on right bank 15 ft upstream from right end of box culverts on State Highway 194, 3.2 mi upstream from mouth, 3.4 mi downstream from Ft. Lyon Canal Aqueduct, and 7.5 mi west of Las Animas, Co.

**DRAINAGE AREA AND PERIOD OF RECORD.**--1403 sq mi. Established and operated Oct. 19, 1979 to Sep. 30, 1993 by USGS. Operated and maintained by State of Colorado, Oct. 01, 1993 to present.

**GAGE.**--Accububble and satellite-monitored data collection platform (Sutron 8210 HDR DCP) in a 4' x 4' steel shelter. Primary record is hourly averages of 15-minute DCP log data with satellite-monitored data used for backup purposes. Primary reference gage is a staff gage on the right side of the channel just upstream of the concrete weir control. A tipping bucket raingage is also operated at the site. On Aug 26, 2008 replaced Accububble with Sutron Constant Flow Bubbler. Elevation of gage is 3975 ft above mean sea level from topographic map.

**REMARKS.**--Record is complete and reliable. Record good. Station maintained and record developed by A. Adame.

**RATING TABLE.**--HRC194CO07 USED FROM 01-Oct-2007 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

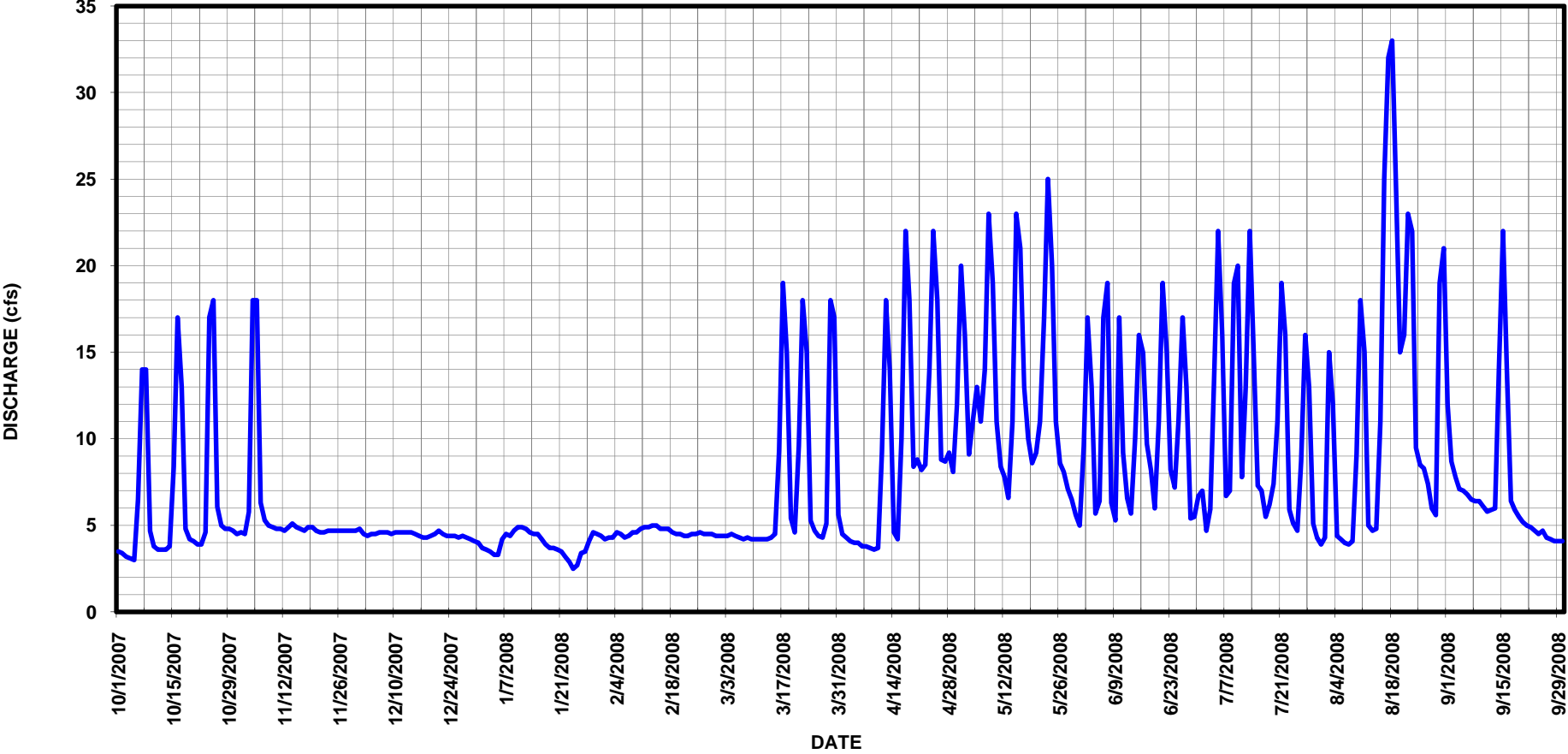
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	4.6	4.8	3.7	4.2	4.4	4.5	20	9.6	7.0	4.3	12
2	3.4	4.5	4.5	3.6	4.3	4.4	4.3	16	17	4.7	15	8.7
3	3.2	5.8	4.4	3.5	4.3	4.4	4.1	9.1	13	5.9	12	7.8
4	3.1	18	4.5	3.3	4.6	4.5	4.0	11	5.7	14	4.4	7.1
5	3.0	18	4.5	3.3	4.5	4.4	4.0	13	6.4	22	4.2	7.0
6	6.5	6.3	4.6	4.2	4.3	4.3	3.8	11	17	16	4.0	6.8
7	14	5.3	4.6	4.5	4.4	4.2	3.8	14	19	6.7	3.9	6.5
8	14	5.0	4.6	4.4	4.6	4.3	3.7	23	6.3	7.0	4.1	6.4
9	4.7	4.9	4.5	4.7	4.6	4.2	3.6	19	5.3	19	9.1	6.4
10	3.8	4.8	4.6	4.9	4.8	4.2	3.7	11	17	20	18	6.1
11	3.6	4.8	4.6	4.9	4.9	4.2	9.2	8.4	9.2	7.8	15	5.8
12	3.6	4.7	4.6	4.8	4.9	4.2	18	7.8	6.6	13	5.0	5.9
13	3.6	4.9	4.6	4.6	5.0	4.2	14	6.6	5.7	22	4.7	6.0
14	3.8	5.1	4.6	4.5	5.0	4.3	4.6	11	10	15	4.8	14
15	8.4	4.9	4.5	4.5	4.8	4.5	4.2	23	16	7.3	11	22
16	17	4.8	4.4	4.2	4.8	9.3	10	21	15	7.0	25	14
17	13	4.7	4.3	3.9	4.8	19	22	13	9.7	5.5	32	6.4
18	4.8	4.9	4.3	3.7	4.6	15	18	10	8.2	6.2	33	5.9
19	4.2	4.9	4.4	3.7	4.5	5.4	8.4	8.6	6.0	7.4	24	5.5
20	4.1	4.7	4.5	3.6	4.5	4.6	8.8	9.2	11	11	15	5.2
21	3.9	4.6	4.7	3.5	4.4	9.6	8.2	11	19	19	16	5.0
22	3.9	4.6	4.5	3.2	4.4	18	8.5	17	15	16	23	4.9
23	4.6	4.7	4.4	2.9	4.5	15	14	25	8.2	5.9	22	4.7
24	17	4.7	4.4	2.5	4.5	5.3	22	20	7.2	5.1	9.5	4.5
25	18	4.7	4.4	2.7	4.6	4.7	18	11	11	4.7	8.5	4.7
26	6.1	4.7	4.3	3.4	4.5	4.4	8.8	8.6	17	8.7	8.3	4.3
27	5.0	4.7	4.4	3.5	4.5	4.3	8.7	8.1	13	16	7.4	4.2
28	4.8	4.7	4.3	4.1	4.5	5.1	9.2	7.1	5.4	13	6.0	4.1
29	4.8	4.7	4.2	4.6	4.4	18	8.1	6.5	5.5	5.1	5.6	4.1
30	4.7	4.7	4.1	4.5	---	17	12	5.6	6.7	4.3	19	4.1
31	4.5	---	4.0	4.4	---	5.6	---	5.0	---	3.9	21	---
TOTAL	202.6	172.4	138.1	121.8	132.7	225.0	274.2	390.6	321.7	326.2	394.8	210.1
MEAN	6.54	5.75	4.45	3.93	4.58	7.26	9.14	12.6	10.7	10.5	12.7	7.00
AC-FT	402	342	274	242	263	446	544	775	638	647	783	417
MAX	18	18	4.8	4.9	5.0	19	22	25	19	22	33	22
MIN	3.0	4.5	4.0	2.5	4.2	4.2	3.6	5.0	5.3	3.9	3.9	4.1

CAL YR	2007	TOTAL	4402.9	MEAN	12.1	MAX	58	MIN	3.0	AC-FT	8730
WTR YR	2008	TOTAL	2910.2	MEAN	7.95	MAX	33	MIN	2.5	AC-FT	5770

MAX DISCH: 35.2 CFS AT 18:45 ON Aug. 16, 2008 GH 1.32 FT. SHIFT 0.15 FT.  
MAX GH: 1.32 FT. AT 18:45 ON Aug. 16, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

07123675 HORSE CREEK AT HIGHWAY 194 NEAR LAS ANIMAS CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

RATON CREEK ABOVE STARKVILLE, CO

**LOCATION.**--Lat 37°07'35.5", Long 104°31'24.8" in NW¼, NE¼, NE¼, Section 35,T33S, R64W, Las Animas County, 20 feet away from the creek on the left upstream side of bridge for road 18.3 approximately half a mile south of Interstate 25 exit 8 south of Trinidad.

**DRAINAGE AREA.**--Undetermined.

**GAGE.**--Sutron SatLink satellite-monitored data collection platform (DCP), with High Data Rate (HDR) radio and shaft encoder. The data logger is housed inside a 4' x 4' metal shelter about 20 feet away from the creek, while the shaft encoder is in a 20" x 30" metal shelter on an 18" corrugated metal pipe stilling well attached to the left bridge wing wall. Shaft encoder is set to an electric drop tape inside the half shelter. Primary record is hourly averages of 15-minute DCP log data with satellite data used for back-up purposes.

**REMARKS.**--Record is complete and reliable, except for the following periods: November 22 - 30; December 8 -25, 2007; January 3, 9 -15, 21 - 31; February 1 - 13, 16 - 25; March 5 - 7, 2008, when ice in the creek affected the stage-discharge relationship. December 26 - 31, 2007; January 1, 2, 16 - 31, 2008 when the well was frozen. Record good, except during periods of no gage height and ice affected record, which should be considered poor. Periods of record when the gage height is less than 1.50 ft. and greater than 3.08 ft. should be considered fair to poor. Station maintained and record developed by A.D. Gutierrez.

**RATING TABLE.**--RACRSTCO01 USED FROM 01-Oct-2007 TO 30-Sep-2008

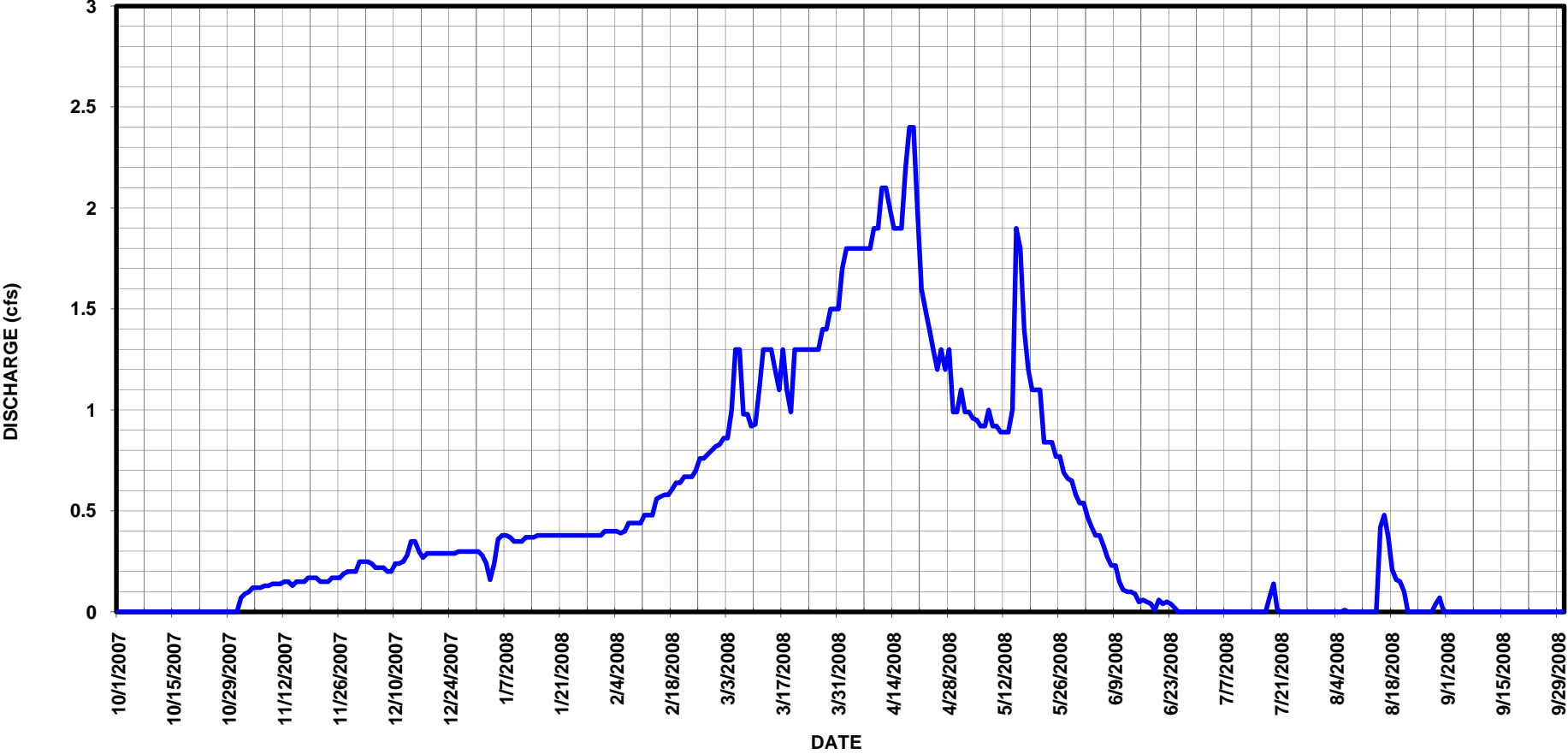
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.07	.25	.28	.40	.83	1.7	1.1	.54	0	0	0
2	0	.09	.25	.24	.40	.86	1.8	.99	.47	0	0	0
3	0	.10	.25	.16	.40	.86	1.8	.99	.42	0	0	0
4	0	.12	.24	.24	.40	1.0	1.8	.96	.38	0	0	0
5	0	.12	.22	.36	.39	1.3	1.8	.95	.38	0	0	0
6	0	.12	.22	.38	.40	1.3	1.8	.92	.33	0	.01	0
7	0	.13	.22	.38	.44	.98	1.8	.92	.27	0	0	0
8	0	.13	.20	.37	.44	.98	1.8	1.0	.23	0	0	0
9	0	.14	.20	.35	.44	.92	1.9	.92	.23	0	0	0
10	0	.14	.24	.35	.44	.93	1.9	.92	.15	0	0	0
11	0	.14	.24	.35	.48	1.1	2.1	.89	.11	0	0	0
12	0	.15	.25	.37	.48	1.3	2.1	.89	.10	0	0	0
13	0	.15	.28	.37	.48	1.3	2.0	.89	.10	0	0	0
14	0	.13	.35	.37	.56	1.3	1.9	1.0	.09	0	0	0
15	0	.15	.35	.38	.57	1.2	1.9	1.9	.05	0	.42	0
16	0	.15	.30	.38	.58	1.1	1.9	1.8	.06	0	.48	0
17	0	.15	.27	.38	.58	1.3	2.2	1.4	.05	0	.37	0
18	0	.17	.29	.38	.61	1.1	2.4	1.2	.04	.07	.21	0
19	0	.17	.29	.38	.64	.99	2.4	1.1	.01	.14	.16	0
20	0	.17	.29	.38	.64	1.3	2.0	1.1	.06	.01	.15	0
21	0	.15	.29	.38	.67	1.3	1.6	1.1	.04	0	.10	0
22	0	.15	.29	.38	.67	1.3	1.5	.84	.05	0	0	0
23	0	.15	.29	.38	.67	1.3	1.4	.84	.04	0	0	0
24	0	.17	.29	.38	.70	1.3	1.3	.84	.02	0	0	0
25	0	.17	.29	.38	.76	1.3	1.2	.77	0	0	0	0
26	0	.17	.30	.38	.76	1.3	1.3	.77	0	0	0	0
27	0	.19	.30	.38	.78	1.4	1.2	.69	0	0	0	0
28	0	.20	.30	.38	.80	1.4	1.3	.66	0	0	0	0
29	0	.20	.30	.38	.82	1.5	.99	.65	0	0	.04	0
30	0	.20	.30	.38	---	1.5	.99	.58	0	0	.07	0
31	0	---	.30	.38	---	1.5	---	.54	---	0	---	---
TOTAL	0	4.44	8.45	11.03	16.40	37.05	51.78	30.12	4.22	.22	2.01	0
MEAN	0	.15	.27	.36	.57	1.20	1.73	.97	.14	.007	.065	0
AC-FT	0	8.8	17	22	33	73	103	60	8.4	.4	4.0	0
MAX	0	.20	.35	.38	.82	1.5	2.4	1.9	.54	.14	.48	0
MIN	0	.07	.20	.16	.39	.83	.99	.54	0	0	0	0
CAL YR 2007	TOTAL	677.85	MEAN	1.85	MAX	13	MIN	0	AC-FT	1340		
WTR YR 2008	TOTAL	165.72	MEAN	.45	MAX	2.4	MIN	0	AC-FT	329		

MAX DISCH: 13.1 CFS AT 17:45 ON Aug. 15, 2008 GH 4.18 FT. SHIFT -0.82 FT.  
MAX GH: 4.18 FT. AT 17:45 ON Aug. 15, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

RATON CREEK ABOVE STARKVILLE CO  
WY2008 HYDROGRAPH





ARKANSAS RIVER BASIN

07124500 PURGATOIRE RIVER AT TRINIDAD, CO

**LOCATION.**--Lat 37°10'15", long 104°30'31", in NW¼SE¼ sec. 13, T.33 S., R.64 W., Las Animas County, in city of Trinidad, on left bank.

**DRAINAGE AREA.**--795 mi<sup>2</sup>.

**GAGE.**--Sutron 8210 High Data Rate DCP (satellite monitored data collection platform) controlling a Sutron Accububble system inside a 4' x 4' steel shelter on the left bank above the channel. Orifice line inside 1-½ inch galvanized pipe anchored to the bank extending down and into the channel. Primary record is hourly averages of 15-minute DCP log data with satellite-monitored data used for backup purposes. The primary reference gage was a staff gage set in the streambed near the orifice. A wire weight gage was installed August 21, 2007 on the Commercial Street Bridge immediately downstream and in line with the orifice line and staff gage, and became the primary reference gage on that date. A tipping bucket raingage is also installed at the station. A Sutron Constant Bubble Gage and Recorder (CFB) replaced the Accububble on July 16, 2008.

**REMARKS.**--Record is complete and reliable, except for the following periods: Nov 21 - 25, Dec 8 - 17, 22 - 31, 2007, Jan 1 - 27, 30, 31, Feb 1, 5 - 7, 17 - 18, Mar 7, 2008, when ice at or near the gage affected the gage height; and Aug 18 - Sep 18, 2008, when numerous large datum corrections were made to the Constant Flow Bubbler gage. The CFB was ultimately replaced on Oct 10, 2008. Record considered good, except for days of ice affected gage height record, which are poor. The record is considered to be fair from Aug 18 through Sep 18, 2008 (which includes the peak discharge), when equipment problems with the Constant Flow Bubbler resulted in numerous large gage height corrections. Station maintained and record developed by A.D. Gutierrez.

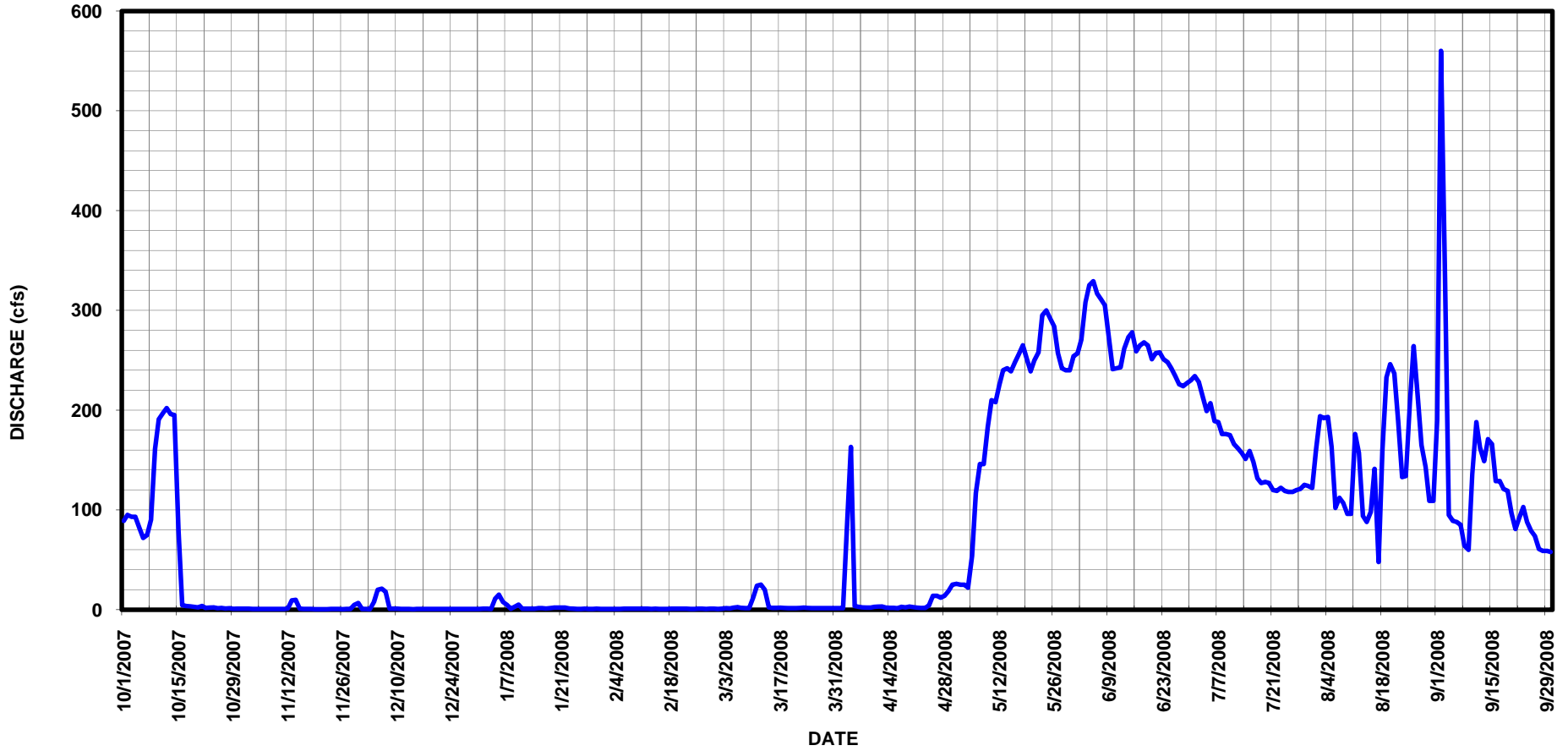
**RATING TABLE.**--PURTRICO28 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	1.1	.70	.96	.68	.82	1.5	26	257	234	160	190
2	95	1.1	.59	.90	.69	1.1	1.6	25	271	228	194	560
3	93	.84	.52	.70	.67	1.6	80	25	308	214	192	332
4	93	.73	7.9	11	.76	1.3	163	22	325	199	193	95
5	82	.78	20	15	.70	2.2	3.7	54	329	207	163	89
6	72	.76	21	7.7	.95	2.5	2.9	117	317	189	102	88
7	75	.79	18	5.0	.90	1.8	2.4	146	311	188	112	85
8	90	.83	1.0	1.0	.90	1.6	2.2	146	305	176	107	64
9	161	.78	.95	3.0	.92	1.6	2.1	183	272	176	96	60
10	191	.82	.90	5.0	1.0	12	2.9	210	241	175	96	136
11	197	.80	.75	.95	.94	24	3.2	208	242	166	176	188
12	202	1.2	.70	.90	.93	25	3.2	225	243	162	157	162
13	196	9.5	.65	1.0	.78	20	2.2	240	262	157	94	149
14	195	10	.55	1.0	.91	2.3	1.9	242	273	151	88	171
15	80	.95	.65	1.4	.80	1.9	1.7	239	278	159	98	166
16	4.6	.74	.70	1.4	.81	1.7	1.6	248	259	148	141	129
17	3.6	.60	.70	1.3	.80	2.0	3.0	256	265	132	48	129
18	3.4	.59	.63	1.5	.90	1.8	2.3	265	268	127	160	121
19	3.0	.49	.59	2.2	1.0	1.6	3.1	252	265	128	233	119
20	2.3	.48	.62	2.2	.95	1.5	2.6	239	251	127	246	97
21	3.7	.45	.66	2.1	.95	1.6	2.0	250	257	120	237	81
22	1.8	.52	.70	2.0	.87	1.7	1.8	258	258	119	190	92
23	2.2	.60	.68	1.2	.80	2.0	1.8	295	251	122	133	103
24	2.3	.75	.65	1.0	.72	1.7	4.2	300	248	119	134	88
25	1.6	.60	.65	.75	.88	1.6	14	292	242	118	208	79
26	1.9	.53	.65	.75	.91	1.6	14	284	234	118	264	74
27	1.2	.78	.70	1.1	.83	1.6	12	257	226	120	214	61
28	1.5	.72	.70	.84	.90	1.6	14	242	224	121	165	59
29	1.0	4.8	.70	.78	.89	1.5	19	240	227	125	143	59
30	1.0	6.6	.70	.90	---	1.5	25	240	230	124	109	58
31	.88	---	.70	.70	---	1.4	---	254	---	122	109	---
TOTAL	1946.98	50.23	85.59	76.23	24.74	126.12	394.9	6280	7939	4771	4762	3884
MEAN	62.8	1.67	2.76	2.46	.85	4.07	13.2	203	265	154	154	129
AC-FT	3860	100	170	151	49	250	783	12460	15750	9460	9450	7700
MAX	202	10	21	15	1.0	25	163	300	329	234	264	560
MIN	.88	.45	.52	.70	.67	.82	1.5	22	224	118	48	58
CAL YR 2007	TOTAL	37757.80	MEAN	103	MAX	363	MIN	.45	AC-FT	74890		
WTR YR 2008	TOTAL	30340.79	MEAN	82.9	MAX	560	MIN	.45	AC-FT	60180		

MAX DISCH: 787 CFS AT 07:15 ON Sep. 3, 2008 GH 3.77 FT. GH CORR. +0.11 FT. SHIFT -0.07 FT.  
MAX GH: 3.88 FT. (GH CORR. +0.11 FT APPLIED) AT 07:15 ON Sep. 3, 2008

07124500 PURGATOIRE RIVER AT TRINIDAD CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07126500 PURGATOIRE RIVER AT NINEMILE DAM NEAR HIGBEE, CO (RIVER ONLY)

**LOCATION.**--Lat 37°42'53", long 103°30'38", in NW¼ sec. 7, T.27 S., R.54 W., Otero County, Hydrologic Unit 11020010, on left bank at Ninemile Dam, 4 mi southwest of Higbee, and 5.5 mi upstream from Smith Canyon. Prior to Apr. 21, 1978 gage located 850 ft, upstream.

**DRAINAGE AREA.**--2,752 mi<sup>2</sup>.

**GAGE**--Sutron Accububble and satellite-monitored data collection platform (Sutron 8210 HDR DCP) in a 4 ft by 4 ft steel shelter. The primary reference gage is an outside drop tape from a reference point on a steel "I" beam on the wall face between Ninemile Dam and the Ninemile Canal headgate. Control is the Ninemile Dam. Primary record is hourly averages of 15-minute DCP log data with satellite-monitored gage height data providing backup. On Jan 31, 2008 replaced Accububble with a Sutron Constant Flow Bubbler.

**REMARKS.**--Record is complete and reliable, except for the following periods: Dec. 9-10, 15-17, 2007, due to spurious Accububbler gage readings likely caused by ice and cold; July 14-18, 23-31, August 1-8, 2008, due to bad Constant Flow Bubbler data because orifice line was out of water due to no flow; Nov 27- 30, Dec 8, 11-14, 22-31, 2007, Jan 1-3, 7-25, and Feb 5-7, 10-12, 20-21, 2008, when the stage-discharge relationship was affected by ice on the control. Record fair, except during periods of ice affected record, flows over 500 cfs, and estimated flows, which should be considered poor. The record for total flow in the river at this location is computed by adding Ninemile Canal flows to this record. High flows have not been measured at or near the gage due to a lack of facilities. Station maintained and record developed by A. Adame.

**RATING TABLE.**--PURNINCO17 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

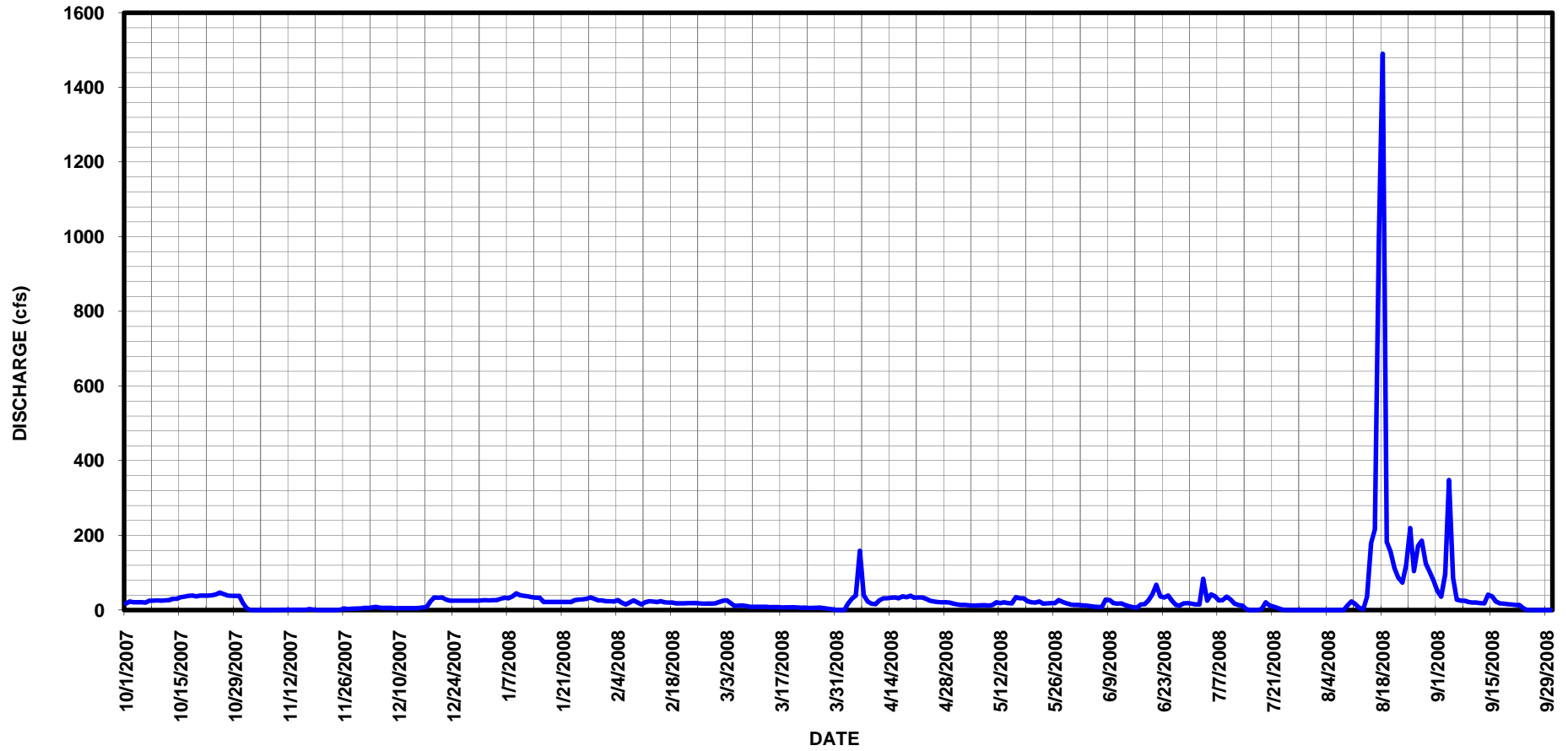
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	3.9	5.6	27	24	22	0	15	14	15	0	51
2	23	0	5.8	26	24	25	0	14	13	15	0	36
3	21	0	7.5	27	23	26	17	14	12	84	0	97
4	21	0	8.4	27	27	18	31	13	11	25	0	348
5	21	0	6.3	30	20	11	39	12	9.3	42	0	87
6	20	0	5.8	33	15	12	159	12	8.4	37	0	28
7	25	.03	5.5	32	20	12	41	13	8.0	26	0	25
8	25	.23	5.7	37	26	11	23	13	28	27	0	25
9	26	.11	5.0	45	21	8.9	17	12	27	36	13	22
10	25	.39	5.0	40	15	8.9	16	14	19	29	23	20
11	26	.59	5.0	38	21	8.8	26	21	17	17	16	20
12	27	.60	5.0	37	24	8.8	32	19	18	14	5.7	19
13	30	.81	5.0	35	23	8.4	32	21	14	12	2.5	18
14	30	.86	5.0	33	22	7.6	33	19	10	3.0	36	41
15	35	.74	6.0	33	24	7.8	34	18	7.6	0	179	37
16	36	.96	7.0	22	21	7.6	32	35	6.7	0	216	23
17	38	2.6	8.0	22	20	7.4	37	32	15	0	1000	18
18	39	1.1	24	22	20	7.0	35	32	16	3.0	1490	17
19	37	.17	34	22	18	6.9	38	24	26	21	183	16
20	39	.11	33	22	18	7.7	33	21	43	12	157	15
21	39	.13	34	22	18	7.4	34	20	68	9.5	112	14
22	39	.05	28	22	19	6.7	34	23	37	6.1	87	14
23	40	0	25	22	19	6.3	30	17	34	2.0	74	5.3
24	42	0	25	27	19	5.7	25	18	39	0	120	0
25	47	1.7	25	28	18	5.9	23	19	25	0	220	0
26	43	4.0	25	29	17	6.3	22	19	14	0	105	0
27	39	3.0	25	30	17	6.2	21	27	12	0	171	0
28	38	3.5	25	34	17	5.0	21	22	18	0	186	0
29	38	4.0	25	30	18	3.5	20	18	19	0	124	0
30	38	4.5	25	26	---	2.2	17	15	17	0	103	0
31	19	---	26	26	---	.94	---	14	---	0	78	---
TOTAL	984	34.08	480.6	906	588	288.94	922	586	606.0	435.6	4701.2	996.3
MEAN	31.7	1.14	15.5	29.2	20.3	9.32	30.7	18.9	20.2	14.1	152	33.2
AC-FT	1950	68	953	1800	1170	573	1830	1160	1200	864	9320	1980
MAX	47	4.5	34	45	27	26	159	35	68	84	1490	348
MIN	18	0	5.0	22	15	.94	0	12	6.7	0	0	0

CAL YR 2007 TOTAL 18947.68 MEAN 51.9 MAX 391 MIN 0 AC-FT 37580  
WTR YR 2008 TOTAL 11528.72 MEAN 31.5 MAX 1490 MIN 0 AC-FT 22870

MAX DISCH: 2350 CFS AT 16:15 ON Aug. 18, 2008 GH 5.12 FT. GH CORR. -0.05 FT. SHIFT 0.03 FT.  
MAX GH: 5.07 FT. (GH CORR. -0.05 FT APPLIED) AT 16:15 ON Aug. 18, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

0712650 PURGATOIRE RIVER AT NINEMILE DAM NEAR HIGBEE CO (RIVER ONLY)  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07126500 NINEMILE CANAL BELOW NINEMILE DAM NEAR HIGBEE, CO.

LOCATION.--Lat 37°42'53", long 103°30'38", in NW¼ sec. 7, T.27 S., R.54 W., Otero County.

DRAINAGE AREA.--N/A

GAGE.--Float-activated graphic water-stage recorder, SDI shaft encoder, and a High Data Rate Sutron SatLink DCP in a 3 ft by 3 ft steel shelter with well. Primary record is hourly averages of 15-minute DCP log data with satellite-monitored data and the graphic chart recorder used for backup purposes. Six-foot standard concrete Parshall flume is the control. Primary reference gage is outside staff gage installed in flume.

REMARKS.--Record is complete and reliable, except for the periods: Nov 25-29; Dec 9-17, 22, 23, 2007; Jan 12, 13, 31, Feb 1-3, 6, 7, 2008, when the stage-discharge relationship was affected by ice. Record is good, except periods of ice affected record, which are poor. Station maintained and record developed by A. Adame.

RATING TABLE.--NMCHIGCO01 USED FROM 01-Oct-2007 TO 30-Sep-2008

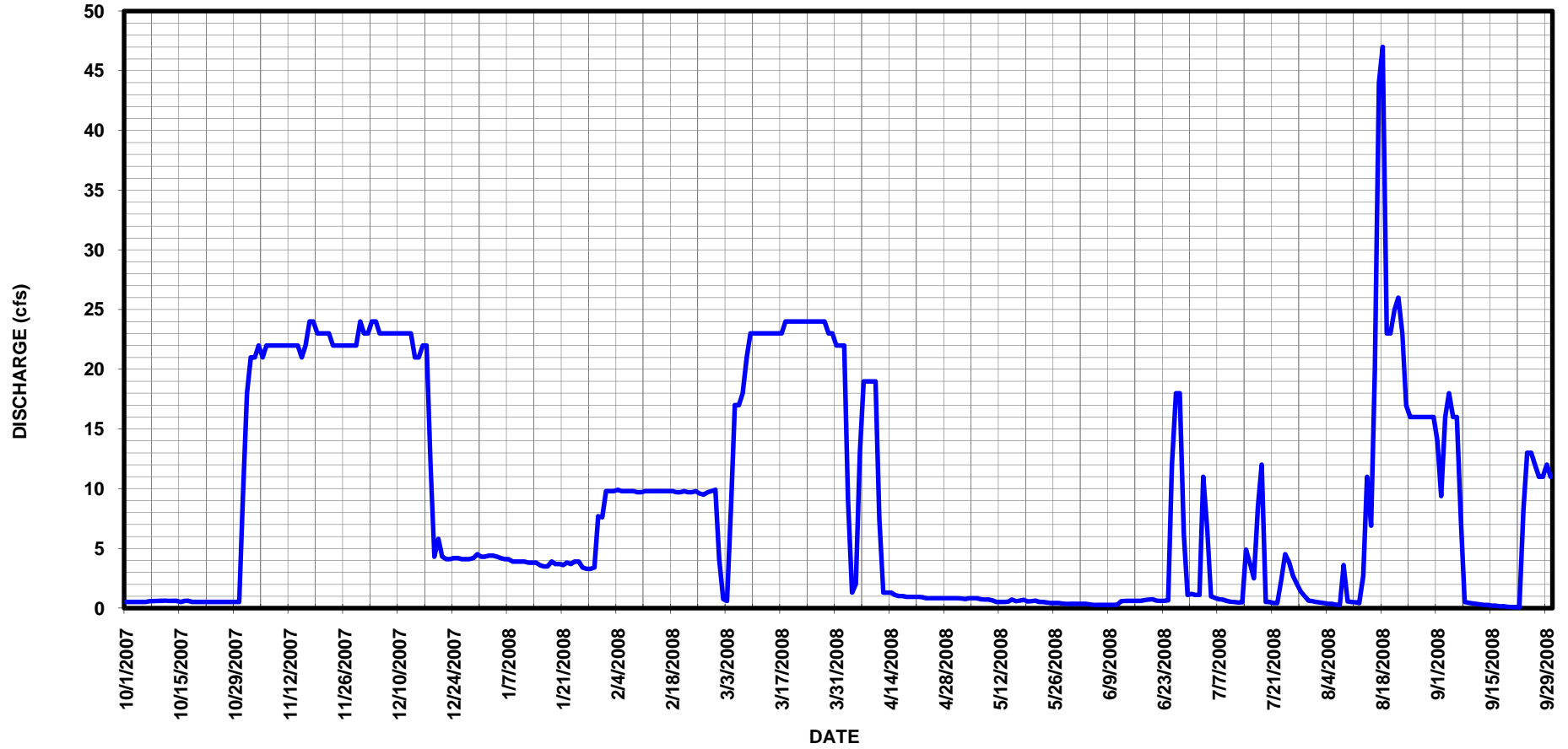
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.52	18	23	4.3	9.8	4.1	22	.82	.35	1.1	.52	14
2	.52	21	23	4.4	9.8	.75	22	.80	.35	1.1	.46	9.4
3	.52	21	24	4.4	9.8	.60	9.1	.77	.35	1.1	.42	16
4	.52	22	24	4.3	9.9	8.6	1.3	.82	.31	6.6	.35	18
5	.52	21	23	4.2	9.8	17	2.0	.82	.27	.98	.35	16
6	.52	22	23	4.1	9.8	17	13	.82	.27	.85	.29	16
7	.58	22	23	4.1	9.8	18	19	.73	.27	.73	.27	7.4
8	.58	22	23	3.9	9.8	21	19	.71	.27	.71	3.6	.52
9	.61	22	23	3.9	9.7	23	19	.71	.27	.61	.55	.44
10	.61	22	23	3.9	9.7	23	19	.64	.27	.53	.52	.39
11	.63	22	23	3.9	9.8	23	7.5	.52	.29	.52	.50	.35
12	.61	22	23	3.8	9.8	23	1.3	.52	.59	.47	.43	.30
13	.61	22	23	3.8	9.8	23	1.3	.52	.61	.48	2.7	.27
14	.61	22	21	3.8	9.8	23	1.3	.54	.61	4.9	1.1	.26
15	.52	21	21	3.6	9.8	23	1.1	.71	.61	3.7	6.9	.20
16	.61	22	22	3.5	9.8	23	1.0	.57	.61	2.5	20	.20
17	.61	24	22	3.5	9.8	23	1.0	.63	.61	8.5	44	.16
18	.52	24	12	3.9	9.8	24	.93	.70	.67	12	47	.14
19	.52	23	4.3	3.7	9.7	24	.93	.56	.71	.52	23	.10
20	.52	23	5.8	3.7	9.7	24	.93	.57	.74	.52	23	.09
21	.52	23	4.3	3.6	9.8	24	.93	.63	.63	.43	25	.09
22	.52	23	4.1	3.8	9.7	24	.91	.52	.61	.43	26	.06
23	.52	22	4.1	3.7	9.7	24	.82	.52	.61	2.4	23	8.2
24	.52	22	4.2	3.9	9.8	24	.82	.46	.65	4.5	17	13
25	.52	22	4.2	3.9	9.6	24	.82	.43	12	3.8	16	13
26	.52	22	4.1	3.4	9.5	24	.82	.43	18	2.7	16	12
27	.52	22	4.1	3.3	9.7	24	.82	.43	18	2.0	16	11
28	.52	22	4.1	3.3	9.8	24	.82	.38	6.2	1.4	16	11
29	.52	22	4.2	3.4	9.9	23	.82	.35	1.1	.98	16	12
30	.52	24	4.5	7.7	---	23	.82	.35	1.2	.63	16	11
31	9.4	---	4.3	7.6	---	22	---	.35	---	.58	16	---
TOTAL	25.86	662	455.3	126.3	283.2	626.05	171.09	18.33	68.03	78.17	388.86	191.57
MEAN	.83	22.1	14.7	4.07	9.77	20.2	5.70	.59	2.27	2.52	12.5	6.39
AC-FT	51	1310	903	251	562	1240	339	36	135	155	771	380
MAX	9.4	24	24	7.7	9.9	24	22	.82	18	12	47	18
MIN	.52	18	4.1	3.3	9.5	.60	.82	.35	.27	.43	.27	.06
CAL YR 2007	TOTAL	1617.60	MEAN	4.42	MAX	24	MIN	0	AC-FT	3210		
WTR YR 2008	TOTAL	3094.76	MEAN	8.46	MAX	47	MIN	.06	AC-FT	6140		

MAX DISCH: 66.8 CFS AT 05:45 ON Aug. 18, 2008 GH 1.90 FT. SHIFT 0 FT.  
MAX GH: 1.90 FT. AT 05:45 ON Aug. 18, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

07126500 NINEMILE CANAL BELOW NINEMILE DAM NEAR HIGBEE CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

07126500 PURGATOIRE RIVER AT NINEMILE DAM NEAR HIGBEE, CO (COMBINED)

**LOCATION.**--Lat 37°42'53", long 103°30'38", in NW¼ sec. 7, T.27 S., R.54 W., Otero County, Hydrologic Unit 11020010, on left bank at Ninemile Dam, 4 mi southwest of Higbee, and 5.5 mi upstream from Smith Canyon. Prior to Apr. 21, 1978 gage located 850 ft, upstream.

**DRAINAGE AREA.**--2,752 mi<sup>2</sup>.

**REMARKS.**--The combined record of discharges was obtained by the addition of daily flows from the Ninemile Canal to the corresponding daily flows in the Purgatoire River at Ninemile Dam. The peak discharge for the water year was 2380 cfs at 1615 on Aug 18, 2008. Combined record is fair, except during periods of estimated record, which are poor. See individual PURNINCO and NMCHIGCO records for more details. Record developed by Div. II Hydrographic Staff.

PURGATOIRE RIVER AT NINEMILE DAM AND NINEMILE CANAL NEAR HIGBEE CO (COMBINED)

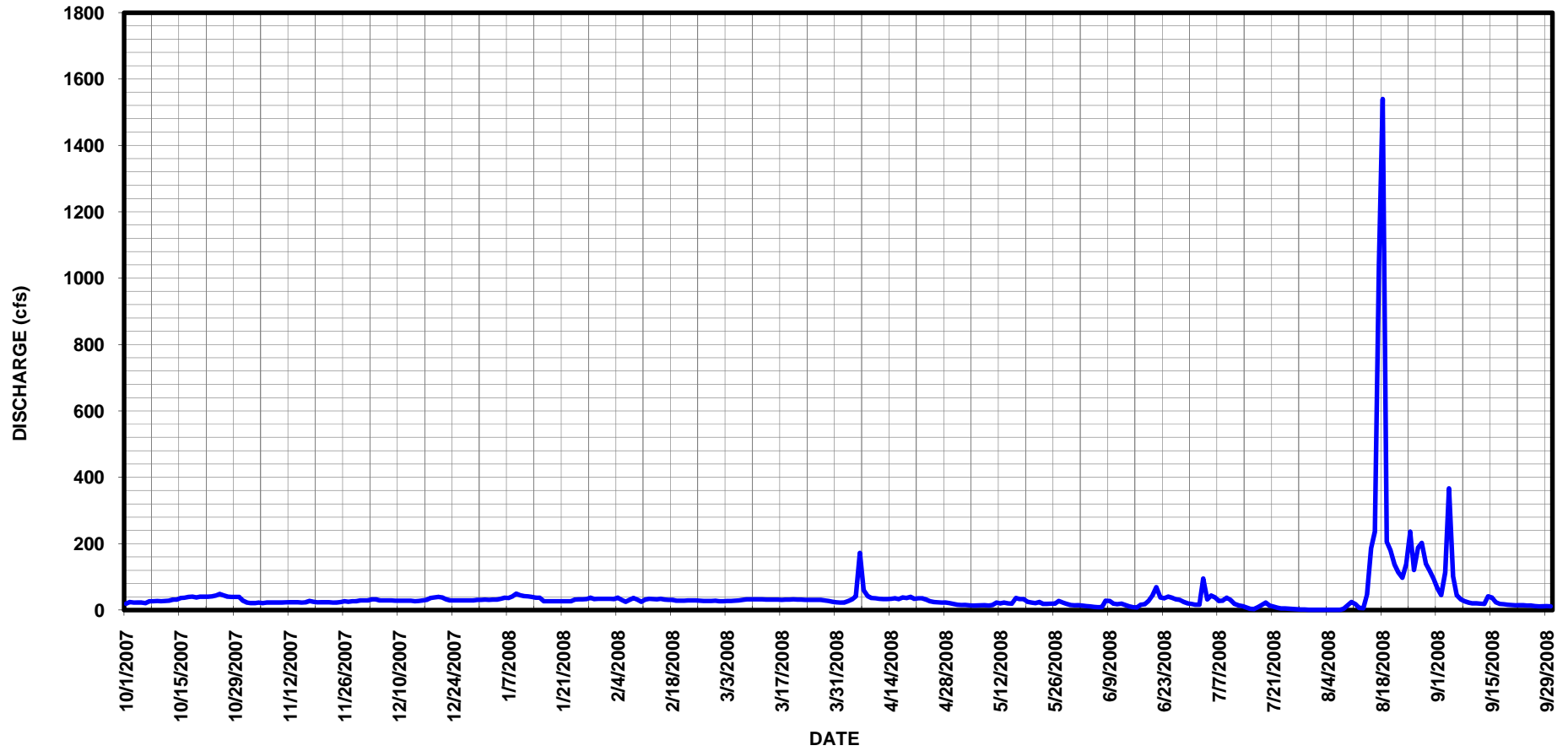
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	22	29	31	34	26	22	16	14	16	.52	65
2	24	21	29	30	34	26	22	15	13	16	.46	45
3	22	21	32	31	33	27	26	15	12	95	.42	113
4	22	22	32	31	37	27	32	14	11	32	.35	366
5	22	21	29	34	30	28	41	13	9.6	43	.35	103
6	21	22	29	37	25	29	172	13	8.7	38	.29	44
7	26	22	29	36	30	30	60	14	8.3	27	.27	32
8	26	22	29	41	36	32	42	14	28	28	3.6	26
9	27	22	28	49	31	32	36	13	27	37	14	22
10	26	22	28	44	25	32	35	15	19	30	24	20
11	27	23	28	42	31	32	34	22	17	18	17	20
12	28	23	28	41	34	32	33	20	19	14	6.1	19
13	31	23	28	39	33	31	33	22	15	12	5.2	18
14	31	23	26	37	32	31	34	20	11	7.9	47	41
15	36	22	27	37	34	31	35	19	8.2	3.7	186	37
16	37	23	29	26	31	31	33	36	7.3	2.5	236	23
17	39	27	30	26	30	30	38	33	16	8.5	1040	18
18	40	25	36	26	30	31	36	33	17	15	1540	17
19	38	23	38	26	28	31	39	25	27	22	206	16
20	40	23	39	26	28	32	34	22	44	13	180	15
21	40	23	38	26	28	31	35	21	69	9.9	137	14
22	40	23	32	26	29	31	35	24	38	6.5	113	14
23	41	22	29	26	29	30	31	18	35	4.4	97	14
24	43	22	29	31	29	30	26	18	40	4.5	137	13
25	48	24	29	32	28	30	24	19	37	3.8	236	13
26	44	26	29	32	27	30	23	19	32	2.7	121	12
27	40	25	29	33	27	30	22	27	30	2	187	11
28	39	26	29	37	27	29	22	22	24	1.4	202	11
29	39	26	29	33	28	27	21	18	20	.98	140	12
30	39	29	30	34	---	25	18	15	18	.63	119	11
31	28	---	30	34	---	23	---	14	---	.58	94	---
TOTAL	1023	698	936	1034	878	917	1094	609	675.1	515.99	5090.56	1185
MEAN	33	23	30	33	30	30	37	20	22.5	16.6	164	40
AC-FT	2030	1380	1860	2050	1740	1820	2170	1210	1340	1020	10100	2350
MAX	48	29	39	49	37	32	172	36	69	95	1540	366
MIN	19	21	26	26	25	23	18	13	7.3	.58	.27	11
CAL YR 2007	TOTAL	20583.00	MEAN	56.4	MAX	392	MIN	19	AC-FT	40830		
WTR YR 2008	TOTAL	14655.65	MEAN	40.0	MAX	1540	MIN	.27	AC-FT	29070		

MAX DISCHARGE: 2380 CFS AT 16:15 ON AUG. 18, 2008.

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

0712650 PURGATOIRE RIVER AT NINEMILE DAM NEAR HIGBEE CO (COMBINED)  
WY2008 HYDROGRAPH





ARKANSAS RIVER BASIN

PURGATOIRE RIVER BELOW HIGHLAND DAM NEAR LAS ANIMAS, CO

**LOCATION.**--Lat 37°54'03", Long 103°17'56" (Hackamore Ranch, CO Quadrangle, Scale 1:24,000), NE1/4, SW1/4, Section 1, T25S, R53W. On the left bank approximately ¼ mile downstream of the Highland Canal Diversion Dam, Bent County, 11 mi southwest of Las Animas, Colorado.

**DRAINAGE AREA.**--N/A.

**GAGE.**--Sutron Accububble water level sensor and satellite-monitored data collection platform (High data rate Sutron 8210 DCP) in a 4 ft x 4 ft steel shelter. Primary record is hourly averages of 15-minute DCP log data with satellite-monitored data used for backup purposes. Primary reference gage is a drop tape gage referenced to the top of "C" channel attached to the flood block. On 9 July 2008 Accububbler was replaced with a Sutron Constant Flow Bubbler.

**REMARKS.**--Record is complete and reliable, except for the following periods: Nov. 25-30, Dec 10, 2007 - February 10, 2008; when ice affected the stage discharge relationship. Record fair, except during periods of ice affected record, and when flows exceed 500 cfs (since such flows are unmeasurable at this location), which all should be considered poor. Station maintained and record developed by A. Adame.

**RATING TABLE.**--PURHILCO03 USED FROM 01-Oct-2007 TO 30-SEPT-2008

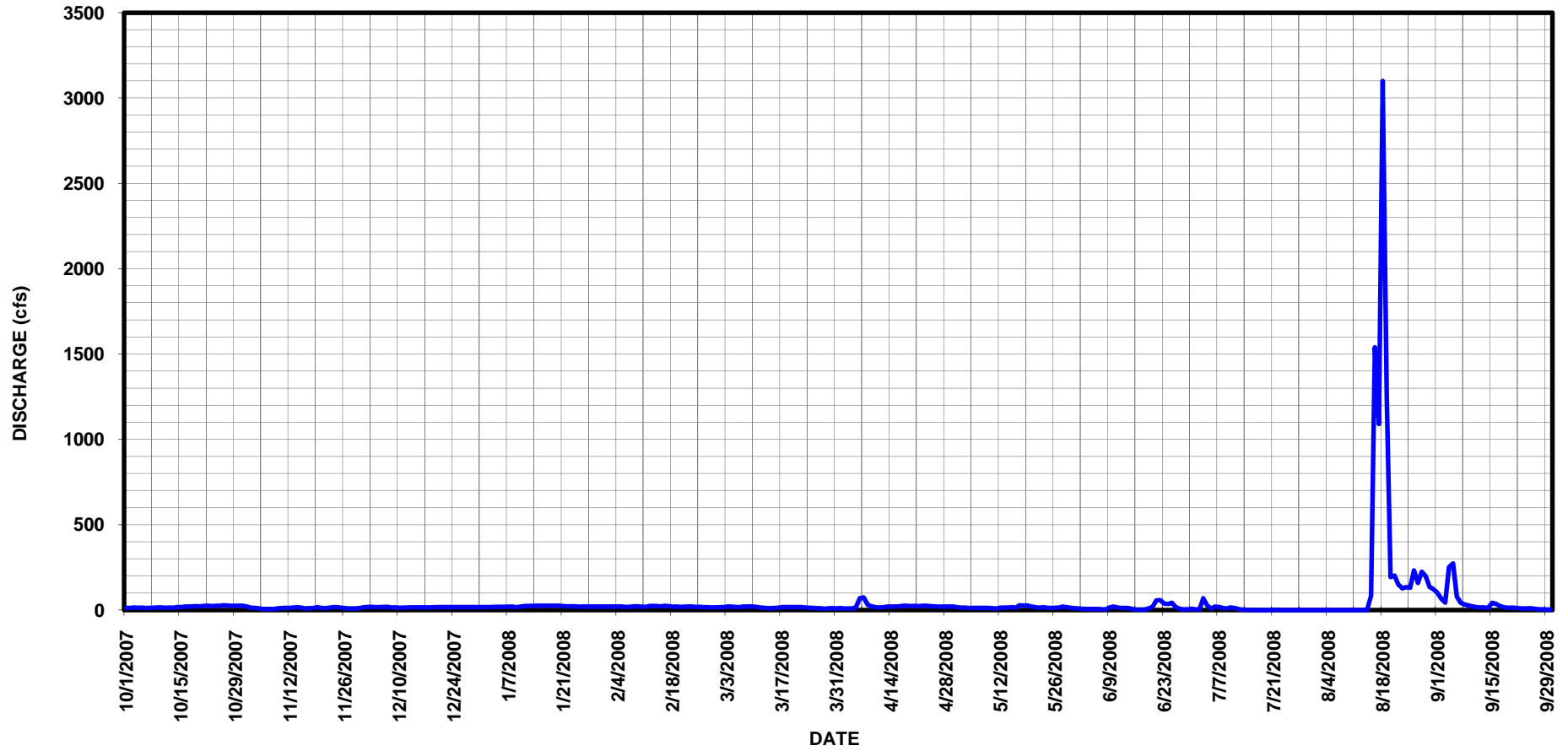
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	20	17	18	20	17	12	17	8.9	5.2	.02	101
2	13	15	19	18	21	18	9.0	14	7.9	3.8	.02	68
3	16	13	19	19	21	21	9.4	14	7.1	.69	.01	45
4	15	11	17	19	20	20	9.7	13	6.6	27	.01	252
5	15	6.5	17	19	20	19	16	13	6.4	8.9	.01	273
6	13	6.5	19	19	19	18	69	12	6.9	21	.01	79
7	12	6.7	19	20	19	20	75	12	4.5	19	.01	42
8	14	6.7	16	20	22	21	32	13	2.7	12	.01	33
9	16	11	16	18	22	22	22	12	16	9.4	.01	27
10	16	12	15	20	21	21	17	11	21	16	0	22
11	15	13	15	24	19	18	16	9.4	16	13	0	18
12	15	12	16	24	23	14	18	14	13	7.0	0	16
13	15	16	16	25	26	13	20	15	13	3.9	.02	16
14	18	17	16	25	24	11	20	16	11	2.3	.02	13
15	18	14	16	26	22	12	21	17	6.2	1.3	.85	43
16	20	10	16	25	25	14	22	14	3.9	.64	1540	36
17	21	11	16	26	23	18	26	28	2.5	.25	1090	24
18	22	12	16	26	21	18	26	27	2.8	.16	3100	18
19	23	18	17	26	21	18	24	27	9.6	.09	1250	15
20	22	13	17	25	19	17	26	20	19	.40	194	14
21	25	11	18	24	20	17	23	17	57	2.0	203	12
22	25	15	18	22	20	17	25	15	58	1.0	150	11
23	24	18	17	22	20	16	25	18	38	.20	128	9.5
24	25	17	17	22	19	15	23	15	36	.13	134	9.6
25	26	15	17	21	19	12	22	13	42	.07	131	11
26	28	13	17	21	18	11	21	14	16	.05	232	8.5
27	27	10	17	20	17	11	20	15	8.0	.05	159	5.0
28	26	10	17	20	16	7.8	21	21	4.5	.04	224	4.3
29	26	10	18	20	16	11	21	17	5.5	.03	198	3.7
30	26	13	18	20	---	11	21	14	7.4	.03	136	2.7
31	25	---	18	20	---	9.2	---	11	---	.03	122	---
TOTAL	616	376.4	527	674	593	488.0	712.1	488.4	457.4	223.97	9076.15	1232.3
MEAN	19.9	12.5	17.0	21.7	20.4	15.7	23.7	15.8	15.2	7.22	293	41.1
AC-FT	1220	747	1050	1340	1180	968	1410	969	907	444	18000	2440
MAX	28	20	19	26	26	22	75	28	58	69	3100	273
MIN	12	6.5	15	18	16	7.8	9.0	9.4	2.5	.03	0	2.7
CAL YR 2007	TOTAL	19472.80	MEAN	53.4	MAX	459	MIN	6.5	AC-FT	38620		
WTR YR 2008	TOTAL	15464.72	MEAN	42.3	MAX	3100	MIN	0	AC-FT	30670		

MAX DISCH: 4590 CFS AT 03:30 ON Aug. 16, 2008 GH 9.13 FT. SHIFT -0.10 FT.  
MAX GH: 9.13 FT. AT 03:30 ON Aug. 16, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

PURGATOIRE RIVER BELOW HIGHLAND DAM NEAR LAS ANIMAS CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

HIGHLAND CANAL BELOW HIGHLAND DAM NEAR LAS ANIMAS, CO

**LOCATION.**--Lat 37°54'03", Long 103°17'56" (Hackamore Ranch, CO Quadrangle, Scale 1:24,000), NE1/4, SW1/4, Section 1, T25S, R53W. On the left bank approximately ¼ mile downstream of the Highland Canal Diversion Dam, Bent County, 11 mi southwest of Las Animas, Colorado.

**DRAINAGE AREA.**--N/A.

**GAGE.**--Float-activated graphic water-stage recorder and shaft encoder in small shelter over CMP stilling well. Shaft encoder wired to satellite-monitored data collection platform (Sutron 8210 HDR DCP) in Purgatoire River below Highland Dam gage shelter. Primary record is hourly averages of 15-minute satellite-monitored data with the graphic chart recorder used for backup purposes. Standard 5-ft steel Parshall flume is the control. Primary reference gage is outside staff gage installed in flume.

**REMARKS.**--Record is complete and reliable. The canal was started on May 1, 2008 and shut off for the year on September 15, 2008. Record is considered fair, based on the facts that the shift on measurement no. 2 was percentaged at 6% and run for the entire water year, measurement no. 2 was rated "fair", and that the gage height was less than that recommended for accurate measurement in a 5-ft Parshall Flume on 31 days. Station maintained and record developed by A. Adame.

**RATING TABLE.**--STD05FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

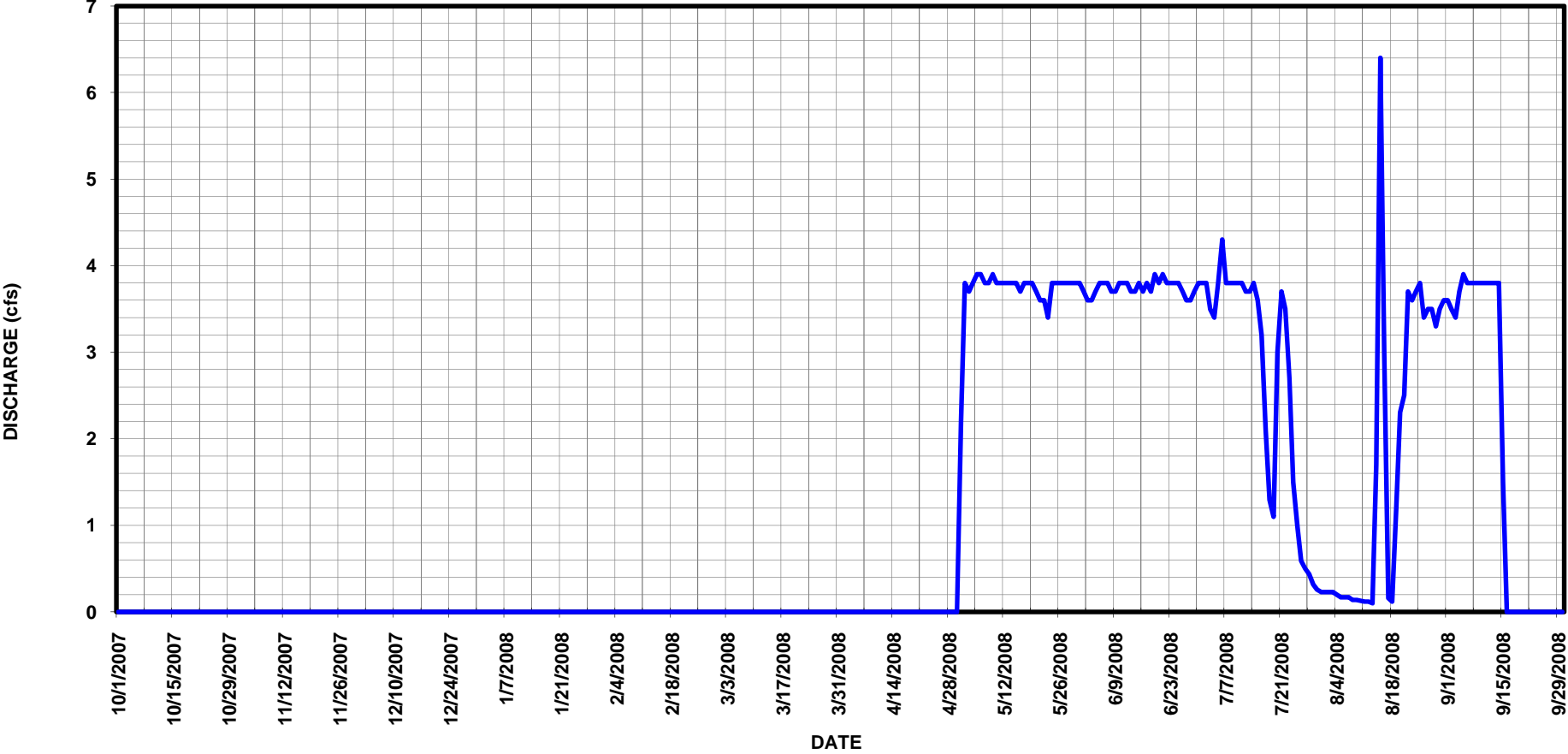
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	2.2	3.7	3.8	.23	3.6
2	0	0	0	0	0	0	0	3.8	3.6	3.8	.23	3.5
3	0	0	0	0	0	0	0	3.7	3.6	3.5	.23	3.4
4	0	0	0	0	0	0	0	3.8	3.7	3.4	.2	3.7
5	0	0	0	0	0	0	0	3.9	3.8	3.8	.17	3.9
6	0	0	0	0	0	0	0	3.9	3.8	4.3	.17	3.8
7	0	0	0	0	0	0	0	3.8	3.8	3.8	.17	3.8
8	0	0	0	0	0	0	0	3.8	3.7	3.8	.14	3.8
9	0	0	0	0	0	0	0	3.9	3.7	3.8	.14	3.8
10	0	0	0	0	0	0	0	3.8	3.8	3.8	.13	3.8
11	0	0	0	0	0	0	0	3.8	3.8	3.8	.12	3.8
12	0	0	0	0	0	0	0	3.8	3.8	3.7	.12	3.8
13	0	0	0	0	0	0	0	3.8	3.7	3.7	.1	3.8
14	0	0	0	0	0	0	0	3.8	3.7	3.8	1.7	3.8
15	0	0	0	0	0	0	0	3.8	3.8	3.6	6.4	1.5
16	0	0	0	0	0	0	0	3.7	3.7	3.2	3	0
17	0	0	0	0	0	0	0	3.8	3.8	2.1	.16	0
18	0	0	0	0	0	0	0	3.8	3.7	1.3	.12	0
19	0	0	0	0	0	0	0	3.8	3.9	1.1	1.2	0
20	0	0	0	0	0	0	0	3.7	3.8	3	2.3	0
21	0	0	0	0	0	0	0	3.6	3.9	3.7	2.5	0
22	0	0	0	0	0	0	0	3.6	3.8	3.5	3.7	0
23	0	0	0	0	0	0	0	3.4	3.8	2.7	3.6	0
24	0	0	0	0	0	0	0	3.8	3.8	1.5	3.7	0
25	0	0	0	0	0	0	0	3.8	3.8	1	3.8	0
26	0	0	0	0	0	0	0	3.8	3.7	.59	3.4	0
27	0	0	0	0	0	0	0	3.8	3.6	.5	3.5	0
28	0	0	0	0	0	0	0	3.8	3.6	.44	3.5	0
29	0	0	0	0	0	0	0	3.8	3.7	.32	3.3	0
30	0	0	0	0	---	0	0	3.8	3.8	.26	3.5	0
31	0	---	0	0	---	0	---	3.8	---	.23	3.6	---
TOTAL	0	0	0	0	0	0	0	115.4	112.4	81.84	55.13	53.8
MEAN	0	0	0	0	0	0	0	3.7	3.8	2.64	1.78	1.79
AC-FT	0	0	0	0	0	0	0	229	223	162	109	107
MAX	0	0	0	0	0	0	0	3.9	3.9	4.3	6.4	3.9
MIN	0	0	0	0	0	0	0	2.2	3.6	.23	.1	0

CAL YR	2007	TOTAL	452.80	MEAN	1.24	MAX	4.5	MIN	0	AC-FT	898
WTR YR	2008	TOTAL	418.57	MEAN	1.14	MAX	6.4	MIN	0	AC-FT	830

MAX DISCH: 51.7 CFS AT 23:00 ON Aug. 15, 2008 GH 1.84 FT. GH CORR. -0.02 FT. SHIFT 0 FT.  
MAX GH: 1.82 FT. (GH CORR. -0.02 FT. APPLIED) AT 23:00 ON Aug. 15, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

HIGHLAND CANAL BELOW HIGHLAND DAM NEAR LAS ANIMAS CO  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

PURGATOIRE RIVER BELOW HIGHLAND DAM NEAR LAS ANIMAS, CO (COMBINED)

HIGHLAND CANAL near LAS ANIMAS, CO

**LOCATION.**--Lat 37°54'03", Long 103°17'56" (Hackamore Ranch, CO Quadrangle, Scale 1:24,000), NE1/4, SW1/4, Section 1, T25S, R53W. On the left bank approximately ¼ mile downstream of the Highland Canal Diversion Dam, Bent County, 11 mi southwest of Las Animas, Colorado.

**DRAINAGE AREA.**--N/A.

**REMARKS.**--The combined record of discharges was obtained by the addition of Highland Canal daily flows to the corresponding daily flows in the Purgatoire River below Highland Dam. The peak discharge for the water year was 4590 cfs at 03:30 on August 16, 2008. Combined record is fair, except during periods of estimated flow and flows greater than 500 cfs, which should be considered poor. Record developed by Div. II Hydrographic Staff.

PURGATOIRE RIVER BELOW HIGHLAND DAM AND HIGHLAND CANAL (COMBINED)

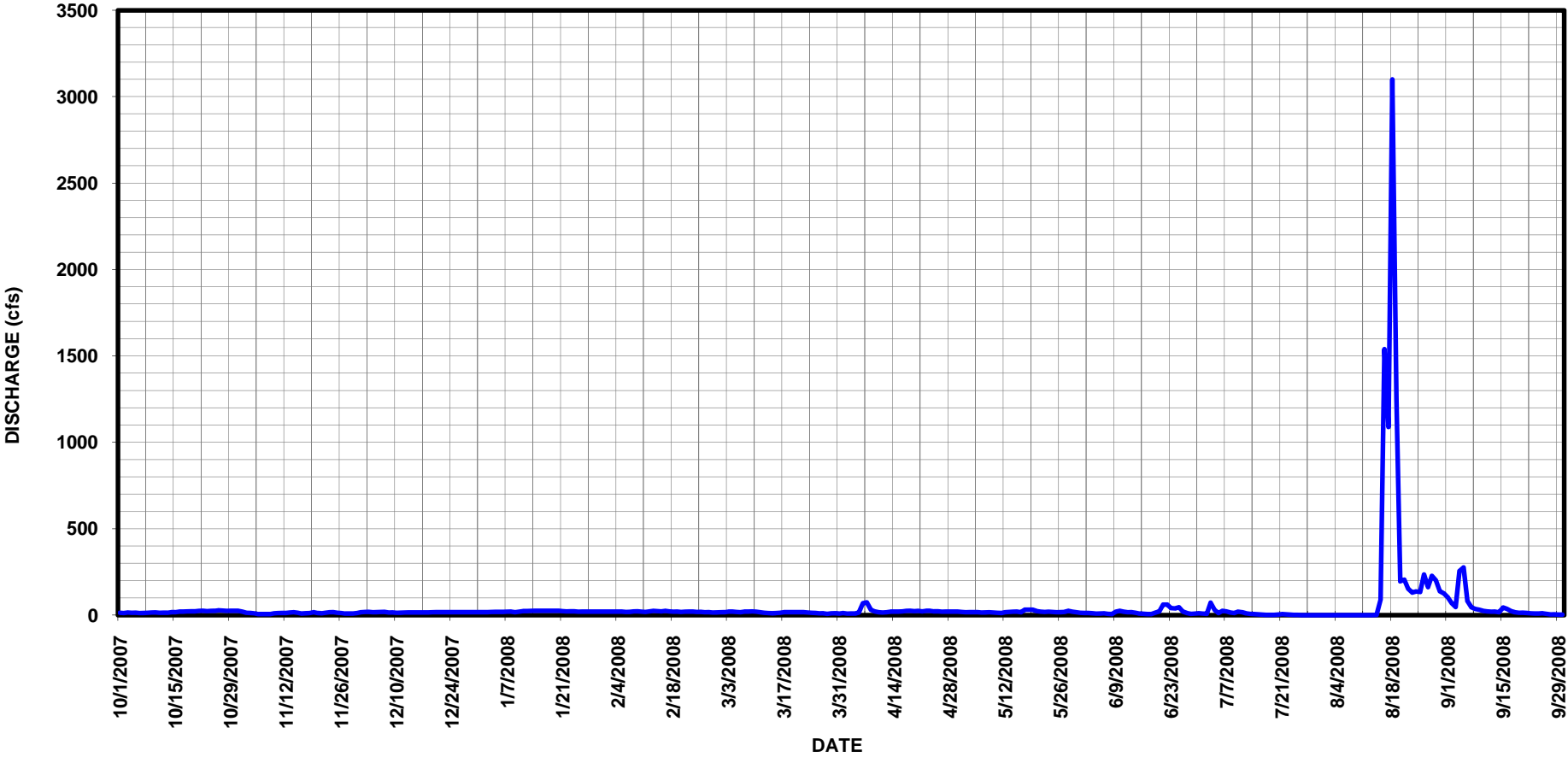
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	20	17	18	20	17	12	19	13	9	.25	105
2	13	15	19	18	21	18	9	18	12	7.6	.25	72
3	16	13	19	19	21	21	9.4	18	11	73	.24	48
4	15	11	17	19	20	20	9.7	17	10	30	.21	256
5	15	6.5	17	19	20	19	16	17	10	13	.18	277
6	13	6.5	19	19	19	18	69	16	11	25	.18	83
7	12	6.7	19	20	19	20	75	16	8.3	23	.18	46
8	14	6.7	16	20	22	21	32	17	6.4	16	.15	37
9	16	11	16	18	22	22	22	16	20	13	.15	31
10	16	12	15	20	21	21	17	15	25	20	.13	26
11	15	13	15	24	19	18	16	13	20	17	.12	22
12	15	12	16	24	23	14	18	18	17	11	.12	20
13	15	16	16	25	26	13	20	19	17	7.6	.12	20
14	18	17	16	25	24	11	20	20	15	6.1	1.7	17
15	18	14	16	26	22	12	21	21	10	4.9	.91	45
16	20	10	16	25	25	14	22	18	7.6	3.8	1540	36
17	21	11	16	26	23	18	26	32	6.3	2.4	1090	24
18	22	12	16	26	21	18	26	31	6.5	1.5	3100	18
19	23	18	17	26	21	18	24	31	14	1.2	1250	15
20	22	13	17	25	19	17	26	24	23	3.4	196	14
21	25	11	18	24	20	17	23	21	61	5.7	206	12
22	25	15	18	22	20	17	25	19	62	4.5	154	11
23	24	18	17	22	20	16	25	21	42	2.9	132	9.5
24	25	17	17	22	19	15	23	19	40	1.6	138	9.6
25	26	15	17	21	19	12	22	17	46	1.1	135	11
26	28	13	17	21	18	11	21	18	20	.64	235	8.5
27	27	10	17	20	17	11	20	19	12	.55	163	5
28	26	10	17	20	16	7.8	21	25	8.1	.48	228	4.3
29	26	10	18	20	16	11	21	21	9.2	.35	201	3.7
30	26	13	18	20	---	11	21	18	11	.29	140	2.7
31	25	---	18	20	---	9.2	---	15	---	.26	126	---
TOTAL	616	376.4	527	674	593	488	712.1	609	574.4	306.87	9128.98	1289.3
MEAN	20	12.5	17	22	20	15.7	23.7	20	19.1	9.9	294	43
AC-FT	1220	747	1050	1340	1180	968	1410	1210	1140	609	18110	2560
MAX	28	20	19	26	26	22	75	32	62	73	3100	277
MIN	12	6.5	15	18	16	7.8	9	13	6.3	.26	.12	2.7
CAL YR 2007	TOTAL	19940.40	MEAN	54.6	MAX	463	MIN	6.5	AC-FT	39550		
WTR YR 2008	TOTAL	15895.05	MEAN	43.4	MAX	3100	MIN	.12	AC-FT	31530		

MAX. DISCHARGE: 4590 CFS AT 03:30 ON Aug. 16, 2008.

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

PURGATOIRE RIVER BELOW HIGHLAND DAM NEAR LAS ANIMAS CO (COMBINED)  
WY2008 HYDROGRAPH



ARKANSAS RIVER BASIN

MUDDY CREEK BELOW MUDDY CREEK DAM NEAR TOONERVILLE, CO

**LOCATION.**-- Latitude 37° 45' 46", Longitude 103° 14' 36" (Toonerville, Colorado quadrangle, 1:24000 scale) in the SE¼ SE¼ Sec.21, T26S, R52W, Bent County on the north bridge abutment where CR 11 crosses Muddy Creek.

**DRAINAGE AREA AND PERIOD OF RECORD.**--Undetermined. The gage was established in the 1970's. It is unknown at this time how long the station was operated before it was abandoned. The station was reopened in the October of 2004 utilizing the existing stilling well.

**GAGE.**--Sutron SatLink-2 satellite-monitored data collection platform (DCP) and shaft encoder sheltered in a steel "half shelter" on a 24-inch CMP stilling well. The shaft encoder is referenced to a drop tape from an "I" beam on a rail along the bridge. The stilling well and intakes were excavated on May 6, 2008. Elev. of gage is approximately 4,230 ft (from topographic map).

**REMARKS.**-- Primary record is hourly averages of 15-minute satellite-monitored data. The record is complete and reliable, except for the following periods: Oct 1-12 and Nov 14-20, 2007; Feb 4-13, 15, 16, 18-19, 21-24, 26-29; Mar 1, 12-31; Apr 1-8; May 6; Aug 20-31 and Sep 1-15, 2008, when gage heights are not considered to be indicative of flow in the creek. Specifically gage heights indicate flow because the float is sitting on mud; however, based on numerous site visits and analysis of rain fall data our best estimate is that there was no flow. Dec 8-13, 2007 and June 3-5, 2008, when equipment problems resulted in missing gage height data. Muddy Creek is an ephemeral stream and flows are generally short duration spikes due to rainfall-runoff events. Record should be considered poor. The flashy nature and remote location of the gage make it extremely difficult maintain an accurate stage-discharge rating. Station maintained and record developed by A. Adame.

**RATING TABLE.**--MUDTOOCO01 USED FROM 01-Oct-2007 TO 30-Sep-2008

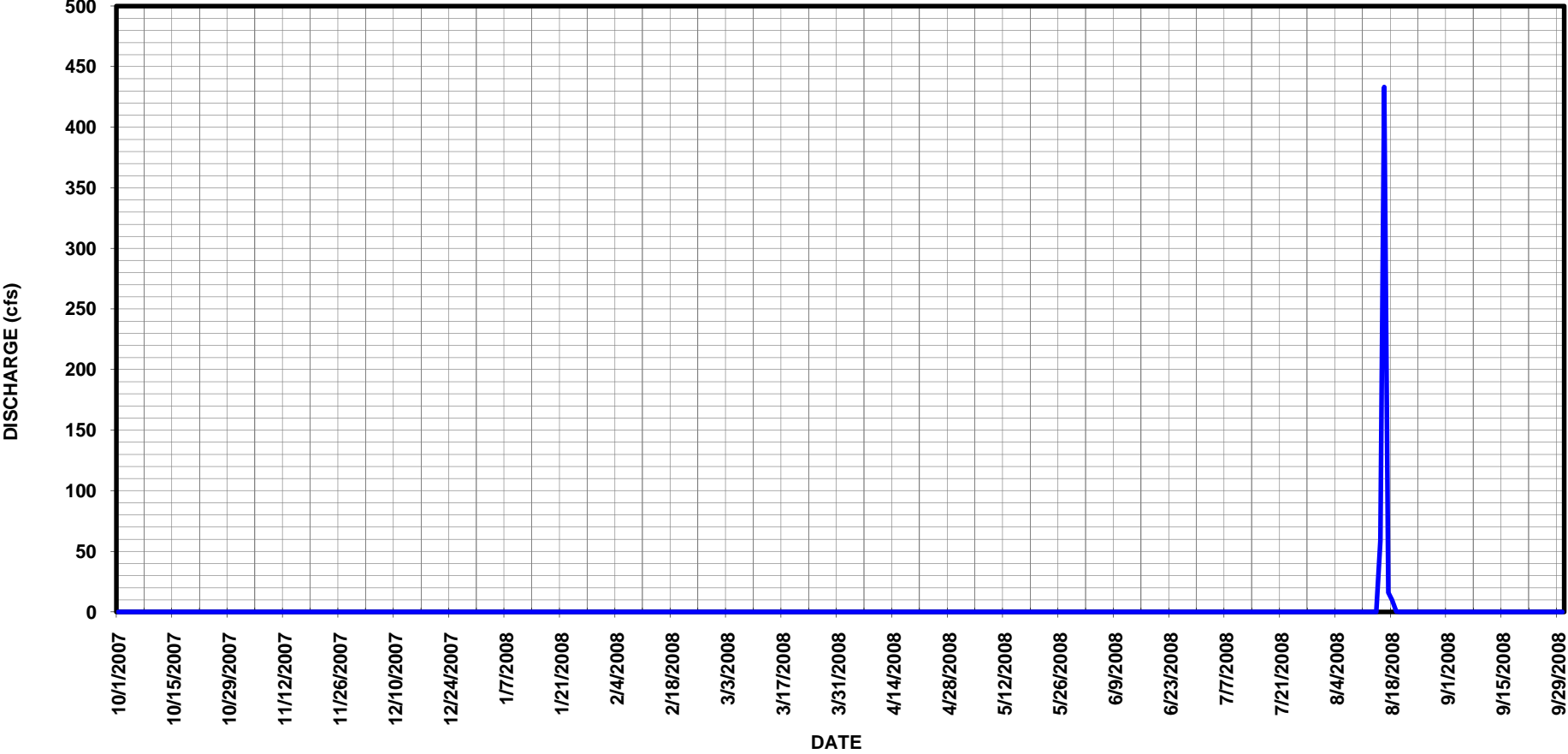
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	59	0
16	0	0	0	0	0	0	0	0	0	0	433	0
17	0	0	0	0	0	0	0	0	0	0	16	0
18	0	0	0	0	0	0	0	0	0	0	9.8	0
19	0	0	0	0	0	0	0	0	0	0	.41	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	---	0	0	0	0	0	0	0
31	0	---	0	0	---	0	---	0	---	0	0	---
TOTAL	0	0	0	0	0	0	0	0	0	0	518.21	0
MEAN	0	0	0	0	0	0	0	0	0	0	16.7	0
AC-FT	0	0	0	0	0	0	0	0	0	0	1030	0
MAX	0	0	0	0	0	0	0	0	0	0	433	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0

CAL YR 2007 TOTAL 751.40 MEAN 2.06 MAX 167 MIN 0 AC-FT 1490  
WTR YR 2008 TOTAL 518.21 MEAN 1.42 MAX 433 MIN 0 AC-FT 1030

MAX DISCH: 1540 CFS AT 04:00 ON Aug. 16, 2008 GH 10.14 FT. SHIFT -0.86 FT.  
MAX GH: 10.14 FT. AT 04:00 ON Aug. 16, 2008

MUDDY CREEK BELOW MUDDY CREEK DAM NEAR TOONERVILLE CO  
WY2008 HYDROGRAPH





ARKANSAS RIVER BASIN

RULE CREEK AT HWY 101 NEAR TOONERVILLE CO

**LOCATION.**-- Latitude 37° 49' 12", Longitude 103° 10' 55" (Toonerville, Colorado quadrangle, 1:24000 scale) in the NW¼ Sec.6, T26S, R51W, Bent County on the downstream side of a bridge abutment at the crossing of Highway 101 and Rule Creek approximately 920 feet below the confluence of Muddy and Rule Creek.

**DRAINAGE AREA AND PERIOD OF RECORD.**--Undetermined. The gage was established in the 1970's. It is unknown at this time how long the station was operated before it was abandoned. The station was reopened in the October of 2004 utilizing the existing stilling well, and subsequently replaced with a Accububble gage.

**GAGE.**--High data rate Sutron SatLink 2 DCP and Sutron Accububble mounted on the north side of the Highway 101 bridge over Rule Creek. Primary record is hourly averages of 15-minute satellite-monitored data. A drop wire weight gage installed on the bridge is used as the primary reference gage. Elevation of gage is approximately 4,120 ft above mean sea level from topographic map.

**REMARKS.**--The gage height record is complete and reliable, except for the following periods: Nov 22-29, Dec 2-3, 8-18, 20, 22-31, 2007, Jan 1-5, 7-31, Feb 1-3,5-12,15-22, 27, Mar 3-4,7, 2008, when there were equipment problems with the Accububble resulting in spurious data, mainly caused by ice in the bubbler line; Oct 6,14,16,21-22,24-30, Nov 1-19, Dec 19, 21, 2007, Jan 6, Feb 4,13-14,24,26,28-29, Mar 1-2,5-6,8-9,14-18,20,22-26,28,31, Apr 1, 4-12,14-20,23, May 5-16,22-31, Jun 1-12, Jul 17-24, Sep 12-13, 2008, when gage heights were not indicative of actual flow. Generally during these periods, gage heights would have indicated some small flow, whereas numerous site visits observed no flow throughout the time periods involved. Record should be considered poor: the flashy nature and remote location of the gage make it extremely difficult to maintain a reliable stage-discharge relationship, and daily average flows on Aug 15-16, 2008, are more than twice the maximum measured flow during the water year. Station maintained by A. Adame and record developed by Mark Perry.

**RATING TABLE.**--RULTOOCO01 USED FROM 01-Oct-2007 TO 30-Sep-2008

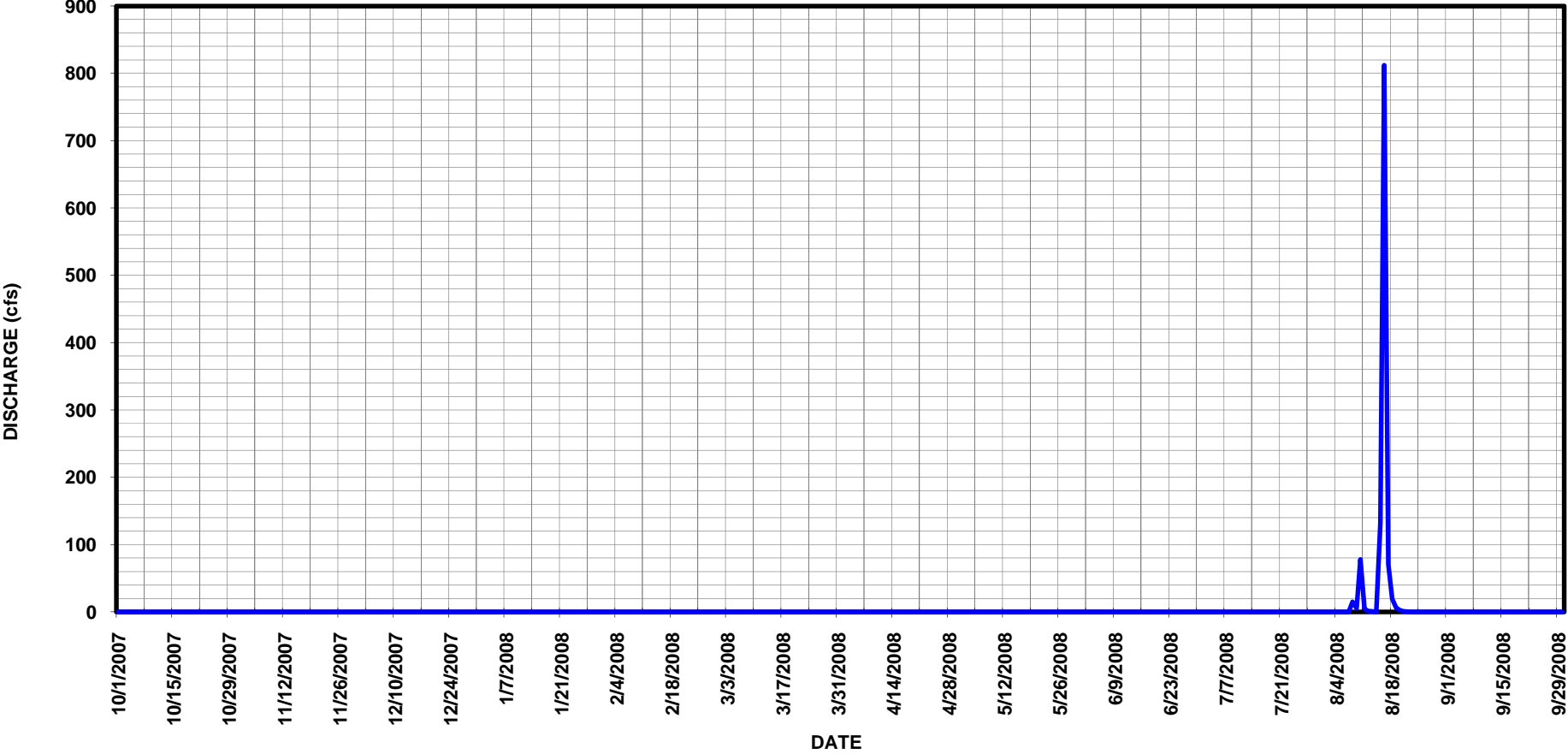
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	15	0
9	0	0	0	0	0	0	0	0	0	0	5.7	0
10	0	0	0	0	0	0	0	0	0	0	78	0
11	0	0	0	0	0	0	0	0	0	0	4.6	0
12	0	0	0	0	0	0	0	0	0	0	1.3	0
13	0	0	0	0	0	0	0	0	0	0	.82	0
14	0	0	0	0	0	0	0	0	0	0	.15	0
15	0	0	0	0	0	0	0	0	0	0	132	0
16	0	0	0	0	0	0	0	0	0	0	812	0
17	0	0	0	0	0	0	0	0	0	0	71	0
18	0	0	0	0	0	0	0	0	0	0	20	0
19	0	0	0	0	0	0	0	0	0	0	6.0	0
20	0	0	0	0	0	0	0	0	0	0	2.5	0
21	0	0	0	0	0	0	0	0	0	0	.98	0
22	0	0	0	0	0	0	0	0	0	0	.28	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	---	0	0	0	0	0	0	0
31	0	---	0	0	---	0	---	0	---	0	0	---
TOTAL	0	0	0	0	0	0	0	0	0	0	1150.33	0
MEAN	0	0	0	0	0	0	0	0	0	0	37.1	0
AC-FT	0	0	0	0	0	0	0	0	0	0	2280	0
MAX	0	0	0	0	0	0	0	0	0	0	812	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0

CAL YR	2007	TOTAL	595.26	MEAN	1.63	MAX	167	MIN	0	AC-FT	1180
WTR YR	2008	TOTAL	1150.33	MEAN	3.14	MAX	812	MIN	0	AC-FT	2280

MAX DISCH: 2460 CFS (ESTIMATED) AT 07:30 ON Aug. 16, 2008 GH 10.88 FT. SHIFT +0.46 FT.  
MAX GH: 10.88 FT. AT 07:30 ON Aug. 16, 2008

RULE CREEK AT HWY 101 NEAR TOONERVILLE CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

ARKANSAS RIVER BASIN

09061500 COLUMBINE DITCH NEAR FREMONT PASS, CO.

**LOCATION.**--Lat 39°22'25", long 106°13'38". Columbine ditch diverts water from tributaries of Eagle River in sec. 5, T.8 S., R. 79 W., in Colorado River basin to Chalk Creek (tributary to East Fork Arkansas River) in NW¼ sec. 9, T.8 S., R 79 W., in Arkansas River basin.

**DRAINAGE AREA.**--N/A.

**GAGE.**--Graphic water-stage recorder, satellite-monitored data collection platform (Sutron SatLink high data rate DCP) and shaft encoder in a 30" diameter metal pipe shelter and well. Shaft encoder and chart are set to outside staff gage. Control is a 6-foot steel Parshall Flume.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite-monitored data with the graphic chart recorder used for backup purposes. Record is complete and reliable, except for June 4, 5,7-16,18-21, 2008 due to ice in the flume. This ditch is owned by Pueblo Board of Water Works. PBWW minimized diversions during WY08 in order to lower their 10-year average diversions. Therefore, the ditch ran intermittently through the season. Record fair, due to intermittent low flows with many days running gage heights too low for the 6-foot Parshall Flume to measure accurately, except for periods of ice-affected record, which are poor. Station maintained and record developed by L.R. Schultz.

**RATING TABLE.**--COLDITCO01 USED FROM 01-Oct-2007 TO 30-Sep-2008

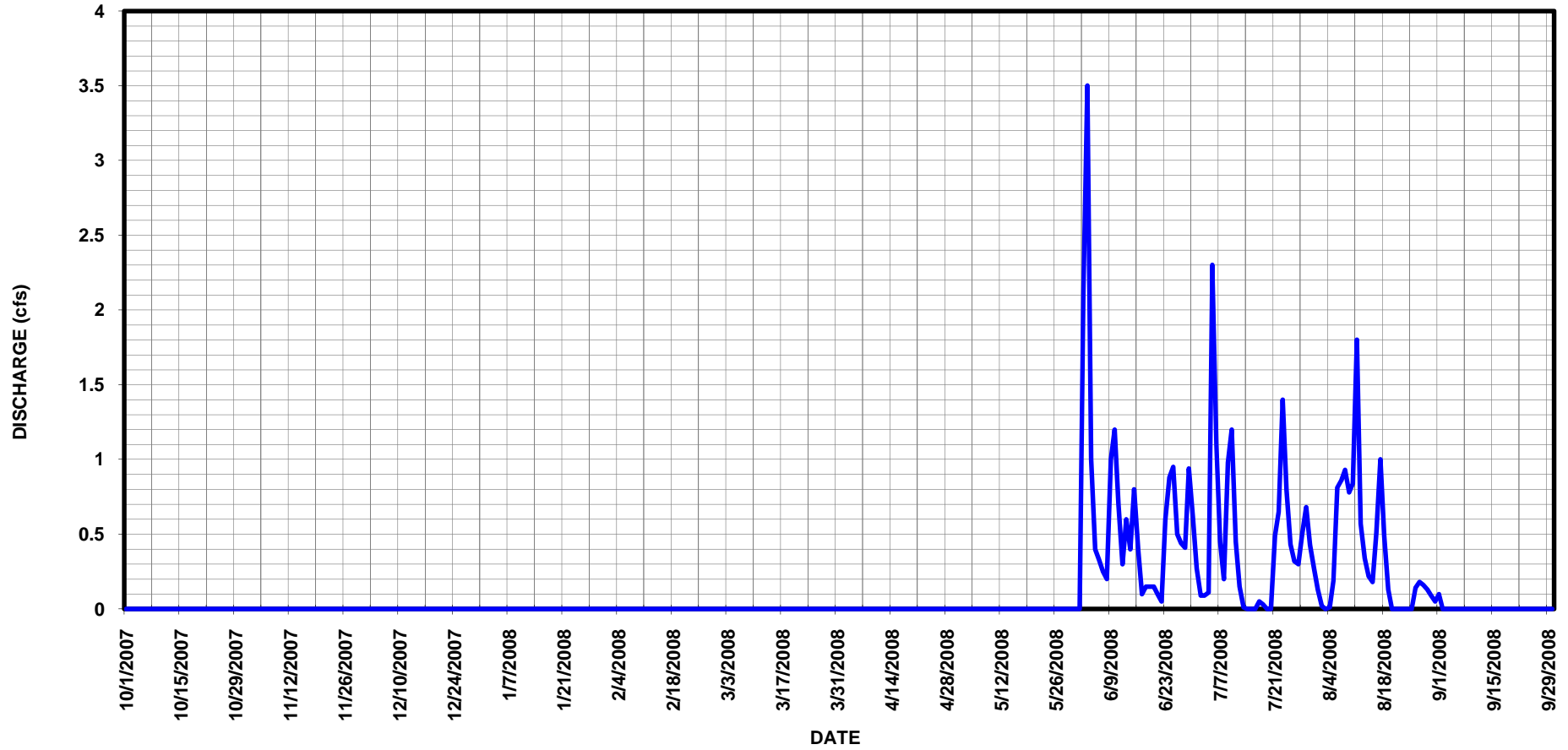
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	.27	.13	.10
2	0	0	0	0	0	0	0	0	2.1	.09	.02	0
3	0	0	0	0	0	0	0	0	3.5	.09	0	0
4	0	0	0	0	0	0	0	0	1.0	.11	.01	0
5	0	0	0	0	0	0	0	0	.40	2.3	.19	0
6	0	0	0	0	0	0	0	0	.33	1.1	.81	0
7	0	0	0	0	0	0	0	0	.25	.45	.86	0
8	0	0	0	0	0	0	0	0	.20	.20	.93	0
9	0	0	0	0	0	0	0	0	1.0	.98	.78	0
10	0	0	0	0	0	0	0	0	1.2	1.2	.84	0
11	0	0	0	0	0	0	0	0	.70	.45	1.8	0
12	0	0	0	0	0	0	0	0	.30	.15	.57	0
13	0	0	0	0	0	0	0	0	.60	.01	.34	0
14	0	0	0	0	0	0	0	0	.40	0	.22	0
15	0	0	0	0	0	0	0	0	.80	0	.18	0
16	0	0	0	0	0	0	0	0	.40	0	.51	0
17	0	0	0	0	0	0	0	0	.10	.05	1.0	0
18	0	0	0	0	0	0	0	0	.15	.03	.49	0
19	0	0	0	0	0	0	0	0	.15	0	.13	0
20	0	0	0	0	0	0	0	0	.15	0	0	0
21	0	0	0	0	0	0	0	0	.10	.49	0	0
22	0	0	0	0	0	0	0	0	.05	.65	0	0
23	0	0	0	0	0	0	0	0	.60	1.4	0	0
24	0	0	0	0	0	0	0	0	.88	.80	0	0
25	0	0	0	0	0	0	0	0	.95	.43	0	0
26	0	0	0	0	0	0	0	0	.50	.32	.14	0
27	0	0	0	0	0	0	0	0	.44	.30	.18	0
28	0	0	0	0	0	0	0	0	.41	.50	.16	0
29	0	0	0	0	0	0	0	0	.94	.68	.13	0
30	0	0	0	0	---	0	0	0	.61	.43	.09	0
31	0	---	0	0	---	0	---	0	---	.27	.05	---
TOTAL	0	0	0	0	0	0	0	0	19.21	13.75	10.56	.10
MEAN	0	0	0	0	0	0	0	0	.64	.44	.34	.003
AC-FT	0	0	0	0	0	0	0	0	38	27	21	.2
MAX	0	0	0	0	0	0	0	0	3.5	2.3	1.8	.10
MIN	0	0	0	0	0	0	0	0	0	0	0	0
CAL YR 2007	TOTAL	922.8	MEAN	2.53	MAX	31	MIN	0	AC-FT	1830		
WTR YR 2008	TOTAL	43.62	MEAN	.12	MAX	3.5	MIN	0	AC-FT	87		

MAX DISCH: 13.6 CFS AT 18:45 ON Jul. 5, 2008 GH 0.67 FT. SHIFT 0.03 FT.  
MAX GH: 0.67 FT. AT 18:45 ON Jul. 5, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09061500 COLUMBINE DITCH NEAR FREMONT PASS CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

ARKANSAS RIVER BASIN

09062000 EWING DITCH AT TENNESSEE PASS, CO

**LOCATION.**--Lat 39°21'40", long 106°18'22", diverts water from Piney Creek in sec. 11, T.8 S., R.80 W., in Eagle River basin, to Thayer Gulch (tributary to Tennessee Creek) in sec. 11, T. 8 S., R.80 W., in Arkansas River basin

**DRAINAGE AREA.**--N/A.

**GAGE.**--Graphic water-stage recorder, satellite-monitored data collection platform (Sutron SatLink high data rate DCP) and shaft encoder in a 30" diameter metal pipe shelter and well. Shaft encoder and chart are set to outside staff gage. Control is a 4-foot steel Parshall Flume.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite-monitored data with the graphic chart recorder used for backup purposes. Record is complete and reliable, except for the following days when the stage- discharge relationship was affected by ice in the flume: May 16, 2008. Record good, except for periods of ice effects, which are poor. Station maintained by L.R. Schultz and record developed by C. A. Hart.

**RATING TABLE.**--STD04FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

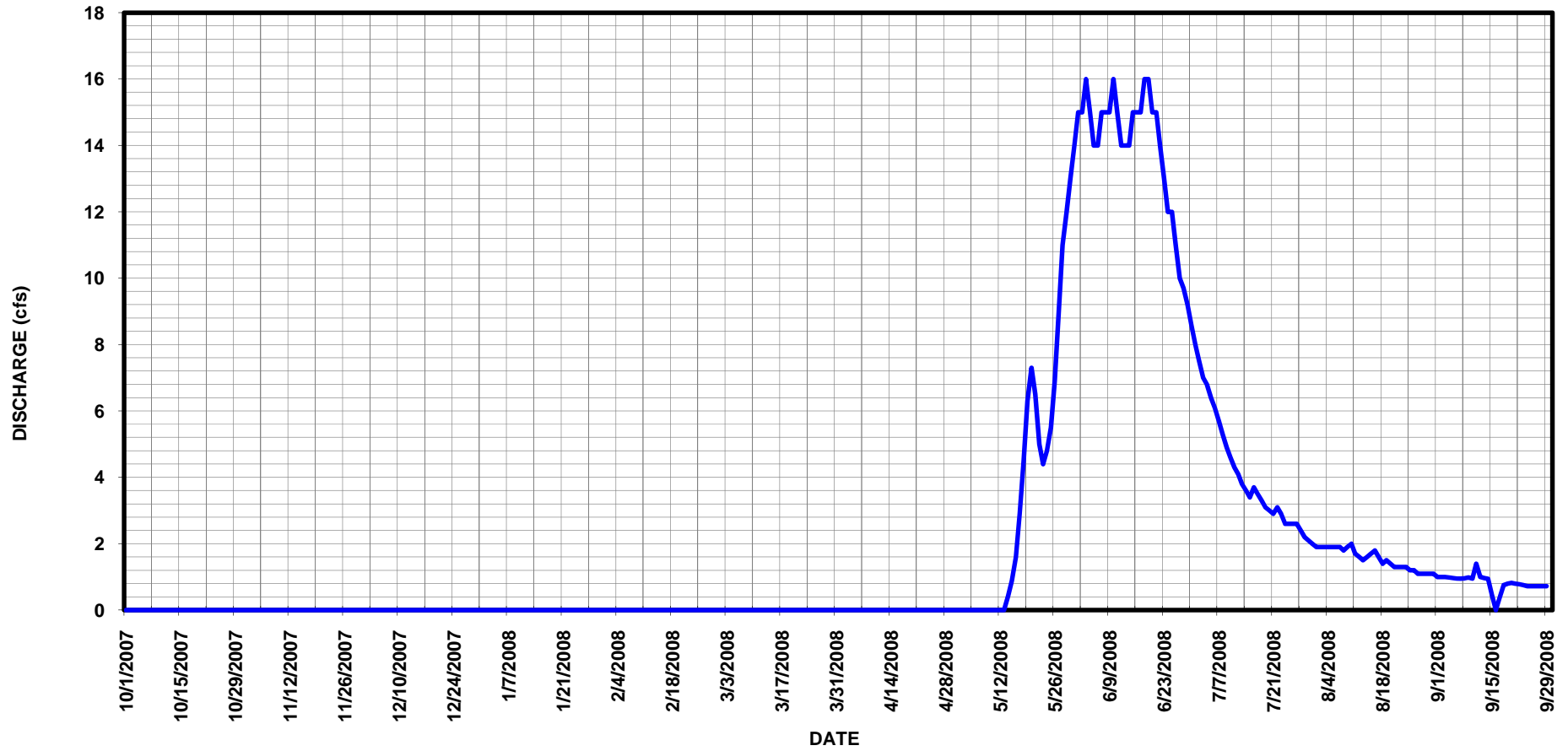
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	14	8.6	2.0	1.1
2	0	0	0	0	0	0	0	0	15	8.0	1.9	1.0
3	0	0	0	0	0	0	0	0	15	7.5	1.9	1.0
4	0	0	0	0	0	0	0	0	16	7.0	1.9	1.0
5	0	0	0	0	0	0	0	0	15	6.8	1.9	.98
6	0	0	0	0	0	0	0	0	14	6.4	1.9	.97
7	0	0	0	0	0	0	0	0	14	6.1	1.9	.95
8	0	0	0	0	0	0	0	0	15	5.7	1.9	.95
9	0	0	0	0	0	0	0	0	15	5.3	1.8	.96
10	0	0	0	0	0	0	0	0	15	4.9	1.9	.98
11	0	0	0	0	0	0	0	0	16	4.6	2.0	.95
12	0	0	0	0	0	0	0	0	15	4.3	1.7	1.4
13	0	0	0	0	0	0	0	0	14	4.1	1.6	1.0
14	0	0	0	0	0	0	0	0	14	3.8	1.5	.97
15	0	0	0	0	0	0	0	.42	14	3.6	1.6	.94
16	0	0	0	0	0	0	0	.89	15	3.4	1.7	.46
17	0	0	0	0	0	0	0	1.6	15	3.7	1.8	0
18	0	0	0	0	0	0	0	2.9	15	3.5	1.6	.37
19	0	0	0	0	0	0	0	4.5	16	3.3	1.4	.76
20	0	0	0	0	0	0	0	6.3	16	3.1	1.5	.80
21	0	0	0	0	0	0	0	7.3	15	3.0	1.4	.82
22	0	0	0	0	0	0	0	6.5	15	2.9	1.3	.80
23	0	0	0	0	0	0	0	5.0	14	3.1	1.3	.78
24	0	0	0	0	0	0	0	4.4	13	2.9	1.3	.76
25	0	0	0	0	0	0	0	4.8	12	2.6	1.3	.72
26	0	0	0	0	0	0	0	5.5	12	2.6	1.2	.72
27	0	0	0	0	0	0	0	6.9	11	2.6	1.2	.72
28	0	0	0	0	0	0	0	9.0	10	2.6	1.1	.72
29	0	0	0	0	0	0	0	11	9.7	2.4	1.1	.72
30	0	0	0	0	---	0	0	12	9.2	2.2	1.1	.72
31	0	---	---	0	---	0	---	13	---	2.1	1.1	---
TOTAL	0	0	0	0	0	0	0	102.01	418.9	132.7	48.8	25.02
MEAN	0	0	0	0	0	0	0	3.29	14.0	4.28	1.57	.83
AC-FT	0	0	0	0	0	0	0	202	831	263	97	50
MAX	0	0	0	0	0	0	0	13	16	8.6	2.0	1.4
MIN	0	0	0	0	0	0	0	0	9.2	2.1	1.1	0
CAL YR 2007	TOTAL	525.42	MEAN	1.44	MAX	10	MIN	0	AC-FT	1040		
WTR YR 2008	TOTAL	727.43	MEAN	1.99	MAX	16	MIN	0	AC-FT	1440		

MAX DISCH: 18.1 CFS AT 16:45 ON Jun. 1, 2008 GH 1.11 FT. SHIFT -0.03 FT.  
MAX GH: 1.11 FT. AT 16:45 ON Jun. 1, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09062000 EWING DITCH AT TENNESSEE PASS CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

ARKANSAS RIVER BASIN

09062500 WURTZ DITCH NEAR TENNESSEE PASS, CO

**LOCATION.**--Lat 39°21'15", long 106°21'09"; diverts water from tributaries of Eagle River in Colorado River basin to West Tennessee Creek (tributary to Tennessee Creek) in sec. 17, T.8 S., R.80 W., in Arkansas River basin.

**DRAINAGE AREA.**--N/A.

**GAGE.**--Graphic water-stage recorder, satellite-monitored data collection platform (Sutron SatLink high data rate DCP and logger) and shaft encoder in a 30" diameter metal pipe shelter and well. Shaft encoder and chart are set to outside staff gage. Control is a 6-foot steel Parshall Flume.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite-monitored data with the graphic chart recorder used for backup purposes. Record is complete and reliable. Record good. Station maintained by L.R. Schultz and record developed by C. A. Hart.

**RATING TABLE.**--WURDITCO01 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

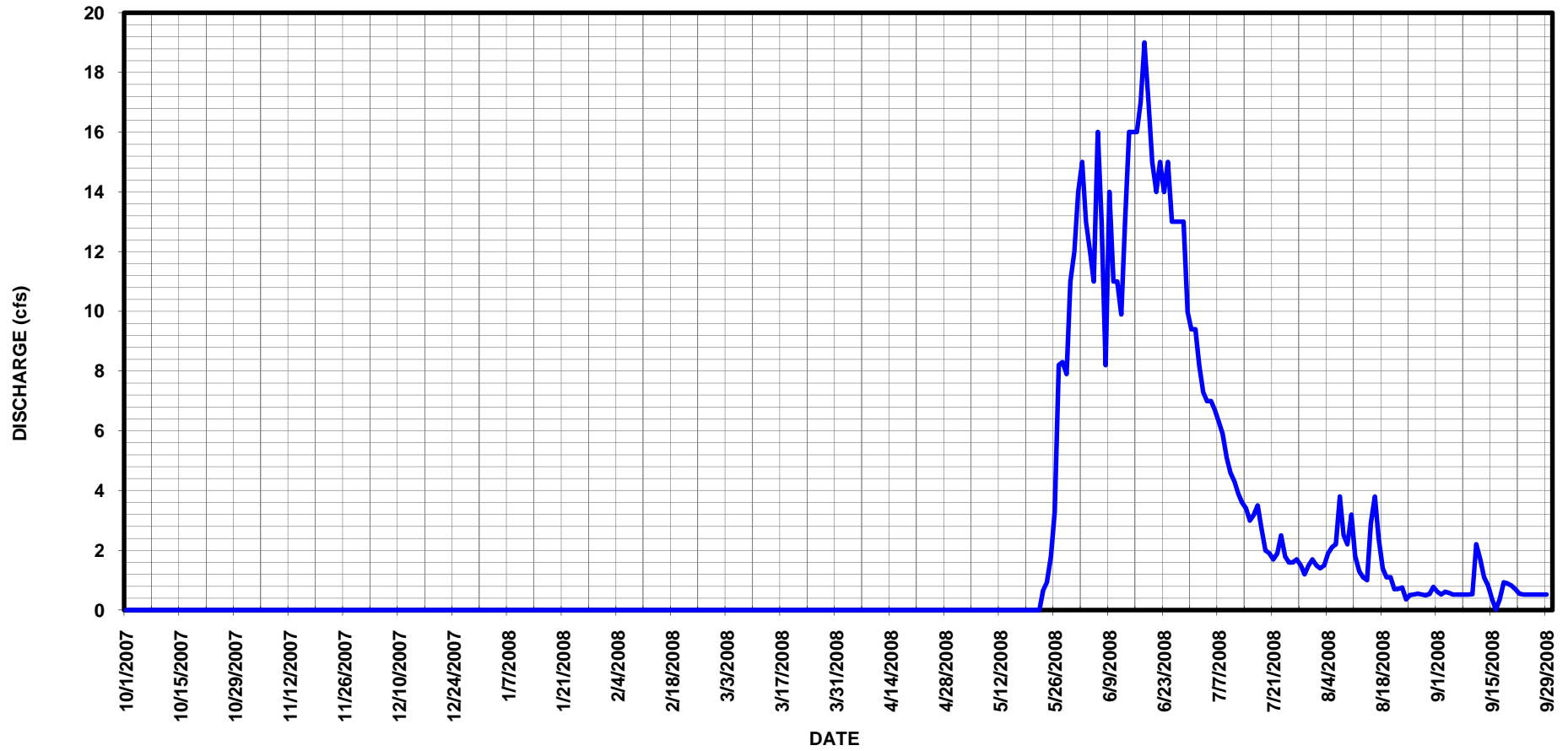
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	12	9.4	1.7	.78
2	0	0	0	0	0	0	0	0	14	9.4	1.5	.61
3	0	0	0	0	0	0	0	0	15	8.2	1.4	.52
4	0	0	0	0	0	0	0	0	13	7.3	1.5	.61
5	0	0	0	0	0	0	0	0	12	7.0	1.9	.58
6	0	0	0	0	0	0	0	0	11	7.0	2.1	.52
7	0	0	0	0	0	0	0	0	16	6.7	2.2	.52
8	0	0	0	0	0	0	0	0	13	6.3	3.8	.52
9	0	0	0	0	0	0	0	0	8.2	5.9	2.5	.52
10	0	0	0	0	0	0	0	0	14	5.1	2.2	.52
11	0	0	0	0	0	0	0	0	11	4.6	3.2	.53
12	0	0	0	0	0	0	0	0	11	4.3	1.8	2.2
13	0	0	0	0	0	0	0	0	9.9	3.9	1.3	1.7
14	0	0	0	0	0	0	0	0	13	3.6	1.1	1.1
15	0	0	0	0	0	0	0	0	16	3.4	1.0	.82
16	0	0	0	0	0	0	0	0	16	3.0	2.9	.40
17	0	0	0	0	0	0	0	0	16	3.2	3.8	.02
18	0	0	0	0	0	0	0	0	17	3.5	2.4	.35
19	0	0	0	0	0	0	0	0	19	2.7	1.4	.93
20	0	0	0	0	0	0	0	0	17	2.0	1.1	.89
21	0	0	0	0	0	0	0	0	15	1.9	1.1	.82
22	0	0	0	0	0	0	0	0	14	1.7	.70	.70
23	0	0	0	0	0	0	0	0	15	1.9	.71	.55
24	0	0	0	0	0	0	0	.66	14	2.5	.76	.52
25	0	0	0	0	0	0	0	.93	15	1.8	.36	.52
26	0	0	0	0	0	0	0	1.8	13	1.6	.51	.52
27	0	0	0	0	0	0	0	3.3	13	1.6	.52	.52
28	0	0	0	0	0	0	0	8.2	13	1.7	.55	.52
29	0	0	0	0	0	0	0	8.3	13	1.5	.52	.52
30	0	0	0	0	---	0	0	7.9	10	1.2	.50	.52
31	0	---	---	0	---	0	---	11	---	1.5	.54	---
TOTAL	0	0	0	0	0	0	0	42.09	409.1	125.4	47.57	20.35
MEAN	0	0	0	0	0	0	0	1.36	13.6	4.05	1.53	.68
AC-FT	0	0	0	0	0	0	0	83	811	249	94	40
MAX	0	0	0	0	0	0	0	11	19	9.4	3.8	2.2
MIN	0	0	0	0	0	0	0	0	8.2	1.2	.36	.02

CAL YR 2007 TOTAL 1178.5 MEAN 3.22 MAX 32 MIN 0 AC-FT 2340  
WTR YR 2008 TOTAL 644.51 MEAN 1.77 MAX 19 MIN 0 AC-FT 1280

MAX DISCH: 24.8 CFS AT 20:45 ON Jun. 7, 2008 GH 0.98 FT. SHIFT 0.04 FT.  
MAX GH: 0.98 FT. AT 20:45 ON Jun. 7, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09062500 WURTZ DITCH NEAR TENNESSEE PASS CO  
WY2008 HYDROGRAPH





TRANSMOUNTAIN DIVERSION TO

ARKANSAS RIVER BASIN

WURTZ DITCH EXTENSION AT TENNESSEE PASS NEAR LEADVILLE, CO

LOCATION.--Lat 39°23'41", long 106°21'10", sec. 32, T.7 S., R.80 W., Eagle County.

DRAINAGE AREA.--N/A.

GAGE.--Graphic water-stage recorder, satellite-monitored data collection platform (Sutron SatLink HDR DCP) and shaft encoder in a 30" diameter metal pipe shelter and well. Shaft encoder and chart are set to outside staff gage. Control is a 6-foot, steel Parshall flume. Control is a 6-foot steel Parshall flume.

REMARKS.--Primary record is hourly averages of 15-minute satellite-monitored data with the graphic chart recorder used for backup purposes. Record is complete and reliable, except for the periods: May 27-31; June 1, 6, 9, 12, 13, 2008, when ice affected the stage-discharge relationship. Record good, except during periods of ice affected record, which are poor. Station maintained by L.R. Schultz and record developed by Mark Perry.

RATING TABLE.--WUREXD001 USED FROM 01-Oct-2007 TO 30-Sep-2008

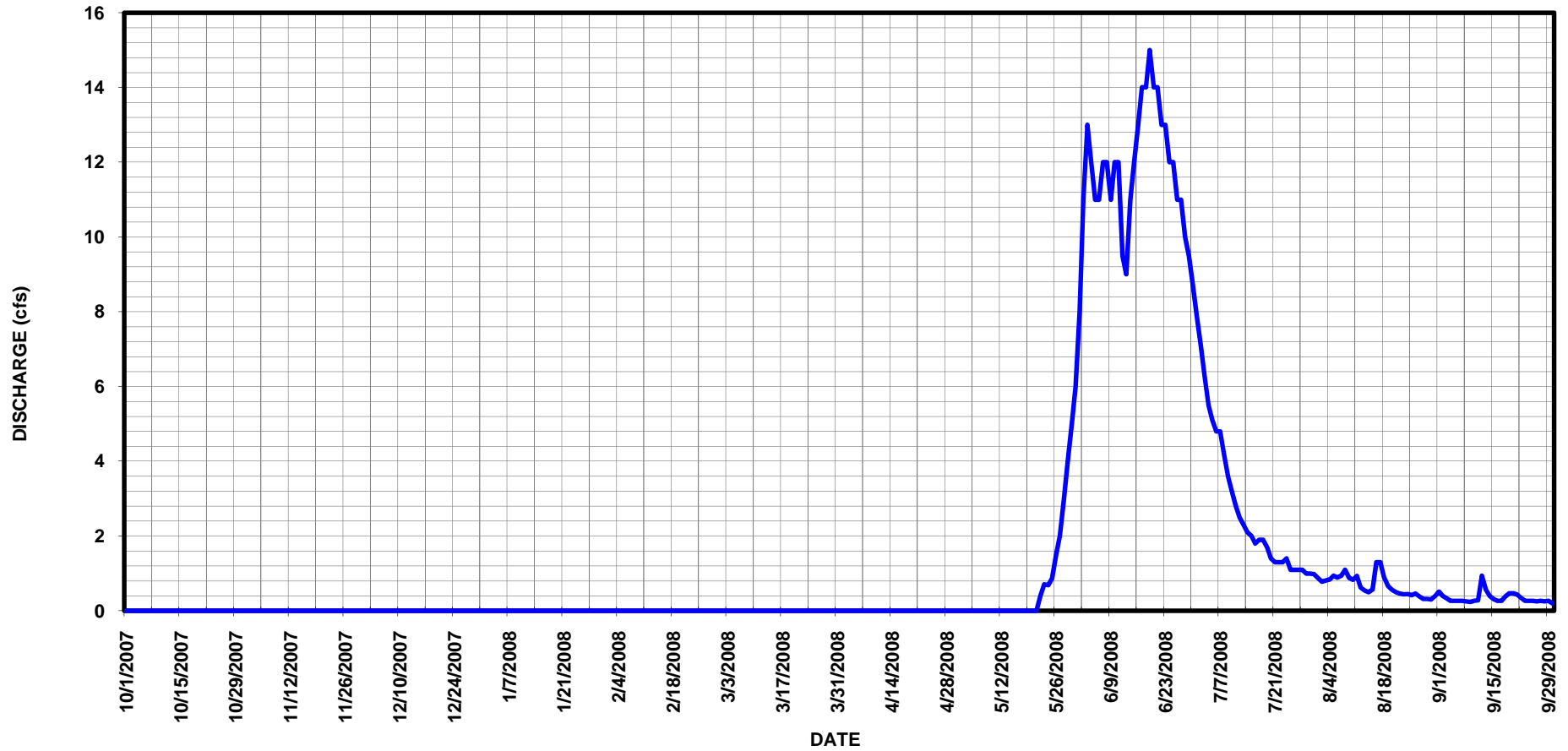
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	8.0	7.9	.88	.51
2	0	0	0	0	0	0	0	0	11	7.1	.78	.40
3	0	0	0	0	0	0	0	0	13	6.3	.81	.33
4	0	0	0	0	0	0	0	0	12	5.5	.84	.27
5	0	0	0	0	0	0	0	0	11	5.1	.94	.27
6	0	0	0	0	0	0	0	0	11	4.8	.89	.27
7	0	0	0	0	0	0	0	0	12	4.8	.94	.27
8	0	0	0	0	0	0	0	0	12	4.2	1.1	.25
9	0	0	0	0	0	0	0	0	11	3.6	.88	.24
10	0	0	0	0	0	0	0	0	12	3.2	.83	.27
11	0	0	0	0	0	0	0	0	12	2.8	.93	.28
12	0	0	0	0	0	0	0	0	9.5	2.5	.62	.94
13	0	0	0	0	0	0	0	0	9.0	2.3	.54	.56
14	0	0	0	0	0	0	0	0	11	2.1	.50	.40
15	0	0	0	0	0	0	0	0	12	2.0	.57	.31
16	0	0	0	0	0	0	0	0	13	1.8	1.3	.27
17	0	0	0	0	0	0	0	0	14	1.9	1.3	.27
18	0	0	0	0	0	0	0	0	14	1.9	.89	.38
19	0	0	0	0	0	0	0	0	15	1.7	.66	.47
20	0	0	0	0	0	0	0	0	14	1.4	.56	.47
21	0	0	0	0	0	0	0	0	14	1.3	.50	.43
22	0	0	0	0	0	0	0	.41	13	1.3	.46	.35
23	0	0	0	0	0	0	0	.71	13	1.3	.44	.27
24	0	0	0	0	0	0	0	.69	12	1.4	.45	.27
25	0	0	0	0	0	0	0	.87	12	1.1	.42	.27
26	0	0	0	0	0	0	0	1.5	11	1.1	.46	.25
27	0	0	0	0	0	0	0	2.0	11	1.1	.38	.27
28	0	0	0	0	0	0	0	3.0	10	1.1	.32	.25
29	0	0	0	0	0	0	0	4.0	9.5	1.0	.32	.27
30	0	0	0	0	---	0	0	5.0	8.7	1.0	.30	.20
31	0	---	0	0	---	0	---	6.0	---	.98	.40	---
TOTAL	0	0	0	0	0	0	0	24.18	350.7	85.58	21.21	10.26
MEAN	0	0	0	0	0	0	0	.78	11.7	2.76	.68	.34
AC-FT	0	0	0	0	0	0	0	48	696	170	42	20
MAX	0	0	0	0	0	0	0	6.0	15	7.9	1.3	.94
MIN	0	0	0	0	0	0	0	0	8.0	.98	.30	.20
CAL YR 2007	TOTAL	291.30	MEAN	0.80	MAX	7.2	MIN	0	AC-FT	578		
WTR YR 2008	TOTAL	491.93	MEAN	1.34	MAX	15	MIN	0	AC-FT	976		

MAX DISCH: 17.2 CFS AT 20:00 ON Jun. 18, 2008 GH 0.81 FT. SHIFT 0 FT.  
MAX GH: 0.81 FT. AT 20:00 ON Jun. 18, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

WURTZ DITCH EXTENSION AT TENNESSEE PASS NEAR LEADVILLE CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

ARKANSAS RIVER BASIN

09063700 HOMESTAKE TUNNEL NEAR GOLD PARK, CO

**LOCATION.**--Lat 39°16'52", long 106°25'56"; Homestake tunnel diverts water from Homestake Lake, in sec. 17, T. 8 S., R. 81 W., in Eagle River basin, to Lake Fork Creek in Arkansas River basin.

**GAGE.**--Graphic water-stage recorder, satellite-monitored data collection platform (Sutron SatLink high data rate DCP) and shaft encoder in a 4 ft x 4 ft wood shelter and concrete well. Shaft encoder and chart are set to inside electric tape gage. Control is a 12-foot concrete Parshall Flume.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite-monitored data with the graphic chart recorder used for backup purposes. Record is complete and reliable. The following period of estimated gage heights should be noted: May 7-14, 2008, shaft encoder showed gage heights of 0.15 ft after tunnel was turned off because the float was hung up on bottom of well. Discharge was estimated as zero for this period based on communication with Homestake Tunnel operator. Record good. Station maintained by L.R. Schultz and record developed by C.A. Hart.

**RATING TABLE.**--HOMTUNCO01 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

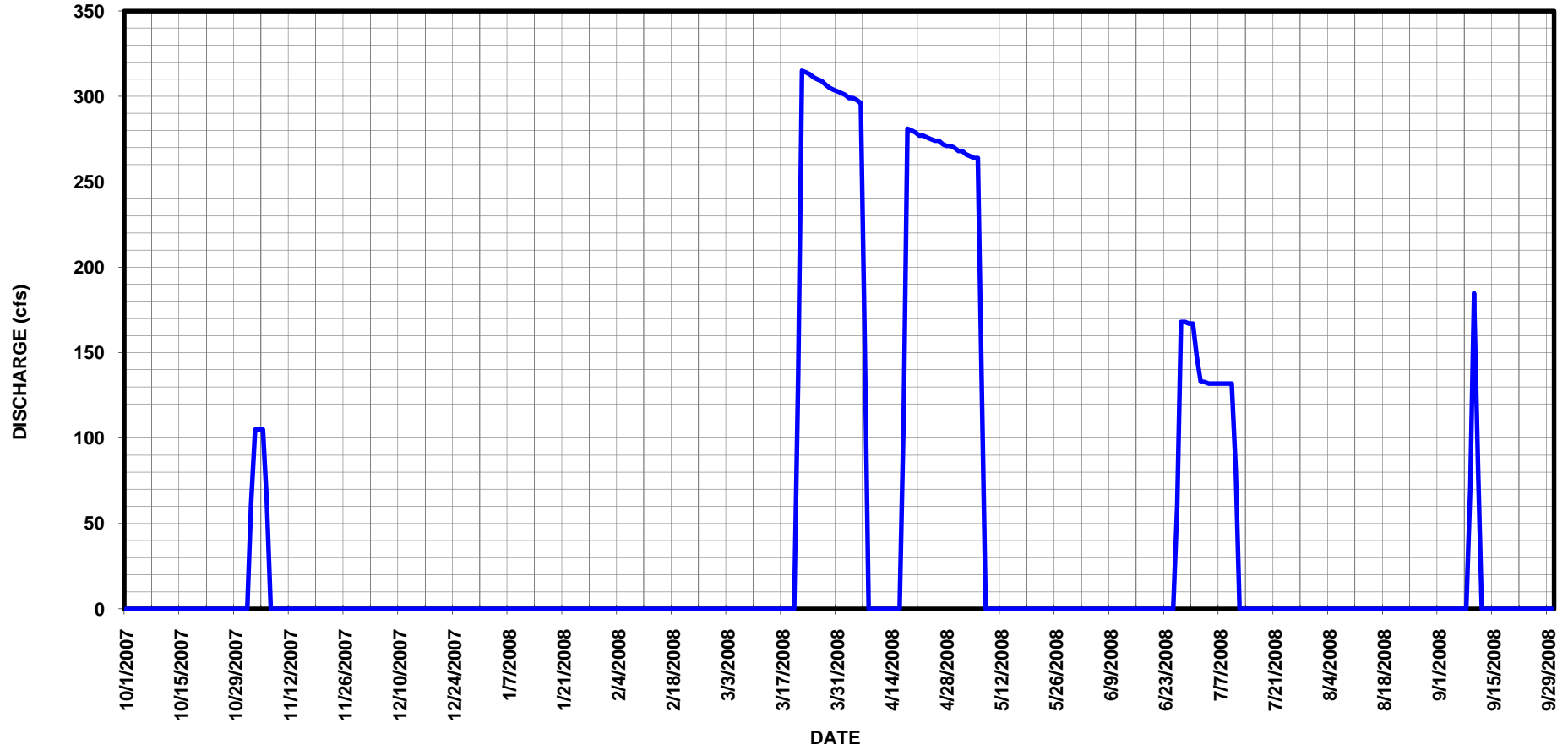
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	302	268	0	148	0	0
2	0	61	0	0	0	0	301	268	0	133	0	0
3	0	105	0	0	0	0	299	266	0	133	0	0
4	0	105	0	0	0	0	299	265	0	132	0	0
5	0	105	0	0	0	0	298	264	0	132	0	0
6	0	64	0	0	0	0	296	264	0	132	0	0
7	0	0	0	0	0	0	161	125	0	132	0	0
8	0	0	0	0	0	0	0	0	0	132	0	0
9	0	0	0	0	0	0	0	0	0	132	0	71
10	0	0	0	0	0	0	0	0	0	132	0	185
11	0	0	0	0	0	0	0	0	0	81	0	84
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	112	0	0	0	0	0
18	0	0	0	0	0	0	281	0	0	0	0	0
19	0	0	0	0	0	0	280	0	0	0	0	0
20	0	0	0	0	0	0	279	0	0	0	0	0
21	0	0	0	0	0	137	277	0	0	0	0	0
22	0	0	0	0	0	315	277	0	0	0	0	0
23	0	0	0	0	0	314	276	0	0	0	0	0
24	0	0	0	0	0	313	275	0	0	0	0	0
25	0	0	0	0	0	311	274	0	0	0	0	0
26	0	0	0	0	0	310	274	0	61	0	0	0
27	0	0	0	0	0	309	272	0	168	0	0	0
28	0	0	0	0	0	307	271	0	168	0	0	0
29	0	0	0	0	0	305	271	0	167	0	0	0
30	0	0	0	0	---	304	270	0	167	0	0	0
31	0	---	0	0	---	303	---	0	---	0	0	---
TOTAL	0	440	0	0	0	3228	5645	1720	731	1419	0	340
MEAN	0	14.7	0	0	0	104	188	55.5	24.4	45.8	0	11.3
AC-FT	0	873	0	0	0	6400	11200	3410	1450	2810	0	674
MAX	0	105	0	0	0	315	302	268	168	148	0	185
MIN	0	0	0	0	0	0	0	0	0	0	0	0

CAL YR	2007	TOTAL	10965	MEAN	30.0	MAX	327	MIN	0	AC-FT	21750
WTR YR	2008	TOTAL	13523	MEAN	36.9	MAX	315	MIN	0	AC-FT	26820

MAX DISCH: 316 CFS AT 14:00 ON Mar. 21, 2008 GH 3.21 FT. SHIFT 0.09 FT.  
MAX GH: 3.21 FT. AT 14:00 ON Mar. 21, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09063700 HOMESTAKE TUNNEL NEAR GOLD PARK CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

ARKANSAS RIVER BASIN

09077160 BOUSTEAD TUNNEL AT EAST PORTAL NEAR LEADVILLE, CO

**LOCATION.**--Lat 39°16'40", long 106°25'40"; Charles H. Boustead Tunnel diverts water from the main stem and tributaries of Fryingspan River in Colorado River basin, to Lake Fork in sec. 10, T. 9 S., R. 81 W., in Arkansas River basin.

**GAGE.**--Graphic water-stage recorder with satellite-monitored data collection platform (Sutron 8210 high data rate DCP) and shaft encoder in a 5'x 5' concrete shelter. Shaft encoder and chart are set to inside electric tape gage with an outside staff gage in the flume used as a supplemental reference gage. Control is a 15-foot concrete Parshall Flume.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite-monitored data with the graphic chart recorder used for backup purposes. Record is complete and reliable. Record fair. The Boustead Tunnel flume is located approximately 90 feet downstream of the mouth of Boustead Tunnel. There are no provisions over this 90-foot reach for a deeper channel section prior to the flume entrance, nor any other channel modifications, to help still and slow the flow to the recommended tranquil flow conditions. Observations of flow conditions at higher stages over the past several years have indicated the approach velocities to the flume are too high and poorly distributed by the time flow reaches the flume entrance. This results in increasing positive shifts to the standard 15-ft. Parshall Flume rating as stage increases. Station maintained and record developed by L.R. Schultz.

**RATING TABLE.**--BOUTUNCO01 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

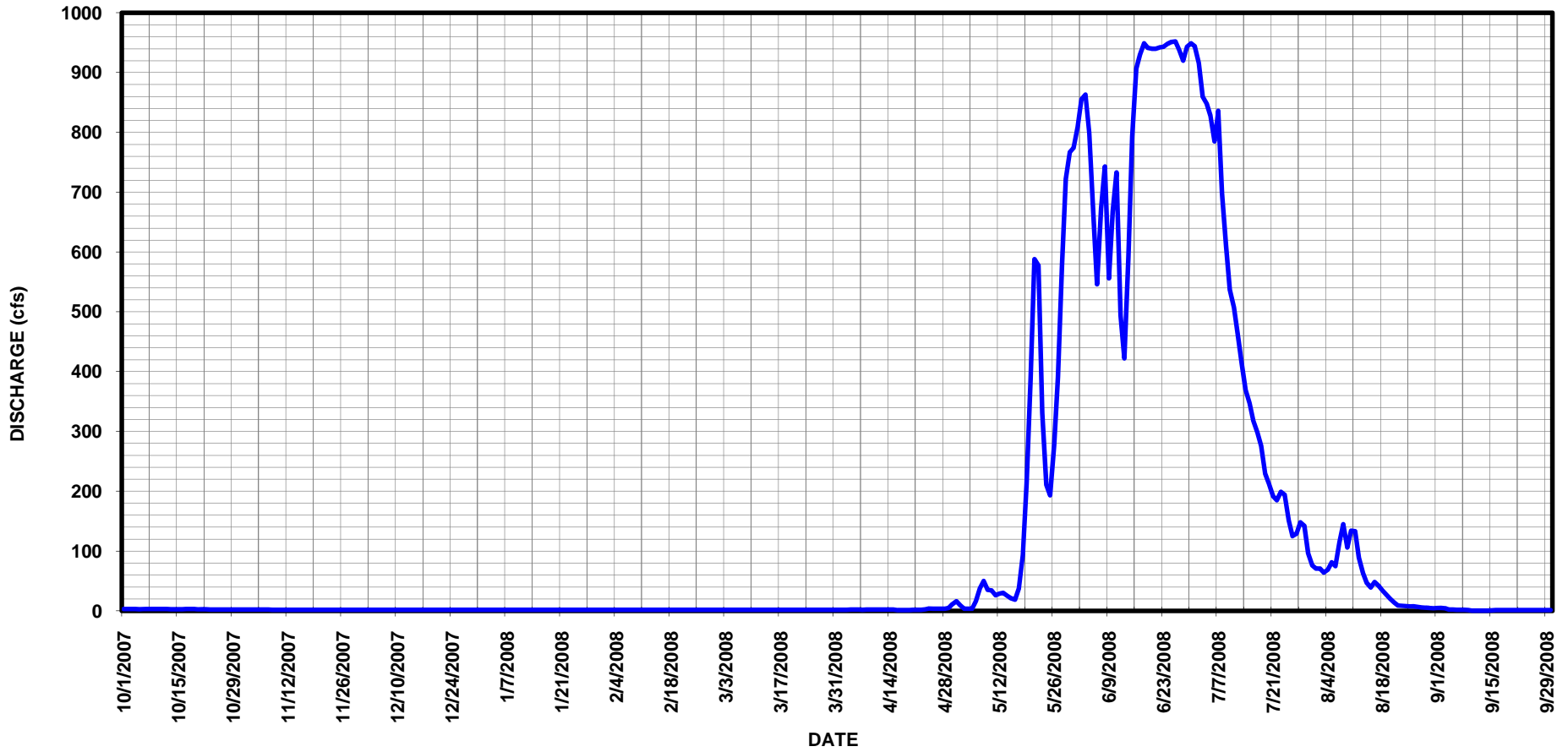
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	2.2	1.7	1.7	1.7	1.7	1.9	16	809	944	71	5.0
2	3.1	2.2	1.7	1.7	1.7	1.8	1.9	9.3	855	916	71	5.0
3	3.1	2.2	1.7	1.7	1.7	1.9	1.9	3.5	863	860	64	4.2
4	3.0	2.2	1.7	1.7	1.7	1.9	2.0	3.4	799	848	69	2.3
5	2.7	2.2	1.7	1.7	1.7	1.9	2.2	3.4	666	828	81	2.2
6	2.9	2.2	1.7	1.7	1.7	1.9	2.0	16	546	785	75	1.9
7	3.1	2.0	1.7	1.7	1.7	1.9	1.9	38	673	836	115	1.9
8	3.1	1.9	1.7	1.7	1.7	1.9	2.0	50	743	698	145	1.9
9	3.1	1.9	1.7	1.7	1.7	1.9	2.2	35	556	610	106	1.1
10	3.0	1.9	1.7	1.7	1.7	1.9	2.2	34	668	536	134	.34
11	3.0	1.9	1.7	1.7	1.7	1.9	2.2	26	733	507	133	.34
12	2.9	1.9	1.7	1.7	1.7	1.9	2.2	29	494	463	89	.34
13	2.8	1.9	1.7	1.7	1.7	1.9	2.2	30	422	413	63	.34
14	2.8	1.9	1.7	1.7	1.7	1.9	2.2	25	592	370	47	.34
15	2.8	1.9	1.7	1.7	1.7	1.9	2.0	21	793	347	39	.71
16	2.8	1.9	1.7	1.7	1.7	1.9	1.4	19	906	318	48	1.4
17	2.9	1.9	1.7	1.7	1.7	1.9	1.4	37	930	298	42	1.4
18	3.1	1.9	1.7	1.7	1.7	1.9	1.4	94	949	276	34	1.4
19	2.9	1.9	1.7	1.7	1.7	1.9	1.4	212	941	229	27	1.4
20	2.8	1.9	1.7	1.7	1.7	1.9	1.5	389	940	212	20	1.4
21	2.8	1.9	1.7	1.7	1.7	1.9	1.7	588	940	192	14	1.4
22	2.8	1.9	1.7	1.7	1.7	1.9	1.7	577	942	185	9.0	1.4
23	2.2	1.9	1.7	1.7	1.7	1.9	2.7	331	943	199	8.5	1.4
24	2.2	1.9	1.7	1.7	1.7	1.9	3.9	211	948	194	7.9	1.4
25	2.2	1.9	1.7	1.7	1.7	1.9	3.7	193	951	151	7.6	1.4
26	2.2	1.9	1.7	1.7	1.8	1.9	3.4	277	952	125	7.4	1.4
27	2.2	1.7	1.7	1.7	1.9	1.9	3.4	391	938	129	6.6	1.4
28	2.2	1.7	1.7	1.7	1.9	1.9	3.5	578	920	148	5.9	1.4
29	2.2	1.7	1.7	1.7	1.9	1.9	5.0	722	943	142	5.5	1.4
30	2.2	1.7	1.7	1.7	---	1.9	11	767	949	96	4.7	1.4
31	2.2	---	1.7	1.7	---	1.9	---	774	---	76	4.5	---
TOTAL	84.4	58.1	52.7	52.7	50.0	58.6	78.1	6499.6	24304	12931	1554.6	48.91
MEAN	2.72	1.94	1.70	1.70	1.72	1.89	2.60	210	810	417	50.1	1.63
AC-FT	167	115	105	105	99	116	155	12890	48210	25650	3080	97
MAX	3.1	2.2	1.7	1.7	1.9	1.9	11	774	952	944	145	5.0
MIN	2.2	1.7	1.7	1.7	1.7	1.7	1.4	3.4	422	76	4.5	.34

CAL YR	2007	TOTAL	27880	MEAN	76.2	MAX	802	MIN	1.7	AC-FT	55300
WTR YR	2008	TOTAL	45772.71	MEAN	125	MAX	952	MIN	.34	AC-FT	90790

MAX DISCH: 971 CFS AT 22:45 ON Jun. 25, 2008 GH 5.57 FT. SHIFT 0.26 FT.  
MAX GH: 5.57 FT. AT 22:45 ON Jun. 25, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09077160 BOUSTEAD TUNNEL AT EAST PORTAL NEAR LEADVILLE CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

ARKANSAS RIVER BASIN

09077500 BUSK-IVANHOE TUNNEL AT EAST PORTAL NEAR MALTA, CO

**LOCATION.**--Lat 39°14'55", long 106°28'14"; Water diverted from Ivanhoe Lake, tributary to Fryingpan River in sec. 13, T. 9 S., R. 82 W., in Roaring Fork River basin, to Busk Creek (tributary to Lake Fork) in sec. 20, T. 9 S., R. 81 W., in Arkansas River basin.

**GAGE.**--Graphic water-stage recorder, satellite-monitored data collection platform (Sutron SatLink high data rate DCP) and shaft encoder in a 3'x3' metal and wood shelter. Shaft encoder and chart are set to outside staff gage in the flume. Control is an 8-foot steel Parshall Flume.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite-monitored data with chart record used for backup. Record is complete and reliable. Record is considered fair. The gage operated for over eight months below the recommended minimum stage (0.24') for accurate measurement in an 8-ft Parshall Flume. Also numerous corrections were made during winter months due to ice and frost build up on floats and float tape. These corrections were applied as datum corrections and were assumed to occur linearly through time. It should be noted the peak this year occurred during the winter operation time and therefore there is no chart record to back up the shaft encoder data. If at all possible the gage should be visited before June to check on gage before peak occurs. Station maintained by L.R. Schultz and record developed by C. A. Hart.

**RATING TABLE.**--BUSTUNCO02 USED FROM 01-Oct-2007 TO 30-Sep-2008

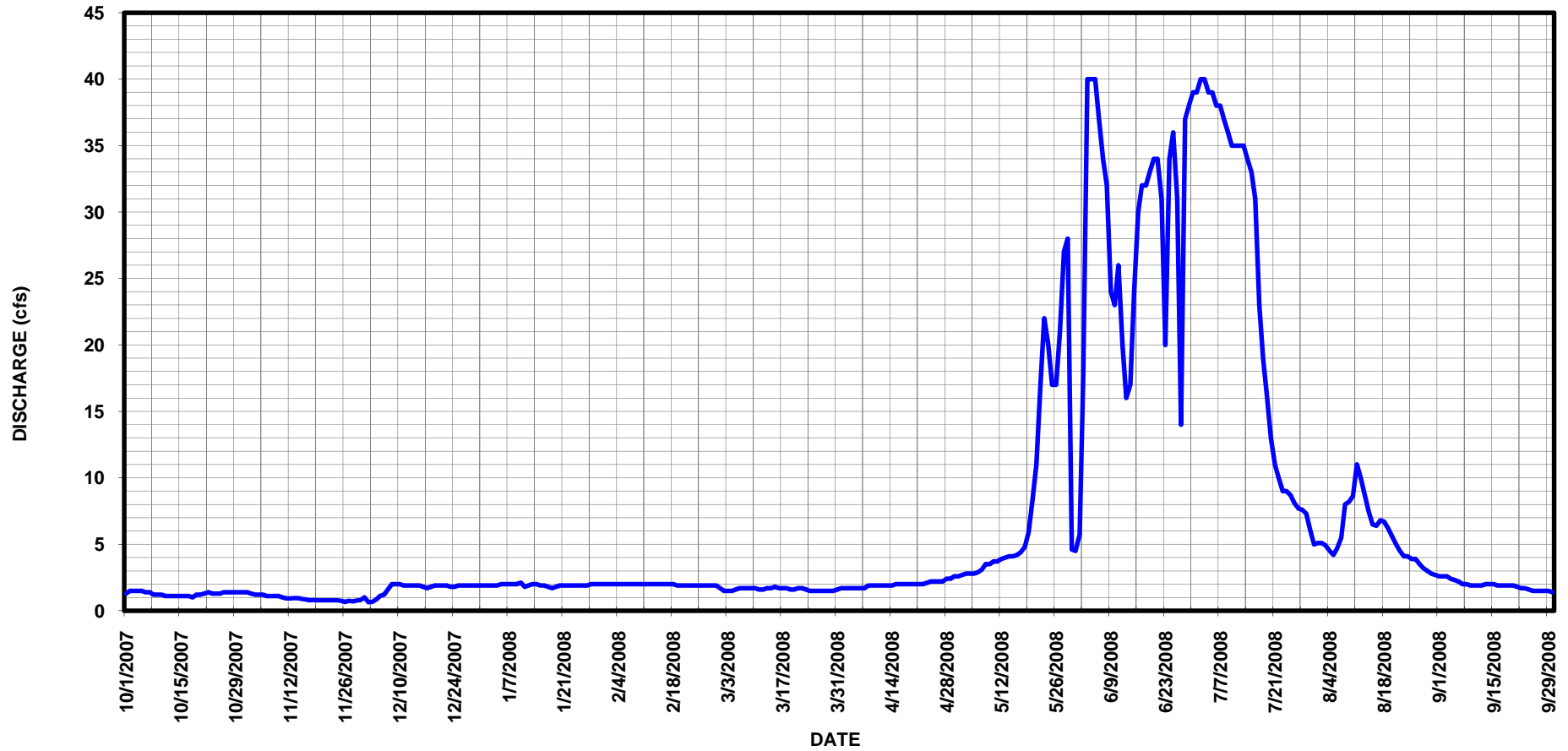
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.4	1.0	1.9	2.0	1.7	1.7	2.6	5.7	39	5.1	2.6
2	1.5	1.3	.64	1.9	2.0	1.5	1.7	2.7	18	40	5.1	2.6
3	1.5	1.2	.67	1.9	2.0	1.5	1.7	2.8	40	40	4.9	2.6
4	1.5	1.2	.85	1.9	2.0	1.5	1.7	2.8	40	39	4.5	2.4
5	1.5	1.2	1.1	2.0	2.0	1.6	1.7	2.8	40	39	4.2	2.3
6	1.4	1.1	1.2	2.0	2.0	1.7	1.7	2.9	37	38	4.7	2.2
7	1.4	1.1	1.6	2.0	2.0	1.7	1.7	3.1	34	38	5.5	2.0
8	1.2	1.1	2.0	2.0	2.0	1.7	1.9	3.5	32	37	8.0	2.0
9	1.2	1.1	2.0	2.0	2.0	1.7	1.9	3.5	24	36	8.2	1.9
10	1.2	1.0	2.0	2.1	2.0	1.7	1.9	3.7	23	35	8.6	1.9
11	1.1	.92	1.9	1.8	2.0	1.6	1.9	3.7	26	35	11	1.9
12	1.1	.92	1.9	1.9	2.0	1.6	1.9	3.9	20	35	10	1.9
13	1.1	.95	1.9	2.0	2.0	1.7	1.9	4.0	16	35	8.7	2.0
14	1.1	.95	1.9	2.0	2.0	1.7	1.9	4.1	17	34	7.5	2.0
15	1.1	.88	1.9	1.9	2.0	1.8	2.0	4.1	24	33	6.5	2.0
16	1.1	.84	1.8	1.9	2.0	1.7	2.0	4.2	30	31	6.4	1.9
17	1.1	.79	1.7	1.8	2.0	1.7	2.0	4.4	32	23	6.8	1.9
18	1.0	.80	1.8	1.7	2.0	1.7	2.0	4.8	32	19	6.7	1.9
19	1.2	.79	1.9	1.8	1.9	1.6	2.0	5.9	33	16	6.2	1.9
20	1.2	.79	1.9	1.9	1.9	1.6	2.0	8.4	34	13	5.6	1.9
21	1.3	.78	1.9	1.9	1.9	1.7	2.0	11	34	11	5.0	1.8
22	1.4	.79	1.9	1.9	1.9	1.7	2.0	17	31	10	4.5	1.7
23	1.3	.79	1.8	1.9	1.9	1.6	2.1	22	20	9.0	4.1	1.7
24	1.3	.79	1.8	1.9	1.9	1.5	2.2	20	34	9.0	4.1	1.6
25	1.3	.74	1.9	1.9	1.9	1.5	2.2	17	36	8.7	3.9	1.5
26	1.4	.67	1.9	1.9	1.9	1.5	2.2	17	31	8.1	3.9	1.5
27	1.4	.75	1.9	1.9	1.9	1.5	2.2	21	14	7.7	3.5	1.5
28	1.4	.71	1.9	2.0	1.9	1.5	2.4	27	37	7.6	3.2	1.5
29	1.4	.77	1.9	2.0	1.9	1.5	2.4	28	38	7.3	3.0	1.5
30	1.4	.80	1.9	2.0	---	1.5	2.6	4.6	39	6.1	2.8	1.4
31	1.4	---	1.9	2.0	---	1.6	---	4.5	---	5.0	2.7	---
TOTAL	39.8	27.92	52.36	59.7	56.9	50.1	59.5	267.0	871.7	744.5	174.9	57.5
MEAN	1.28	.93	1.69	1.93	1.96	1.62	1.98	8.61	29.1	24.0	5.64	1.92
AC-FT	79	55	104	118	113	99	118	530	1730	1480	347	114
MAX	1.5	1.4	2.0	2.1	2.0	1.8	2.6	28	40	40	11	2.6
MIN	1.0	.67	.64	1.7	1.9	1.5	1.7	2.6	5.7	5.0	2.7	1.4
CAL YR 2007	TOTAL	2124.48	MEAN	5.82	MAX	45	MIN	.64	AC-FT	4210		
WTR YR 2008	TOTAL	2461.88	MEAN	6.73	MAX	40	MIN	.64	AC-FT	4880		

MAX DISCH: 40.7 CFS AT 08:15 ON Jun. 4, 2008 GH 1.12 FT. SHIFT 0.04 FT.  
MAX GH: 1.12 FT. AT 08:15 ON Jun. 4, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09077500 BUSK-IVANHOE TUNNEL AT EAST PORTAL NEAR MALTA CO  
WY2008 HYDROGRAPH





TRANSMOUNTAIN DIVERSION TO

ARKANSAS RIVER BASIN

09073000 TWIN LAKES TUNNEL AT EAST PORTAL NEAR TWIN LAKES, CO

**LOCATION.**--Lat 39°04'56", long 106°32'24"; diverts water from tributaries of Roaring Fork River in Colorado River Basin to North Fork Lake Creek in sec. 22, T.11 S., R.82 W., in Arkansas River basin.

**DRAINAGE AREA.**--N/A

**GAGE.**--Graphic water-stage recorder, with Sutron high data rate 8210 DCP and shaft encoder in a 5' x 5' concrete shelter and well. Shaft encoder and chart are set to an electric tape gage in the shelter and well. Outside staff gage in flume is used for supplemental readings. Control is a 12-foot concrete Parshall Flume.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite-monitored data with the graphic chart recorder used for backup purposes. Record is complete and reliable except for the following periods: Oct. 1 - 22, 2007: When incorrect operation of a drain valve in the stilling well by the Twin Lakes Tunnel Co. personnel resulted in draining the well and so shaft encoder data were wrong. On Oct. 22, 2007, DWR personnel ran levels and checked RP and tape length. The problem with the drain valve was corrected. Oct 18, 2007: Work on gage resulted in bad shaft encoder and chart data. Jan. 17-18, 2008: Ice on chart recorder and shaft encoder floats resulted in bad data. Jan 20, 2008: Ice on control affected the stage-discharge relationship. Jan. 22-27, 2008: Ice on floats caused bad data. Twin Lakes Co. personnel worked on gages but did not document corrections resulting in questionable data during this period. May 27, 2008: Work on gage resulted in bad shaft encoder and chart data. Record is considered good except for the following periods, during which the record should be considered poor: Oct 1-22, 2007, when a drain valve in the stilling well was opened and affected gage heights in the well; Jan. 17-18, 20 and 22-27, 2008, when ice affected operation of the gage and/or the stage-discharge relationship; and May 27, 2008, when gage work resulted in bad gage data. Station maintained by L.R. Schultz and record developed by C.A. Hart.

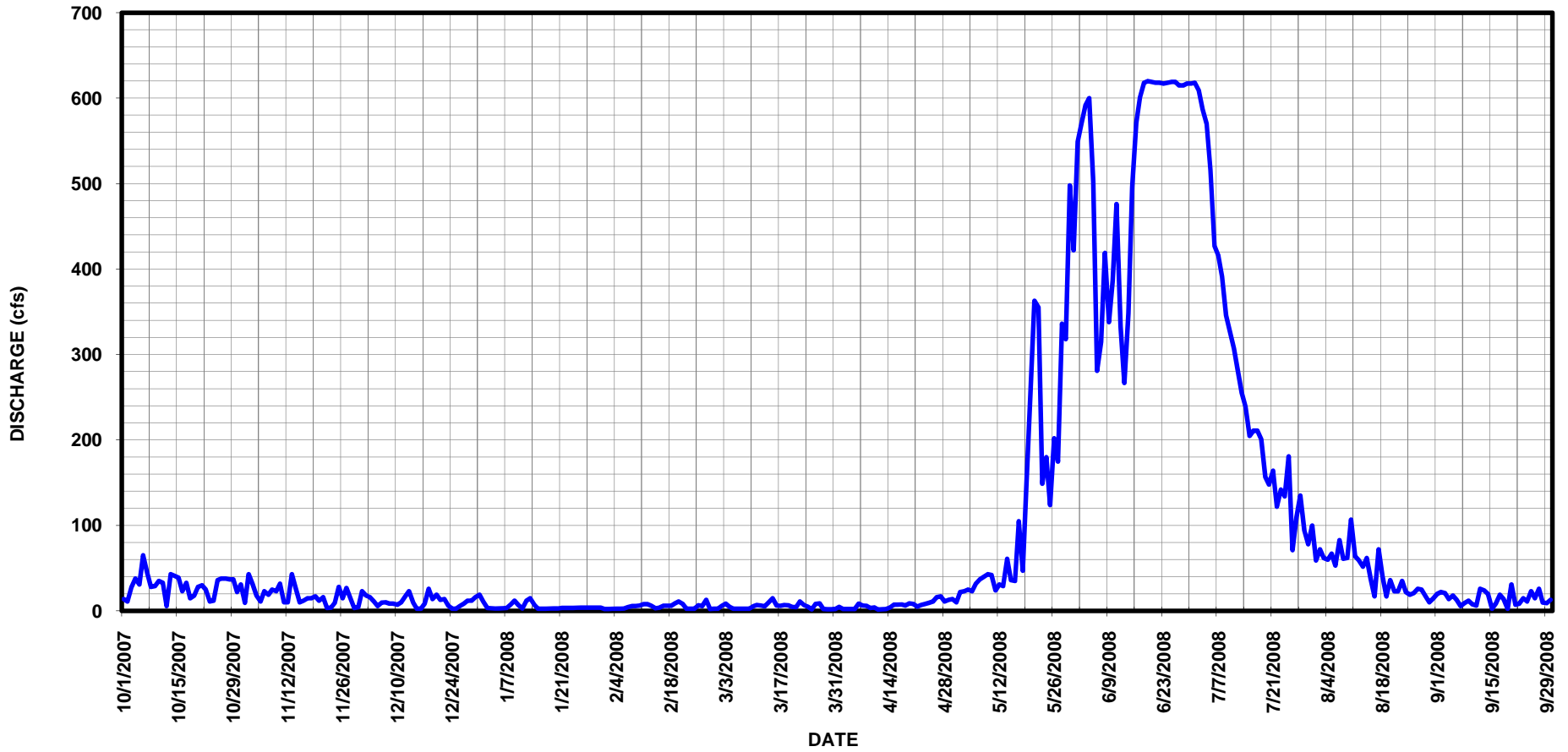
**RATING TABLE.**--STD12FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	9.4	23	11	2.3	2.5	4.9	10	549	618	59	20
2	11	43	18	3.6	2.2	5.9	2.2	22	570	609	72	22
3	28	31	16	3.2	2.4	8.7	2.3	23	592	587	62	21
4	38	18	11	3.0	2.5	4.8	2.2	25	600	570	60	14
5	31	11	5.6	3.0	2.5	2.5	2.1	23	502	516	67	18
6	65	23	9.7	3.2	3.0	2.5	8.5	32	281	427	53	13
7	45	19	10	3.6	4.6	2.5	6.5	37	315	416	83	5.7
8	28	25	8.5	7.7	5.8	2.5	5.9	40	419	391	61	9.2
9	29	23	8.5	12	5.8	2.5	3.5	43	338	346	62	12
10	35	32	7.2	6.8	6.3	5.4	4.1	42	387	327	107	7.9
11	33	10	10	2.8	7.9	6.9	1.6	24	476	307	64	6.3
12	5.7	10	17	12	7.9	6.2	2.0	31	333	282	59	26
13	43	43	23	15	6.0	5.5	2.2	29	267	255	52	24
14	41	27	10	7.2	3.3	10	4.2	61	348	239	62	20
15	39	10	2.5	2.5	3.8	15	7.3	36	496	205	37	2.7
16	23	12	2.6	2.7	6.1	6.4	7.3	35	571	211	17	8.5
17	33	15	8.5	2.7	6.1	6.1	7.5	105	601	211	72	19
18	15	15	26	3.0	6.1	7.1	6.5	47	618	201	41	14
19	18	17	14	3.0	9.0	6.6	8.8	152	620	157	17	2.5
20	28	12	19	3.0	11	4.8	8.2	260	619	148	36	31
21	30	16	13	3.6	8.1	4.6	5.0	363	618	164	23	7.2
22	25	3.6	14	3.6	2.7	11	6.9	355	618	122	23	8.4
23	11	3.7	6.5	3.6	2.7	6.9	8.2	149	617	142	35	15
24	12	9.5	2.6	3.6	2.7	5.2	9.6	180	618	134	22	11
25	36	28	2.7	3.8	6.7	1.9	11	124	619	181	19	23
26	38	15	5.7	3.8	5.6	8.2	16	202	619	71	21	15
27	38	27	8.7	3.8	13	8.8	17	175	615	110	26	26
28	37	15	12	3.8	2.2	2.3	11	336	615	135	25	9.7
29	37	3.5	12	3.8	2.4	2.0	13	318	617	94	17	9.1
30	22	4.5	16	3.8	---	2.0	14	498	617	78	10	13
31	31	---	19	3.9	---	2.1	---	422	---	100	15	---

TOTAL	919.7	531.2	362.3	152.1	150.7	169.4	209.5	4199	15675	8354	1379	434.2
MEAN	29.7	17.7	11.7	4.91	5.20	5.46	6.98	135	523	269	44.5	14.5
AC-FT	1820	1050	719	302	299	336	416	8330	31090	16570	2740	861
MAX	65	43	26	15	13	15	17	498	620	618	107	31
MIN	5.7	3.5	2.5	2.5	2.2	1.9	1.6	10	267	71	10	2.5
CAL YR 2007	TOTAL	26427.6	MEAN	72.4	MAX	530	MIN	0.52	AC-FT	52420		
WTR YR 2008	TOTAL	32536.1	MEAN	88.9	MAX	620	MIN	1.6	AC-FT	64540		
MAX DISCH: 628 CFS AT 02:15 ON Jun. 20, 2008 GH 5.07 FT. SHIFT 0 FT.												
MAX GH: 5.07 FT. AT 02:15 ON Jun. 20, 2008												

09073000 TWIN LAKES TUNNEL AT EAST PORTAL NEAR TWIN LAKES CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

ARKANSAS RIVER BASIN

09115000 LARKSPUR DITCH NEAR MARSHALL PASS, CO

**LOCATION.**--Lat 38°23'00", long 106°15'00", diverts water from tributaries of Tomichi Creek between headgates (in sec. 11, T.48 N., R.6 E., and sec. 1, T.47 N., R.6 E.), and Marshall Pass, in Gunnison River basin, to Poncha Creek (tributary to South Arkansas River) in SE¼ sec. 24, T.48 N., R.6 E., in Arkansas River basin.

**DRAINAGE AREA.**--N/A

**GAGE.**--Satellite-monitored data collection platform (high data rate Sutron SatLink Logger DCP) and SDR shaft encoder in a 30"x 24" metal shelter and well. Primary reference gage is the outside staff gage in the flume. Control is a 2-foot steel Parshall Flume.

**REMARKS.**--Primary record is hourly averages of 15-minute satellite-monitored data with the SDR record used for backup purposes. The record is complete and fairly reliable, except for Oct. 7-9, 14-17, 2007 and May 21-24, 27, 30, 2008 when the control was affected by ice. Record fair, except for periods of ice-affected record, which are poor. Station maintained by L.R. Schultz and record developed by C. A. Hart.

**RATING TABLE.**--STD02FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

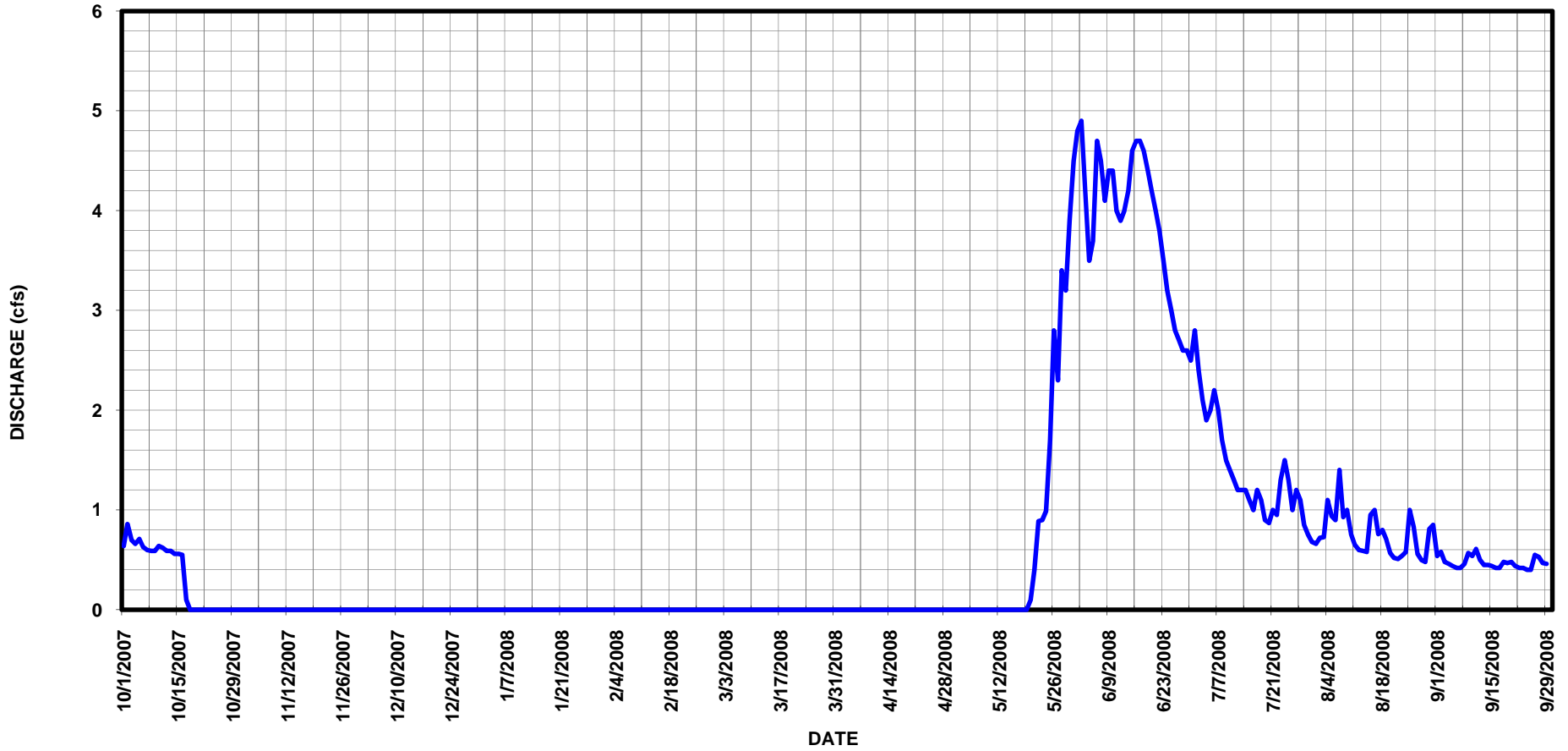
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.64	0	0	0	0	0	0	0	4.5	2.5	.68	.85
2	.86	0	0	0	0	0	0	0	4.8	2.8	.66	.54
3	.70	0	0	0	0	0	0	0	4.9	2.4	.72	.58
4	.66	0	0	0	0	0	0	0	4.2	2.1	.73	.48
5	.71	0	0	0	0	0	0	0	3.5	1.9	1.1	.46
6	.63	0	0	0	0	0	0	0	3.7	2.0	.94	.44
7	.60	0	0	0	0	0	0	0	4.7	2.2	.90	.42
8	.59	0	0	0	0	0	0	0	4.5	2.0	1.4	.42
9	.59	0	0	0	0	0	0	0	4.1	1.7	.93	.46
10	.64	0	0	0	0	0	0	0	4.4	1.5	1.0	.57
11	.62	0	0	0	0	0	0	0	4.4	1.4	.76	.54
12	.59	0	0	0	0	0	0	0	4.0	1.3	.65	.61
13	.59	0	0	0	0	0	0	0	3.9	1.2	.60	.50
14	.56	0	0	0	0	0	0	0	4.0	1.2	.59	.45
15	.56	0	0	0	0	0	0	0	4.2	1.2	.58	.45
16	.55	0	0	0	0	0	0	0	4.6	1.1	.95	.44
17	.10	0	0	0	0	0	0	0	4.7	1.0	1.0	.42
18	0	0	0	0	0	0	0	0	4.7	1.2	.76	.42
19	0	0	0	0	0	0	0	0	4.6	1.1	.80	.48
20	0	0	0	0	0	0	0	0	4.4	.90	.71	.47
21	0	0	0	0	0	0	0	.10	4.2	.87	.57	.48
22	0	0	0	0	0	0	0	.40	4.0	1.0	.52	.44
23	0	0	0	0	0	0	0	.89	3.8	.95	.51	.42
24	0	0	0	0	0	0	0	.90	3.5	1.3	.54	.42
25	0	0	0	0	0	0	0	.99	3.2	1.5	.58	.40
26	0	0	0	0	0	0	0	1.7	3.0	1.3	1.0	.40
27	0	0	0	0	0	0	0	2.8	2.8	1.0	.83	.55
28	0	0	0	0	0	0	0	2.3	2.7	1.2	.56	.53
29	0	0	0	0	0	0	0	3.4	2.6	1.1	.50	.47
30	0	0	0	0	---	0	0	3.2	2.6	.85	.48	.46
31	0	---	---	0	---	0	---	3.9	---	.75	.81	---
TOTAL	10.19	0	0	0	0	0	0	20.58	119.2	44.52	23.36	14.57
MEAN	.33	0	0	0	0	0	0	.66	3.97	1.44	.75	.49
AC-FT	20	0	0	0	0	0	0	41	236	88	46	29
MAX	.86	0	0	0	0	0	0	3.9	4.9	2.8	1.4	.85
MIN	0	0	0	0	0	0	0	0	2.6	.75	.48	.40
CAL YR 2007	TOTAL	195.41	MEAN	.53	MAX	3.5	MIN	0	AC-FT	388		
WTR YR 2008	TOTAL	232.42	MEAN	.64	MAX	4.9	MIN	0	AC-FT	461		

MAX DISCH: 7.75 CFS AT 19:00 ON June 1, 2008 GH 0.98 FT. SHIFT 0 FT.  
MAX GH: 0.98 FT. AT 19:00 ON June 1, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09115000 LARKSPUR DITCH NEAR MARSHALL PASS CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08213500 RIO GRANDE AT THIRTYMILE BRIDGE, NEAR CREEDE, CO

**LOCATION.**--Lat 37°43'29", long 107°15'18", in NE¼ sec. 13, T.40 N., R.4 W., Hinsdale County, Hydrologic Unit 13010001, on right bank 70 ft downstream from bridge, 500 ft upstream from Squaw Creek, 0.8 mi downstream from Rio Grande Reservoir, and 20 mi southwest of Creede.

**DRAINAGE AREA AND PERIOD OF RECORD.**--163 mi<sup>2</sup>. June 1909 to Sep. 1923, May 1925 to current year. No winter records 1910, 1926. Monthly data only for some periods.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. The primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 3 ft. by 3 ft. timber shelter and corrugated metal well. A graphic water-stage recorder is operated as a data backup. Elevation of gage is 9,300 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Record is complete and reliable, except for Nov. 1-4, 2007, Apr. 9-13, 2008 when the station was isolated; and Nov. 5, 2007 to April 8, 2008 when the station was closed for the winter. Record good, except for periods of no gage-height record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--RIOMILCO12 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

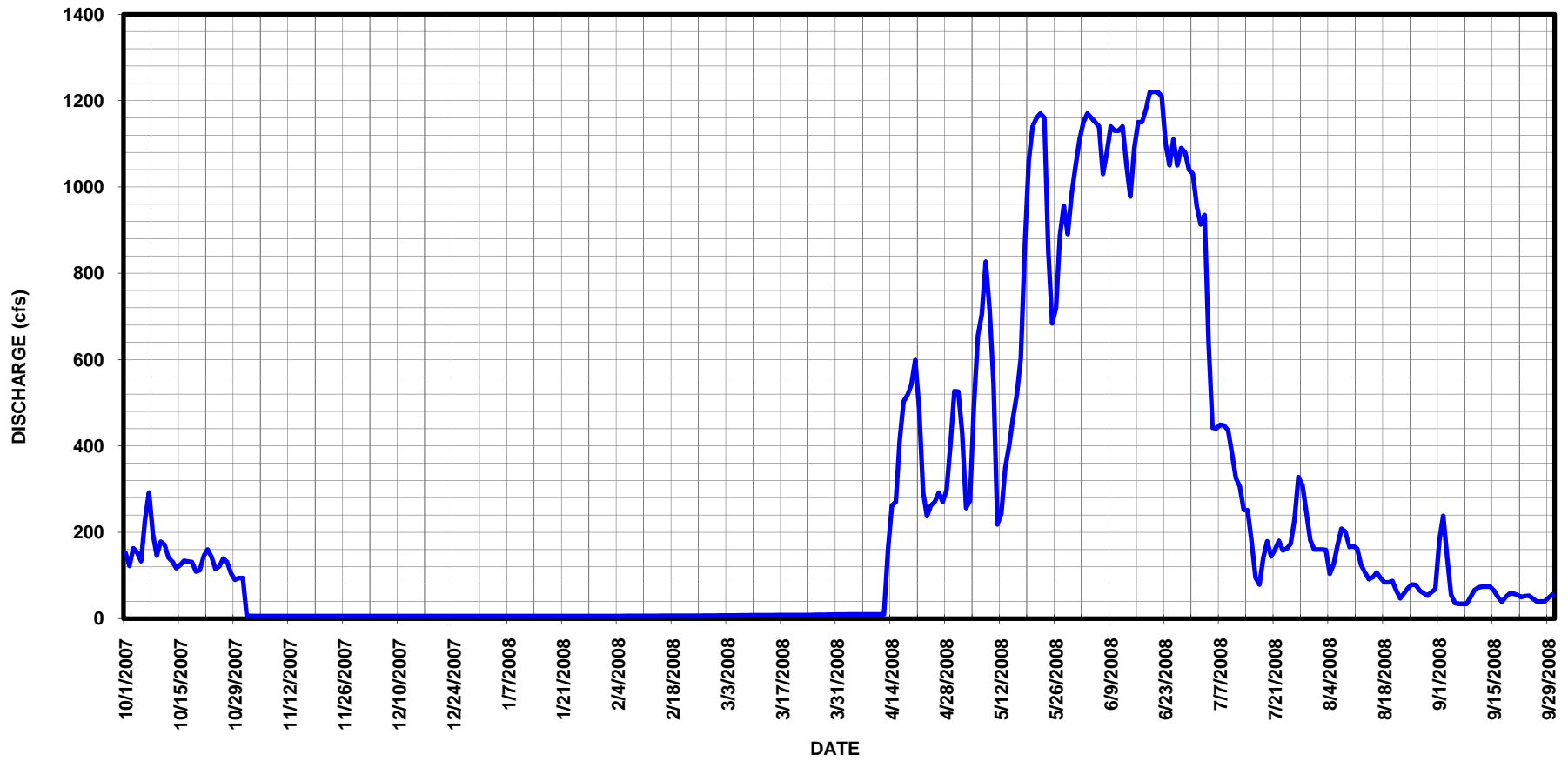
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	6.4	6.0	6.0	6.0	7.2	9.6	526	1110	955	160	180
2	122	6.2	6.0	6.0	6.0	7.2	9.6	430	1150	913	160	238
3	163	6.0	6.0	6.0	6.0	7.2	9.8	256	1170	935	159	143
4	153	6.0	6.0	6.0	6.0	7.4	9.8	273	1160	637	104	56
5	133	6.0	6.0	6.0	6.0	7.4	10	492	1150	442	126	36
6	228	6.0	6.0	6.0	6.2	7.6	10	656	1140	441	170	34
7	292	6.0	6.0	6.0	6.2	7.6	10	705	1030	449	208	34
8	196	6.0	6.0	6.0	6.2	7.6	10	827	1080	447	201	34
9	146	6.0	6.0	6.0	6.2	7.8	10	715	1140	436	166	50
10	178	6.0	6.0	6.0	6.2	7.8	10	545	1130	382	168	66
11	171	6.0	6.0	6.0	6.4	7.8	10	218	1130	325	162	72
12	141	6.0	6.0	6.0	6.4	8.0	10	243	1140	306	124	74
13	132	6.0	6.0	6.0	6.4	8.0	160	349	1050	252	107	74
14	117	6.0	6.0	6.0	6.4	8.0	262	400	978	251	91	74
15	124	6.0	6.0	6.0	6.6	8.0	270	465	1090	180	96	65
16	134	6.0	6.0	6.0	6.6	8.2	413	520	1150	95	107	50
17	132	6.0	6.0	6.0	6.6	8.2	503	603	1150	79	94	39
18	131	6.0	6.0	6.0	6.6	8.2	518	865	1180	142	84	50
19	109	6.0	6.0	6.0	6.6	8.2	542	1060	1220	179	84	58
20	112	6.0	6.0	6.0	6.8	8.2	599	1140	1220	144	87	58
21	145	6.0	6.0	6.0	6.8	8.4	485	1160	1220	160	65	55
22	160	6.0	6.0	6.0	6.8	8.4	294	1170	1210	180	47	50
23	143	6.0	6.0	6.0	6.8	8.4	237	1160	1100	158	59	52
24	115	6.0	6.0	6.0	6.8	8.4	262	855	1050	162	71	53
25	121	6.0	6.0	6.0	6.8	8.6	271	684	1110	173	79	46
26	139	6.0	6.0	6.0	7.0	8.8	292	719	1050	230	78	39
27	131	6.0	6.0	6.0	7.0	8.8	270	888	1090	328	65	40
28	105	6.0	6.0	6.0	7.0	9.0	298	956	1080	309	59	40
29	90	6.0	6.0	6.0	7.0	9.2	405	891	1040	246	53	49
30	94	6.0	6.0	6.0	---	9.2	527	986	1030	182	61	56
31	94	---	6.0	6.0	---	9.4	---	1050	---	160	68	---
TOTAL	4404	180.6	186.0	186.0	188.4	252.2	6726.8	21807	33548	10278	3363	1965
MEAN	142	6.02	6.00	6.00	6.50	8.14	224	703	1118	332	108	65.5
AC-FT	8740	358	369	369	374	500	13340	43250	66540	20390	6670	3900
MAX	292	6.4	6.0	6.0	7.0	9.4	599	1170	1220	955	208	238
MIN	90	6.0	6.0	6.0	6.0	7.2	9.6	218	978	79	47	34

CAL YR	2007	TOTAL	83329.6	MEAN	228	MAX	1240	MIN	6.0	AC-FT	165300
WTR YR	2008	TOTAL	83085	MEAN	227	MAX	1220	MIN	6.0	AC-FT	164800

MAX DISCH: 1230 CFS AT 08:15 ON Jun. 19, 2008 GH 3.66 FT. SHIFT 0.02 FT.  
MAX GH: 3.66 FT. AT 08:15 ON Jun. 19, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08213500 RIO GRANDE AT THIRTYMILE BRIDGE, NEAR CREEDE CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08214500 NORTH CLEAR CREEK BELOW CONTINENTAL RESERVOIR, CO

**LOCATION.**--Lat 37°53'18", long 107°12'10", in NE¼SW¼ sec. 21, T.42 N., R.3 W., Hinsdale County, Hydrologic Unit 13010001, on left bank 100 ft downstream from bridge, 1,000 ft downstream from Continental Reservoir, and 15 mi west of Creede.

**DRAINAGE AREA.**--51.7 mi<sup>2</sup>.

**GAGE.**--Primary reference gage is a drop tape from reference point on shelf. The primary record is an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 4 ft. by 4 ft. timber shelter and concrete well. A graphic water-stage recorder is operated as a data backup. The control is a concrete ramp flume. Elevation of gage is 10,200 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Record is complete and reliable, except for Nov. 5, 2007 through Apr. 24, 2008 when the station was closed for the winter; Sep. 8-10, 2008 when the station was closed to remove old trapezoidal section and reset gage; and Sep. 25, 26, 2008 when concrete measuring apron was constructed. Record is good, except for periods of no gage-height record. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--NCLCONCO22EXT USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

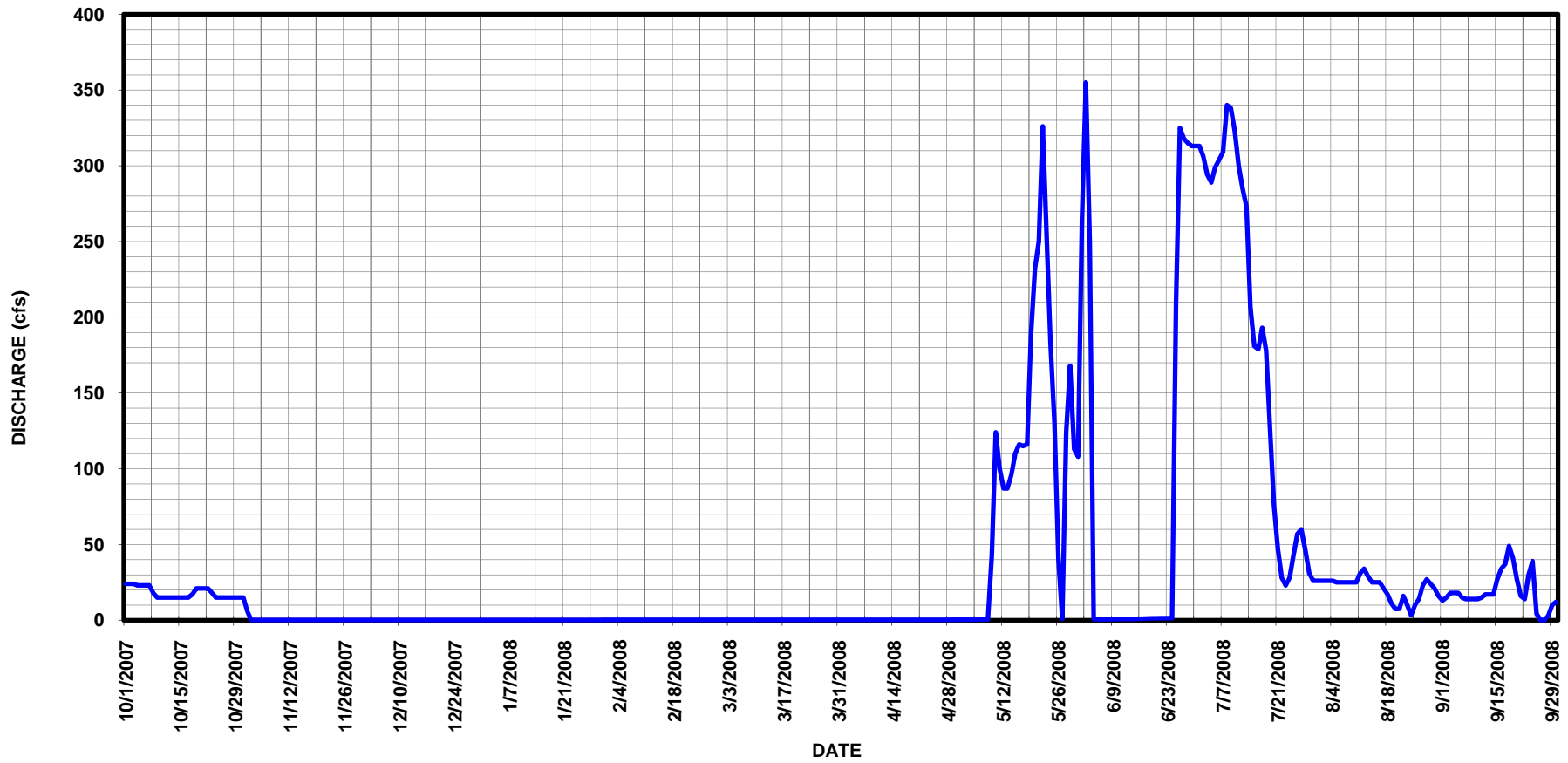
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	6.0	.16	.19	.21	.22	.24	.33	265	313	26	13
2	24	.16	.16	.19	.21	.22	.24	.33	355	306	26	15
3	24	.16	.16	.19	.21	.22	.24	.32	249	294	26	18
4	23	.14	.16	.19	.21	.22	.24	.36	.68	289	26	18
5	23	.13	.16	.19	.21	.22	.24	.43	.65	299	25	18
6	23	.13	.16	.19	.21	.22	.24	.44	.63	304	25	15
7	23	.13	.16	.19	.21	.22	.24	.52	.63	309	25	14
8	18	.13	.17	.19	.21	.23	.24	.55	.65	340	25	14
9	15	.14	.17	.19	.21	.23	.24	.43	.73	338	25	14
10	15	.14	.17	.19	.21	.23	.24	124	.75	323	25	14
11	15	.14	.17	.19	.21	.23	.24	100	.77	300	31	15
12	15	.14	.17	.19	.21	.23	.24	87	.81	285	34	17
13	15	.14	.17	.19	.21	.23	.24	87	.81	273	29	17
14	15	.14	.17	.19	.21	.23	.24	96	.84	207	25	17
15	15	.14	.17	.20	.21	.23	.24	110	.92	181	25	27
16	15	.14	.17	.20	.21	.23	.24	116	.95	179	25	34
17	15	.14	.17	.20	.22	.23	.24	115	1.1	193	21	37
18	17	.15	.18	.20	.22	.23	.24	116	1.2	178	17	49
19	21	.15	.18	.20	.22	.23	.24	189	1.3	126	11	41
20	21	.15	.18	.20	.22	.23	.25	232	1.3	76	7.4	27
21	21	.15	.18	.20	.22	.23	.25	250	1.4	47	7.5	16
22	21	.15	.18	.20	.22	.23	.25	326	1.4	28	16	14
23	18	.15	.18	.20	.22	.23	.25	253	1.4	23	10	30
24	15	.15	.18	.20	.22	.23	.25	182	1.4	28	3.3	39
25	15	.15	.18	.20	.22	.23	.26	130	209	43	10	4.3
26	15	.15	.18	.20	.22	.23	.26	41	325	57	14	.07
27	15	.15	.18	.20	.22	.23	.27	1.0	318	60	23	.07
28	15	.15	.18	.20	.22	.23	.27	124	315	46	27	3.0
29	15	.16	.18	.20	.22	.23	.31	168	313	31	24	10
30	15	.16	.18	.20	---	.23	.34	113	313	26	21	12
31	15	---	.18	.21	---	.24	---	108	---	26	16	---
TOTAL	556	10.21	5.34	6.07	6.22	7.07	7.52	3114.28	2682.32	5528	651.2	562.44
MEAN	17.9	.34	.17	.20	.21	.23	.25	100	89.4	178	21.0	18.7
AC-FT	1100	20	11	12	12	14	15	6180	5320	10960	1290	1120
MAX	24	6.0	.18	.21	.22	.24	.34	326	355	340	34	49
MIN	15	.13	.16	.19	.21	.22	.24	.32	.63	23	3.3	.07
CAL YR 2007	TOTAL	13979.3	MEAN	38.3	MAX	258	MIN	.13	AC-FT	27730		
WTR YR 2008	TOTAL	13136.67	MEAN	35.9	MAX	355	MIN	.07	AC-FT	26060		

MAX DISCH: 575 CFS AT 14:00 ON May. 22, 2008 GH 3.48 FT. SHIFT 0 FT.

MAX GH: 3.48 FT. AT 14:00 ON May. 22, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08214500 NORTH CLEAR CREEK BELOW CONTINENTAL RESERVOIR CO  
WY2008 HYDROGRAPH





RIO GRANDE BASIN

08217500 RIO GRANDE RIVER AT WAGONWHEEL GAP, CO.

**LOCATION.**--Lat 37°46'01", long 106°49'51", in NW1/4 NE1/4 sec. 35, T. 41N, R. 1E., Mineral County, Hydrologic unit 13010001, on left bank 40 ft. downstream from private bridge, 0.3 mi. upstream from Goose Creek, and 0.3 mi. west of town of Wagonwheel Gap.

**DRAINAGE AREA.**--780 mi<sup>2</sup>.

**GAGE.**--Primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder, in a 4 ft. by 4 ft. timber shelter with a 4 ft. diameter concrete well. A graphic water-stage recorder is operated as a data backup. Altitude of gage 8,430 ft. from topographic map. A cableway is located approximately 350 ft. upstream of the gage.

**REMARKS.**--Record is complete and reliable, except for Dec. 13, 2007 through Mar. 27, 2008 when the station was closed for the winter. Stage-discharge relationship was affected by ice ("b" record) December 8-12, 2007 and March 28-30, 2008. Record is good, except for periods of no gage height and ice-affected record, which should be considered poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--RIOWAGCO04 USED FROM 01-Oct-2007 TO 30-Sep-2008

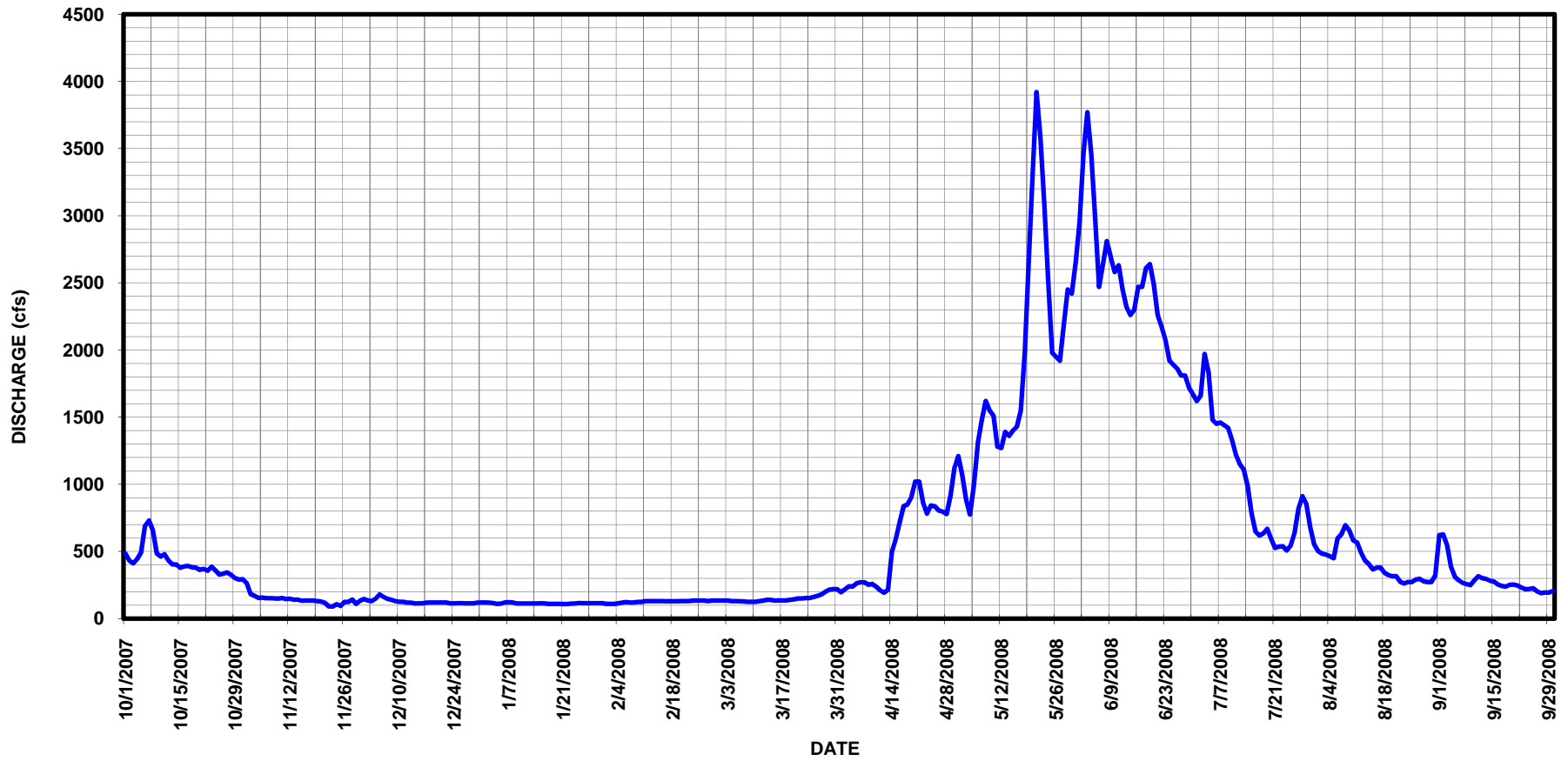
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	485	264	146	120	110	135	197	1210	2950	1620	503	621
2	432	182	136	119	110	135	218	1070	3460	1660	484	627
3	411	170	130	116	110	135	240	887	3770	1970	476	546
4	444	154	149	110	114	130	239	775	3460	1830	465	385
5	492	156	180	112	119	130	263	993	2980	1480	450	311
6	689	152	161	120	123	129	270	1310	2470	1450	597	285
7	730	152	147	122	120	128	270	1480	2640	1460	629	266
8	657	151	140	120	120	125	253	1620	2810	1440	695	257
9	485	149	130	113	124	125	258	1550	2690	1420	656	250
10	462	153	125	113	124	125	238	1510	2580	1330	582	286
11	480	146	125	113	130	129	211	1280	2630	1220	567	316
12	433	148	119	113	130	133	193	1270	2450	1150	491	301
13	404	141	119	113	130	140	214	1390	2320	1110	433	295
14	403	142	113	113	130	140	497	1360	2260	989	406	282
15	379	133	114	114	130	135	594	1400	2300	786	367	275
16	388	135	114	114	129	136	717	1430	2470	647	379	254
17	393	135	119	110	129	136	837	1550	2470	618	380	243
18	382	135	120	110	129	136	849	1990	2610	635	342	238
19	379	130	120	110	129	140	904	2660	2640	668	324	252
20	362	127	120	110	130	144	1020	3310	2490	594	316	254
21	370	118	120	109	130	150	1020	3920	2260	526	316	246
22	356	91	120	109	130	150	863	3580	2170	537	274	232
23	386	90	114	112	134	153	782	3080	2070	539	262	220
24	359	108	114	113	135	153	842	2510	1920	508	272	221
25	328	94	115	116	135	160	836	1980	1890	544	272	226
26	334	124	115	115	135	170	805	1950	1860	637	291	203
27	344	124	114	115	130	180	797	1920	1810	817	296	189
28	326	142	114	115	135	200	779	2190	1810	912	277	195
29	302	110	114	115	135	215	915	2450	1720	854	272	194
30	291	133	119	115	---	220	1120	2420	1670	679	272	205
31	293	---	120	115	---	220	---	2650	---	553	321	---
TOTAL	12979	4189	3906	3534	3669	4637	17241	58695	73630	31183	12667	8675
MEAN	419	140	126	114	127	150	575	1893	2454	1006	409	289
AC-FT	25740	8310	7750	7010	7280	9200	34200	116400	146000	61850	25120	17210
MAX	730	264	180	122	135	220	1120	3920	3770	1970	695	627
MIN	291	90	113	109	110	125	193	775	1670	508	262	189
CAL YR 2007	TOTAL	241420	MEAN	661	MAX	3170	MIN	90	AC-FT	478900		
WTR YR 2008	TOTAL	235005	MEAN	642	MAX	3920	MIN	90	AC-FT	466100		

MAX DISCH: 4280 CFS AT 03:00 ON May. 21, 2008 GH 4.84 FT. SHIFT 0.02 FT.  
MAX GH: 4.84 FT. AT 03:00 ON May. 21, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08217500 RIO GRANDE RIVER AT WAGONWHEEL GAP CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08218500 GOOSE CREEK AT WAGONWHEEL GAP, CO

**LOCATION.**--Lat 37°45'07", long 106°49'46", in SW¼SE¼ sec. 35, T.41 N., R.1 E., Mineral County, Hydrologic Unit 13010001, on left bank 0.2 mi downstream from Pierce Creek, 1.0 mi upstream from mouth, 1.0 mi south of Wagonwheel Gap, and 8.8 mi southeast of Creede.

**DRAINAGE AREA.**--90 mi<sup>2</sup>.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. The primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 36-inch corrugated metal pipe shelter and smooth steel pipe well. A graphic water-stage recorder is operated as a data backup. Supplemental outside cantilever chain gage (not in use). Elevation of gage is 8,460 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Record is complete and reliable, except for December 13, 2007 through March 27, 2008 when station was closed for the winter. Stage-discharge relation was affected by ice November 22-30, December 1-5, and 9-12, 2007 and March 28-30, 2008. Record is good, except for periods of no gage height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--GOOWAGCO09 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

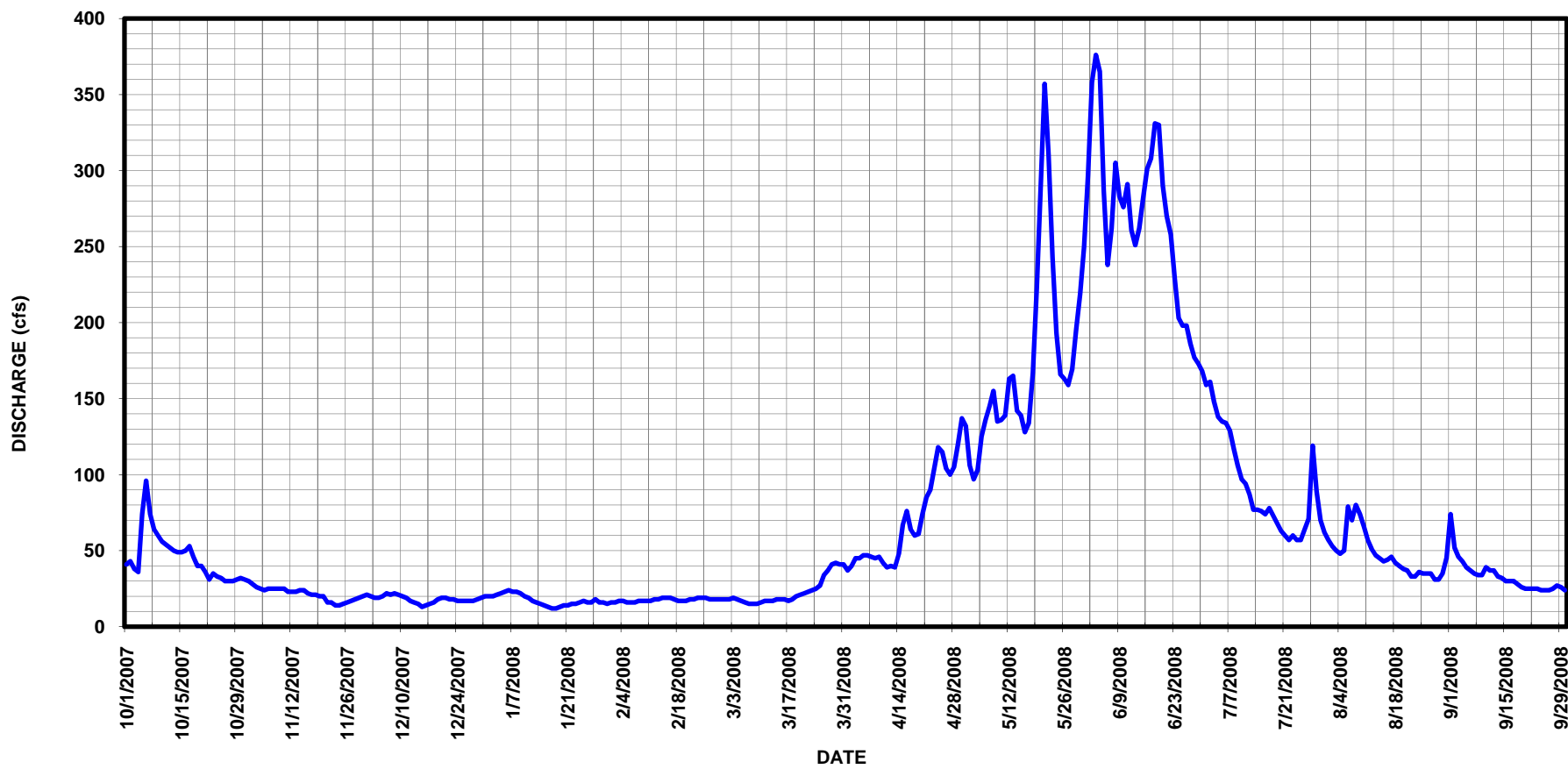
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	30	21	20	16	18	37	132	297	159	57	74
2	43	28	20	20	16	18	40	106	358	161	53	52
3	38	26	19	21	17	19	45	97	376	148	50	46
4	36	25	19	22	17	18	45	103	365	138	48	43
5	74	24	20	23	16	17	47	125	287	135	50	39
6	96	25	22	24	16	16	47	136	238	134	79	37
7	74	25	21	23	16	15	46	145	262	129	70	35
8	64	25	22	23	17	15	45	155	305	117	80	34
9	60	25	21	22	17	15	46	135	283	106	74	34
10	56	25	20	20	17	16	42	136	276	97	66	39
11	54	23	19	19	17	17	39	139	291	94	57	37
12	52	23	17	17	18	17	40	163	261	87	51	37
13	50	23	16	16	18	17	39	165	251	77	47	33
14	49	24	15	15	19	18	48	142	262	77	45	32
15	49	24	13	14	19	18	67	139	282	76	43	30
16	50	22	14	13	19	18	76	128	301	74	44	30
17	53	21	15	12	18	17	64	134	308	78	46	30
18	46	21	16	12	17	18	60	167	331	73	42	28
19	40	20	18	13	17	20	61	223	330	68	40	26
20	40	20	19	14	17	21	74	290	290	63	38	25
21	36	16	19	14	18	22	85	357	270	60	37	25
22	31	16	18	15	18	23	90	310	258	57	33	25
23	35	14	18	15	19	24	104	243	229	60	33	25
24	33	14	17	16	19	25	118	193	203	57	36	24
25	32	15	17	17	19	27	115	166	198	57	35	24
26	30	16	17	16	18	34	104	163	198	64	35	24
27	30	17	17	16	18	37	100	159	186	71	35	25
28	30	18	17	18	18	41	105	169	177	119	31	27
29	31	19	18	16	18	42	120	195	173	89	31	26
30	32	20	19	16	---	41	137	219	168	70	35	24
31	31	---	20	15	---	41	---	250	---	62	45	---
TOTAL	1416	644	564	537	509	705	2086	5384	8014	2857	1466	990
MEAN	45.7	21.5	18.2	17.3	17.6	22.7	69.5	174	267	92.2	47.3	33.0
AC-FT	2810	1280	1120	1070	1010	1400	4140	10680	15900	5670	2910	1960
MAX	96	30	22	24	19	42	137	357	376	161	80	74
MIN	30	14	13	12	16	15	37	97	168	57	31	24

CAL YR	2007	TOTAL	25155	MEAN	68.9	MAX	357	MIN	13	AC-FT	49890
WTR YR	2008	TOTAL	25172	MEAN	68.8	MAX	376	MIN	12	AC-FT	49930

MAX DISCH: 425 CFS AT 01:00 ON Jun. 4, 2008 GH 3.92 FT. SHIFT -0.15 FT.  
MAX GH: 3.92 FT. AT 01:00 ON Jun. 4, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08218500 GOOSE CREEK AT WAGONWHEEL GAP CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08219500 SOUTH FORK RIO GRANDE AT SOUTH FORK, CO

**LOCATION.**--Lat 37°39'25", long 106°38'55", in SW¼NE¼ sec. 3, T.39 N., R.3 E., Rio Grande County, Hydrologic Unit 13010001, on left bank near U.S. Highway 160, 0.1 mile downstream from Church Creek, 0.9 mi southwest of village of South Fork, and 1.5 mi upstream from mouth.

**DRAINAGE AREA AND PERIOD OF RECORD.**--216 mi<sup>2</sup>. Station established May 17, 1909 at different site with minimal records. Non-recording to 1910 when water-stage recorder installed. Moved to current site in May 1936.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder, air temperature, and rain data in a timber shelter and corrugated metal pipe well. A graphic water-stage recorder is operated as a data backup. Datum of gage is 8,221.79 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Record is complete and reliable, except Dec. 12, 2007 when the well was frozen and Dec. 13, 2007 through Mar. 27, 2008 when the station was closed for the winter. Stage-discharge relation was affected by ice Nov. 22-30, 2007, Dec. 1-11, 2007 and Mar. 28, 2008. Record is good, except for periods of no gage-height record and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--RIOSFKCO11 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

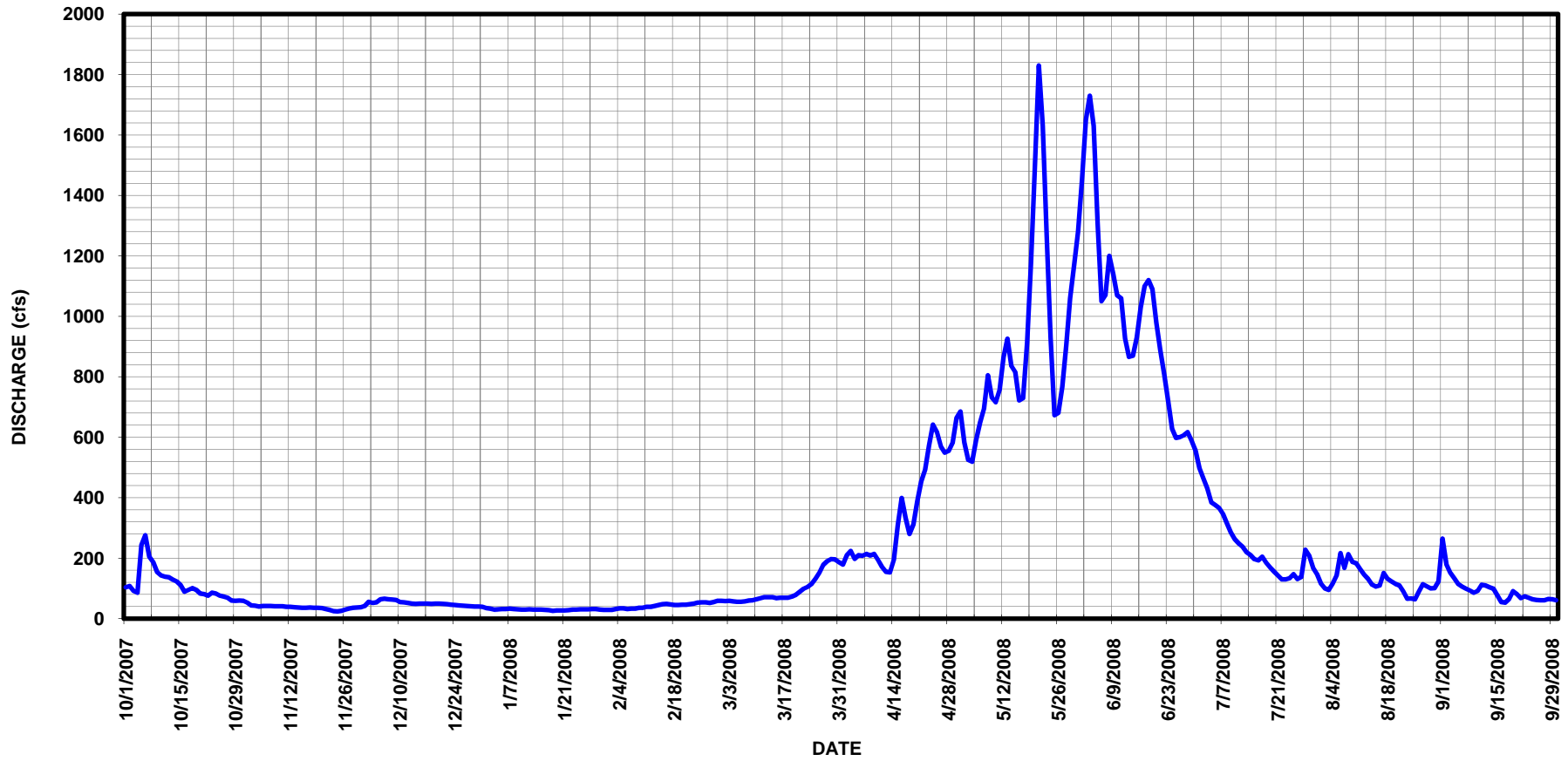
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	53	42	35	29	59	179	685	1450	498	116	265
2	108	44	56	33	29	58	210	583	1650	464	100	180
3	92	43	52	30	32	59	224	525	1730	431	95	152
4	86	40	54	31	34	57	198	519	1630	385	116	134
5	243	42	64	32	34	56	210	590	1310	376	143	115
6	276	42	66	32	32	56	208	649	1050	366	217	106
7	205	42	64	33	33	57	214	695	1070	346	168	99
8	187	41	63	32	33	60	209	805	1200	315	213	93
9	154	41	62	31	36	61	214	732	1140	285	188	86
10	143	41	55	30	36	64	194	716	1070	263	183	92
11	139	39	54	30	39	68	171	757	1060	249	164	112
12	137	39	52	31	39	71	155	865	927	238	146	110
13	129	38	50	30	42	71	153	926	866	220	132	104
14	123	37	49	30	45	71	195	836	870	211	113	99
15	111	36	50	30	48	68	309	816	930	197	106	77
16	89	36	50	29	49	69	399	722	1030	193	110	55
17	95	37	50	28	47	69	333	730	1100	205	151	53
18	101	36	49	26	45	69	280	913	1120	185	132	65
19	95	36	50	27	45	73	312	1180	1090	170	123	91
20	83	35	50	27	46	79	389	1500	979	156	115	81
21	81	32	49	27	46	89	454	1830	889	143	110	68
22	76	29	48	28	48	99	493	1630	807	130	90	74
23	86	25	46	30	50	105	573	1270	719	130	66	69
24	83	24	45	30	53	115	642	931	628	134	67	64
25	76	26	44	31	54	132	617	673	598	147	64	62
26	73	30	43	31	54	152	570	681	601	131	90	61
27	69	33	42	31	52	178	549	767	607	138	114	61
28	60	36	41	32	55	190	555	902	617	228	107	65
29	59	37	40	32	59	197	582	1060	589	208	100	64
30	60	38	40	30	---	196	664	1170	556	168	101	61
31	59	---	39	29	---	187	---	1280	---	147	123	---
TOTAL	3482	1108	1559	938	1244	2935	10455	27938	29883	7457	3863	2818
MEAN	112	36.9	50.3	30.3	42.9	94.7	349	901	996	241	125	93.9
AC-FT	6910	2200	3090	1860	2470	5820	20740	55420	59270	14790	7660	5590
MAX	276	53	66	35	59	197	664	1830	1730	498	217	265
MIN	59	24	39	26	29	56	153	519	556	130	64	53

CAL YR	2007	TOTAL	79057	MEAN	217	MAX	1090	MIN	24	AC-FT	156800
WTR YR	2008	TOTAL	93680	MEAN	256	MAX	1830	MIN	24	AC-FT	185800

MAX DISCH: 1970 CFS AT 00:45 ON May. 21, 2008 GH 5.66 FT. SHIFT 0 FT.  
MAX GH: 5.66 FT. AT 00:45 ON May. 21, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08219500 SOUTH FORK RIO GRANDE AT SOUTH FORK CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08220000 RIO GRANDE RIVER NEAR DEL NORTE, CO

**LOCATION.**--Lat 37°41'22", long 106°27'38", in NW¼ sec. 29, T.40 N., R.5 E., Rio Grande County, Hydrologic Unit 13010001, on right bank 20 ft downstream from county highway bridge, 6.0 mi west of Del Norte, and 5 mi upstream from Pinos Creek.

**DRAINAGE AREA AND PERIOD OF RECORD.**--1,320 mi<sup>2</sup>. Measurements and staff gages with frequent readings begun in June of 1889. Various sites used until present site established in Nov. 1910, with a recorder installed in 1934. All missing periods have been estimated and discharge records are complete from July 1, 1889.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter and phone modem, which records gage-height data from a float-operated shaft encoder, air temperature, water temperature, and rainfall in a 6 ft. by 6 ft. exposed aggregate building with a 4 ft. diameter concrete well. A graphic water-stage recorder is operated as a data backup. Gage datum is 7,980.25 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Record is complete and reliable, except for Dec. 29, 2007 through Jan. 3, 2008 and Jan. 13-21, 2008 when floats were affected by ice in well. The stage-discharge relation was affected by ice Nov. 24 through Dec. 28, 2007, and Jan. 4-12, Jan. 22 through Mar. 29, 2008. Record is good, except for periods of no gage-height and ice affected record, which should be considered poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--RIODELCO04 USED FROM 01-Oct-2007 TO 30-Sep-2008

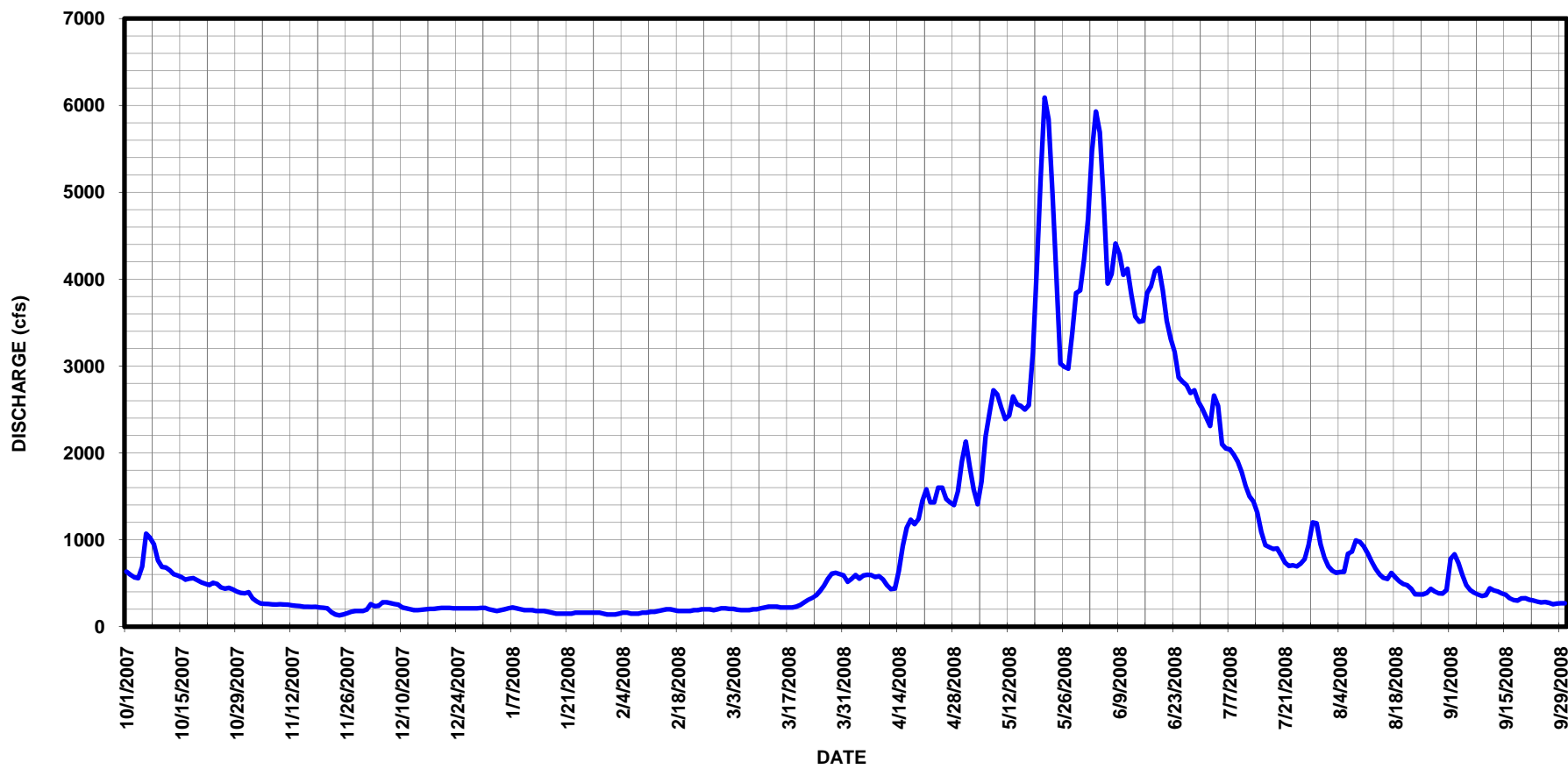
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	632	397	196	200	140	210	516	2130	4690	2410	693	781
2	597	326	260	190	140	205	550	1840	5470	2310	644	833
3	568	291	235	180	150	205	594	1580	5930	2660	619	732
4	558	268	240	190	160	195	552	1410	5690	2540	629	595
5	690	263	280	200	160	190	588	1670	4890	2100	631	478
6	1070	261	280	210	150	190	596	2190	3950	2050	839	421
7	1020	256	270	220	150	190	593	2460	4060	2040	864	390
8	944	255	260	210	150	200	571	2720	4410	1980	993	369
9	761	257	252	200	160	200	580	2670	4290	1900	975	353
10	687	254	220	190	160	210	543	2520	4050	1780	921	362
11	680	252	210	190	170	220	477	2390	4120	1620	840	441
12	649	244	200	190	170	230	432	2430	3820	1500	747	417
13	604	240	190	180	180	230	439	2650	3570	1440	664	404
14	588	236	190	180	190	230	646	2560	3510	1310	602	382
15	570	229	195	180	200	220	930	2540	3520	1090	561	368
16	541	228	200	170	200	220	1140	2500	3840	938	549	327
17	551	227	205	160	190	220	1230	2550	3920	915	618	306
18	558	228	205	150	180	220	1180	3150	4090	894	568	299
19	533	221	210	150	180	230	1240	4120	4130	900	523	325
20	510	217	215	150	180	250	1450	5180	3870	821	490	327
21	493	211	215	150	180	280	1580	6090	3520	737	478	310
22	479	167	215	150	190	310	1430	5840	3310	699	437	301
23	504	140	210	160	190	330	1430	4980	3160	706	373	289
24	492	130	210	160	200	360	1600	4020	2870	694	371	278
25	451	140	210	160	200	410	1600	3030	2820	726	371	283
26	437	155	210	160	200	470	1470	2990	2780	778	388	274
27	447	170	210	160	190	550	1430	2970	2690	943	436	257
28	428	180	210	160	200	610	1400	3370	2720	1200	404	265
29	404	180	210	160	210	620	1560	3840	2590	1190	384	269
30	389	180	215	150	---	605	1900	3870	2510	949	381	269
31	383	---	215	140	---	591	---	4230	---	794	420	---
TOTAL	18218	6803	6843	5400	5120	9401	30247	96490	114790	42614	18413	11705
MEAN	588	227	221	174	177	303	1008	3113	3826	1375	594	390
AC-FT	36140	13490	13570	10710	10160	18650	59990	191400	227700	84520	36520	23220
MAX	1070	397	280	220	210	620	1900	6090	5930	2660	993	833
MIN	383	130	190	140	140	190	432	1410	2510	694	371	257
CAL YR 2007	TOTAL	358033	MEAN	981	MAX	4750	MIN	130	AC-FT	710200		
WTR YR 2008	TOTAL	366044	MEAN	1000	MAX	6090	MIN	130	AC-FT	726000		

MAX DISCH: 6370 CFS AT 07:30 ON May. 21, 2008 GH 4.92 FT. SHIFT 0 FT.  
MAX GH: 4.92 FT. AT 07:30 ON May. 21, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08220000 RIO GRANDE RIVER NEAR DEL NORTE CO  
WY2008 HYDROGRAPH





RIO GRANDE BASIN

08220500 PINOS CREEK NEAR DEL NORTE, CO

**LOCATION.**--Lat 37°26'51", long 106°27'05", in SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec. 29, T.39 N., R.5 E., Rio Grande County, Hydrologic Unit 13010002, on left bank 200 ft. downstream from Bennett Creek and 8.0 mi. southwest of Del Norte, Co.

**DRAINAGE AREA.**--53 mi<sup>2</sup>.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. A supplemental outside staff gage is located in the concrete box. The primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 3 ft. by 3 ft. timber shelter and concrete well at a 12-foot rectangular concrete box control. The control was modified on Oct. 4, 2007, by inserting a steel triangular ramp on each side of the concrete box at the discharge end. A graphic water-stage recorder is operated as a data backup. Altitude of gage is 8,480 ft. from topographic map.

**REMARKS.**--Record is complete and reliable, except for Nov. 24 to Dec. 12, 2007 when the well was frozen; Dec. 13, 2007 to Mar. 31, 2008 when the station was closed for the winter; and May 11-13, 18, 19, 25, 2008 when there was some uncertainty in gage-height due to the well siphoning. Stage-discharge relation was affected by ice Oct. 22, Nov. 4-9, 15-23, 2007 and Apr. 1, 12, 18, 2008. Record is good, except for periods when well was siphoning ('e' days), no gage-height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--PINDELCO14 USED FROM 01-Oct-2007 TO 04-Oct-2007  
 PINDELCO15 USED FROM 04-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
 MEAN VALUES

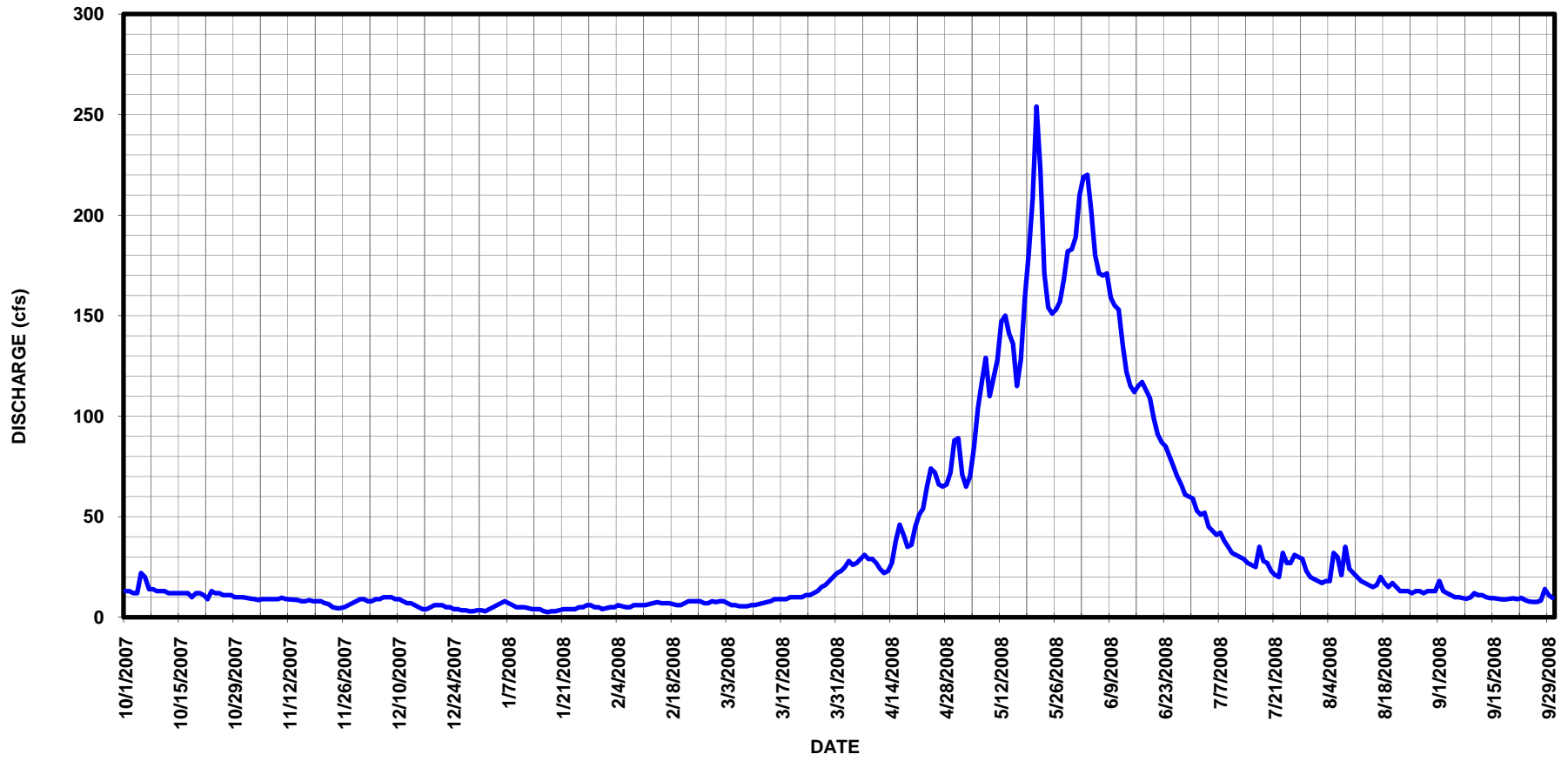
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	9.6	9.0	3.0	4.5	8.0	23	89	210	53	18	18
2	13	9.3	8.0	4.0	5.0	8.0	25	71	219	51	17	13
3	12	9.0	8.0	5.0	5.0	7.0	28	65	220	52	18	12
4	12	8.5	9.0	6.0	6.0	6.0	26	70	202	45	18	11
5	22	9.0	9.0	7.0	5.5	6.0	27	84	180	43	32	10
6	20	9.0	10	8.0	5.0	5.5	29	104	171	41	30	10
7	14	9.0	10	7.0	5.0	5.5	31	117	170	42	21	9.5
8	14	9.0	10	6.0	6.0	5.5	29	129	171	38	35	9.2
9	13	9.0	9.0	5.0	6.0	6.0	29	110	159	35	24	9.9
10	13	9.7	9.0	5.0	6.0	6.0	27	119	155	32	22	12
11	13	9.1	8.0	5.0	6.0	6.5	24	128	153	31	20	11
12	12	8.9	7.0	4.5	6.5	7.0	22	147	136	30	18	11
13	12	8.7	7.0	4.0	7.0	7.5	23	150	122	29	17	10
14	12	8.6	6.0	4.0	7.5	8.0	27	141	115	27	16	9.5
15	12	8.0	5.0	4.0	7.0	9.0	38	136	112	26	15	9.5
16	12	8.0	4.0	3.0	7.0	9.0	46	115	115	25	16	9.2
17	12	8.5	4.0	2.5	7.0	9.0	41	128	117	35	20	8.9
18	10	8.0	5.0	3.0	6.5	9.0	35	159	113	28	17	8.9
19	12	8.0	6.0	3.0	6.0	10	36	181	109	27	15	9.2
20	12	8.0	6.0	3.5	6.0	10	45	208	99	23	17	9.4
21	11	7.0	6.0	4.0	7.0	10	51	254	91	21	15	9.0
22	9.0	6.5	5.0	4.0	8.0	10	54	222	87	20	13	9.6
23	13	5.0	5.0	4.0	8.0	11	65	171	85	32	13	8.5
24	12	4.5	4.0	4.0	8.0	11	74	154	80	27	13	7.8
25	12	4.5	4.0	5.0	8.0	12	72	151	75	27	12	7.6
26	11	5.0	3.5	5.0	7.0	13	66	153	70	31	13	7.6
27	11	6.0	3.5	6.0	7.0	15	65	157	66	30	13	8.4
28	11	7.0	3.0	6.0	8.0	16	66	168	61	29	12	14
29	10	8.0	3.0	5.0	7.5	18	72	182	60	23	13	11
30	10	9.0	3.5	5.0	---	20	88	183	59	20	13	9.6
31	10	---	3.5	4.0	---	22	---	189	---	19	13	---
TOTAL	385.0	237.4	193.0	144.5	189.0	306.5	1284	4435	3782	992	549	304.3
MEAN	12.4	7.91	6.23	4.66	6.52	9.89	42.8	143	126	32.0	17.7	10.1
AC-FT	764	471	383	287	375	608	2550	8800	7500	1970	1090	604
MAX	22	9.7	10	8.0	8.0	22	88	254	220	53	35	18
MIN	9.0	4.5	3.0	2.5	4.5	5.5	22	65	59	19	12	7.6

CAL YR	2007	TOTAL	12427.4	MEAN	34.0	MAX	184	MIN	4.0	AC-FT	24650
WTR YR	2008	TOTAL	12801.7	MEAN	35.1	MAX	254	MIN	2.5	AC-FT	25390

MAX DISCH: 301 CFS AT 22:00 ON May. 20, 2008 GH 2.82 FT. SHIFT 0.01 FT.  
 MAX GH: 2.82 FT. AT 22:00 ON May. 20, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08220500 PINOS CREEK NEAR DEL NORTE CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08221500 RIO GRANDE NEAR MONTE VISTA, CO

**LOCATION.**--Lat 37°36'34", long 106°08'54", in NW¼SW¼ sec. 19, T.39 N., R.8 E., Rio Grande County, Hydrographic Unit 13010002, on left bank 40 ft. downstream from bridge on U.S. Highway 285, 2.0 mi. north of Monte Vista, and 12 mi. downstream from San Francisco Creek.

**DRAINAGE AREA.**--1,590 mi<sup>2</sup>.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. The primary record is an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder and precipitation data from a tipping-bucket rain gauge in 72 inch corrugated metal shelter and well. A graphic water-stage recorder is used as data backup. Datum of gage is 7,654.16 ft., Colorado State Highway Datum.

**REMARKS.**--Record is complete and reliable, except for Dec. 18, 2007 through Mar. 11, 2008 when station was closed for winter. Stage-discharge relation was affected by ice Nov. 26-30, Dec. 1-3, 14-17, 2007 and Mar. 12-28, 2008. Record is good, except for periods of no gage-height and ice-affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--RIOMONCO20 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

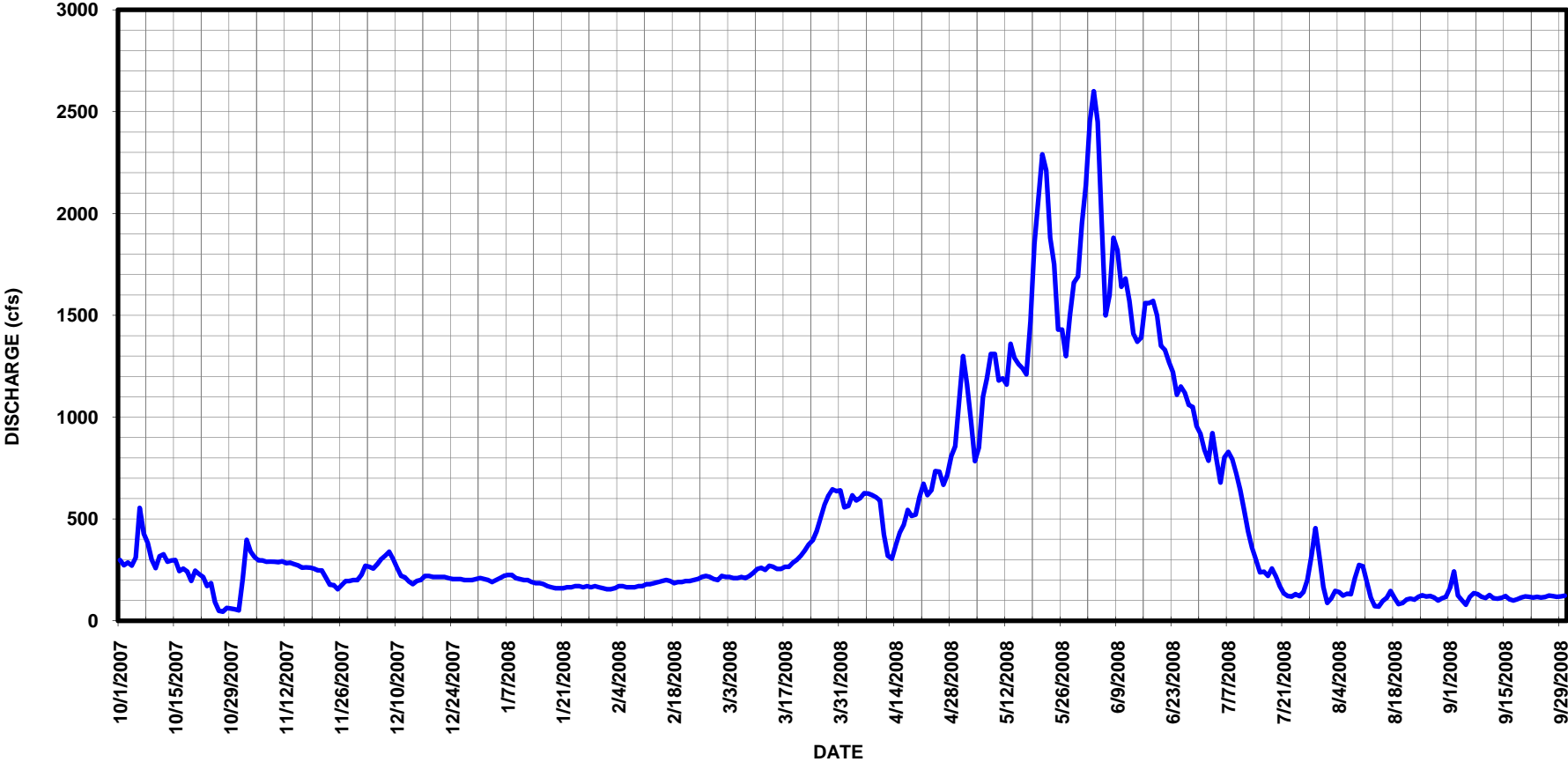
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	298	206	225	205	155	220	557	1300	2140	839	88	162
2	273	397	270	200	155	215	564	1160	2450	786	110	242
3	286	340	265	190	160	215	616	982	2600	921	147	124
4	271	313	257	200	170	210	591	784	2450	792	141	101
5	311	297	278	210	170	210	603	849	1960	679	124	79
6	554	296	303	220	165	215	626	1100	1500	803	133	117
7	428	290	320	225	165	210	625	1190	1600	829	131	136
8	382	291	339	225	165	220	617	1310	1880	793	209	131
9	300	290	303	210	170	235	607	1310	1820	723	274	118
10	259	288	261	205	170	255	591	1180	1640	643	268	112
11	317	292	221	200	180	260	424	1190	1680	543	191	127
12	327	283	213	200	180	250	319	1160	1570	439	114	111
13	290	285	193	190	185	270	305	1360	1410	360	72	109
14	296	278	180	185	190	265	372	1290	1370	300	70	113
15	298	272	195	185	195	255	433	1260	1390	238	97	122
16	244	261	200	180	200	255	471	1240	1560	241	112	106
17	256	262	220	170	195	265	544	1210	1560	221	146	100
18	242	261	220	165	185	265	515	1470	1570	257	112	106
19	196	256	215	160	190	285	521	1850	1500	219	82	114
20	246	248	215	160	190	300	608	2070	1350	170	87	120
21	229	247	215	160	195	320	673	2290	1330	135	104	118
22	215	213	215	165	195	345	617	2210	1270	122	109	114
23	171	177	210	165	200	375	641	1880	1220	119	104	118
24	185	175	205	170	205	395	735	1750	1110	131	118	114
25	92	155	205	170	215	440	732	1430	1150	121	125	117
26	49	175	205	165	220	505	668	1430	1120	142	119	124
27	45	195	200	170	215	570	716	1300	1060	202	122	121
28	63	195	200	165	205	615	808	1500	1050	320	114	118
29	60	200	200	170	200	646	857	1660	955	455	100	120
30	57	200	205	165	---	637	1080	1690	917	315	111	123
31	51	---	210	160	---	640	---	1950	---	166	118	---
TOTAL	7291	7638	7163	5710	5385	10363	18036	44355	46182	13024	3952	3637
MEAN	235	255	231	184	186	334	601	1431	1539	420	127	121
AC-FT	14460	15150	14210	11330	10680	20560	35770	87980	91600	25830	7840	7210
MAX	554	397	339	225	220	646	1080	2290	2600	921	274	242
MIN	45	155	180	160	155	210	305	784	917	119	70	79

CAL YR 2007 TOTAL 154296 MEAN 423 MAX 1550 MIN 45 AC-FT 306000  
WTR YR 2008 TOTAL 172736 MEAN 472 MAX 2600 MIN 45 AC-FT 342600

MAX DISCH: 2730 CFS AT 10:15 ON Jun. 3, 2008 GH 6.39 FT. SHIFT -0.01 FT.  
MAX GH: 6.39 FT. AT 10:15 ON Jun. 3, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08221500 RIO GRANDE NEAR MONTE VISTA CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

RIO GRANDE AT RIO GRANDE-ALAMOSA COUNTY LINE, CO

**LOCATION.**--UTM coordinates: 406626 meters Easting, 4158964 meters Northing, Zone 13S, NAD83, in NW ¼ NW ¼ NW ¼ section 1, T38N, R8E, NMPM, Rio Grande County, on left bank approximately 1 mile above bridge on county line road.

**DRAINAGE AREA.**--1,640 mi<sup>2</sup>.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. The primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 42-inch diameter corrugated metal well and shelter. A graphic water-stage recorder is operated as a data backup. Datum of gage is 7,595 feet, from topographic map.

**REMARKS.**--Record is complete and reliable, except for Nov. 25, 26, 27, December 26, 2007 through March 12, 2008 when well was frozen. Shaft encoder float was installed in oil cylinder November 27, 2007 and was the only record until Dec. 26, 2007 when water in oil cylinder froze. Stage-discharge relation was affected by ice Nov. 24, 28-30, Dec.1-3, 14-25, 2007 and Mar.13-24, 2008. Record is good, except for periods of no gage-height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--RIOLINCO09 USED FROM 01-Oct-2007 TO 30-Sep-2008

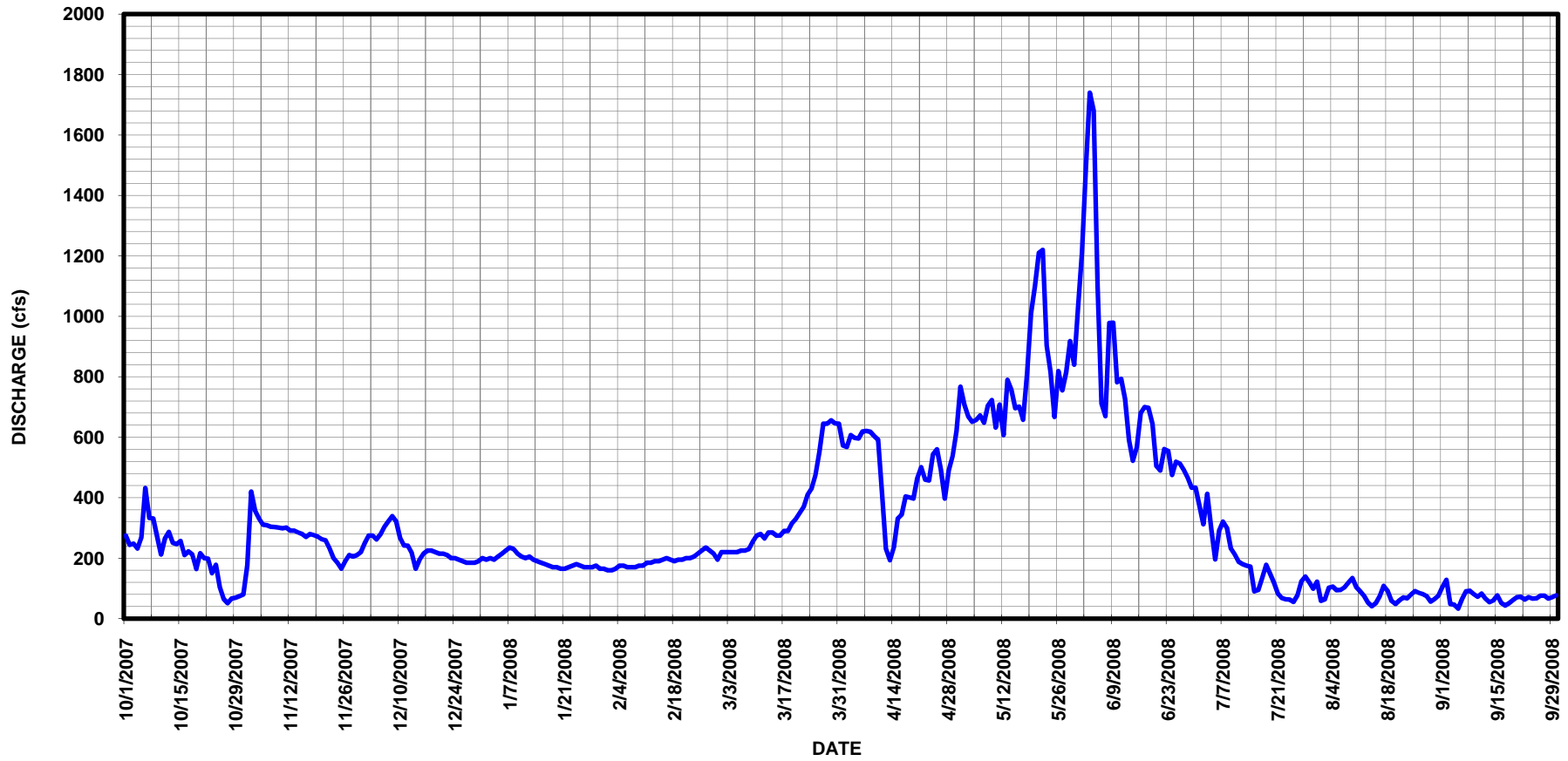
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	275	176	250	195	160	220	573	767	1210	373	59	105
2	244	420	275	200	160	220	568	708	1490	312	64	128
3	248	357	275	195	165	220	607	669	1740	413	102	48
4	232	331	262	205	175	220	598	651	1680	296	106	46
5	269	311	279	215	175	220	596	657	1100	196	94	33
6	432	309	304	225	170	225	619	672	711	291	95	65
7	333	304	322	235	170	225	621	648	670	321	103	90
8	331	303	339	230	170	230	618	705	978	300	119	92
9	271	301	322	215	175	255	604	723	979	232	134	81
10	212	299	267	205	175	275	592	632	782	212	104	72
11	265	301	242	200	185	280	415	708	793	188	90	83
12	287	291	241	205	185	265	231	607	726	180	75	66
13	251	291	217	195	190	285	193	790	591	175	53	54
14	246	285	165	190	190	285	236	757	522	172	41	60
15	257	280	195	185	195	275	331	696	567	90	51	77
16	210	270	215	180	200	275	344	701	680	95	74	52
17	222	280	225	175	195	290	404	658	700	135	108	43
18	212	276	225	170	190	290	401	813	697	178	92	51
19	164	271	220	170	195	315	397	1010	646	149	59	61
20	216	263	215	165	195	330	465	1100	505	119	48	71
21	200	259	215	165	200	350	501	1210	490	83	60	72
22	198	233	210	170	200	370	460	1220	561	68	70	63
23	150	200	200	175	205	410	457	904	555	64	67	71
24	178	185	200	180	215	430	543	815	475	63	80	66
25	104	165	195	175	225	475	560	667	519	55	91	67
26	65	190	190	170	235	551	492	819	513	77	85	76
27	51	210	185	170	225	645	397	755	492	123	81	76
28	66	205	185	170	215	645	490	815	466	139	74	66
29	69	210	185	175	195	656	538	918	433	120	56	71
30	74	220	190	165	---	646	621	840	433	99	65	77
31	80	---	200	165	---	645	---	1030	---	122	76	---
TOTAL	6412	7996	7210	5835	5530	11023	14472	24665	22704	5440	2476	2083
MEAN	207	267	233	188	191	356	482	796	757	175	79.9	69.4
AC-FT	12720	15860	14300	11570	10970	21860	28710	48920	45030	10790	4910	4130
MAX	432	420	339	235	235	656	621	1220	1740	413	134	128
MIN	51	165	165	165	160	220	193	607	433	55	41	33
CAL YR 2007	TOTAL	93419.7	MEAN	256	MAX	937	MIN	7	AC-FT	185300		
WTR YR 2008	TOTAL	115846	MEAN	317	MAX	1740	MIN	33	AC-FT	229800		

MAX DISCH: 1850 CFS AT 18:30 ON Jun. 3, 2008 GH 6.24 FT. GH CORR. +0.11 FT. SHIFT -0.07 FT.  
MAX GH: 6.35 FT. (GH CORR. +0.11 FT. APPLIED) AT 18:30 ON Jun. 3, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

RIO GRANDE AT RIO GRANDE-ALAMOSA COUNTY LINE CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08223000 RIO GRANDE AT ALAMOSA, CO

**LOCATION.**--Lat 37°28'51", long 105°52'39", in SE¼NE¼ sec. 4, T. 37 N., R. 10 E., Alamosa County, on left bank 0.3 mile northwest of Adams State College and 9 miles upstream from Alamosa Creek.

**DRAINAGE AREA.**--1,710 mi<sup>2</sup>.

**GAGE.**--Primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder and air temperature data from a thermistor in a 4 ft. by 6 ft. exposed aggregate building with a 4 ft. diameter concrete well. A graphic water-stage recorder is operated as a data backup. Datum of gage is 7,532.66 ft.

**REMARKS.**--Record is complete and reliable, except for December 17, 2007 to Mar. 12, 2008 when the well was frozen. The stage-discharge relation was affected by ice November 25-30, December 1-4, 14-16, 2007, and March 13-20, 2008. Record is good except, for periods of no gage-height and ice-affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--RIOALACO22D USED FROM 01-Oct-2007 TO 30-Sep-2008

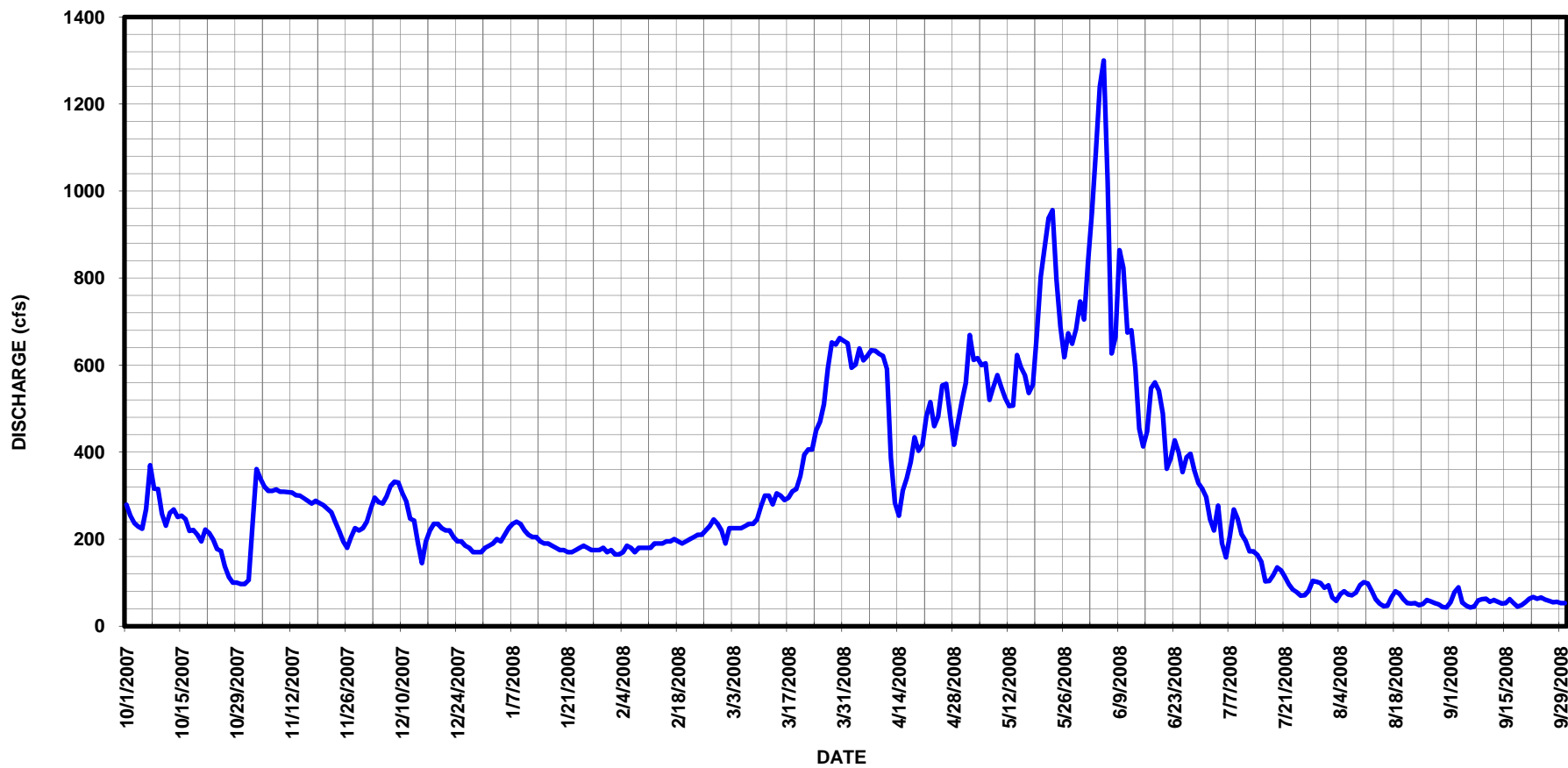
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	279	106	240	185	175	190	650	559	837	297	94	55
2	254	235	270	190	165	225	594	669	951	245	66	78
3	237	361	295	200	165	225	601	612	1090	220	58	89
4	229	339	285	195	170	225	638	616	1240	277	73	54
5	224	321	282	210	185	225	611	600	1300	190	80	47
6	269	311	298	225	180	230	621	604	1020	158	73	43
7	370	311	322	235	170	235	634	520	627	207	71	45
8	316	314	332	240	180	235	633	550	665	268	77	59
9	315	309	330	235	180	245	626	577	864	246	94	62
10	258	309	306	220	180	275	621	549	823	211	101	63
11	231	308	287	210	180	300	591	524	675	196	98	56
12	260	307	247	205	190	300	387	506	680	172	81	60
13	268	301	243	205	190	280	283	507	595	172	62	56
14	251	300	190	195	190	305	254	623	454	164	52	52
15	254	294	145	190	195	300	312	595	413	148	46	53
16	246	288	195	190	195	290	340	577	447	103	47	62
17	219	282	220	185	200	295	377	536	547	104	66	53
18	221	288	235	180	195	310	434	555	560	117	80	45
19	210	283	235	175	190	315	403	669	541	135	75	48
20	195	278	225	175	195	345	417	803	489	128	62	55
21	222	270	220	170	200	394	482	871	362	113	53	63
22	214	262	220	170	205	406	515	938	386	96	52	67
23	199	239	205	175	210	406	460	956	427	84	53	63
24	177	218	195	180	210	450	482	797	400	78	48	66
25	173	195	195	185	220	470	553	689	354	70	51	61
26	137	180	185	180	230	510	557	618	388	71	60	58
27	113	205	180	175	245	593	485	673	396	81	57	55
28	100	225	170	175	235	652	417	649	358	104	53	56
29	100	220	170	175	220	647	468	683	329	102	50	53
30	97	225	170	180	---	662	517	746	316	99	44	53
31	97	---	180	170	---	656	---	705	---	88	43	---
TOTAL	6735	8084	7272	5980	5645	11196	14963	20076	18534	4744	2020	1730
MEAN	217	269	235	193	195	361	499	648	618	153	65.2	57.7
AC-FT	13360	16030	14420	11860	11200	22210	29680	39820	36760	9410	4010	3430
MAX	370	361	332	240	245	662	650	956	1300	297	101	89
MIN	97	106	145	170	165	190	254	506	316	70	43	43
CAL YR 2007	TOTAL	87009	MEAN	238	MAX	963	MIN	26	AC-FT	172600		
WTR YR 2008	TOTAL	106979	MEAN	292	MAX	1300	MIN	43	AC-FT	212200		

MAX DISCH: 1310 CFS AT 00:15 ON Jun. 5, 2008 GH 6.45 FT. SHIFT -0.49 FT.  
MAX GH: 6.45 FT. AT 00:15 ON Jun. 5, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08223000 RIO GRANDE AT ALAMOSA CO  
WY2008 HYDROGRAPH





RIO GRANDE BASIN

CLOSED BASIN PROJECT CANAL NEAR ALAMOSA, CO

RIO GRANDE COMPACT STATION

**LOCATION.**--Lat 37°28'33", long 105°45'58", SW¼SW¼, sec. 3, T.37 N., R.11 E., Alamosa County, Hydrologic Unit 13010002, 400 ft north of State Highway 160, 5.5 mi east of Alamosa, Co. on right bank of Closed Basin Project Canal.

**DRAINAGE AREA.**--N/A

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from two float-operated shaft encoders on wells Ha and Hb in 8 ft. x 10 ft. steel plated building with concrete stilling wells. A graphic water-stage recorder is operated as data backup for the Ha data. The Hb (downstream) well is monitored to detect submergence. The Bureau of Reclamation owns and operates an independent electronic data acquisition system using pressure transducers, a water quality monitor, and temperature sensor.

**REMARKS.**--Record is complete and reliable. The stage-discharge relation was affected by ice in approach section of flume depressing gage-height and accelerating velocity through flume on Jan. 1-5, 17-21, 2008. These days were designated as 'e' days meaning that the gage-height was not representative of average. The stage-discharge relation was affected by backwater (submerged) on Jan. 28, 29, Feb. 13-15, 2008, caused by downstream ice jams. Record is good, except for periods backwater effect and periods when gage-height was not representative of average due to approach ice conditions, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--CBPALACO01 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

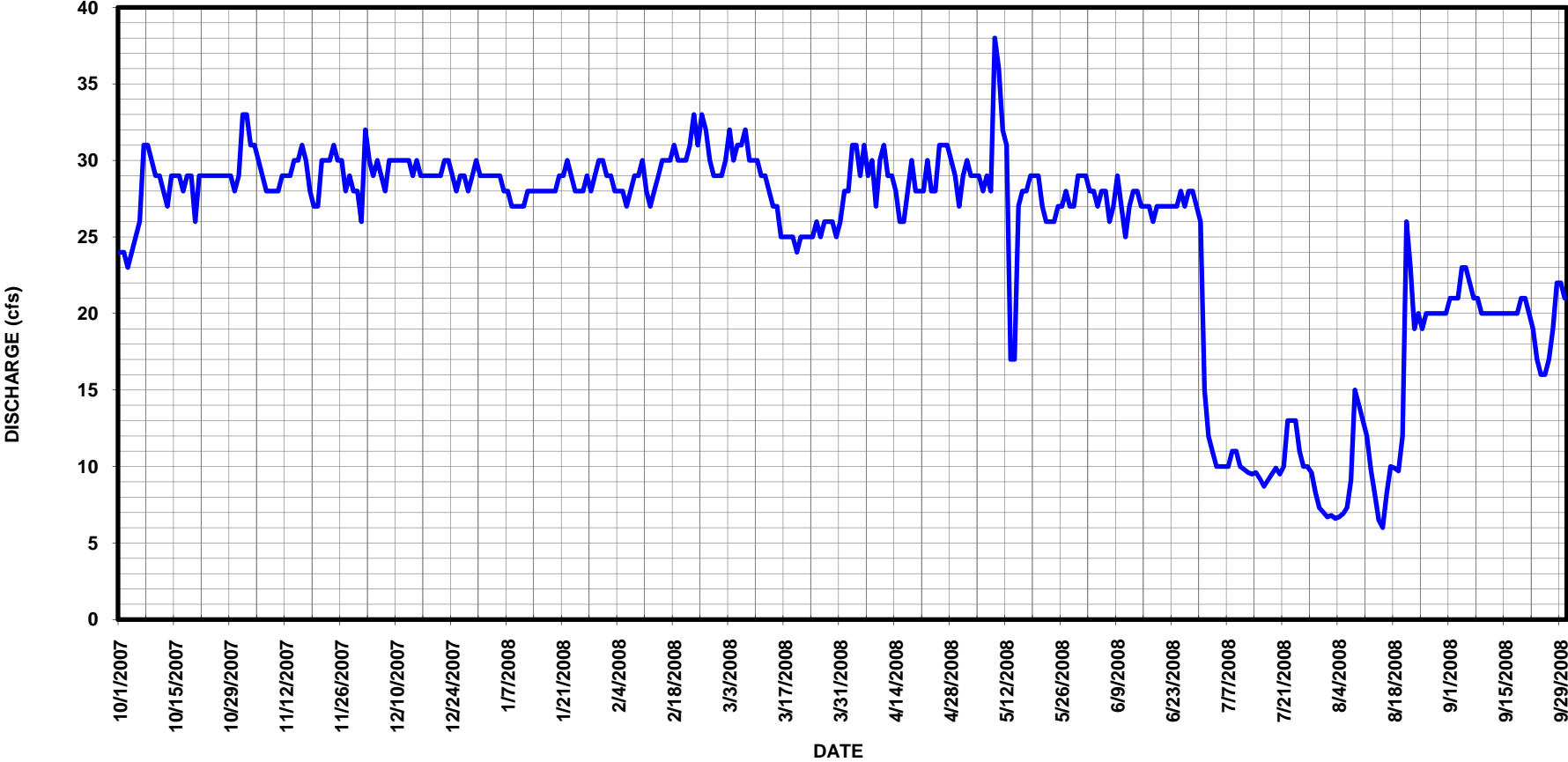
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	33	26	29	29	29	28	29	29	15	6.7	21
2	24	33	32	29	29	30	28	30	28	12	6.8	21
3	23	31	30	29	28	32	31	29	28	11	6.6	21
4	24	31	29	29	28	30	31	29	27	10	6.7	23
5	25	30	30	29	28	31	29	29	28	10	6.9	23
6	26	29	29	28	27	31	31	28	28	10	7.3	22
7	31	28	28	28	28	32	29	29	26	10	9.1	21
8	31	28	30	27	29	30	30	28	27	11	15	21
9	30	28	30	27	29	30	27	38	29	11	14	20
10	29	28	30	27	30	30	30	36	27	10	13	20
11	29	29	30	27	28	29	31	32	25	9.8	12	20
12	28	29	30	28	27	29	29	31	27	9.6	9.8	20
13	27	29	30	28	28	28	29	17	28	9.5	8.2	20
14	29	30	29	28	29	27	28	17	28	9.6	6.5	20
15	29	30	30	28	30	27	26	27	27	9.2	6.0	20
16	29	31	29	28	30	25	26	28	27	8.7	8.2	20
17	28	30	29	28	30	25	28	28	27	9.1	10	20
18	29	28	29	28	31	25	30	29	26	9.5	9.9	20
19	29	27	29	28	30	25	28	29	27	9.9	9.7	21
20	26	27	29	29	30	24	28	29	27	9.5	12	21
21	29	30	29	29	30	25	28	27	27	10	26	20
22	29	30	30	30	31	25	30	26	27	13	23	19
23	29	30	30	29	33	25	28	26	27	13	19	17
24	29	31	29	28	31	25	28	26	27	13	20	16
25	29	30	28	28	33	26	31	27	28	11	19	16
26	29	30	29	28	32	25	31	27	27	10	20	17
27	29	28	29	29	30	26	31	28	28	10	20	19
28	29	29	28	28	29	26	30	27	28	9.6	20	22
29	29	28	29	29	29	26	29	27	27	8.3	20	22
30	28	28	30	30	---	25	27	29	26	7.3	20	21
31	29	---	29	30	---	26	---	29	---	7.0	20	---
TOTAL	868	883	908	880	856	849	870	871	818	316.6	411.4	604
MEAN	28.0	29.4	29.3	28.4	29.5	27.4	29.0	28.1	27.3	10.2	13.3	20.1
AC-FT	1720	1750	1800	1750	1700	1680	1730	1730	1620	628	816	1200
MAX	31	33	32	30	33	32	31	38	29	15	26	23
MIN	23	27	26	27	27	24	26	17	25	7.0	6.0	16
CAL YR 2007	TOTAL	8956	MEAN	24.5	MAX	33	MIN	11	AC-FT	17760		
WTR YR 2008	TOTAL	9135	MEAN	25	MAX	38	MIN	6	AC-FT	18120		

MAX DISCH: 50.6 CFS AT 12:30 ON May. 9, 2008 GH 1.05 FT. SHIFT 0 FT.

MAX GH: 1.05 FT. AT 12:30 ON May. 9, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

CLOSED BASIN PROJECT CANAL NEAR ALAMOSA CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

CLOSED BASIN IN SAN LUIS VALLEY

08224500 KERBER CREEK NEAR VILLA GROVE, CO

**LOCATION.**--Lat 38°13'13", long 106°05'20", in SW¼SE¼, sec. 21, T. 46 N., R. 8 E., Saguache County, on left bank 7 miles west of Villa Grove.

**DRAINAGE AREA AND PERIOD OF RECORD.**--45.4 mi<sup>2</sup> (revised). (approx.) Originally established with staff gage only in 1911. Station at various locations from that time.

**GAGE.**-- The primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 6 ft. by 6 ft. exposed aggregate shelter and 48 inch concrete well at a concrete ramp flume control. A graphic water-stage recorder is operated as a data backup. Full station name: Kerber Creek above Little Kerber Creek near Villa Grove, CO. Elevation of gage is 8,634 ft. from topographic map.

**REMARKS.**--Record is complete and reliable, except for January 16, through March 14, 2008 when the float was affected by ice in well. Stage-discharge relation was affected by ice November 15, 2007 through January 15, 2008, March 15-28, 2008. The record is good, except for periods of no gage-height and ice affected record, which should be considered poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--KERVILCO19 USED FROM 01-Oct-2007 TO 30-Sep-2008

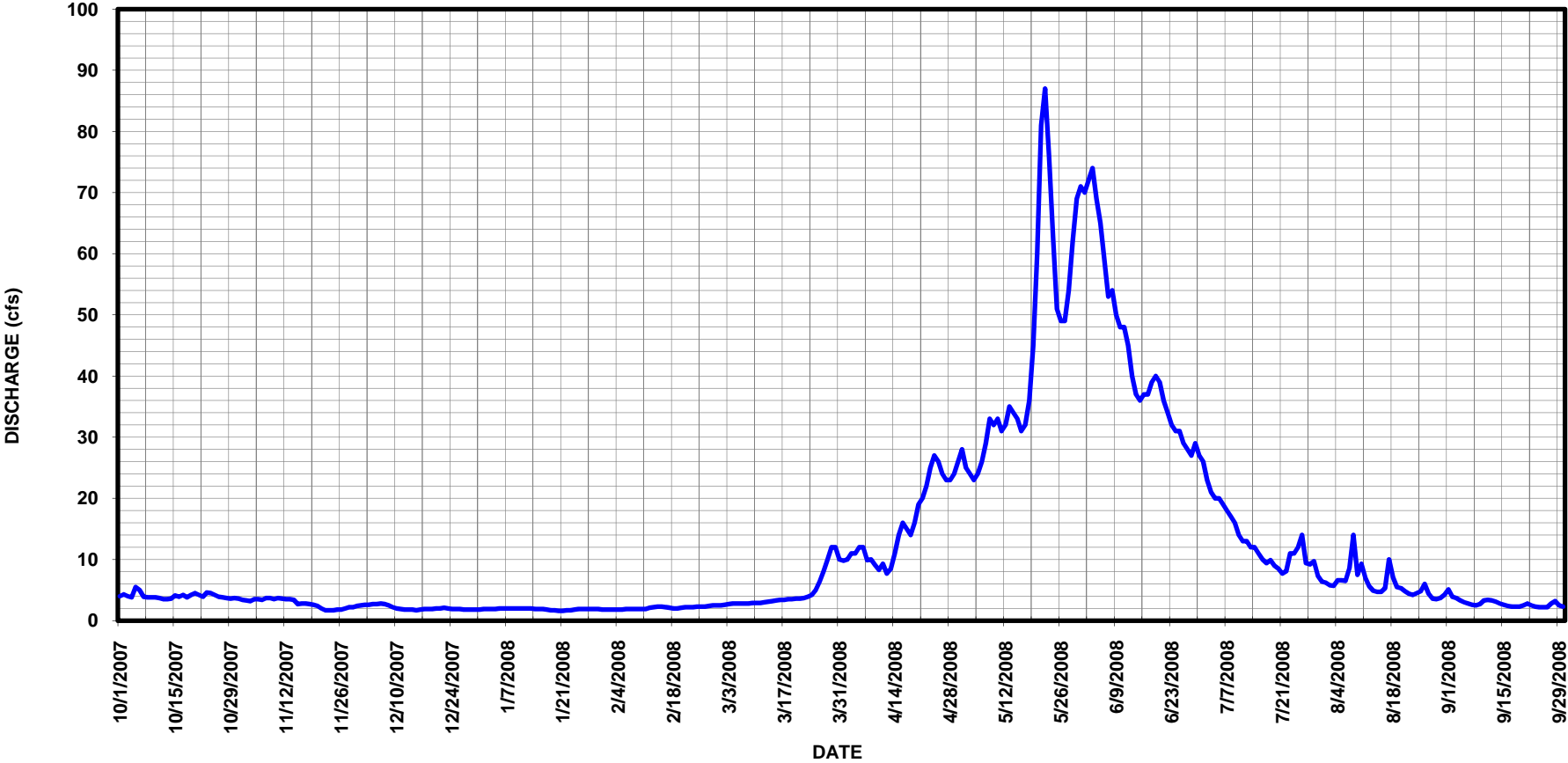
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	3.4	2.5	1.9	1.8	2.5	9.8	28	70	26	6.2	5.1
2	4.3	3.3	2.6	1.9	1.8	2.6	10	25	72	23	5.8	3.9
3	4.0	3.2	2.6	1.9	1.8	2.7	11	24	74	21	5.7	3.7
4	3.8	3.5	2.7	1.9	1.8	2.8	11	23	69	20	6.6	3.3
5	5.5	3.5	2.7	2.0	1.8	2.8	12	24	65	20	6.6	3.0
6	5.0	3.4	2.8	2.0	1.9	2.8	12	26	59	19	6.5	2.8
7	3.9	3.7	2.7	2.0	1.9	2.8	9.9	29	53	18	8.6	2.6
8	3.8	3.7	2.5	2.0	1.9	2.8	10	33	54	17	14	2.5
9	3.8	3.5	2.2	2.0	1.9	2.9	9.1	32	50	16	7.5	2.7
10	3.8	3.7	2.0	2.0	1.9	2.9	8.3	33	48	14	9.3	3.3
11	3.7	3.6	1.9	2.0	1.9	2.9	9.3	31	48	13	7.0	3.4
12	3.5	3.5	1.8	2.0	2.1	3.0	7.7	32	45	13	5.6	3.3
13	3.5	3.5	1.8	2.0	2.2	3.1	8.5	35	40	12	4.9	3.1
14	3.6	3.4	1.8	1.9	2.3	3.2	11	34	37	12	4.7	2.8
15	4.1	2.7	1.7	1.9	2.3	3.3	14	33	36	11	4.7	2.6
16	3.9	2.8	1.8	1.9	2.2	3.4	16	31	37	10	5.3	2.4
17	4.2	2.8	1.9	1.8	2.1	3.4	15	32	37	9.4	10	2.3
18	3.8	2.7	1.9	1.7	2.0	3.5	14	36	39	9.9	7.1	2.3
19	4.2	2.6	1.9	1.7	2.0	3.5	16	45	40	9.0	5.5	2.3
20	4.5	2.4	2.0	1.6	2.1	3.6	19	60	39	8.5	5.3	2.5
21	4.2	2.0	2.0	1.6	2.2	3.6	20	81	36	7.7	4.8	2.8
22	3.9	1.7	2.1	1.7	2.2	3.7	22	87	34	8.1	4.4	2.5
23	4.6	1.7	2.0	1.7	2.2	3.9	25	76	32	11	4.2	2.3
24	4.5	1.7	1.9	1.8	2.3	4.2	27	63	31	11	4.5	2.2
25	4.2	1.8	1.9	1.9	2.3	5.0	26	51	31	12	4.8	2.2
26	3.9	1.8	1.9	1.9	2.3	6.4	24	49	29	14	6.0	2.2
27	3.8	2.0	1.8	1.9	2.4	8.1	23	49	28	9.4	4.4	2.8
28	3.7	2.2	1.8	1.9	2.5	10	23	54	27	9.2	3.6	3.2
29	3.6	2.2	1.8	1.9	2.5	12	24	62	29	9.7	3.5	2.5
30	3.7	2.4	1.8	1.9	---	12	26	69	27	7.3	3.7	2.3
31	3.6	---	1.8	1.8	---	10	---	71	---	6.4	4.2	---
TOTAL	124.6	84.4	64.6	58.1	60.6	139.4	473.6	1358	1316	407.6	185.0	84.9
MEAN	4.02	2.81	2.08	1.87	2.09	4.50	15.8	43.8	43.9	13.1	5.97	2.83
AC-FT	247	167	128	115	120	276	939	2690	2610	808	367	168
MAX	5.5	3.7	2.8	2.0	2.5	12	27	87	74	26	14	5.1
MIN	3.5	1.7	1.7	1.6	1.8	2.5	7.7	23	27	6.4	3.5	2.2
CAL YR 2007	TOTAL	4015.7	MEAN	11.0	MAX	55	MIN	1.5	AC-FT	7970		
WTR YR 2008	TOTAL	4356.8	MEAN	11.9	MAX	87	MIN	1.6	AC-FT	8640		

MAX DISCH: 93.4 CFS AT 14:15 ON May. 22, 2008 GH 1.44 FT. SHIFT 0.01 FT.  
MAX GH: 1.83 FT. (Ice Affected) AT 10:15 ON Mar. 25, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08224500 KERBER CREEK NEAR VILLA GROVE CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

CLOSED BASIN IN SAN LUIS VALLEY

GARNER CREEK NEAR VILLA GROVE, CO

**LOCATION.**--Lat 38°10'27", long 105°48'29", in SE ¼ SE ¼ Sec. 1, T.45 N., R.10 E., NMPM, Saguache Co., on right bank, 12 miles SE of Villa Grove.

**DRAINAGE AREA.**--6.4 mi<sup>2</sup>.

**GAGE.**--Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 2-foot steel culvert pipe stilling well with a small steel box-type shelter atop well. A 1-inch intake pipe attaches well to 2-foot Parshall flume. Flume and staff gage have been at this site many years. Elevation 8680 ft.

**REMARKS.**--Record is complete and reliable, except for Dec. 2-4, 2007 when the well was frozen and Dec. 5, 2007 through Apr. 4, 2008 when the station was closed for the winter. Stage-discharge relation was affected by ice Nov. 22, 24, Dec. 1, 2007. Record is good, except for periods of no gage-height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--GARVILCO01 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

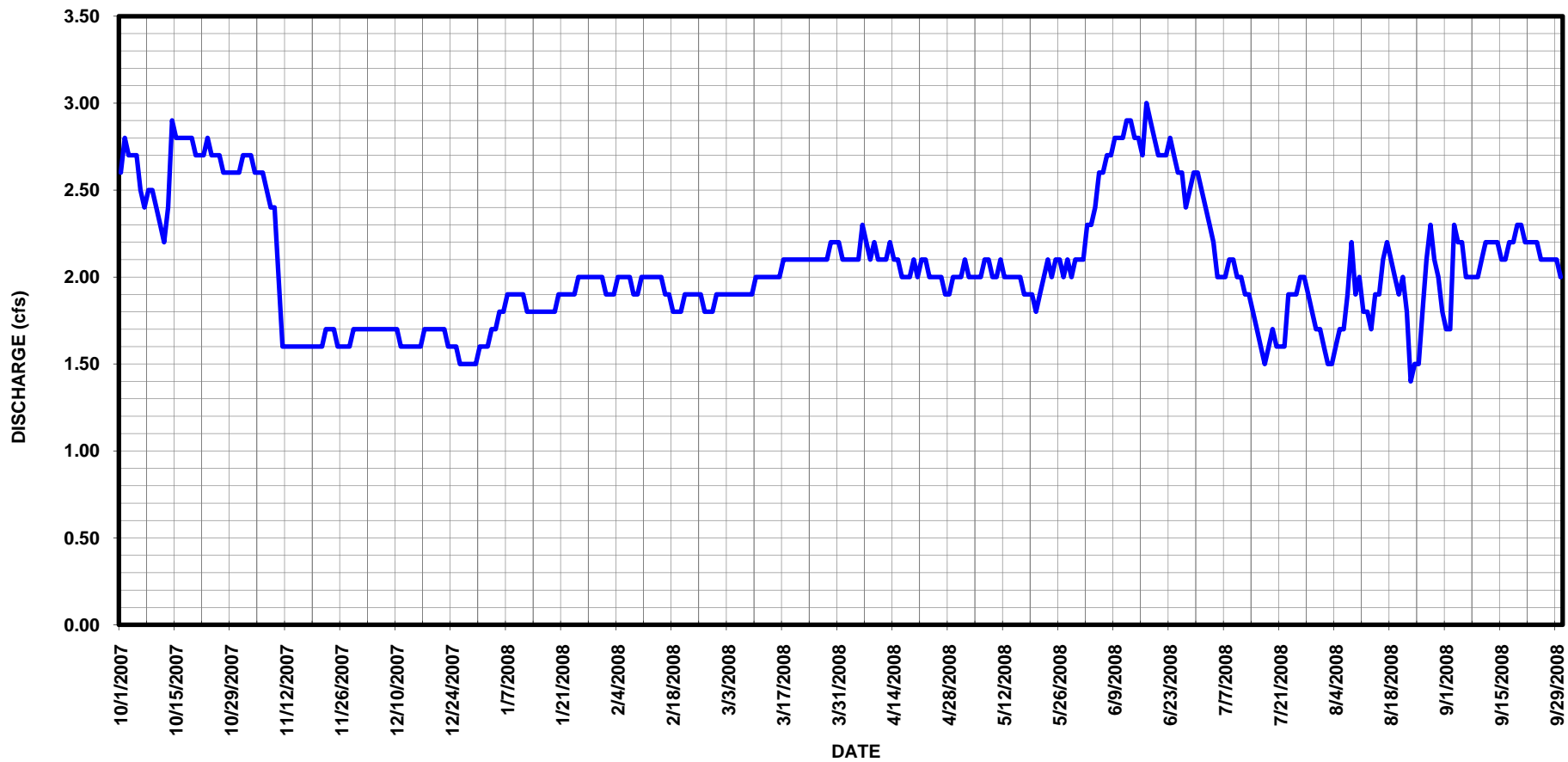
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	2.7	1.7	1.6	1.9	1.9	2.1	2.0	2.1	2.5	1.6	1.7
2	2.8	2.7	1.7	1.6	1.9	1.9	2.1	2.1	2.3	2.4	1.5	1.7
3	2.7	2.7	1.7	1.7	1.9	1.9	2.1	2.0	2.3	2.3	1.5	2.3
4	2.7	2.6	1.7	1.7	2.0	1.9	2.1	2.0	2.4	2.2	1.6	2.2
5	2.7	2.6	1.7	1.8	2.0	1.9	2.1	2.0	2.6	2.0	1.7	2.2
6	2.5	2.6	1.7	1.8	2.0	1.9	2.3	2.0	2.6	2.0	1.7	2.0
7	2.4	2.5	1.7	1.9	2.0	1.9	2.2	2.1	2.7	2.0	1.9	2.0
8	2.5	2.4	1.7	1.9	1.9	1.9	2.1	2.1	2.7	2.1	2.2	2.0
9	2.5	2.4	1.7	1.9	1.9	1.9	2.2	2.0	2.8	2.1	1.9	2.0
10	2.4	2.0	1.7	1.9	2.0	2.0	2.1	2.0	2.8	2.0	2.0	2.1
11	2.3	1.6	1.6	1.9	2.0	2.0	2.1	2.1	2.8	2.0	1.8	2.2
12	2.2	1.6	1.6	1.8	2.0	2.0	2.1	2.0	2.9	1.9	1.8	2.2
13	2.4	1.6	1.6	1.8	2.0	2.0	2.2	2.0	2.9	1.9	1.7	2.2
14	2.9	1.6	1.6	1.8	2.0	2.0	2.1	2.0	2.8	1.8	1.9	2.2
15	2.8	1.6	1.6	1.8	2.0	2.0	2.1	2.0	2.8	1.7	1.9	2.1
16	2.8	1.6	1.6	1.8	1.9	2.0	2.0	2.0	2.7	1.6	2.1	2.1
17	2.8	1.6	1.7	1.8	1.9	2.1	2.0	1.9	3.0	1.5	2.2	2.2
18	2.8	1.6	1.7	1.8	1.8	2.1	2.0	1.9	2.9	1.6	2.1	2.2
19	2.8	1.6	1.7	1.8	1.8	2.1	2.1	1.9	2.8	1.7	2.0	2.3
20	2.7	1.6	1.7	1.9	1.8	2.1	2.0	1.8	2.7	1.6	1.9	2.3
21	2.7	1.6	1.7	1.9	1.9	2.1	2.1	1.9	2.7	1.6	2.0	2.2
22	2.7	1.7	1.7	1.9	1.9	2.1	2.1	2.0	2.7	1.6	1.8	2.2
23	2.8	1.7	1.6	1.9	1.9	2.1	2.0	2.1	2.8	1.9	1.4	2.2
24	2.7	1.7	1.6	1.9	1.9	2.1	2.0	2.0	2.7	1.9	1.5	2.2
25	2.7	1.6	1.6	2.0	1.9	2.1	2.0	2.1	2.6	1.9	1.5	2.1
26	2.7	1.6	1.5	2.0	1.8	2.1	2.0	2.1	2.6	2.0	1.8	2.1
27	2.6	1.6	1.5	2.0	1.8	2.1	1.9	2.0	2.4	2.0	2.1	2.1
28	2.6	1.6	1.5	2.0	1.8	2.1	1.9	2.1	2.5	1.9	2.3	2.1
29	2.6	1.7	1.5	2.0	1.9	2.2	2.0	2.0	2.6	1.8	2.1	2.1
30	2.6	1.7	1.5	2.0	---	2.2	2.0	2.1	2.6	1.7	2.0	2.0
31	2.6	---	1.6	2.0	---	2.2	---	2.1	---	1.7	1.8	---
TOTAL	81.6	57.7	50.7	57.6	55.5	62.9	62.1	62.4	79.8	58.9	57.3	63.5
MEAN	2.63	1.92	1.64	1.86	1.91	2.03	2.07	2.01	2.66	1.90	1.85	2.12
AC-FT	162	114	101	114	110	125	123	124	158	117	114	126
MAX	2.9	2.7	1.7	2.0	2.0	2.2	2.3	2.1	3.0	2.5	2.3	2.3
MIN	2.2	1.6	1.5	1.6	1.8	1.9	1.9	1.8	2.1	1.5	1.4	1.7

CAL YR	2007	TOTAL	1107.4	MEAN	3.03	MAX	9.3	MIN	1.2	AC-FT	2200
WTR YR	2008	TOTAL	750	MEAN	2.05	MAX	3	MIN	1.4	AC-FT	1490

MAX DISCH: 3.91 CFS AT 06:15 ON Oct. 14, 2007 GH 0.59 FT. SHIFT 0.04 FT.  
MAX GH: 0.59 FT. AT 06:15 ON Oct. 14, 2007

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

### GARNER CREEK NEAR VILLA GROVE CO WY2008 HYDROGRAPH



RIO GRANDE BASIN

CLOSED BASIN IN SAN LUIS VALLEY

MAJOR CREEK NEAR VILLA GROVE, CO

**LOCATION.**--Lat 38°09'26", long 105°48'32", in NE ¼ NE ¼ Sec. 13, T.45 N., R.10 E., NMPM, Saguache Co., on right bank, 11 miles SE of Villa Grove.

**DRAINAGE AREA.**--5.0 mi<sup>2</sup>.

**GAGE.**--Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 2 foot steel culvert pipe stilling well with a small steel box-type shelter atop well at a 2-foot Parshall flume. Elevation of gage is 8410 ft.

**REMARKS.**--Record is complete and reliable, except for Dec. 5, 2007 - Apr. 4, 2008 when the station was closed for the winter. Stage-discharge relation was affected by ice Nov. 21-25, Dec. 1, 3, 2007 and April 12, 2008. Record good, except for periods of no gage-height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--MAJVILCO01 USED FROM 01-Oct-2007 TO 30-Sep-2008

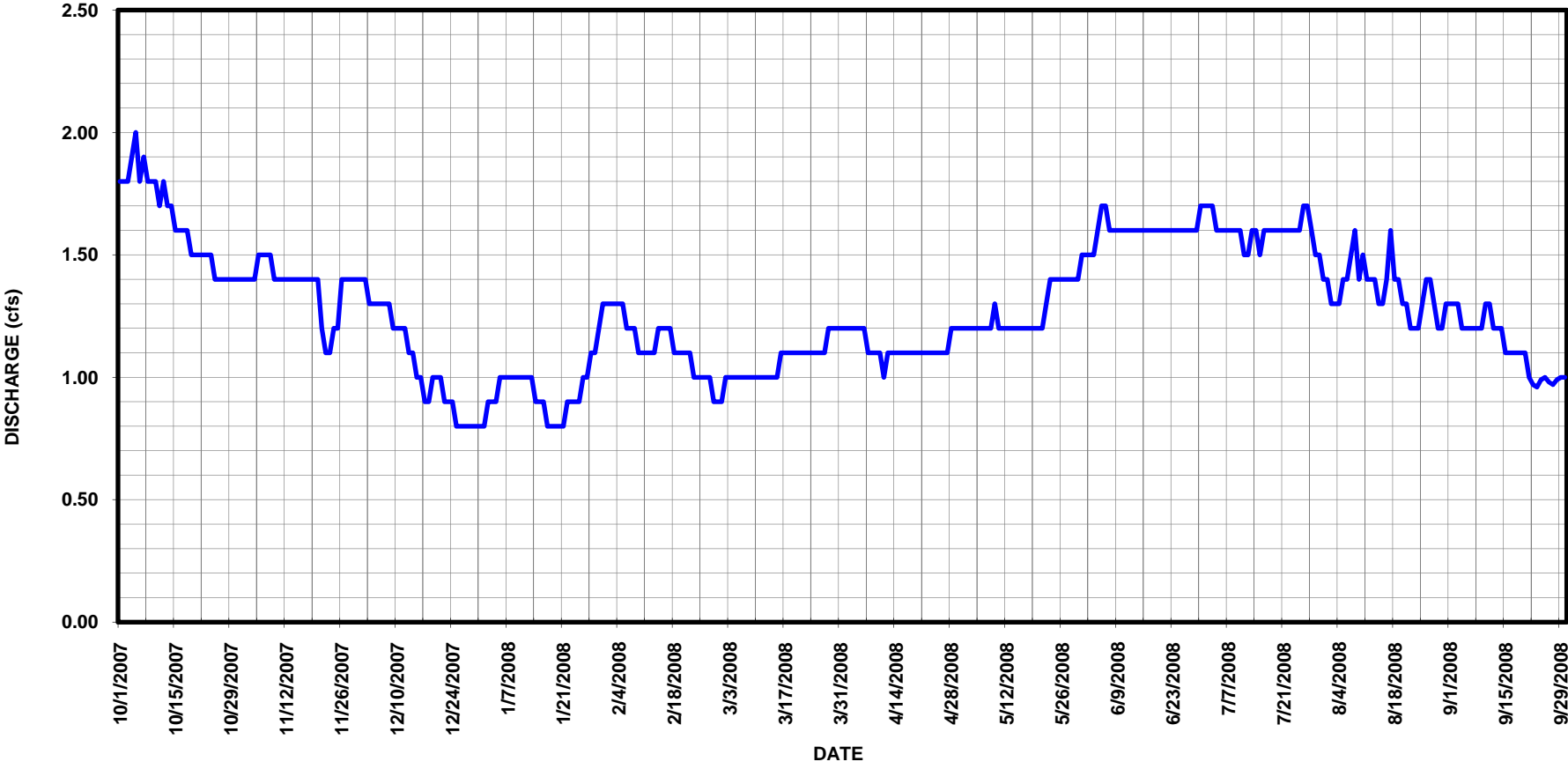
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.4	1.4	.80	1.3	.90	1.2	1.2	1.5	1.7	1.4	1.3
2	1.8	1.4	1.4	.90	1.3	1.0	1.2	1.2	1.5	1.7	1.3	1.3
3	1.8	1.4	1.3	.90	1.3	1.0	1.2	1.2	1.5	1.7	1.3	1.3
4	1.9	1.4	1.3	.90	1.3	1.0	1.2	1.2	1.6	1.6	1.3	1.2
5	2.0	1.5	1.3	1.0	1.3	1.0	1.2	1.2	1.7	1.6	1.4	1.2
6	1.8	1.5	1.3	1.0	1.2	1.0	1.2	1.2	1.7	1.6	1.4	1.2
7	1.9	1.5	1.3	1.0	1.2	1.0	1.1	1.2	1.6	1.6	1.5	1.2
8	1.8	1.5	1.3	1.0	1.2	1.0	1.1	1.2	1.6	1.6	1.6	1.2
9	1.8	1.4	1.2	1.0	1.1	1.0	1.1	1.3	1.6	1.6	1.4	1.2
10	1.8	1.4	1.2	1.0	1.1	1.0	1.1	1.2	1.6	1.6	1.5	1.3
11	1.7	1.4	1.2	1.0	1.1	1.0	1.0	1.2	1.6	1.5	1.4	1.3
12	1.8	1.4	1.2	1.0	1.1	1.0	1.1	1.2	1.6	1.5	1.4	1.2
13	1.7	1.4	1.1	1.0	1.1	1.0	1.1	1.2	1.6	1.6	1.4	1.2
14	1.7	1.4	1.1	.90	1.2	1.0	1.1	1.2	1.6	1.6	1.3	1.2
15	1.6	1.4	1.0	.90	1.2	1.0	1.1	1.2	1.6	1.5	1.3	1.1
16	1.6	1.4	1.0	.90	1.2	1.1	1.1	1.2	1.6	1.6	1.4	1.1
17	1.6	1.4	.90	.80	1.2	1.1	1.1	1.2	1.6	1.6	1.6	1.1
18	1.6	1.4	.90	.80	1.1	1.1	1.1	1.2	1.6	1.6	1.4	1.1
19	1.5	1.4	1.0	.80	1.1	1.1	1.1	1.2	1.6	1.6	1.4	1.1
20	1.5	1.4	1.0	.80	1.1	1.1	1.1	1.2	1.6	1.6	1.3	1.1
21	1.5	1.2	1.0	.80	1.1	1.1	1.1	1.2	1.6	1.6	1.3	1.0
22	1.5	1.1	.90	.90	1.1	1.1	1.1	1.3	1.6	1.6	1.2	.97
23	1.5	1.1	.90	.90	1.0	1.1	1.1	1.4	1.6	1.6	1.2	.96
24	1.5	1.2	.90	.90	1.0	1.1	1.1	1.4	1.6	1.6	1.2	.99
25	1.4	1.2	.80	.90	1.0	1.1	1.1	1.4	1.6	1.6	1.3	1.0
26	1.4	1.4	.80	1.0	1.0	1.1	1.1	1.4	1.6	1.7	1.4	.98
27	1.4	1.4	.80	1.0	1.0	1.1	1.1	1.4	1.6	1.7	1.4	.97
28	1.4	1.4	.80	1.1	.90	1.2	1.2	1.4	1.6	1.6	1.3	.99
29	1.4	1.4	.80	1.1	.90	1.2	1.2	1.4	1.6	1.5	1.2	1.0
30	1.4	1.4	.80	1.2	---	1.2	1.2	1.4	1.7	1.5	1.2	1.0
31	1.4	---	.80	1.3	---	1.2	---	1.5	---	1.4	1.3	---
TOTAL	50.5	41.2	32.70	29.50	32.70	32.90	33.8	39.3	48.0	49.4	42.0	33.76
MEAN	1.63	1.37	1.05	.95	1.13	1.06	1.13	1.27	1.60	1.59	1.35	1.13
AC-FT	100	82	65	59	65	65	67	78	95	98	83	67
MAX	2.0	1.5	1.4	1.3	1.3	1.2	1.2	1.5	1.7	1.7	1.6	1.3
MIN	1.4	1.1	.80	.80	.90	.90	1.0	1.2	1.5	1.4	1.2	.96
CAL YR 2007	TOTAL	645.93	MEAN	1.77	MAX	5	MIN	.48	AC-FT	1280		
WTR YR 2008	TOTAL	465.76	MEAN	1.27	MAX	2	MIN	.8	AC-FT	924		

MAX DISCH: 2.16 CFS AT 00:30 ON Aug. 8, 2008 GH 0.42 FT. SHIFT 0.01 FT.  
MAX GH: 0.43 FT. (ice affected) AT 07:15 ON Dec. 1, 2007

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

MAJOR CREEK NEAR VILLA GROVE CO  
WY2008 HYDROGRAPH





RIO GRANDE BASIN

CLOSED BASIN IN SAN LUIS VALLEY

COTTON CREEK NEAR MINERAL HOT SPRINGS, CO

**LOCATION.**--Lat 38°07'55", long 105°47'15", in SW ¼ NE ¼ Sec. 15, T.45 N., R.11 E., NMPM, Saguache Co., on left bank, 9 miles SE of Mineral Hot Springs.

**DRAINAGE AREA.**--12.8 mi<sup>2</sup>.

**GAGE.**--Primary reference gage is a drop tape from reference point on shelf. The primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 4-foot diameter culvert pipe well and shelter. A graphic water-stage recorder is operated as a data backup. Elevation of gage is 8600 ft.

**REMARKS.**--Record is complete and reliable, except for when the well was frozen Nov. 24 through Dec. 4, 2007 and when the station was closed for the winter Dec. 5, 2007 through April 4, 2008. Stage-discharge relationship was affected by ice Nov. 23, 2007. Record is good, except for periods of no gage-height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--COCRMICO03 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

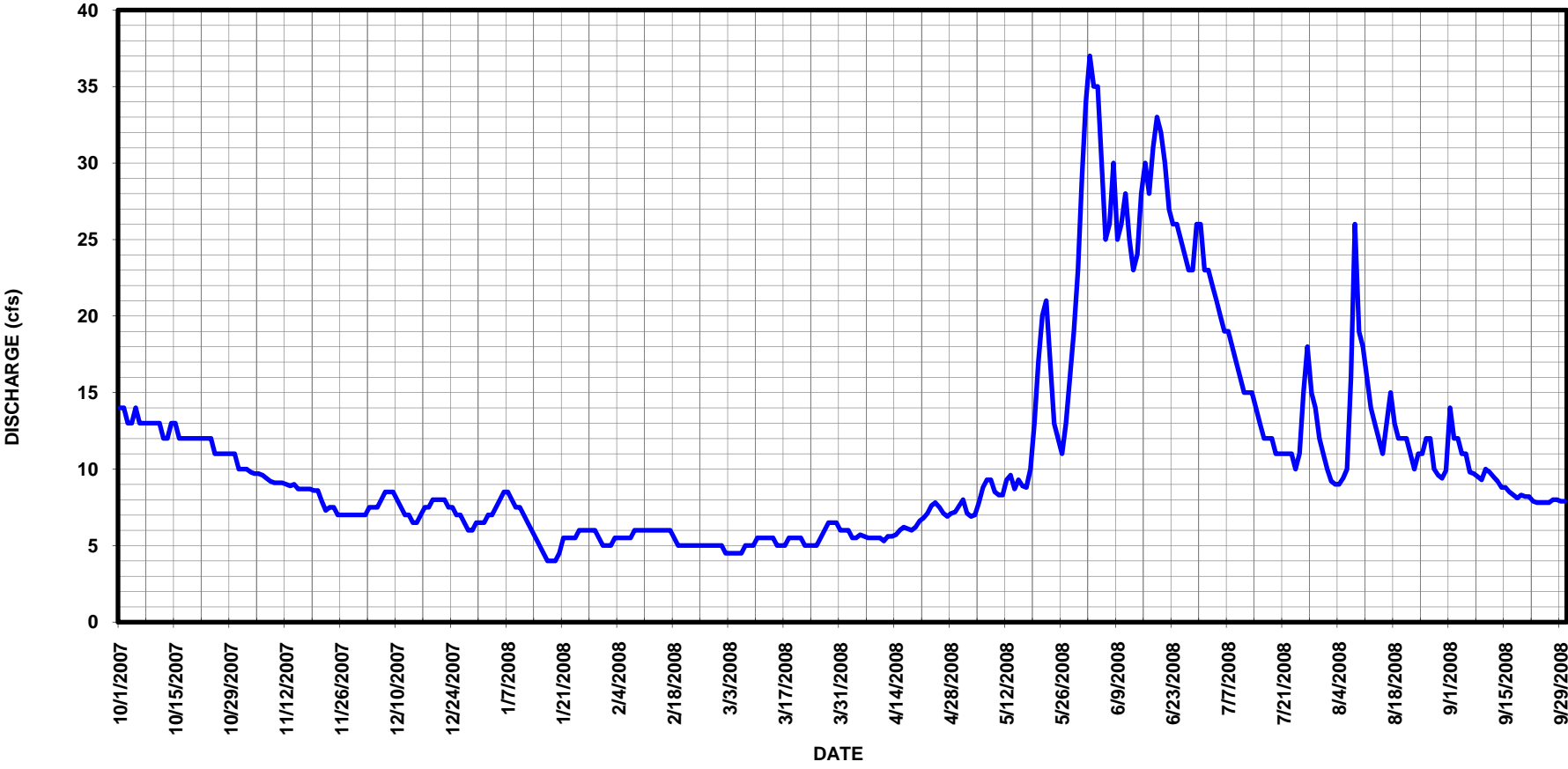
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	10	7.0	6.5	5.0	5.0	6.0	8.0	34	23	10	14
2	14	10	7.0	7.0	5.0	4.5	6.0	7.1	37	23	9.2	12
3	13	9.8	7.5	7.0	5.5	4.5	5.5	6.9	35	22	9.0	12
4	13	9.7	7.5	7.5	5.5	4.5	5.5	7.0	35	21	9.0	11
5	14	9.7	7.5	8.0	5.5	4.5	5.7	7.8	30	20	9.4	11
6	13	9.6	8.0	8.5	5.5	4.5	5.6	8.8	25	19	10	9.8
7	13	9.4	8.5	8.5	5.5	5.0	5.5	9.3	26	19	16	9.7
8	13	9.2	8.5	8.0	6.0	5.0	5.5	9.3	30	18	26	9.5
9	13	9.1	8.5	7.5	6.0	5.0	5.5	8.5	25	17	19	9.3
10	13	9.1	8.0	7.5	6.0	5.5	5.5	8.3	26	16	18	10
11	13	9.1	7.5	7.0	6.0	5.5	5.3	8.3	28	15	16	9.8
12	12	9.0	7.0	6.5	6.0	5.5	5.6	9.3	25	15	14	9.5
13	12	8.9	7.0	6.0	6.0	5.5	5.6	9.6	23	15	13	9.2
14	13	9.0	6.5	5.5	6.0	5.5	5.7	8.7	24	14	12	8.8
15	13	8.7	6.5	5.0	6.0	5.0	6.0	9.3	28	13	11	8.8
16	12	8.7	7.0	4.5	6.0	5.0	6.2	8.9	30	12	13	8.5
17	12	8.7	7.5	4.0	6.0	5.0	6.1	8.8	28	12	15	8.3
18	12	8.7	7.5	4.0	5.5	5.5	6.0	10	31	12	13	8.1
19	12	8.6	8.0	4.0	5.0	5.5	6.2	13	33	11	12	8.3
20	12	8.6	8.0	4.5	5.0	5.5	6.6	17	32	11	12	8.2
21	12	7.9	8.0	5.5	5.0	5.5	6.8	20	30	11	12	8.2
22	12	7.3	8.0	5.5	5.0	5.0	7.1	21	27	11	11	7.9
23	12	7.5	7.5	5.5	5.0	5.0	7.6	17	26	11	10	7.8
24	12	7.5	7.5	5.5	5.0	5.0	7.8	13	26	10	11	7.8
25	11	7.0	7.0	6.0	5.0	5.0	7.5	12	25	11	11	7.8
26	11	7.0	7.0	6.0	5.0	5.5	7.1	11	24	15	12	7.8
27	11	7.0	6.5	6.0	5.0	6.0	6.9	13	23	18	12	8.0
28	11	7.0	6.0	6.0	5.0	6.5	7.1	16	23	15	10	8.0
29	11	7.0	6.0	6.0	5.0	6.5	7.2	19	26	14	9.6	7.9
30	11	7.0	6.5	5.5	---	6.5	7.6	23	26	12	9.4	7.9
31	10	---	6.5	5.0	---	6.0	---	29	---	11	9.9	---
TOTAL	380	255.8	227.0	189.5	158.0	164.0	188.3	377.9	841	467	384.5	274.9
MEAN	12.3	8.53	7.32	6.11	5.45	5.29	6.28	12.2	28.0	15.1	12.4	9.16
AC-FT	754	507	450	376	313	325	373	750	1670	926	763	545
MAX	14	10	8.5	8.5	6.0	6.5	7.8	29	37	23	26	14
MIN	10	7.0	6.0	4.0	5.0	4.5	5.3	6.9	23	10	9.0	7.8

CAL YR 2007	TOTAL	5869.5	MEAN	16.1	MAX	67	MIN	5.4	AC-FT	11640
WTR YR 2008	TOTAL	3907.9	MEAN	10.7	MAX	37	MIN	4	AC-FT	7750

MAX DISCH: 40.5 CFS AT 22:15 ON Jun. 1, 2008 GH 3.48 FT. SHIFT -0.17 FT.  
MAX GH: 3.48 FT. AT 22:15 ON Jun. 1, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

COTTON CREEK NEAR MINERAL HOT SPRINGS CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

CLOSED BASIN IN SAN LUIS VALLEY

WILD CHERRY CREEK NEAR CRESTONE, CO

**LOCATION.**--Lat 38°06'01", long 105°46'04", SW ¼ SW ¼ Sec. 33, T.45 N., R.11 E., NMPM, Saguache Co., on right bank, 12 miles SE of Mineral Hot Springs, 8 Miles NW of Crestone.

**DRAINAGE AREA.**--4.5 mi<sup>2</sup>.

**GAGE.**--Primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 4-foot diameter culvert pipe well and shelter. A graphic water-stage recorder is operated as a data backup. Elevation of gage is 8560 ft.

**REMARKS.**--Record complete and reliable, except for Nov. 22 - Dec. 4, 2007 when the well was frozen, and Dec. 5, 2007 through Apr. 4, 2008 when station was closed for the winter, and May 20-22, 30, 31, June 1, 2, 2008 when the inlets were plugged and the well was isolated from the stream. Stage-discharge relationship was affected by ice April 12, 2008. Record is fair, except for periods of no gage-height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--CHECRECO2 USED FROM 01-Oct-2007 TO 30-Sep-2008

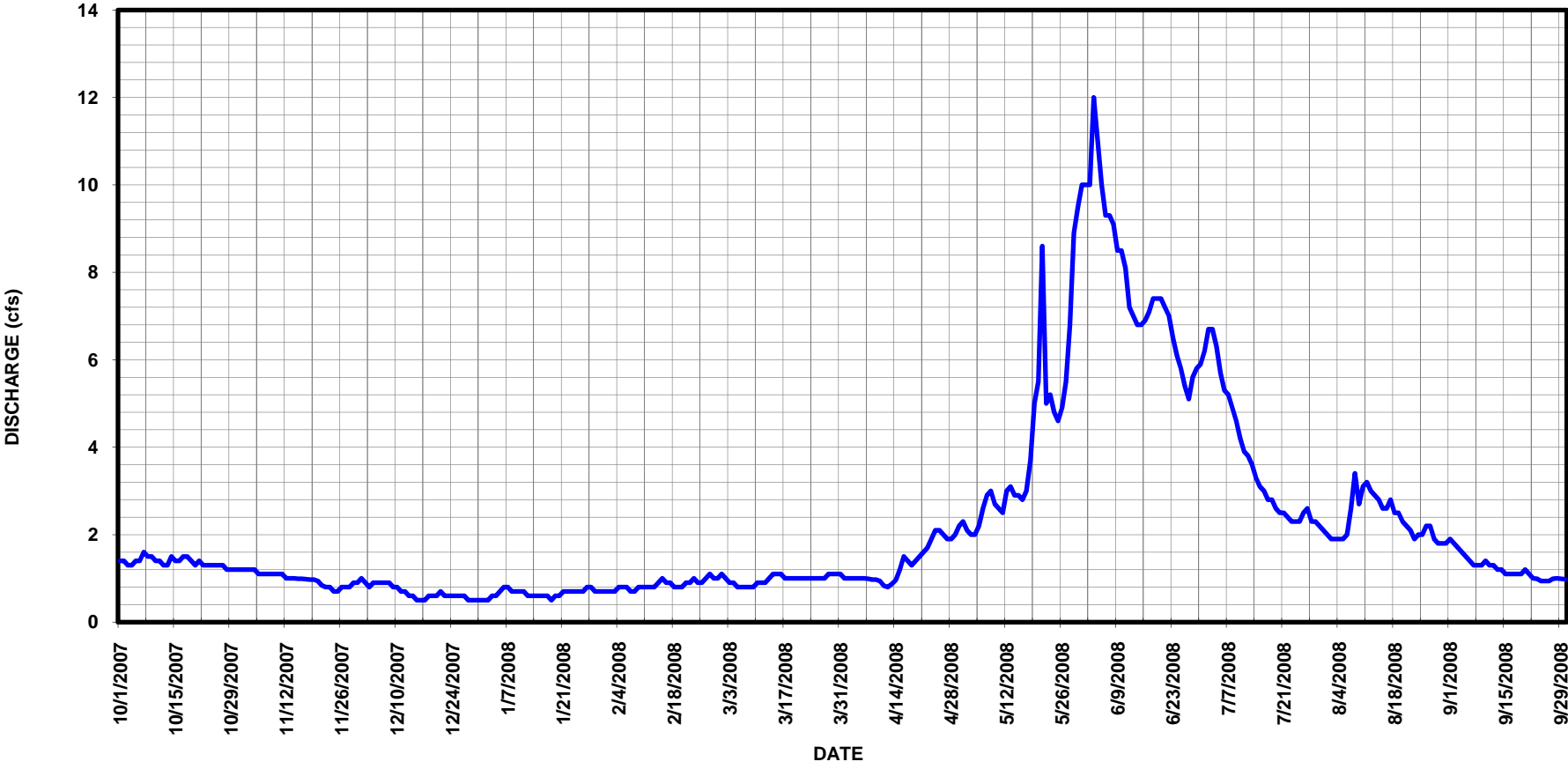
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.2	1.0	.50	.70	1.1	1.0	2.3	10	6.2	2.0	1.9
2	1.4	1.2	.90	.50	.70	1.0	1.0	2.1	10	6.7	1.9	1.8
3	1.3	1.2	.80	.60	.70	.90	1.0	2.0	12	6.7	1.9	1.7
4	1.3	1.2	.90	.60	.80	.90	1.0	2.0	11	6.3	1.9	1.6
5	1.4	1.1	.90	.70	.80	.80	1.0	2.2	10	5.7	1.9	1.5
6	1.4	1.1	.90	.80	.80	.80	1.0	2.6	9.3	5.3	2.0	1.4
7	1.6	1.1	.90	.80	.70	.80	.99	2.9	9.3	5.2	2.6	1.3
8	1.5	1.1	.90	.70	.70	.80	.97	3.0	9.1	4.9	3.4	1.3
9	1.5	1.1	.80	.70	.80	.80	.97	2.7	8.5	4.6	2.7	1.3
10	1.4	1.1	.80	.70	.80	.90	.94	2.6	8.5	4.2	3.1	1.4
11	1.4	1.1	.70	.70	.80	.90	.83	2.5	8.1	3.9	3.2	1.3
12	1.3	1.0	.70	.60	.80	.90	.80	3.0	7.2	3.8	3.0	1.3
13	1.3	1.0	.60	.60	.80	1.0	.87	3.1	7.0	3.6	2.9	1.2
14	1.5	1.0	.60	.60	.90	1.1	.96	2.9	6.8	3.3	2.8	1.2
15	1.4	.99	.50	.60	1.0	1.1	1.2	2.9	6.8	3.1	2.6	1.1
16	1.4	.99	.50	.60	.90	1.1	1.5	2.8	6.9	3.0	2.6	1.1
17	1.5	.98	.50	.60	.90	1.0	1.4	3.0	7.1	2.8	2.8	1.1
18	1.5	.97	.60	.50	.80	1.0	1.3	3.7	7.4	2.8	2.5	1.1
19	1.4	.97	.60	.60	.80	1.0	1.4	5.0	7.4	2.6	2.5	1.1
20	1.3	.94	.60	.60	.80	1.0	1.5	5.5	7.4	2.5	2.3	1.2
21	1.4	.84	.70	.70	.90	1.0	1.6	8.6	7.2	2.5	2.2	1.1
22	1.3	.80	.60	.70	.90	1.0	1.7	5.0	7.0	2.4	2.1	1.0
23	1.3	.80	.60	.70	1.0	1.0	1.9	5.2	6.5	2.3	1.9	.99
24	1.3	.70	.60	.70	.90	1.0	2.1	4.8	6.1	2.3	2.0	.94
25	1.3	.70	.60	.70	.90	1.0	2.1	4.6	5.8	2.3	2.0	.94
26	1.3	.80	.60	.70	1.0	1.0	2.0	4.9	5.4	2.5	2.2	.94
27	1.3	.80	.60	.80	1.1	1.0	1.9	5.5	5.1	2.6	2.2	.99
28	1.2	.80	.50	.80	1.0	1.1	1.9	6.8	5.6	2.3	1.9	1.0
29	1.2	.90	.50	.70	1.0	1.1	2.0	8.9	5.8	2.3	1.8	.99
30	1.2	.90	.50	.70	---	1.1	2.2	9.5	5.9	2.2	1.8	.98
31	1.2	---	.50	.70	---	1.1	---	10	---	2.1	1.8	---
TOTAL	42.2	29.38	21.00	20.50	24.70	30.30	41.03	132.6	230.2	113.0	72.5	36.77
MEAN	1.36	.98	.68	.66	.85	.98	1.37	4.28	7.67	3.65	2.34	1.23
AC-FT	84	58	42	41	49	60	81	263	457	224	144	73
MAX	1.6	1.2	1.0	.80	1.1	1.1	2.2	10	12	6.7	3.4	1.9
MIN	1.2	.70	.50	.50	.70	.80	.80	2.0	5.1	2.1	1.8	.94
CAL YR 2007	TOTAL	1598.08	MEAN	4.38	MAX	24	MIN	.5	AC-FT	3170		
WTR YR 2008	TOTAL	794.18	MEAN	2.17	MAX	12	MIN	.5	AC-FT	1580		

MAX DISCH: 13.3 CFS AT 22:00 ON Jun. 3, 2008 GH 2.42 FT. SHIFT 0 FT.  
MAX GH: 2.42 FT. AT 22:00 ON Jun. 3, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

WILD CHERRY CREEK NEAR CRESTONE CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

CLOSED BASIN IN SAN LUIS VALLEY

RITO ALTO CREEK NEAR CRESTONE, CO

**LOCATION.**--Lat 38°04'39", long 105°45'43", in SW1/4NE1/4 Sec. 9, T.44 N., R.11 E., NMPM, Saguache Co., on right bank 12 miles SE of Mineral Hot Springs, 7 miles NW of Crestone.

**DRAINAGE AREA.**--10.3 mi<sup>2</sup>.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. The primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 4-foot diameter culvert pipe shelter and well. A graphic water-stage recorder is operated as a data backup. Elevation of gage is 8380 ft.

**REMARKS.**--Record is complete and reliable, except for Nov. 29 to Dec. 4, 2007 when the well was frozen and Dec. 5, 2007 to April 4, 2008, when station was closed for the winter. Stage-discharge relation was affected by ice Nov. 22-28, 2007, and April 11-13, 2008. Record is good, except for periods of no gage-height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--RITCRECO04 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

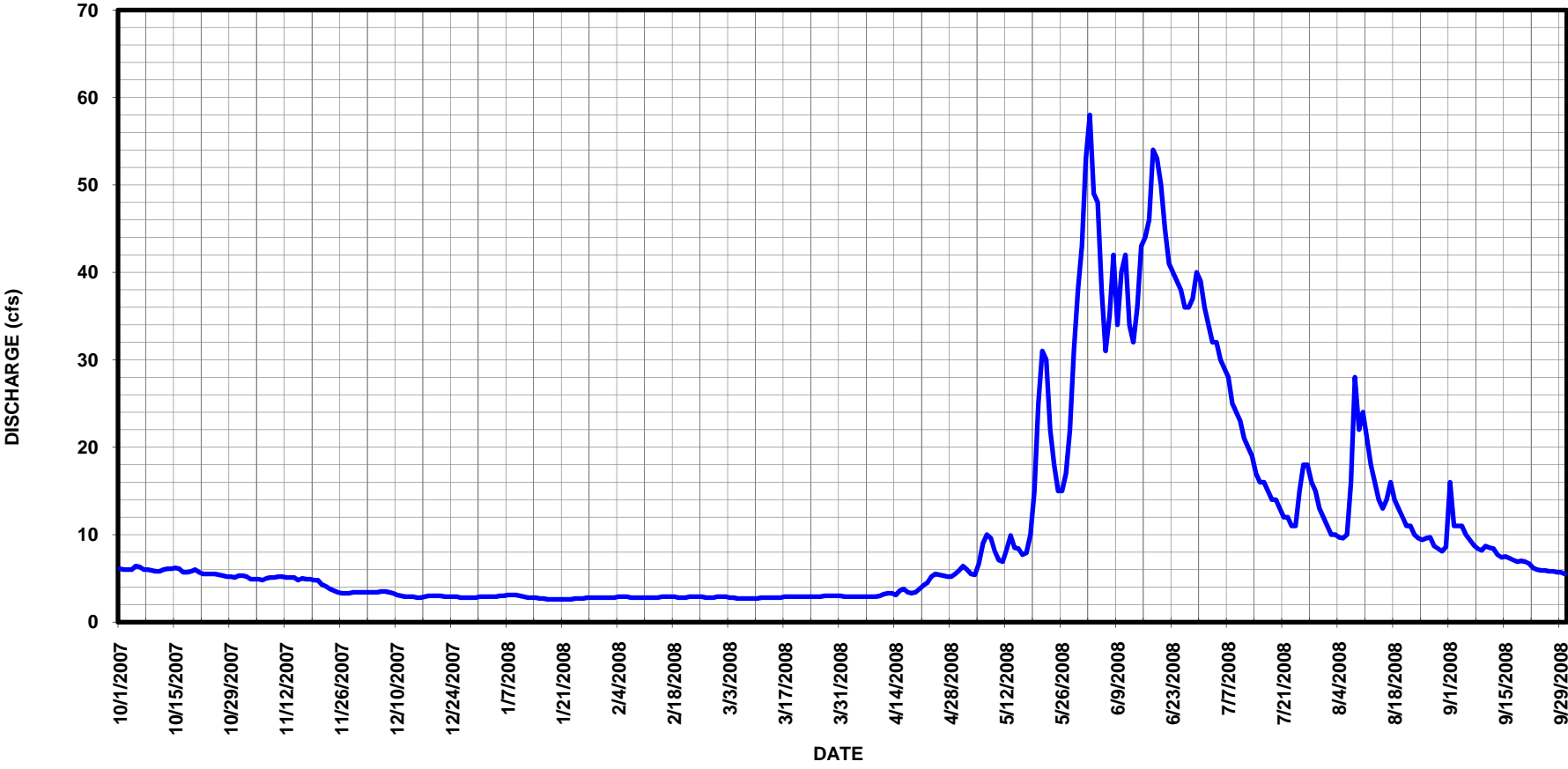
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	5.3	3.4	2.9	2.8	2.9	2.9	6.4	53	36	11	16
2	6.0	5.2	3.4	2.9	2.8	2.9	2.9	6.0	58	34	10	11
3	6.0	4.9	3.4	2.9	2.8	2.8	2.9	5.5	49	32	10	11
4	6.0	4.9	3.4	2.9	2.9	2.8	2.9	5.4	48	32	9.7	11
5	6.4	4.9	3.4	3.0	2.9	2.7	2.9	6.7	38	30	9.6	10
6	6.3	4.8	3.5	3.0	2.9	2.7	2.9	9.0	31	29	10	9.4
7	6.0	5.0	3.5	3.1	2.8	2.7	2.9	10	35	28	16	8.8
8	6.0	5.1	3.4	3.1	2.8	2.7	2.9	9.6	42	25	28	8.4
9	5.9	5.1	3.3	3.1	2.8	2.7	2.9	8.1	34	24	22	8.2
10	5.8	5.2	3.1	3.0	2.8	2.7	3.0	7.1	40	23	24	8.7
11	5.8	5.2	3.0	2.9	2.8	2.8	3.2	6.9	42	21	21	8.5
12	6.0	5.1	2.9	2.8	2.8	2.8	3.3	8.3	34	20	18	8.4
13	6.1	5.1	2.9	2.8	2.8	2.8	3.3	9.9	32	19	16	7.7
14	6.1	5.1	2.9	2.8	2.8	2.8	3.1	8.5	36	17	14	7.4
15	6.2	4.8	2.8	2.7	2.9	2.8	3.6	8.4	43	16	13	7.5
16	6.1	5.0	2.8	2.7	2.9	2.8	3.8	7.7	44	16	14	7.3
17	5.7	4.9	2.9	2.6	2.9	2.9	3.4	7.9	46	15	16	7.1
18	5.7	4.9	3.0	2.6	2.9	2.9	3.3	10	54	14	14	6.9
19	5.8	4.8	3.0	2.6	2.8	2.9	3.4	15	53	14	13	7.0
20	6.0	4.8	3.0	2.6	2.8	2.9	3.8	25	50	13	12	6.9
21	5.7	4.3	3.0	2.6	2.8	2.9	4.2	31	45	12	11	6.7
22	5.5	4.1	2.9	2.6	2.9	2.9	4.5	30	41	12	11	6.2
23	5.5	3.8	2.9	2.6	2.9	2.9	5.2	22	40	11	10	6.0
24	5.5	3.6	2.9	2.7	2.9	2.9	5.5	18	39	11	9.6	5.9
25	5.5	3.4	2.9	2.7	2.9	2.9	5.4	15	38	15	9.4	5.9
26	5.4	3.3	2.8	2.7	2.8	2.9	5.3	15	36	18	9.6	5.8
27	5.3	3.3	2.8	2.8	2.8	3.0	5.2	17	36	18	9.7	5.8
28	5.2	3.3	2.8	2.8	2.8	3.0	5.2	22	37	16	8.7	5.7
29	5.2	3.4	2.8	2.8	2.9	3.0	5.5	31	40	15	8.4	5.7
30	5.1	3.4	2.8	2.8	---	3.0	5.9	38	39	13	8.1	5.5
31	5.3	---	2.9	2.8	---	3.0	---	43	---	12	8.6	---
TOTAL	179.2	136.0	94.5	86.9	82.4	88.4	115.2	463.4	1253	611	405.4	236.4
MEAN	5.78	4.53	3.05	2.80	2.84	2.85	3.84	14.9	41.8	19.7	13.1	7.88
AC-FT	355	270	187	172	163	175	228	919	2490	1210	804	469
MAX	6.4	5.3	3.5	3.1	2.9	3.0	5.9	43	58	36	28	16
MIN	5.1	3.3	2.8	2.6	2.8	2.7	2.9	5.4	31	11	8.1	5.5

CAL YR 2007 TOTAL 5235.2 MEAN 14.3 MAX 100 MIN 2.8 AC-FT 10380  
WTR YR 2008 TOTAL 3751.8 MEAN 10.3 MAX 58 MIN 2.6 AC-FT 7440

MAX DISCH: 75.9 CFS AT 23:00 ON Jun. 1, 2008 GH 2.79 FT. GH CORR. -0.01 FT. SHIFT -0.04 FT.  
MAX GH: 2.78 FT. (GH CORR. -0.01 FT. APPLIED) AT 23:00 ON Jun. 1, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

RITO ALTO CREEK NEAR CRESTONE CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

CLOSED BASIN IN SAN LUIS VALLEY

SAN ISABEL CREEK NEAR CRESTONE, CO

**LOCATION.**--Lat 38°02'03", long 105°43'03", in SW1/4,NW1/4, sec. 25, T.44 N., R.11 E., NMPM, Saguache Co., on left bank 3 miles NW of Crestone.

**DRAINAGE AREA.**--5.7 mi<sup>2</sup>.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. The primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 4-foot diameter culvert shelter and well. A graphic water-stage recorder is operated as a data backup. Elevation of gage is 8200 ft.

**REMARKS.**--Record is complete and reliable, except for Nov. 24, 2007 through Dec. 5, 2007, Apr. 12, 13, 2008 when the well was frozen and Dec. 6, 2007 through Apr. 4, 2008, when station was closed for winter. Stage-discharge relationship was affected by ice Nov. 22, 23, 2007. Record is good, except for periods of no gage-height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--SANCRECO3 USED FROM 01-Oct-2007 TO 30-Sep-2008

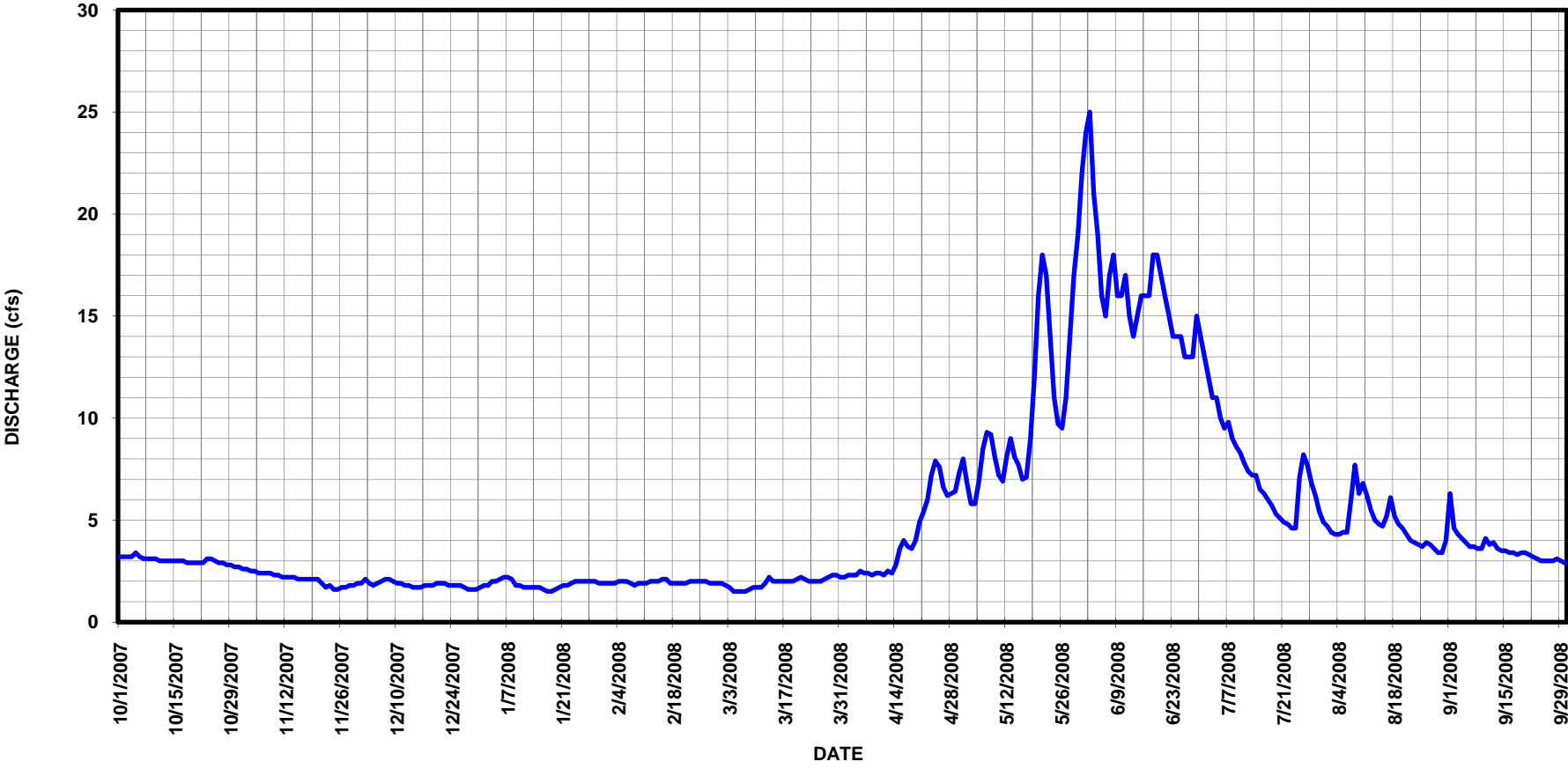
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	2.6	1.9	1.8	1.9	1.9	2.2	8.0	24	13	4.7	6.3
2	3.2	2.6	2.1	1.8	1.9	1.8	2.3	6.8	25	12	4.4	4.6
3	3.2	2.5	1.9	2.0	1.9	1.7	2.3	5.8	21	11	4.3	4.3
4	3.2	2.5	1.8	2.0	2.0	1.5	2.3	5.8	19	11	4.3	4.1
5	3.4	2.4	1.9	2.1	2.0	1.5	2.5	6.9	16	10	4.4	3.9
6	3.2	2.4	2.0	2.2	2.0	1.5	2.4	8.5	15	9.5	4.4	3.7
7	3.1	2.4	2.1	2.2	1.9	1.5	2.4	9.3	17	9.8	6.0	3.7
8	3.1	2.4	2.1	2.1	1.8	1.6	2.3	9.2	18	9.0	7.7	3.6
9	3.1	2.3	2.0	1.8	1.9	1.7	2.4	8.1	16	8.6	6.3	3.6
10	3.1	2.3	1.9	1.8	1.9	1.7	2.4	7.2	16	8.3	6.8	4.1
11	3.0	2.2	1.9	1.7	1.9	1.7	2.3	6.9	17	7.8	6.2	3.8
12	3.0	2.2	1.8	1.7	2.0	1.9	2.5	8.1	15	7.4	5.5	3.9
13	3.0	2.2	1.8	1.7	2.0	2.2	2.4	9.0	14	7.2	5.0	3.6
14	3.0	2.2	1.7	1.7	2.0	2.0	2.8	8.1	15	7.2	4.8	3.5
15	3.0	2.1	1.7	1.7	2.1	2.0	3.6	7.7	16	6.5	4.7	3.5
16	3.0	2.1	1.7	1.6	2.1	2.0	4.0	7.0	16	6.3	5.2	3.4
17	3.0	2.1	1.8	1.5	1.9	2.0	3.7	7.1	16	6.0	6.1	3.4
18	2.9	2.1	1.8	1.5	1.9	2.0	3.6	9.0	18	5.7	5.2	3.3
19	2.9	2.1	1.8	1.6	1.9	2.0	4.0	12	18	5.3	4.8	3.4
20	2.9	2.1	1.9	1.7	1.9	2.1	4.9	16	17	5.1	4.6	3.4
21	2.9	1.9	1.9	1.8	1.9	2.2	5.4	18	16	4.9	4.3	3.3
22	2.9	1.7	1.9	1.8	2.0	2.1	6.0	17	15	4.8	4.0	3.2
23	3.1	1.8	1.8	1.9	2.0	2.0	7.2	14	14	4.6	3.9	3.1
24	3.1	1.6	1.8	2.0	2.0	2.0	7.9	11	14	4.6	3.8	3.0
25	3.0	1.6	1.8	2.0	2.0	2.0	7.6	9.7	14	7.1	3.7	3.0
26	2.9	1.7	1.8	2.0	2.0	2.0	6.6	9.5	13	8.2	3.9	3.0
27	2.9	1.7	1.7	2.0	1.9	2.1	6.2	11	13	7.7	3.8	3.0
28	2.8	1.8	1.6	2.0	1.9	2.2	6.3	14	13	6.8	3.6	3.1
29	2.8	1.8	1.6	2.0	1.9	2.3	6.4	17	15	6.2	3.4	3.0
30	2.7	1.9	1.6	1.9	---	2.3	7.3	19	14	5.4	3.4	2.9
31	2.7	---	1.7	1.9	---	2.2	---	22	---	4.9	4.0	---
TOTAL	93.3	63.3	56.8	57.5	56.5	59.7	124.2	328.7	490	231.9	147.2	107.7
MEAN	3.01	2.11	1.83	1.85	1.95	1.93	4.14	10.6	16.3	7.48	4.75	3.59
AC-FT	185	126	113	114	112	118	246	652	972	460	292	214
MAX	3.4	2.6	2.1	2.2	2.1	2.3	7.9	22	25	13	7.7	6.3
MIN	2.7	1.6	1.6	1.5	1.8	1.5	2.2	5.8	13	4.6	3.4	2.9
CAL YR 2007	TOTAL	2905.4	MEAN	7.96	MAX	44	MIN	1.5	AC-FT	5760		
WTR YR 2008	TOTAL	1816.8	MEAN	4.96	MAX	25	MIN	1.5	AC-FT	3600		

MAX DISCH: 32.3 CFS AT 21:15 ON Jun. 1, 2008 GH 4.40 FT. SHIFT -0.10 FT.  
MAX GH: 4.40 FT. AT 21:15 ON Jun. 1, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

SAN ISABEL CREEK NEAR CRESTONE CO  
WY2008 HYDROGRAPH





RIO GRANDE BASIN

CLOSED BASIN IN SAN LUIS VALLEY

08227000 SAGUACHE CREEK NEAR SAGUACHE, CO

**LOCATION.**--Lat 38°09'48", long 106°17'24", in SE¼SE¼ sec. 10, T. 45 N., R 6 E., Saguache County, Hydrologic Unit 13010004, on left bank 0.2 Mi downstream from Middle Creek and 10 mi northwest of Saguache.

**PERIOD OF RECORD AND DRAINAGE AREA.**--595 mi<sup>2</sup>. Aug. 1910-Sept. 1912, Jun. 1914 to current year. Monthly discharge only for some periods. Water-quality data available, Apr. 1993-Sep. 1995.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. The primary record is an electronic data logger in a CMP shelter and well with satellite transmitter, which records gage-height data from a float-operated shaft encoder, precipitation data from a tipping-bucket rain gauge and air temperature data from a temperature sensor. A graphic water-stage recorder is operated as a data backup. Datum of gage is approximately 8,030 ft. (from topographic map).

**REMARKS.**--Record is complete and reliable. The stage-discharge relation was affected by ice Nov. 22, 2007 through Mar. 25, 2008. Record is good, except for periods of ice-affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**-- SAGSAGCO16 USED FROM 01-Oct-2007 TO 30-Sep-2008

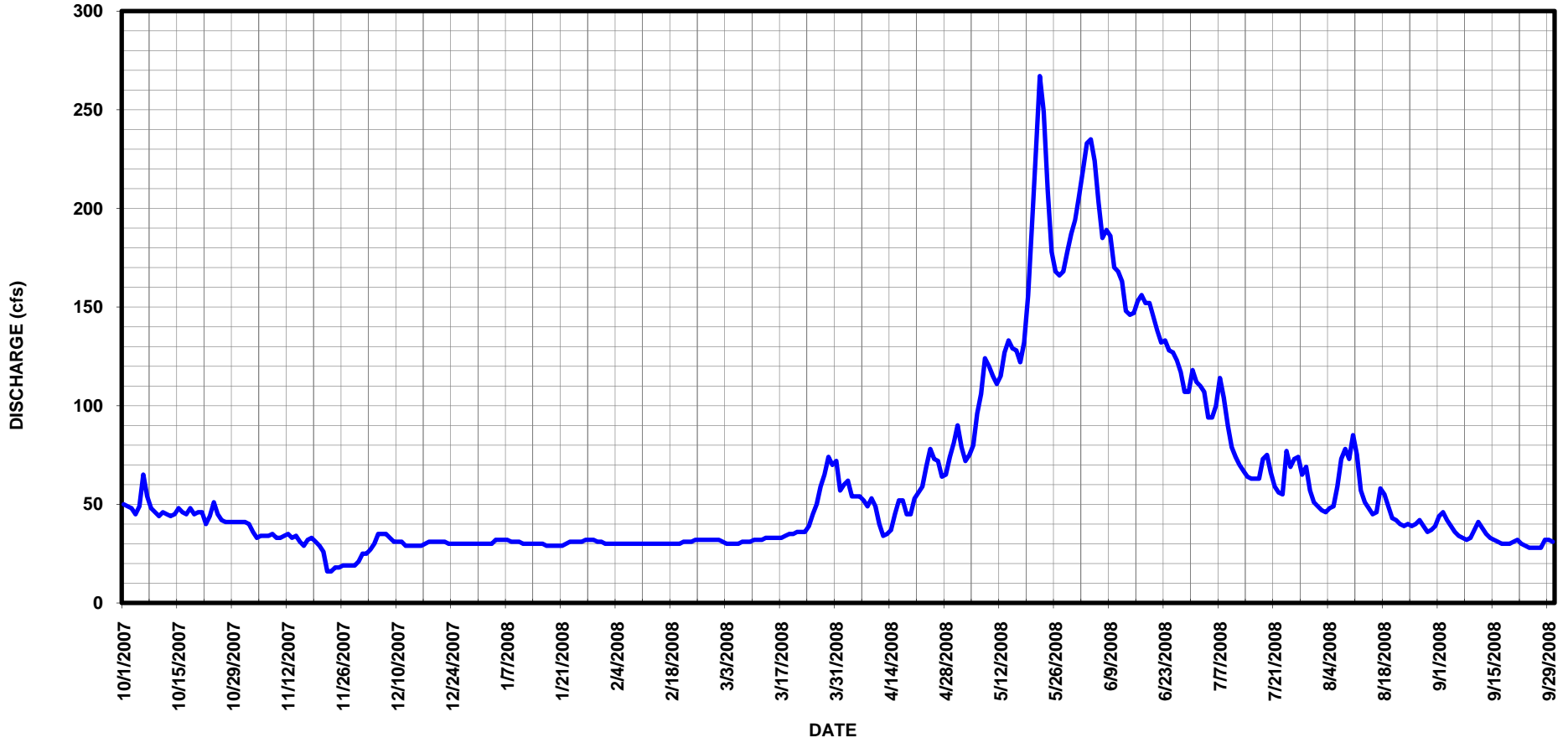
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	41	25	30	30	32	57	90	206	112	49	44
2	49	40	25	30	30	31	60	79	219	110	47	46
3	48	36	27	30	30	30	62	72	233	107	46	42
4	45	33	30	32	30	30	54	75	235	94	48	39
5	49	34	35	32	30	30	54	80	224	94	49	36
6	65	34	35	32	30	30	54	96	203	100	59	34
7	54	34	35	32	30	31	52	106	185	114	73	33
8	48	35	33	31	30	31	49	124	189	104	78	32
9	46	33	31	31	30	31	53	120	186	90	73	33
10	44	33	31	31	30	32	49	115	170	79	85	37
11	46	34	31	30	30	32	40	111	168	74	75	41
12	45	35	29	30	30	32	34	115	163	70	57	38
13	44	33	29	30	30	33	35	127	148	67	51	35
14	45	34	29	30	30	33	37	133	146	64	48	33
15	48	31	29	30	30	33	45	129	147	63	45	32
16	46	29	29	30	30	33	52	128	153	63	46	31
17	45	32	30	29	30	33	52	122	156	63	58	30
18	48	33	31	29	30	34	45	132	152	73	55	30
19	45	31	31	29	30	35	45	156	152	75	49	30
20	46	29	31	29	30	35	53	192	145	66	43	31
21	46	26	31	29	31	36	56	229	138	59	42	32
22	40	16	31	30	31	36	59	267	132	56	40	30
23	44	16	30	31	31	36	69	249	133	55	39	29
24	51	18	30	31	32	39	78	209	128	77	40	28
25	45	18	30	31	32	45	73	178	127	69	39	28
26	42	19	30	31	32	50	72	168	123	73	40	28
27	41	19	30	32	32	59	64	166	117	74	42	28
28	41	19	30	32	32	65	65	168	107	65	39	32
29	41	19	30	32	32	74	74	178	107	69	36	32
30	41	21	30	31	---	70	81	187	118	57	37	31
31	41	---	30	31	---	72	---	194	---	51	39	---
TOTAL	1429	865	938	948	885	1223	1673	4495	4810	2387	1567	1005
MEAN	46.1	28.8	30.3	30.6	30.5	39.5	55.8	145	160	77.0	50.5	33.5
AC-FT	2830	1720	1860	1880	1760	2430	3320	8920	9540	4730	3110	1990
MAX	65	41	35	32	32	74	81	267	235	114	85	46
MIN	40	16	25	29	30	30	34	72	107	51	36	28
CAL YR 2007	TOTAL	26797	MEAN	73.4	MAX	246	MIN	16	AC-FT	53150		
WTR YR 2008	TOTAL	22225	MEAN	60.7	MAX	267	MIN	16	AC-FT	44080		

MAX DISCH: 274 CFS AT 11:15 ON May. 22, 2008 GH 2.96 FT. GH CORR. -0.01 FT. SHIFT 0.01 FT.  
MAX GH: 2.97 FT. (Ice affected) AT 11:30 ON Feb. 13, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08227000 SAGUACHE CREEK NEAR SAGUACHE CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

CLOSED BASIN IN SAN LUIS VALLEY, CO

08227500 NORTH CRESTONE CREEK NEAR CRESTONE, CO

**LOCATION.**--Lat 38°00'49", long 105°41'32", Saguache County, Hydrologic Unit 13010003, on right bank in canyon, 1.5 mi. northeast of Crestone, and 3.2 mi. upstream from South Crestone Creek.

**DRAINAGE AREA.**--10.7 mi<sup>2</sup>.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 48-inch corrugated metal shelter and 36-inch concrete well at a concrete ramp flume. A graphic water-stage recorder is operated as a data backup. Altitude of gage is 8,360 ft from topographic map.

**REMARKS.**--Record is complete and reliable, except for December 6, 2007 through April 4, 2008 when the station was closed for the winter and November 25, 2007 through December 5, 2007 when floats were affected by ice in well. Stage-discharge relationship was affected by ice (b-days) November 22-24, 2007 and April 12, 2008. Record is good, except for periods of no gage-height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--NOCRESCO11 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

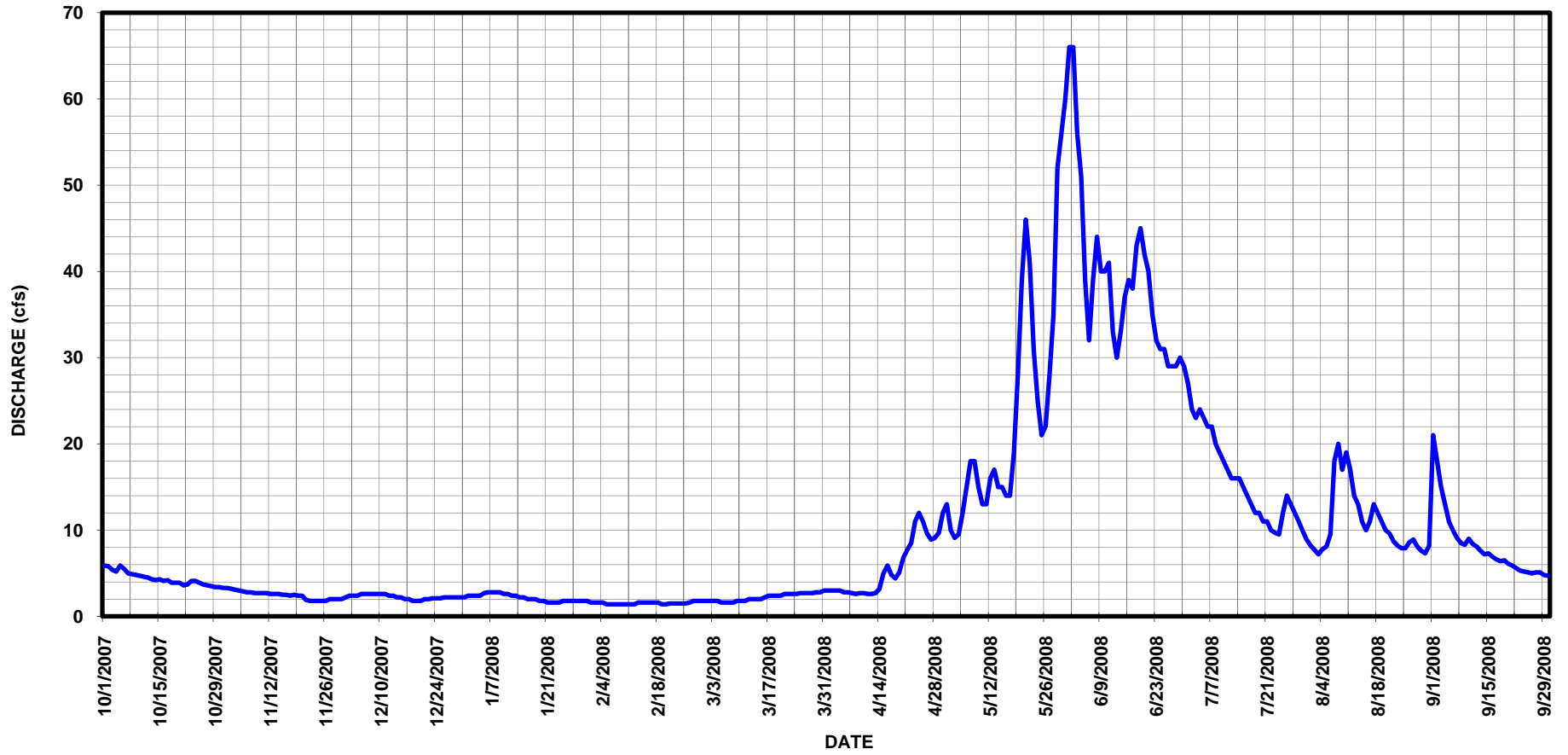
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	3.3	2.2	2.4	1.6	1.8	3.0	13	66	27	8.2	21
2	5.8	3.2	2.4	2.4	1.6	1.8	3.0	10	66	24	7.7	18
3	5.4	3.1	2.4	2.4	1.6	1.8	3.0	9.1	56	23	7.2	15
4	5.2	3.0	2.4	2.4	1.6	1.8	3.0	9.5	51	24	7.8	13
5	5.9	2.9	2.6	2.7	1.4	1.6	2.8	12	39	23	8.1	11
6	5.5	2.8	2.6	2.8	1.4	1.6	2.8	15	32	22	9.5	10
7	5.0	2.8	2.6	2.8	1.4	1.6	2.7	18	39	22	18	9.1
8	4.9	2.7	2.6	2.8	1.4	1.6	2.6	18	44	20	20	8.5
9	4.8	2.7	2.6	2.8	1.4	1.8	2.7	15	40	19	17	8.3
10	4.7	2.7	2.6	2.6	1.4	1.8	2.7	13	40	18	19	9.0
11	4.6	2.7	2.6	2.6	1.4	1.8	2.6	13	41	17	17	8.4
12	4.5	2.6	2.4	2.4	1.4	2.0	2.6	16	33	16	14	8.1
13	4.3	2.6	2.4	2.4	1.6	2.0	2.7	17	30	16	13	7.6
14	4.2	2.6	2.2	2.2	1.6	2.0	3.2	15	33	16	11	7.2
15	4.3	2.5	2.2	2.2	1.6	2.0	5.0	15	37	15	10	7.3
16	4.1	2.5	2.0	2.0	1.6	2.2	5.9	14	39	14	11	6.9
17	4.2	2.4	2.0	2.0	1.6	2.4	4.8	14	38	13	13	6.6
18	3.9	2.5	1.8	2.0	1.6	2.4	4.4	19	43	12	12	6.4
19	3.9	2.4	1.8	1.8	1.4	2.4	5.1	28	45	12	11	6.5
20	3.9	2.4	1.8	1.8	1.4	2.4	6.8	39	42	11	10	6.1
21	3.6	1.9	2.0	1.6	1.5	2.6	7.7	46	40	11	9.6	5.9
22	3.7	1.8	2.0	1.6	1.5	2.6	8.5	41	35	10	8.7	5.6
23	4.1	1.8	2.1	1.6	1.5	2.6	11	31	32	9.7	8.2	5.3
24	4.1	1.8	2.1	1.6	1.5	2.6	12	25	31	9.5	7.9	5.2
25	3.9	1.8	2.1	1.8	1.5	2.7	11	21	31	12	7.9	5.1
26	3.7	1.8	2.2	1.8	1.6	2.7	9.6	22	29	14	8.6	5.0
27	3.6	2.0	2.2	1.8	1.8	2.7	8.9	28	29	13	8.9	5.1
28	3.5	2.0	2.2	1.8	1.8	2.7	9.1	35	29	12	8.1	5.1
29	3.4	2.0	2.2	1.8	1.8	2.8	9.7	52	30	11	7.6	4.8
30	3.4	2.0	2.2	1.8	---	2.8	12	56	29	9.9	7.3	4.7
31	3.3	---	2.2	1.8	---	3.0	---	60	---	8.9	8.2	---
TOTAL	135.3	73.3	69.7	66.5	44.5	68.6	170.9	739.6	1169	485.0	335.5	245.8
MEAN	4.36	2.44	2.25	2.15	1.53	2.21	5.70	23.9	39.0	15.6	10.8	8.19
AC-FT	268	145	138	132	88	136	339	1470	2320	962	665	488
MAX	5.9	3.3	2.6	2.8	1.8	3.0	12	60	66	27	20	21
MIN	3.3	1.8	1.8	1.6	1.4	1.6	2.6	9.1	29	8.9	7.2	4.7

CAL YR	2007	TOTAL	5149.2	MEAN	14.1	MAX	81	MIN	1.2	AC-FT	10210
WTR YR	2008	TOTAL	3603.7	MEAN	9.85	MAX	66	MIN	1.4	AC-FT	7150

MAX DISCH: 82.4 CFS AT 21:45 ON Jun. 1, 2008 GH 1.82 FT. SHIFT 0 FT.  
MAX GH: 1.82 FT. AT 21:45 ON Jun. 1, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08227500 NORTH CRESTONE CREEK NEAR CRESTONE CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

CLOSED BASIN IN SAN LUIS VALLEY

SOUTH CRESTONE CREEK NEAR CRESTONE, CO

**LOCATION.**--Lat 37°58'55", long 105°42'41", in NE1/4SW1/4 Sec. 12, T.43 N., R.11 E., NMPM, Saguache Co., on right bank, 1 mile SE of Crestone.

**DRAINAGE AREA.**--4.6 mi<sup>2</sup>.

**GAGE.**--The primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a two-foot diameter corrugated culvert pipe stilling well with small steel shelter on top. A 1-inch intake pipe attaches well to a 2.5 foot Parshall flume. Elevation of gage is 7740 ft.

**REMARKS.**--Record is complete and reliable, except for Nov. 22, 2007, Aug. 6-14, 2008 when the well isolated from flume; Dec. 6, 2007 through Apr. 28, 2008 when the station was closed for the winter and Sep. 25, 2008 when several hours of satellite data were missing. Opening of gage was attempted on Apr. 4, 2008, but the well was isolated from flume due to extremely low flows. Stage-discharge relation was affected by ice Nov. 21, 23-30, Dec. 1-5, 2007. Record is good, except for periods of no gage-height and ice affected record, which are poor. Analysis indicates that uncertain shift distribution (stage-dependent vs. time-dependent) for gage heights above approximately 0.39' warrant a rating of fair for the period from June 18-21, 2008 and a rating of poor for the period from September 1-4, 2008. Uncertainty analysis for the open-ended shift utilized for the peak flow calculation indicate that the peak flow is within 10% of actual flow and a rating of good is appropriate. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--SOUCRECO01 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

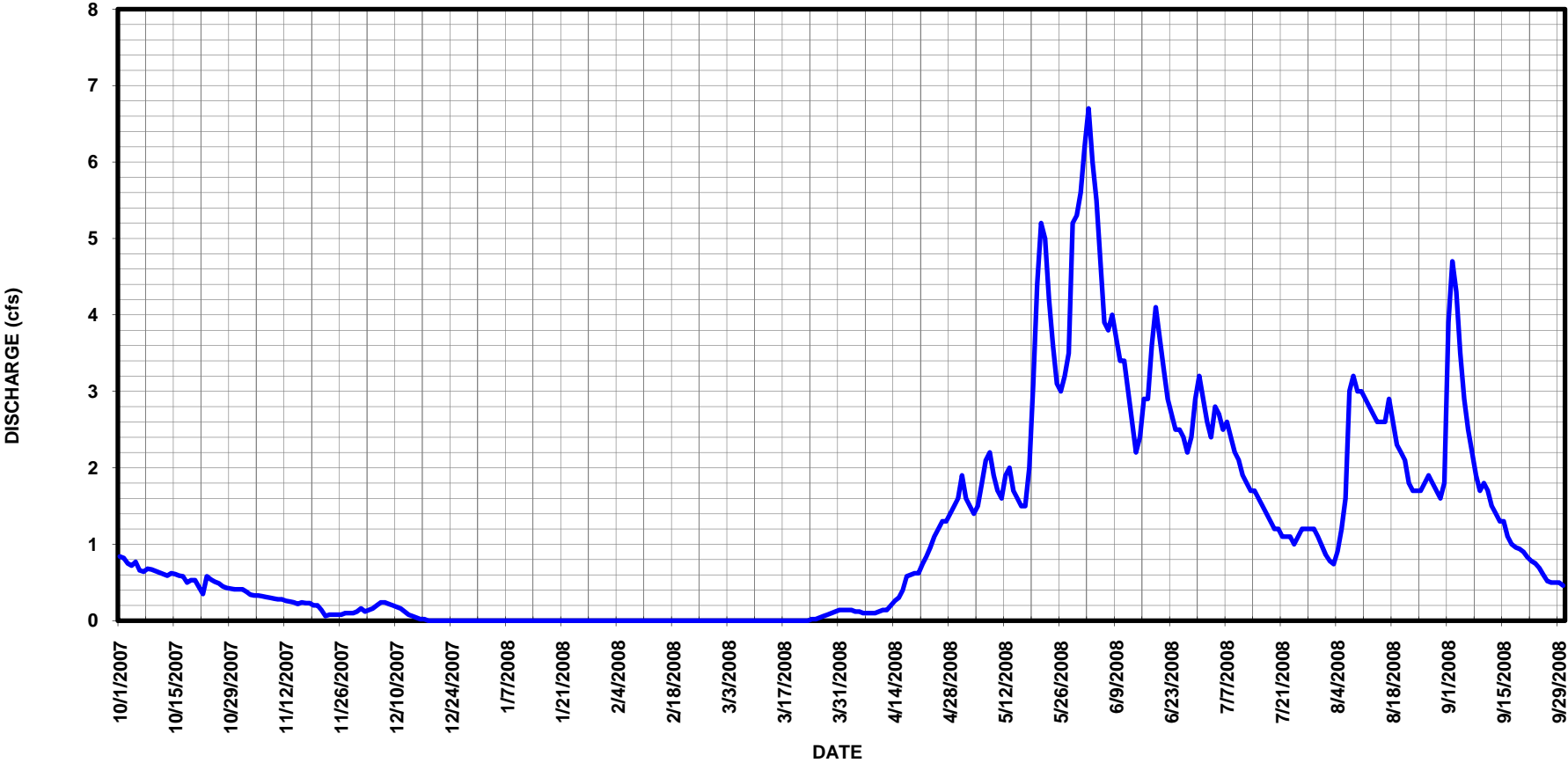
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.84	.41	.16	0	0	0	.14	1.9	6.2	2.9	.86	3.9
2	.82	.38	.12	0	0	0	.14	1.6	6.7	2.6	.78	4.7
3	.75	.34	.14	0	0	0	.14	1.5	6.0	2.4	.74	4.3
4	.72	.33	.16	0	0	0	.12	1.4	5.5	2.8	.91	3.5
5	.77	.33	.20	0	0	0	.12	1.5	4.7	2.7	1.2	2.9
6	.66	.32	.24	0	0	0	.10	1.8	3.9	2.5	1.6	2.5
7	.64	.31	.24	0	0	0	.10	2.1	3.8	2.6	3.0	2.2
8	.68	.30	.22	0	0	0	.10	2.2	4.0	2.4	3.2	1.9
9	.67	.29	.20	0	0	0	.10	1.9	3.7	2.2	3.0	1.7
10	.65	.28	.18	0	0	0	.12	1.7	3.4	2.1	3.0	1.8
11	.63	.28	.16	0	0	0	.14	1.6	3.4	1.9	2.9	1.7
12	.61	.26	.12	0	0	0	.14	1.9	3.0	1.8	2.8	1.5
13	.59	.25	.08	0	0	0	.20	2.0	2.6	1.7	2.7	1.4
14	.62	.24	.06	0	0	0	.26	1.7	2.2	1.7	2.6	1.3
15	.61	.22	.04	0	0	0	.30	1.6	2.4	1.6	2.6	1.3
16	.59	.24	.02	0	0	0	.40	1.5	2.9	1.5	2.6	1.1
17	.58	.23	.02	0	0	0	.58	1.5	2.9	1.4	2.9	1.0
18	.50	.23	0	0	0	0	.60	2.0	3.6	1.3	2.6	.96
19	.53	.20	0	0	0	0	.62	3.1	4.1	1.2	2.3	.94
20	.53	.20	0	0	0	0	.62	4.4	3.7	1.2	2.2	.90
21	.44	.14	0	0	0	0	.74	5.2	3.3	1.1	2.1	.83
22	.35	.06	0	0	0	0	.84	5.0	2.9	1.1	1.8	.78
23	.58	.08	0	0	0	0	.96	4.2	2.7	1.1	1.7	.75
24	.54	.08	0	0	0	.02	1.1	3.6	2.5	1.0	1.7	.69
25	.51	.08	0	0	0	.02	1.2	3.1	2.5	1.1	1.7	.60
26	.49	.08	0	0	0	.04	1.3	3.0	2.4	1.2	1.8	.52
27	.45	.10	0	0	0	.06	1.3	3.2	2.2	1.2	1.9	.50
28	.43	.10	0	0	0	.08	1.4	3.5	2.4	1.2	1.8	.50
29	.42	.10	0	0	0	.10	1.5	5.2	2.9	1.2	1.7	.50
30	.41	.12	0	0	---	.12	1.6	5.3	3.2	1.1	1.6	.46
31	.41	---	0	0	---	.14	---	5.6	---	.98	1.8	---
TOTAL	18.02	6.58	2.36	0	0	.58	16.98	85.8	105.7	52.78	64.09	47.63
MEAN	.58	.22	.076	0	0	.019	.57	2.77	3.52	1.70	2.07	1.59
AC-FT	36	13	4.7	0	0	1.2	34	170	210	105	127	94
MAX	.84	.41	.24	0	0	.14	1.6	5.6	6.7	2.9	3.2	4.7
MIN	.35	.06	0	0	0	0	.10	1.4	2.2	.98	.74	.46
CAL YR 2007	TOTAL	659.57	MEAN	1.81	MAX	11	MIN	0	AC-FT	1310		
WTR YR 2008	TOTAL	400.52	MEAN	1.09	MAX	6.7	MIN	0	AC-FT	794		

MAX DISCH: 7.34 CFS AT 04:15 ON Jun. 2, 2008 GH 0.75 FT. SHIFT 0.07 FT.

MAX GH: 0.75 FT. AT 04:15 ON Jun. 2, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

SOUTH CRESTONE CREEK NEAR CRESTONE CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

CLOSED BASIN IN SAN LUIS VALLEY

WILLOW CREEK NEAR CRESTONE, CO

**LOCATION.**--Lat 37°57'29", long 105°41'59", in SE1/4NW1/4 Sec. 20, T.43 N., R.12 E., NMPM, Saguache Co. on right bank, 2 miles SE of Crestone.

**DRAINAGE AREA.**--8.0 mi<sup>2</sup>.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. The primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 2-foot diameter steel culvert well and steel box shelter. Elevation of gage is 7740 ft.

**REMARKS.**--Record is complete and reliable, except for Nov.25 through Dec.5, 2007 when the well was frozen and Dec. 6, 2007 through April 4, 2008 when the station was closed for the winter. Stage discharge relationship was affected by ice Nov. 22-24, 2007. Record is good except for periods of no gage-height and ice affected record, which are poor. It was noticed this year that the station name on all YRS reports since 2000 was "At Crestone" instead of "Near Crestone". This year's YRS report was changed to "Near" for accuracy. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--WILCRECO03 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

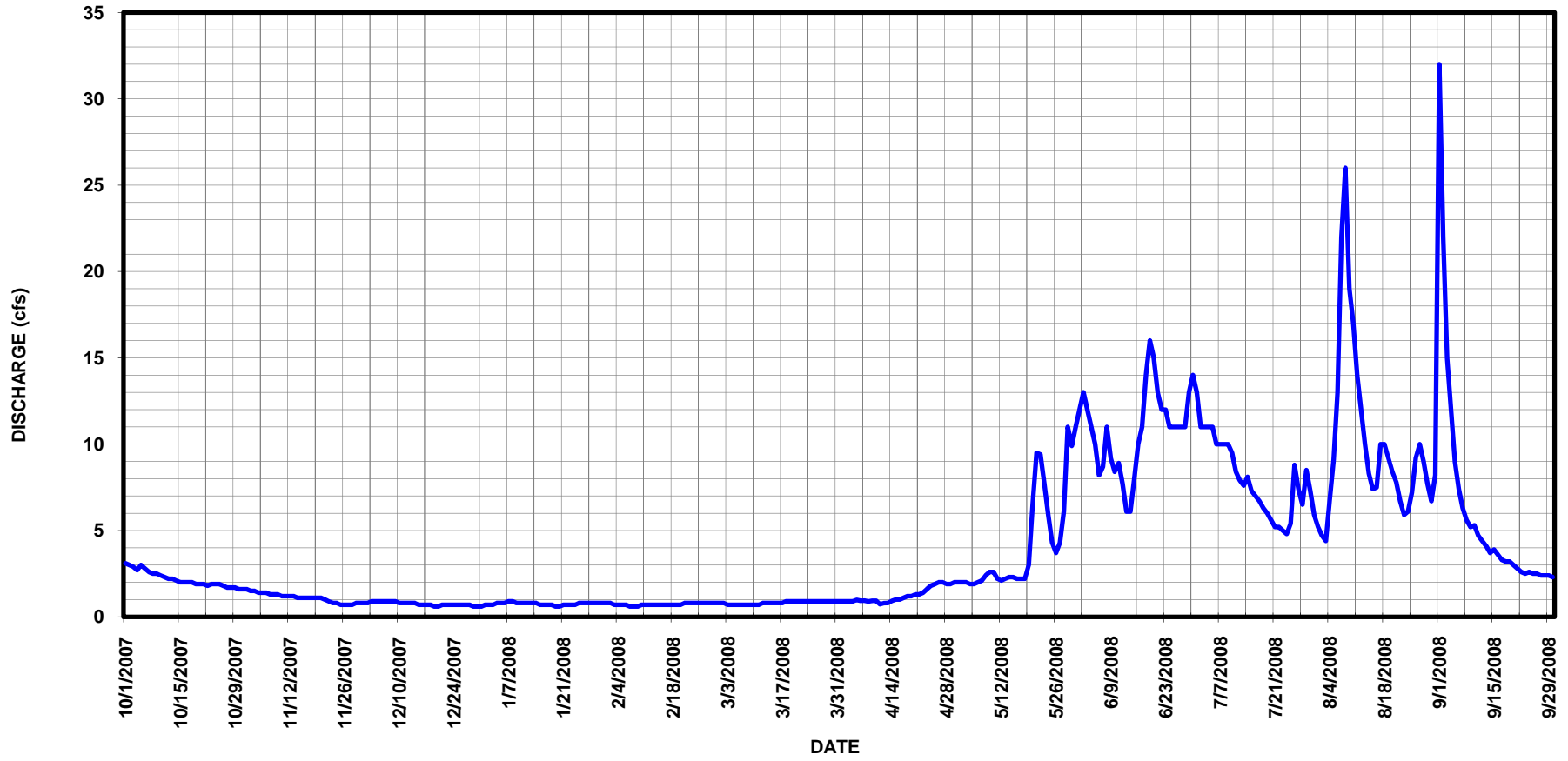
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	1.6	.80	.70	.80	.80	.90	2.0	12	13	5.2	32
2	3.0	1.5	.80	.70	.80	.80	.90	2.0	13	11	4.7	22
3	2.9	1.5	.90	.70	.70	.70	.90	2.0	12	11	4.4	15
4	2.7	1.4	.90	.80	.70	.70	.90	1.9	11	11	6.8	12
5	3.0	1.4	.90	.80	.70	.70	.98	1.9	10	11	9.1	9.0
6	2.8	1.4	.90	.80	.70	.70	.93	2.0	8.2	10	13	7.4
7	2.6	1.3	.90	.90	.60	.70	.94	2.1	8.7	10	22	6.3
8	2.5	1.3	.90	.90	.60	.70	.89	2.4	11	10	26	5.6
9	2.5	1.3	.90	.80	.60	.70	.93	2.6	9.2	10	19	5.2
10	2.4	1.2	.80	.80	.70	.70	.93	2.6	8.4	9.5	17	5.3
11	2.3	1.2	.80	.80	.70	.70	.73	2.2	8.9	8.4	14	4.7
12	2.2	1.2	.80	.80	.70	.80	.79	2.1	7.7	7.9	12	4.4
13	2.2	1.2	.80	.80	.70	.80	.80	2.2	6.1	7.6	10	4.1
14	2.1	1.1	.80	.80	.70	.80	.92	2.3	6.1	8.1	8.3	3.7
15	2.0	1.1	.70	.70	.70	.80	1.0	2.3	8.0	7.3	7.4	3.9
16	2.0	1.1	.70	.70	.70	.80	1.0	2.2	10	7.0	7.5	3.6
17	2.0	1.1	.70	.70	.70	.80	1.1	2.2	11	6.7	10	3.3
18	2.0	1.1	.70	.70	.70	.90	1.2	2.2	14	6.3	10	3.2
19	1.9	1.1	.60	.60	.70	.90	1.2	3.0	16	6.0	9.2	3.2
20	1.9	1.1	.60	.60	.70	.90	1.3	6.5	15	5.6	8.4	3.0
21	1.9	1.0	.70	.70	.80	.90	1.3	9.5	13	5.2	7.8	2.8
22	1.8	.90	.70	.70	.80	.90	1.4	9.4	12	5.2	6.7	2.6
23	1.9	.80	.70	.70	.80	.90	1.6	7.7	12	5.0	5.9	2.5
24	1.9	.80	.70	.70	.80	.90	1.8	5.9	11	4.8	6.1	2.6
25	1.9	.70	.70	.80	.80	.90	1.9	4.3	11	5.4	7.2	2.5
26	1.8	.70	.70	.80	.80	.90	2.0	3.7	11	8.8	9.2	2.5
27	1.7	.70	.70	.80	.80	.90	2.0	4.3	11	7.4	10	2.4
28	1.7	.70	.70	.80	.80	.90	1.9	6.1	11	6.5	9.0	2.4
29	1.7	.80	.60	.80	.80	.90	1.9	11	13	8.5	7.7	2.4
30	1.6	.80	.60	.80	---	.90	2.0	9.9	14	7.3	6.7	2.3
31	1.6	---	.60	.80	---	.90	---	11	---	5.9	8.2	---
TOTAL	67.6	33.10	23.30	23.50	21.10	25.30	37.04	131.5	325.3	247.4	308.5	181.9
MEAN	2.18	1.10	.75	.76	.73	.82	1.23	4.24	10.8	7.98	9.95	6.06
AC-FT	134	66	46	47	42	50	73	261	645	491	612	361
MAX	3.1	1.6	.90	.90	.80	.90	2.0	11	16	13	26	32
MIN	1.6	.70	.60	.60	.60	.70	.73	1.9	6.1	4.8	4.4	2.3

CAL YR	2007	TOTAL	1990.2	MEAN	5.45	MAX	33	MIN	.3	AC-FT	3950
WTR YR	2008	TOTAL	1425.54	MEAN	3.89	MAX	32	MIN	.6	AC-FT	2830

MAX DISCH: 38.4 CFS AT 06:45 ON Sep. 1, 2008 GH 3.37 FT. SHIFT -0.02 FT.  
MAX GH: 3.37 FT. AT 06:45 ON Sep. 1, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

WILLOW CREEK NEAR CRESTONE CO  
WY2008 HYDROGRAPH





RIO GRANDE BASIN

CLOSED BASIN IN SAN LUIS VALLEY

SPANISH CREEK NEAR CRESTONE, CO

**LOCATION.**--Lat 37°57'10", long 105°39'42", in NE1/4SW1/4 Sec. 21, T.43 N., R.12 E., NMPM, Saguache Co., on left bank, 3 1/2 miles SE of Crestone.

**DRAINAGE AREA.**--2.4 mi<sup>2</sup>.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. The primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 2-foot culvert pipe well and small steel box shelter. Elevation of gage is 8240 ft.

**REMARKS.**--Record is complete and reliable, except for Dec. 6, 2007 through April 4, 2008 when the station was closed for the winter, Nov.26-30,Dec.1-5,2007 when the well was frozen and June 6,12-14,22-24,2008 when well was isolated. Stage discharge relationship was affected by ice ('b' record), Nov.23-25, 2007. Record is fair, except for periods of no gage-height record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--SPACRECO04 USED FROM 01-Oct-2007 TO 30-Sep-2008

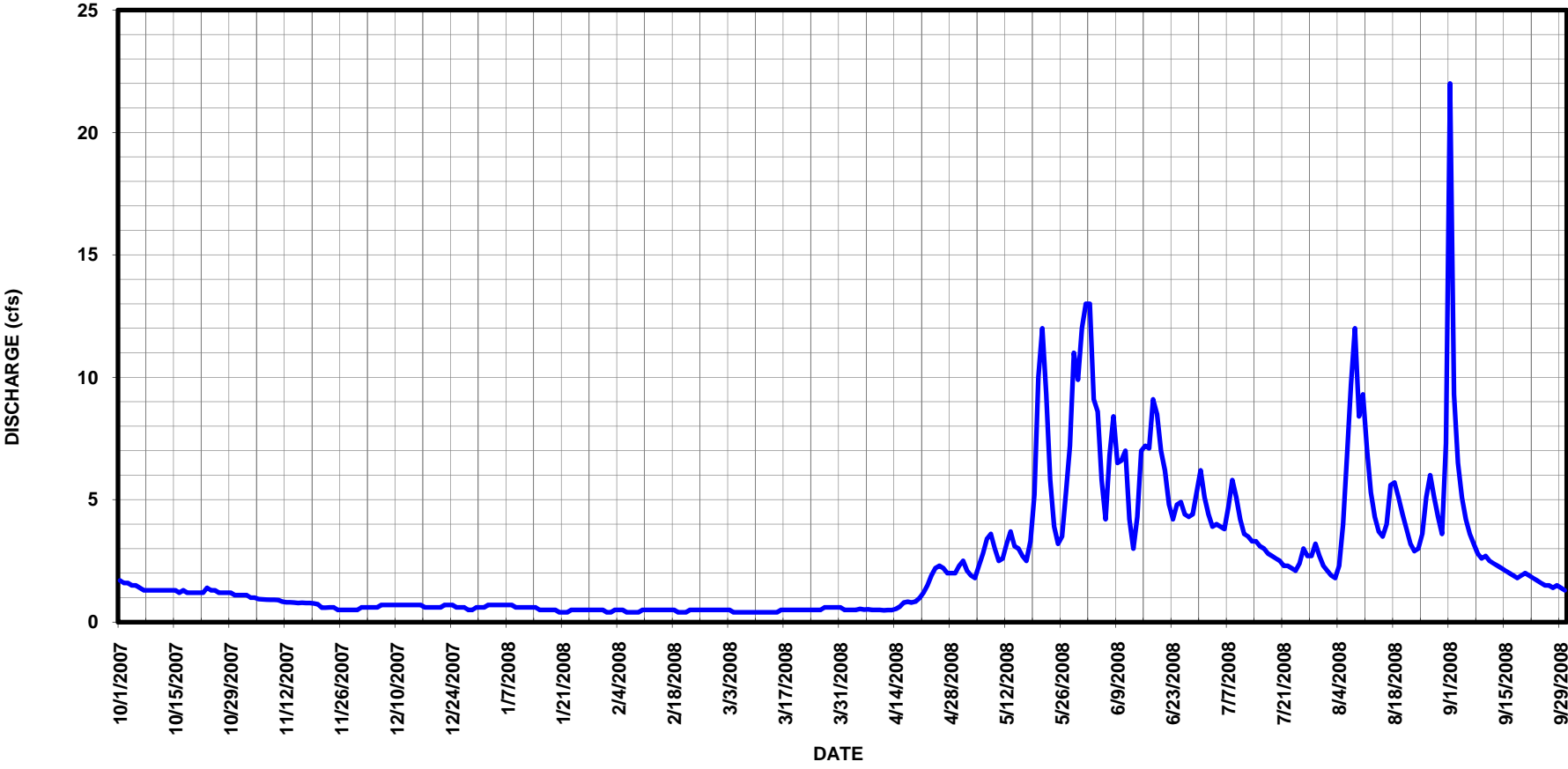
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.1	.60	.60	.40	.50	.50	2.5	13	5.1	2.1	22
2	1.6	1.1	.60	.70	.40	.50	.50	2.1	13	4.4	1.9	9.3
3	1.6	1.0	.60	.70	.50	.50	.50	1.9	9.1	3.9	1.8	6.5
4	1.5	1.0	.60	.70	.50	.40	.50	1.8	8.6	4.0	2.3	5.1
5	1.5	.94	.60	.70	.50	.40	.54	2.3	5.8	3.9	4.0	4.2
6	1.4	.93	.70	.70	.40	.40	.51	2.8	4.2	3.8	6.8	3.6
7	1.3	.92	.70	.70	.40	.40	.52	3.4	6.8	4.7	9.7	3.2
8	1.3	.91	.70	.70	.40	.40	.50	3.6	8.4	5.8	12	2.8
9	1.3	.91	.70	.60	.40	.40	.50	3.0	6.5	5.1	8.4	2.6
10	1.3	.90	.70	.60	.50	.40	.50	2.5	6.6	4.2	9.3	2.7
11	1.3	.84	.70	.60	.50	.40	.48	2.6	7.0	3.6	7.1	2.5
12	1.3	.81	.70	.60	.50	.40	.49	3.2	4.2	3.5	5.3	2.4
13	1.3	.81	.70	.60	.50	.40	.49	3.7	3.0	3.3	4.3	2.3
14	1.3	.80	.70	.60	.50	.40	.54	3.1	4.3	3.3	3.7	2.2
15	1.3	.78	.70	.50	.50	.40	.63	3.0	7.0	3.1	3.5	2.1
16	1.2	.79	.70	.50	.50	.50	.80	2.7	7.2	3.0	4.0	2.0
17	1.3	.78	.60	.50	.50	.50	.83	2.5	7.1	2.8	5.6	1.9
18	1.2	.78	.60	.50	.50	.50	.80	3.3	9.1	2.7	5.7	1.8
19	1.2	.76	.60	.50	.40	.50	.84	5.2	8.5	2.6	5.1	1.9
20	1.2	.73	.60	.40	.40	.50	.98	10	7.0	2.5	4.4	2.0
21	1.2	.59	.60	.40	.40	.50	1.2	12	6.2	2.3	3.8	1.9
22	1.2	.59	.70	.40	.50	.50	1.5	9.3	4.8	2.3	3.2	1.8
23	1.4	.60	.70	.50	.50	.50	1.9	5.8	4.2	2.2	2.9	1.7
24	1.3	.60	.70	.50	.50	.50	2.2	3.9	4.8	2.1	3.0	1.6
25	1.3	.50	.60	.50	.50	.50	2.3	3.2	4.9	2.4	3.6	1.5
26	1.2	.50	.60	.50	.50	.50	2.2	3.5	4.4	3.0	5.1	1.5
27	1.2	.50	.60	.50	.50	.60	2.0	5.3	4.3	2.7	6.0	1.4
28	1.2	.50	.50	.50	.50	.60	2.0	7.2	4.4	2.7	5.1	1.5
29	1.2	.50	.50	.50	.50	.60	2.0	11	5.3	3.2	4.3	1.4
30	1.1	.50	.60	.50	---	.60	2.3	9.9	6.2	2.7	3.6	1.3
31	1.1	---	.60	.50	---	.60	---	12	---	2.3	7.3	---
TOTAL	40.5	22.97	19.80	17.30	13.60	14.80	31.55	148.3	195.9	103.2	154.9	98.7
MEAN	1.31	.77	.64	.56	.47	.48	1.05	4.78	6.53	3.33	5.00	3.29
AC-FT	80	46	39	34	27	29	63	294	389	205	307	196
MAX	1.7	1.1	.70	.70	.50	.60	2.3	12	13	5.8	12	22
MIN	1.1	.50	.50	.40	.40	.40	.48	1.8	3.0	2.1	1.8	1.3
CAL YR 2007	TOTAL	1069.16	MEAN	2.93	MAX	21	MIN	.3	AC-FT	2120		
WTR YR 2008	TOTAL	861.52	MEAN	2.35	MAX	22	MIN	.4	AC-FT	1710		

MAX DISCH: 38 CFS AT 00:45 ON Sep. 1, 2008 GH 3.73 FT. SHIFT 0 FT.  
MAX GH: 3.73 FT. AT 00:45 ON Sep. 1, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

SPANISH CREEK NEAR CRESTONE CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

CLOSED BASIN IN SAN LUIS VALLEY

08229500 COTTONWOOD CREEK NEAR CRESTONE, CO

**LOCATION.**--Lat 37°56'51", long 105°39'05", in SE1/4NE1/4 Sec. 22, T.43 N., R.12 E., NMPM, Saguache Co., on left bank, 5 miles SE of Crestone.

**DRAINAGE AREA.**--5.0 mi<sup>2</sup>.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. The primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 3 ft. by 3 ft. timber shelter and well. This gage is the original gage put in by the USGS in 1936.

**REMARKS.**--Record is complete and reliable, except for Nov.22 through Dec.5, 2007 when the well was frozen and Dec. 6, 2007 through April 9, 2008 when station was closed for the winter and April 10, 2008 when inlets appear to be plugged. Stage-discharge relation was affected by ice April 11, 12, 2008. Record is good, except for periods of no gage-height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--COCRESCO05 USED FROM 01-Oct-2007 TO 30-Sep-2008

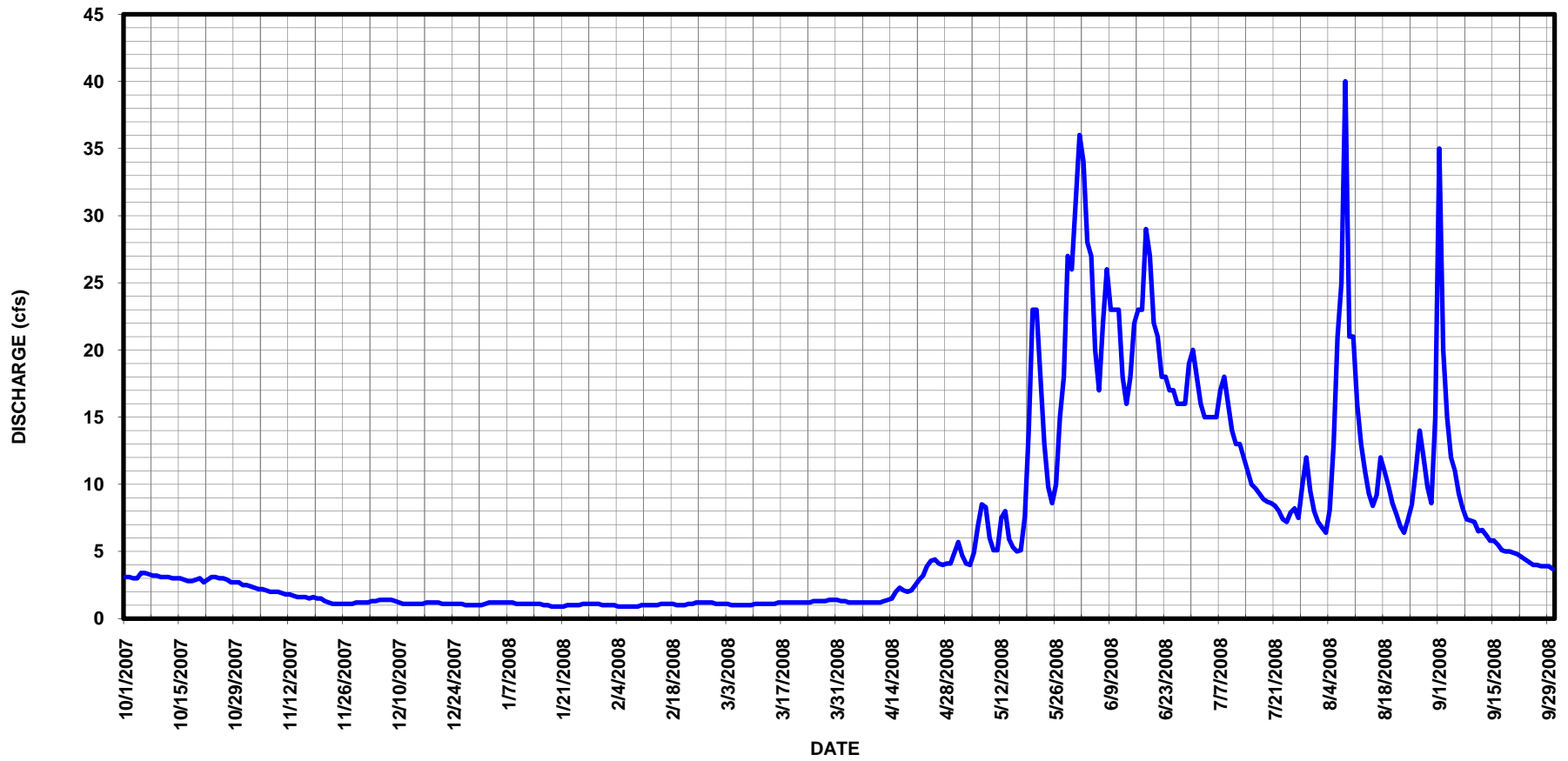
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	2.5	1.2	1.1	1.0	1.1	1.3	5.7	36	18	7.2	35
2	3.1	2.4	1.2	1.2	1.0	1.1	1.3	4.7	34	16	6.8	20
3	3.0	2.3	1.3	1.2	1.0	1.1	1.2	4.1	28	15	6.4	15
4	3.0	2.2	1.3	1.2	.90	1.0	1.2	4.0	27	15	8.1	12
5	3.4	2.2	1.4	1.2	.90	1.0	1.2	4.9	20	15	13	11
6	3.4	2.1	1.4	1.2	.90	1.0	1.2	6.9	17	15	21	9.3
7	3.3	2.0	1.4	1.2	.90	1.0	1.2	8.5	22	17	25	8.2
8	3.2	2.0	1.4	1.2	.90	1.0	1.2	8.3	26	18	40	7.4
9	3.2	2.0	1.3	1.1	.90	1.0	1.2	6.0	23	16	21	7.3
10	3.1	1.9	1.2	1.1	1.0	1.1	1.2	5.1	23	14	21	7.2
11	3.1	1.8	1.1	1.1	1.0	1.1	1.2	5.1	23	13	16	6.5
12	3.1	1.8	1.1	1.1	1.0	1.1	1.3	7.5	18	13	13	6.6
13	3.0	1.7	1.1	1.1	1.0	1.1	1.4	8.0	16	12	11	6.2
14	3.0	1.6	1.1	1.1	1.0	1.1	1.5	5.9	18	11	9.3	5.8
15	3.0	1.6	1.1	1.1	1.1	1.1	2.0	5.3	22	10	8.4	5.8
16	2.9	1.6	1.1	1.0	1.1	1.2	2.3	5.0	23	9.7	9.2	5.5
17	2.8	1.5	1.2	1.0	1.1	1.2	2.1	5.1	23	9.3	12	5.1
18	2.8	1.6	1.2	.90	1.1	1.2	2.0	7.6	29	8.9	11	5.0
19	2.9	1.5	1.2	.90	1.0	1.2	2.1	14	27	8.7	9.9	5.0
20	3.0	1.5	1.2	.90	1.0	1.2	2.5	23	22	8.6	8.6	4.9
21	2.7	1.3	1.1	.90	1.0	1.2	2.9	23	21	8.4	7.8	4.8
22	2.9	1.2	1.1	1.0	1.1	1.2	3.2	18	18	8.0	6.9	4.6
23	3.1	1.1	1.1	1.0	1.1	1.2	3.9	13	18	7.4	6.4	4.4
24	3.1	1.1	1.1	1.0	1.2	1.2	4.3	9.8	17	7.2	7.4	4.2
25	3.0	1.1	1.1	1.0	1.2	1.3	4.4	8.6	17	7.9	8.5	4.0
26	3.0	1.1	1.1	1.1	1.2	1.3	4.1	10	16	8.2	11	4.0
27	2.9	1.1	1.0	1.1	1.2	1.3	4.0	15	16	7.5	14	3.9
28	2.7	1.1	1.0	1.1	1.2	1.3	4.1	18	16	10	12	3.9
29	2.7	1.2	1.0	1.1	1.1	1.4	4.1	27	19	12	9.8	3.9
30	2.7	1.2	1.0	1.1	---	1.4	4.9	26	20	9.5	8.6	3.7
31	2.5	---	1.0	1.0	---	1.4	---	31	---	8.0	15	---
TOTAL	92.7	49.3	36.1	33.30	30.10	36.1	70.5	344.1	655	357.3	385.3	230.2
MEAN	2.99	1.64	1.16	1.07	1.04	1.16	2.35	11.1	21.8	11.5	12.4	7.67
AC-FT	184	98	72	66	60	72	140	683	1300	709	764	457
MAX	3.4	2.5	1.4	1.2	1.2	1.4	4.9	31	36	18	40	35
MIN	2.5	1.1	1.0	.90	.90	1.0	1.2	4.0	16	7.2	6.4	3.7
CAL YR 2007	TOTAL	2296.7	MEAN	6.29	MAX	36	MIN	1.0	AC-FT	4560		
WTR YR 2008	TOTAL	2320	MEAN	6.34	MAX	40	MIN	.9	AC-FT	4600		

MAX DISCH: 59.6 CFS AT 01:15 ON Aug. 8, 2008 GH 2.77 FT. SHIFT -0.01 FT.  
MAX GH: 2.77 FT. AT 01:15 ON Aug. 8, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08229500 COTTONWOOD CREEK NEAR CRESTONE CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

CLOSED BASIN IN SAN LUIS VALLEY

DEADMAN CREEK NEAR CRESTONE, CO

**LOCATION.**--Lat 37°53'05", long 105°38'47", in NE1/4, SE1/4, Sec. 3, T.42 N., R.12 E., NMPM, Saguache Co., on right bank 8 miles SE of Crestone.

**DRAINAGE AREA.**--8.4 mi<sup>2</sup>.

**GAGE.**--The primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 2-foot culvert pipe stilling well with a small, steel, box-like shelter on top. The well is connected to a non-standard 6-foot Parshall Flume in fair condition. Elevation of gage is 7800 ft.

**REMARKS.**--Record is complete and reliable, except for Nov. 24 through Dec. 5, 2007 when the well was frozen; Apr. 10 - 25, 2008 when the inlets where frozen; and Dec. 6, 2007 through Apr. 9, 2008 when the station was closed for the winter. The stage-discharge relation was affected by ice Nov. 22, 23, 2007. Record is good, except for periods of no gage-height record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--DEDCRECO1 USED FROM 01-Oct-2007 TO 30-Sep-2008

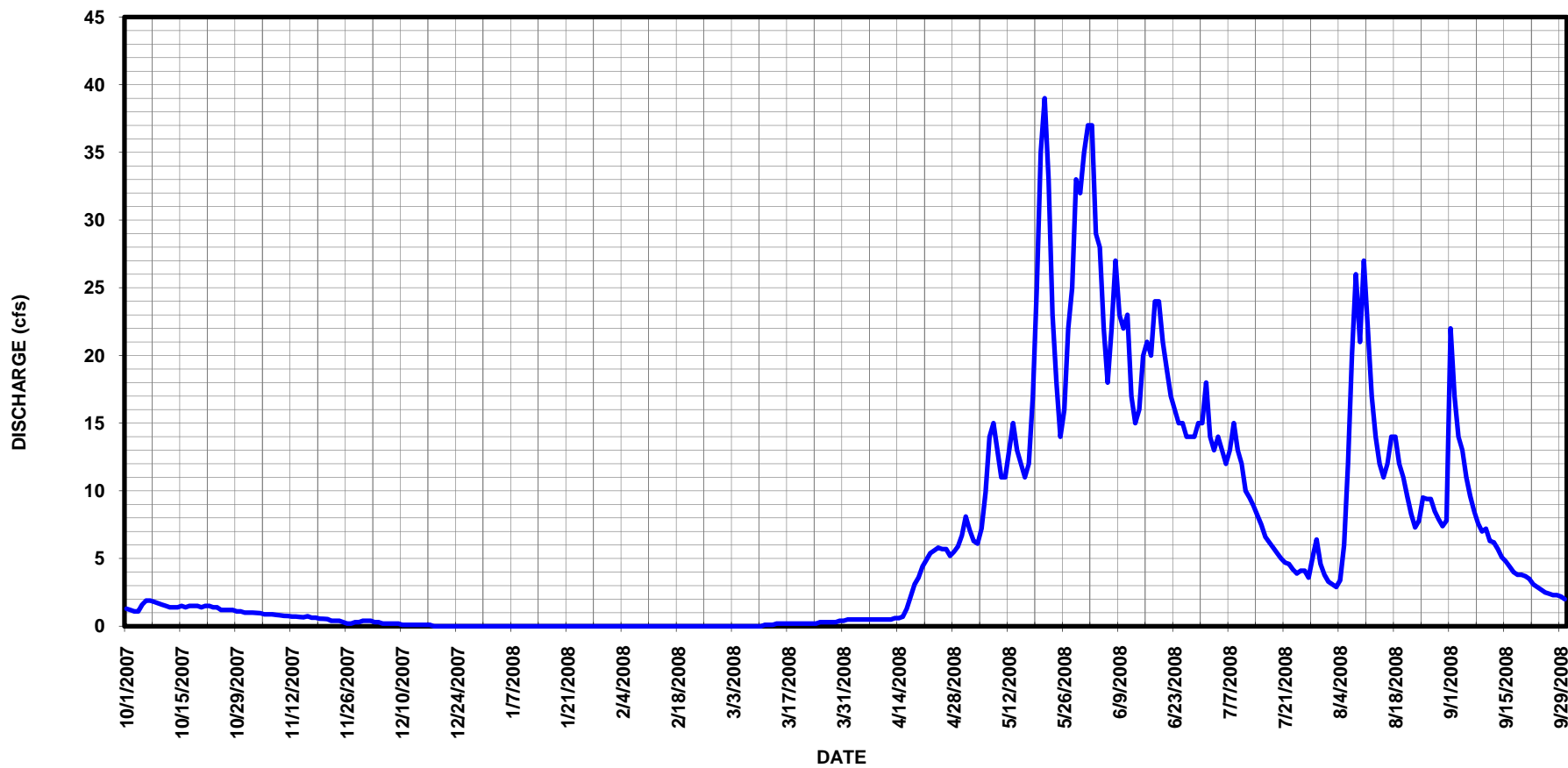
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.0	.40	0	0	0	.50	8.1	37	18	3.3	22
2	1.2	1.0	.40	0	0	0	.50	7.1	37	14	3.1	17
3	1.1	.98	.30	0	0	0	.50	6.3	29	13	2.9	14
4	1.1	.96	.30	0	0	0	.50	6.1	28	14	3.4	13
5	1.6	.88	.20	0	0	0	.50	7.2	22	13	6.0	11
6	1.9	.88	.20	0	0	0	.50	9.9	18	12	12	9.6
7	1.9	.88	.20	0	0	0	.50	14	22	13	20	8.5
8	1.8	.84	.20	0	0	0	.50	15	27	15	26	7.6
9	1.7	.81	.20	0	0	0	.50	13	23	13	21	7.0
10	1.6	.77	.10	0	0	0	.50	11	22	12	27	7.2
11	1.5	.76	.10	0	0	.10	.50	11	23	10	22	6.3
12	1.4	.71	.10	0	0	.10	.50	13	17	9.5	17	6.2
13	1.4	.71	.10	0	0	.10	.60	15	15	8.9	14	5.7
14	1.4	.68	.10	0	0	.20	.60	13	16	8.2	12	5.1
15	1.5	.66	.10	0	0	.20	.70	12	20	7.5	11	4.8
16	1.4	.74	.10	0	0	.20	1.3	11	21	6.6	12	4.4
17	1.5	.63	.10	0	0	.20	2.2	12	20	6.2	14	4.0
18	1.5	.63	0	0	0	.20	3.1	17	24	5.8	14	3.8
19	1.5	.56	0	0	0	.20	3.6	25	24	5.4	12	3.8
20	1.4	.55	0	0	0	.20	4.4	35	21	5.0	11	3.7
21	1.5	.53	0	0	0	.20	4.9	39	19	4.7	9.6	3.5
22	1.5	.40	0	0	0	.20	5.4	33	17	4.6	8.3	3.1
23	1.4	.40	0	0	0	.20	5.6	23	16	4.2	7.3	2.9
24	1.4	.40	0	0	0	.20	5.8	18	15	3.9	7.8	2.7
25	1.2	.30	0	0	0	.30	5.7	14	15	4.1	9.5	2.5
26	1.2	.20	0	0	0	.30	5.7	16	14	4.1	9.4	2.4
27	1.2	.20	0	0	0	.30	5.2	22	14	3.6	9.4	2.3
28	1.2	.30	0	0	0	.30	5.5	25	14	5.1	8.5	2.3
29	1.1	.30	0	0	0	.30	5.9	33	15	6.4	7.9	2.2
30	1.1	.40	0	0	---	.40	6.7	32	15	4.6	7.4	2.0
31	1.0	---	0	0	---	.40	---	35	---	3.8	7.8	---
TOTAL	43.5	19.06	3.20	0	0	4.80	78.90	551.7	620	259.2	356.6	190.6
MEAN	1.40	.64	.10	0	0	.15	2.63	17.8	20.7	8.36	11.5	6.35
AC-FT	86	38	6.3	0	0	9.5	156	1090	1230	514	707	378
MAX	1.9	1.0	.40	0	0	.40	6.7	39	37	18	27	22
MIN	1.0	.20	0	0	0	0	.50	6.1	14	3.6	2.9	2.0
CAL YR 2007	TOTAL	2299.66	MEAN	6.30	MAX	40	MIN	0	AC-FT	4560		
WTR YR 2008	TOTAL	2127.56	MEAN	5.81	MAX	39	MIN	0	AC-FT	4220		

MAX DISCH: 45.8 CFS AT 23:00 ON Jun. 1, 2008 GH 1.44 FT. SHIFT 0.06 FT.  
MAX GH: 1.44 FT. AT 23:00 ON Jun. 1, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

### DEADMAN CREEK NEAR CRESTONE CO WY2008 HYDROGRAPH



RIO GRANDE BASIN

LITTLE SPRING CREEK AT MEDANO RANCH NEAR MOSCA, CO

**LOCATION.**--Lat 37°42'49", long 105°38'55", in Alamosa county, in the NE¼SW¼, sec. 15, T.40 N., R.12 E., New Mexico Principal Meridian.

**DRAINAGE AREA AND PERIOD OF RECORD.**--0.2 mi<sup>2</sup>. Flow primarily due to groundwater accretions. First record produced for water year 2000.

**GAGE.**--The primary reference gage is a staff gage in the 2-foot Parshall flume. Record is generated by a float-operated Sutron SDR shaft encoder, which records gage-height data in a 30-inch diameter pipe stilling well and CMP extension for gage shelter. An SDI-12 radio bridge was installed on Oct. 17, 2006 to interface the SDR to the satellite telemetry system at Big Spring Creek at Medano Ranch near Mosca gaging station. The well intake pipe is attached to a 2-foot Parshall Flume with staff gage.

**REMARKS.**--Record is complete and reliable, except for November 27, 2007 when the shaft encoder float sank and November 28, 2007 - March 26, 2008 when the station was closed for the winter. Stage-discharge relation was affected by ice November 22, 23, 25, 26, 2007. Record is good, except for periods of no gage-height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--STD02FTPF USED FROM 01-Oct-2007 TO 30-Sep-2008

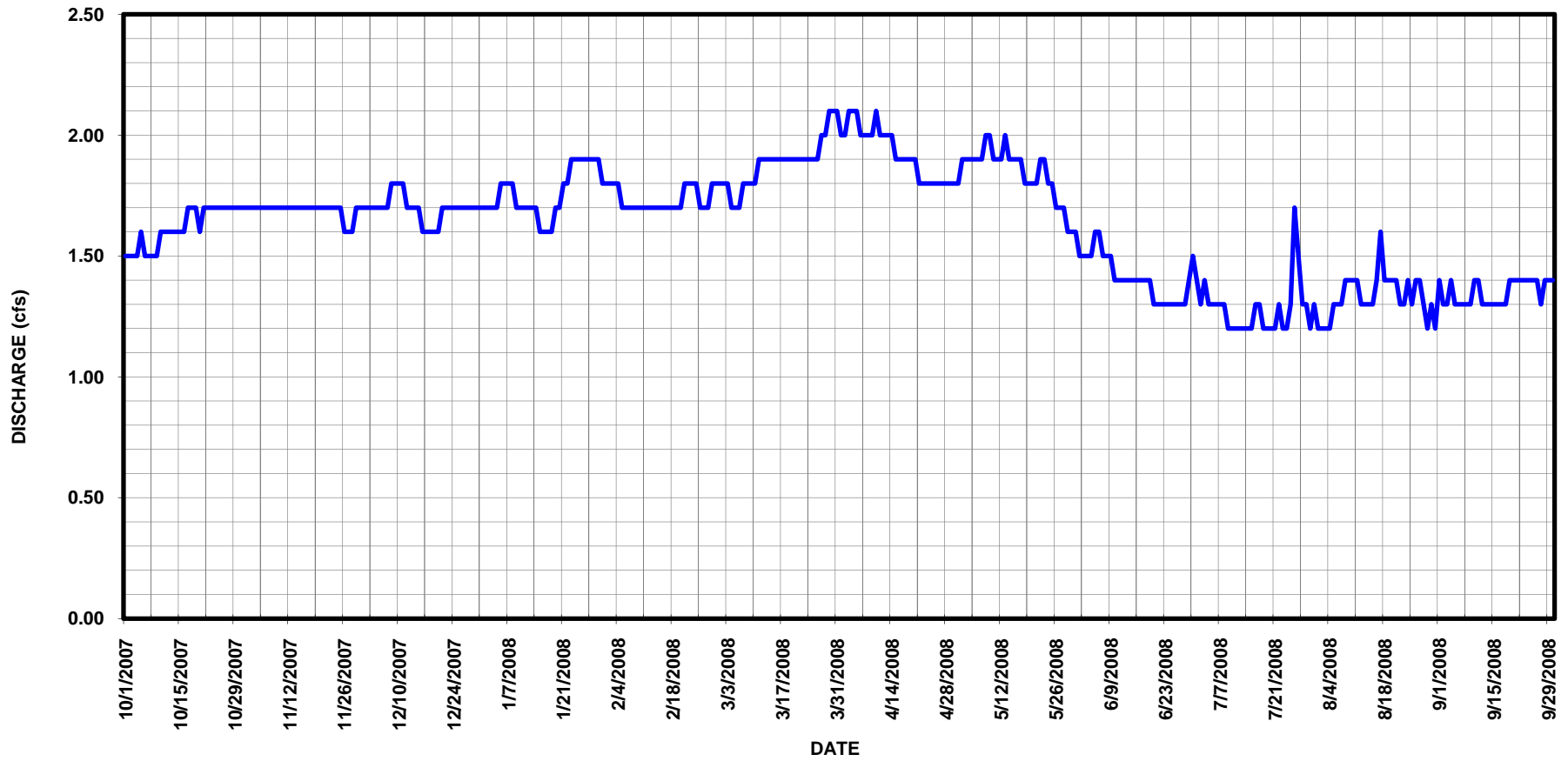
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.7	1.7	1.7	1.8	1.8	2.0	1.8	1.5	1.4	1.2	1.4
2	1.5	1.7	1.7	1.7	1.8	1.8	2.0	1.9	1.5	1.3	1.2	1.3
3	1.5	1.7	1.7	1.7	1.8	1.8	2.1	1.9	1.5	1.4	1.2	1.3
4	1.5	1.7	1.7	1.7	1.8	1.7	2.1	1.9	1.5	1.3	1.2	1.4
5	1.6	1.7	1.7	1.8	1.7	1.7	2.1	1.9	1.6	1.3	1.3	1.3
6	1.5	1.7	1.7	1.8	1.7	1.7	2.0	1.9	1.6	1.3	1.3	1.3
7	1.5	1.7	1.7	1.8	1.7	1.8	2.0	1.9	1.5	1.3	1.3	1.3
8	1.5	1.7	1.8	1.8	1.7	1.8	2.0	2.0	1.5	1.3	1.4	1.3
9	1.5	1.7	1.8	1.7	1.7	1.8	2.0	2.0	1.5	1.2	1.4	1.3
10	1.6	1.7	1.8	1.7	1.7	1.8	2.1	1.9	1.4	1.2	1.4	1.4
11	1.6	1.7	1.8	1.7	1.7	1.9	2.0	1.9	1.4	1.2	1.4	1.4
12	1.6	1.7	1.7	1.7	1.7	1.9	2.0	1.9	1.4	1.2	1.3	1.3
13	1.6	1.7	1.7	1.7	1.7	1.9	2.0	2.0	1.4	1.2	1.3	1.3
14	1.6	1.7	1.7	1.7	1.7	1.9	2.0	1.9	1.4	1.2	1.3	1.3
15	1.6	1.7	1.7	1.6	1.7	1.9	1.9	1.9	1.4	1.2	1.3	1.3
16	1.6	1.7	1.6	1.6	1.7	1.9	1.9	1.9	1.4	1.3	1.4	1.3
17	1.7	1.7	1.6	1.6	1.7	1.9	1.9	1.9	1.4	1.3	1.6	1.3
18	1.7	1.7	1.6	1.6	1.7	1.9	1.9	1.8	1.4	1.2	1.4	1.3
19	1.7	1.7	1.6	1.7	1.7	1.9	1.9	1.8	1.4	1.2	1.4	1.4
20	1.6	1.7	1.6	1.7	1.7	1.9	1.9	1.8	1.3	1.2	1.4	1.4
21	1.7	1.7	1.7	1.8	1.8	1.9	1.8	1.8	1.3	1.2	1.4	1.4
22	1.7	1.7	1.7	1.8	1.8	1.9	1.8	1.9	1.3	1.3	1.3	1.4
23	1.7	1.7	1.7	1.9	1.8	1.9	1.8	1.9	1.3	1.2	1.3	1.4
24	1.7	1.7	1.7	1.9	1.8	1.9	1.8	1.8	1.3	1.2	1.4	1.4
25	1.7	1.7	1.7	1.9	1.7	1.9	1.8	1.8	1.3	1.3	1.3	1.4
26	1.7	1.6	1.7	1.9	1.7	1.9	1.8	1.7	1.3	1.7	1.4	1.4
27	1.7	1.6	1.7	1.9	1.7	2.0	1.8	1.7	1.3	1.5	1.4	1.3
28	1.7	1.6	1.7	1.9	1.8	2.0	1.8	1.7	1.3	1.3	1.3	1.4
29	1.7	1.7	1.7	1.9	1.8	2.1	1.8	1.6	1.4	1.3	1.2	1.4
30	1.7	1.7	1.7	1.9	---	2.1	1.8	1.6	1.5	1.2	1.3	1.4
31	1.7	---	1.7	1.8	---	2.1	---	1.6	---	1.3	1.2	---
TOTAL	50.2	50.7	52.6	54.6	50.3	58.4	57.8	57.0	42.3	39.7	41.2	40.5
MEAN	1.62	1.69	1.70	1.76	1.73	1.88	1.93	1.84	1.41	1.28	1.33	1.35
AC-FT	100	101	104	108	100	116	115	113	84	79	82	80
MAX	1.7	1.7	1.8	1.9	1.8	2.1	2.1	2.0	1.6	1.7	1.6	1.4
MIN	1.5	1.6	1.6	1.6	1.7	1.7	1.8	1.6	1.3	1.2	1.2	1.3
CAL YR 2007	TOTAL	646.6	MEAN	1.77	MAX	2.7	MIN	1.2	AC-FT	1280		
WTR YR 2008	TOTAL	595.3	MEAN	1.63	MAX	2.1	MIN	1.2	AC-FT	1180		

MAX DISCH: 3.62 CFS AT 20:30 ON Jul. 26, 2008 GH 0.6 FT. SHIFT 0 FT.  
MAX GH: 0.64 FT. (Ice affected) AT 11:30 ON Nov. 25, 2007

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

LITTLE SPRING CREEK AT MEDANO RANCH NEAR MOSCA CO  
WY2008 HYDROGRAPH





RIO GRANDE BASIN

CLOSED BASIN IN SAN LUIS VALLEY

BIG SPRING CREEK AT MEDANO RANCH NEAR MOSCA CO

**LOCATION.**--Lat 37°44'03", long 105°39'50", in NE ¼ NW ¼ Sec. 9, T.40 N., R.12 E., NMPM, Alamosa Co., on left bank approximately ¼ mile above Los Ojos Diversion.

**DRAINAGE AREA AND PERIOD OF RECORD.**--0.3 mi<sup>2</sup>. First record produced in 1999. Flow primarily due to groundwater accretions.

**GAGE.**--The primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder, which records gage-height data in a 30 inch diameter pipe well and CMP extension for gage shelter. The intake pipe is attached to a 4-foot modified Parshall Flume with staff gage. The Parshall Flume was modified by placing a steel V-ramp into the converging section of flume on July 24, 2006. Elevation of gage is 7580 ft.

**REMARKS.**--Record is complete and reliable for the water year, except for Nov. 28, 2007 through Mar. 26, 2008 when the station was closed for the winter; and Mar. 27 through April 21, 2008 when the inlets were plugged. The stage-discharge relation was affected by ice Nov. 22-27, 2007. Record is good to fair due to submergence except for periods of no gage-height and ice affected record, which are poor. Peak discharge estimate should be considered poor due to water possibly going around gage at time of peak. Peak estimate assumes that water was going around the gage at that time. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--BIGSPGCO02 USED FROM 01-Oct-2007 TO 30-Sep-2008

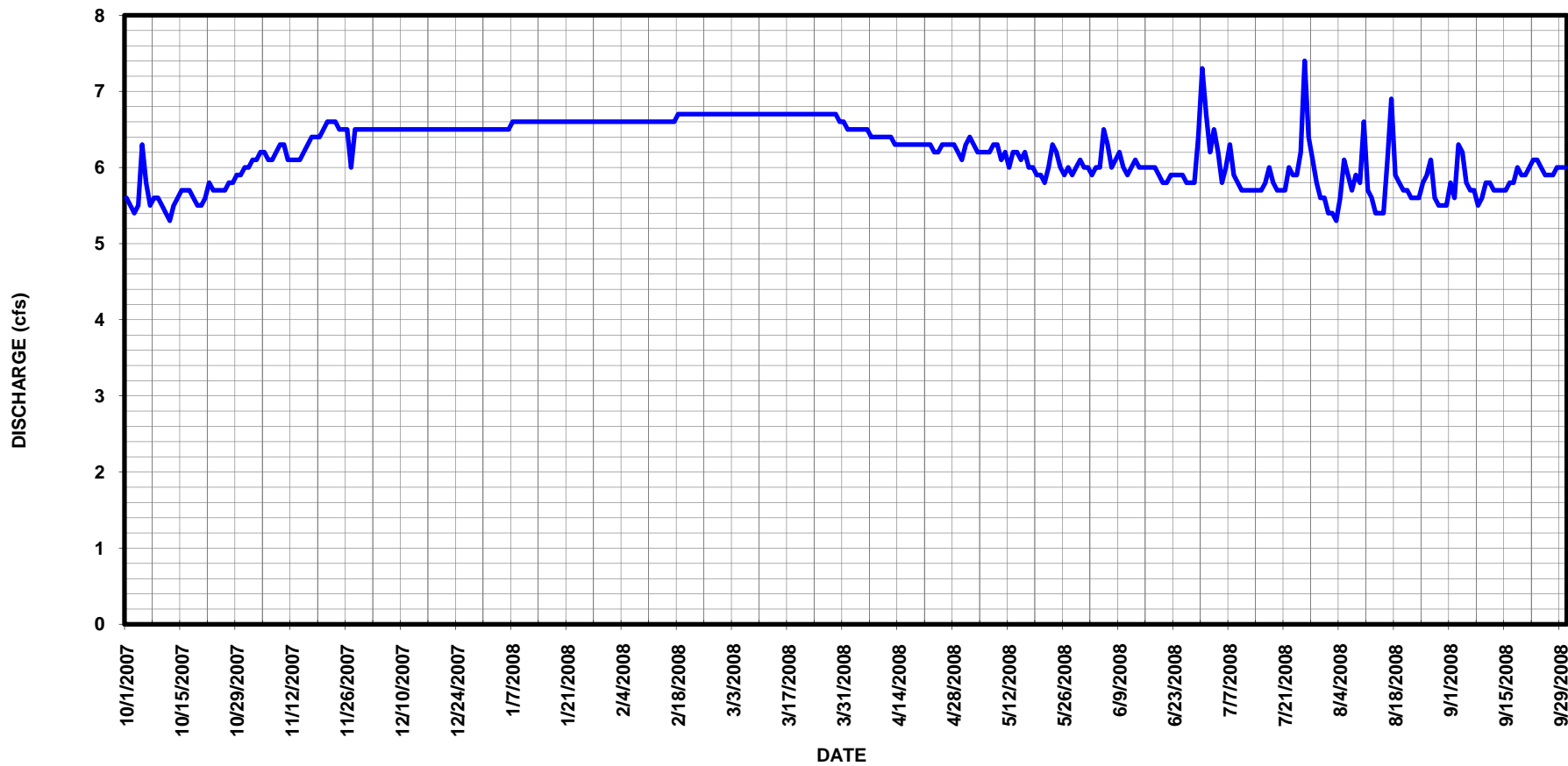
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	6.0	6.5	6.5	6.6	6.7	6.5	6.3	6.0	6.7	5.4	5.8
2	5.5	6.1	6.5	6.5	6.6	6.7	6.5	6.4	5.9	6.2	5.4	5.6
3	5.4	6.1	6.5	6.5	6.6	6.7	6.5	6.3	6.0	6.5	5.3	6.3
4	5.5	6.2	6.5	6.5	6.6	6.7	6.5	6.2	6.0	6.2	5.6	6.2
5	6.3	6.2	6.5	6.5	6.6	6.7	6.5	6.2	6.5	5.8	6.1	5.8
6	5.8	6.1	6.5	6.5	6.6	6.7	6.5	6.2	6.3	6.0	5.9	5.7
7	5.5	6.1	6.5	6.6	6.6	6.7	6.4	6.2	6.0	6.3	5.7	5.7
8	5.6	6.2	6.5	6.6	6.6	6.7	6.4	6.3	6.1	5.9	5.9	5.5
9	5.6	6.3	6.5	6.6	6.6	6.7	6.4	6.3	6.2	5.8	5.8	5.6
10	5.5	6.3	6.5	6.6	6.6	6.7	6.4	6.1	6.0	5.7	6.6	5.8
11	5.4	6.1	6.5	6.6	6.6	6.7	6.4	6.2	5.9	5.7	5.7	5.8
12	5.3	6.1	6.5	6.6	6.6	6.7	6.4	6.0	6.0	5.7	5.6	5.7
13	5.5	6.1	6.5	6.6	6.6	6.7	6.3	6.2	6.1	5.7	5.4	5.7
14	5.6	6.1	6.5	6.6	6.6	6.7	6.3	6.2	6.0	5.7	5.4	5.7
15	5.7	6.2	6.5	6.6	6.6	6.7	6.3	6.1	6.0	5.7	5.4	5.7
16	5.7	6.3	6.5	6.6	6.6	6.7	6.3	6.2	6.0	5.8	6.1	5.8
17	5.7	6.4	6.5	6.6	6.6	6.7	6.3	6.0	6.0	6.0	6.9	5.8
18	5.6	6.4	6.5	6.6	6.7	6.7	6.3	6.0	6.0	5.8	5.9	6.0
19	5.5	6.4	6.5	6.6	6.7	6.7	6.3	5.9	5.9	5.7	5.8	5.9
20	5.5	6.5	6.5	6.6	6.7	6.7	6.3	5.9	5.8	5.7	5.7	5.9
21	5.6	6.6	6.5	6.6	6.7	6.7	6.3	5.8	5.8	5.7	5.7	6.0
22	5.8	6.6	6.5	6.6	6.7	6.7	6.3	6.0	5.9	6.0	5.6	6.1
23	5.7	6.6	6.5	6.6	6.7	6.7	6.2	6.3	5.9	5.9	5.6	6.1
24	5.7	6.5	6.5	6.6	6.7	6.7	6.2	6.2	5.9	5.9	5.6	6.0
25	5.7	6.5	6.5	6.6	6.7	6.7	6.3	6.0	5.9	6.2	5.8	5.9
26	5.7	6.5	6.5	6.6	6.7	6.7	6.3	5.9	5.8	7.4	5.9	5.9
27	5.8	6.0	6.5	6.6	6.7	6.7	6.3	6.0	5.8	6.4	6.1	5.9
28	5.8	6.5	6.5	6.6	6.7	6.7	6.3	5.9	5.8	6.1	5.6	6.0
29	5.9	6.5	6.5	6.6	6.7	6.7	6.2	6.0	6.4	5.8	5.5	6.0
30	5.9	6.5	6.5	6.6	---	6.6	6.1	6.1	7.3	5.6	5.5	6.0
31	6.0	---	6.5	6.6	---	6.6	---	6.0	---	5.6	5.5	---
TOTAL	175.4	189.0	201.5	204.0	192.6	207.5	190.3	189.4	181.2	185.2	178.0	175.9
MEAN	5.66	6.30	6.50	6.58	6.64	6.69	6.34	6.11	6.04	5.97	5.74	5.86
AC-FT	348	375	400	405	382	412	377	376	359	367	353	349
MAX	6.3	6.6	6.5	6.6	6.7	6.7	6.5	6.4	7.3	7.4	6.9	6.3
MIN	5.3	6.0	6.5	6.5	6.6	6.6	6.1	5.8	5.8	5.6	5.3	5.5
CAL YR 2007	TOTAL	2203.5	MEAN	6.04	MAX	8.2	MIN	5.0	AC-FT	4370		
WTR YR 2008	TOTAL	2270	MEAN	6.20	MAX	7.4	MIN	5.3	AC-FT	4500		

MAX DISCH: 13.5 CFS (Estimated) AT 18:00 ON Jul. 26, 2008 GH 1.38 FT. SHIFT 0.06 FT.  
MAX GH: 1.53 FT. (Ice Affected) AT 09:30 ON Nov. 25, 2007

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

BIG SPRING CREEK AT MEDANO RANCH NEAR MOSCA CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

CLOSED BASIN IN SAN LUIS VALLEY, CO

08230500 CARNERO CREEK NEAR LA GARITA, CO

**LOCATION.**--Lat 37°51'39", long 106°18'55", in SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec 28, T.42 N., R.6 E., (projected) Saguache County, Hydrologic Unit 13010004, on left bank 4.5 mi. northwest of La Garita and 5.5 mi. downstream from North Fork.

**DRAINAGE AREA.**--117 mi<sup>2</sup>.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder, in a 42 inch diameter metal shelter and well. A graphic water-stage recorder is operated as a data backup. Datum of gage is 8,150 ft. from topographic map.

**REMARKS.**--Record is complete and reliable, except for the following periods: November 22, 2007 to December 17, 2007 and March 21-25, April 1, 4, 5, 2008 when ice in well was affecting floats; December 18, 2007 to March 20, 2008 when station was closed for the winter. Stage-discharge relation was affected by ice November 21, 2007, March 26-30, and April 12, 2008. Control partially submerged July 11-16, 2008 by beaver dam. Record is good, except for periods of no gage-height, ice-affected, and control-submerged record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--CARLAGCO15 USED FROM 01-Oct-2007 TO 30-Sep-2008

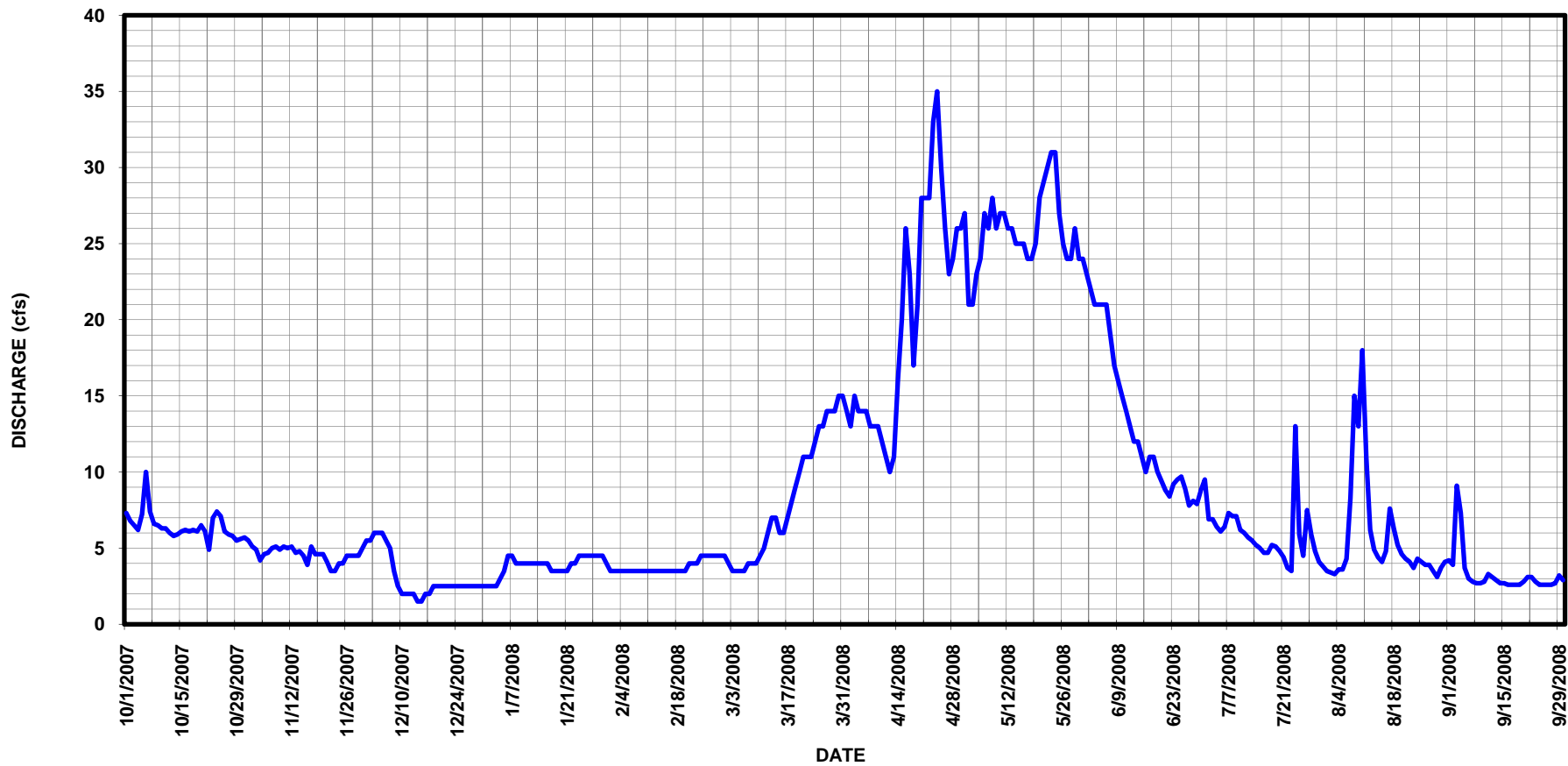
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	5.5	5.5	2.5	3.5	4.5	14	27	23	9.5	3.5	4.2
2	6.8	5.1	5.5	2.5	3.5	4.0	13	21	22	6.9	3.4	3.9
3	6.5	4.9	6.0	2.5	3.5	3.5	15	21	21	6.9	3.3	9.1
4	6.2	4.2	6.0	3.0	3.5	3.5	14	23	21	6.4	3.6	7.3
5	7.2	4.6	6.0	3.5	3.5	3.5	14	24	21	6.1	3.6	3.7
6	10	4.7	5.5	4.5	3.5	3.5	14	27	21	6.4	4.3	3.0
7	7.4	5.0	5.0	4.5	3.5	4.0	13	26	19	7.3	8.3	2.8
8	6.6	5.1	3.5	4.0	3.5	4.0	13	28	17	7.1	15	2.7
9	6.5	4.9	2.5	4.0	3.5	4.0	13	26	16	7.1	13	2.7
10	6.3	5.1	2.0	4.0	3.5	4.5	12	27	15	6.2	18	2.8
11	6.3	5.0	2.0	4.0	3.5	5.0	11	27	14	6.0	11	3.3
12	6.0	5.1	2.0	4.0	3.5	6.0	10	26	13	5.7	6.2	3.1
13	5.8	4.7	2.0	4.0	3.5	7.0	11	26	12	5.5	4.9	2.9
14	5.9	4.8	1.5	4.0	3.5	7.0	16	25	12	5.2	4.4	2.7
15	6.1	4.5	1.5	4.0	3.5	6.0	20	25	11	5.0	4.1	2.7
16	6.2	3.9	2.0	4.0	3.5	6.0	26	25	10	4.7	4.8	2.6
17	6.1	5.1	2.0	3.5	3.5	7.0	23	24	11	4.7	7.6	2.6
18	6.2	4.6	2.5	3.5	3.5	8.0	17	24	11	5.2	6.3	2.6
19	6.1	4.6	2.5	3.5	3.5	9.0	21	25	10	5.1	5.2	2.6
20	6.5	4.6	2.5	3.5	3.5	10	28	28	9.4	4.8	4.6	2.8
21	6.1	4.1	2.5	3.5	4.0	11	28	29	8.8	4.4	4.3	3.1
22	4.9	3.5	2.5	4.0	4.0	11	28	30	8.4	3.7	4.1	3.1
23	7.0	3.5	2.5	4.0	4.0	11	33	31	9.2	3.5	3.7	2.8
24	7.4	4.0	2.5	4.5	4.5	12	35	31	9.5	13	4.3	2.6
25	7.1	4.0	2.5	4.5	4.5	13	30	27	9.7	5.9	4.1	2.6
26	6.1	4.5	2.5	4.5	4.5	13	26	25	8.9	4.5	3.9	2.6
27	5.9	4.5	2.5	4.5	4.5	14	23	24	7.8	7.5	3.9	2.6
28	5.8	4.5	2.5	4.5	4.5	14	24	24	8.1	5.9	3.5	2.7
29	5.5	4.5	2.5	4.5	4.5	14	26	26	7.9	4.8	3.1	3.2
30	5.6	5.0	2.5	4.5	---	15	26	24	8.8	4.1	3.7	2.9
31	5.7	---	2.5	4.0	---	15	---	24	---	3.8	4.1	---
TOTAL	199.1	138.1	95.5	120.0	109.0	253.0	597	800	396.5	182.9	177.8	98.3
MEAN	6.42	4.60	3.08	3.87	3.76	8.16	19.9	25.8	13.2	5.90	5.74	3.28
AC-FT	395	274	189	238	216	502	1180	1590	786	363	353	195
MAX	10	5.5	6.0	4.5	4.5	15	35	31	23	13	18	9.1
MIN	4.9	3.5	1.5	2.5	3.5	3.5	10	21	7.8	3.5	3.1	2.6
CAL YR 2007	TOTAL	5058.1	MEAN	13.9	MAX	59	MIN	1.5	AC-FT	10030		
WTR YR 2008	TOTAL	3167.2	MEAN	8.65	MAX	35	MIN	1.5	AC-FT	6280		

MAX DISCH: 148 CFS AT 21:05 ON Aug. 9, 2008 GH 3.15 FT. SHIFT 0.06 FT.  
MAX GH: 3.15 FT. AT 21:05 ON Aug. 9, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08230500 CARNERO CREEK NEAR LA GARITA CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

CLOSED BASIN IN SAN LUIS VALLEY,

08231000 LA GARITA CREEK NEAR LA GARITA, CO

**LOCATION.**--Lat 37°48'48", long 106°19'05", in NW¼SE¼ sec. 9, T.41 N., R.6 E., Saguache County, Hydrologic Unit 13010004, on right bank 3.75 mi. downstream from Little La Garita Creek and 4.5 mi. southwest of La Garita, Co.

**DRAINAGE AREA AND PERIOD OF RECORD.**--61 mi<sup>2</sup>. Non-recording station Apr. 01, 1919-June 23, 1927. Recording station from June 1927-Oct. 1998, at which time a Data Logger was installed. April 1999 satellite telemetry system installed. Station at various sites all within ¼ mile of present site.

**GAGE.**--Primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 4 ft. metal pipe shelter and well. A graphic water-stage recorder is operated as a data backup. Altitude of gage is 8,030 ft from topographic map.

**REMARKS.**--Record is complete and reliable, except for Nov. 29 to Dec. 17, 2007 when the floats were affected by ice in well; and Dec. 18, 2007 to March 31, 2008 when the station was closed for the winter. Stage-discharge relation was affected by ice Oct. 22, Nov. 21, 22, 25-28, 2007 and April 12, 2008. Record is good, except for periods of no gage-height and ice-affected record, which should be considered poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--LAGLAGCO12 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

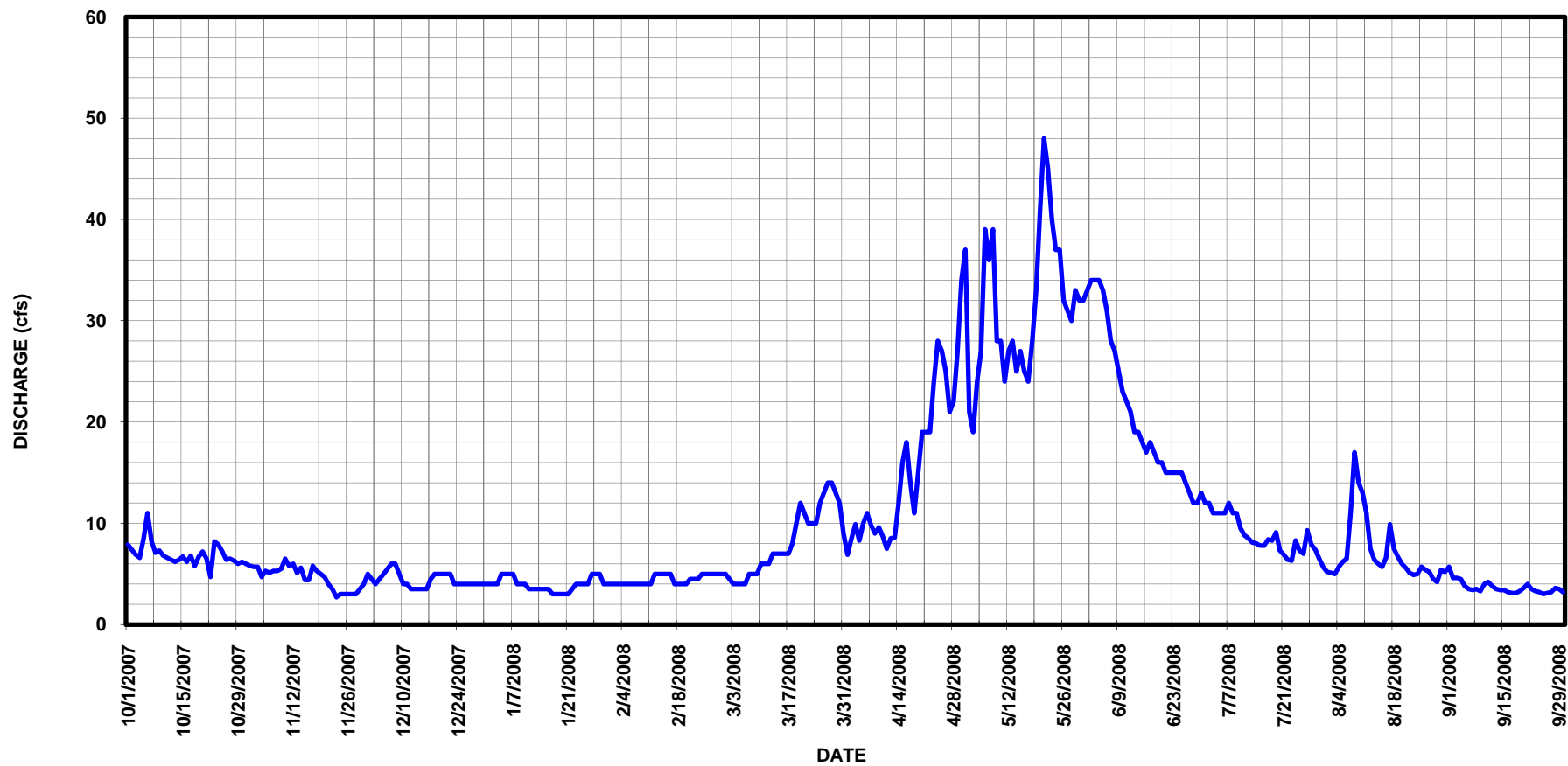
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	5.8	5.0	4.0	4.0	5.0	6.9	37	33	12	5.2	5.7
2	7.4	5.7	4.5	4.0	4.0	4.5	8.5	21	34	12	5.1	4.6
3	6.9	5.7	4.0	4.0	4.0	4.0	9.9	19	34	11	5.0	4.6
4	6.6	4.7	4.5	5.0	4.0	4.0	8.3	24	34	11	5.7	4.5
5	8.5	5.3	5.0	5.0	4.0	4.0	10	27	33	11	6.2	3.8
6	11	5.1	5.5	5.0	4.0	4.0	11	39	31	11	6.5	3.5
7	8.2	5.3	6.0	5.0	4.0	5.0	9.8	36	28	12	11	3.4
8	7.1	5.3	6.0	4.0	4.0	5.0	9.0	39	27	11	17	3.5
9	7.3	5.5	5.0	4.0	4.0	5.0	9.6	28	25	11	14	3.3
10	6.8	6.5	4.0	4.0	4.0	6.0	8.7	28	23	9.5	13	4.0
11	6.6	5.8	4.0	3.5	4.0	6.0	7.5	24	22	8.8	11	4.2
12	6.4	6.0	3.5	3.5	5.0	6.0	8.5	27	21	8.5	7.5	3.8
13	6.2	5.1	3.5	3.5	5.0	7.0	8.6	28	19	8.1	6.4	3.5
14	6.4	5.6	3.5	3.5	5.0	7.0	12	25	19	8.0	6.0	3.4
15	6.7	4.4	3.5	3.5	5.0	7.0	16	27	18	7.8	5.7	3.4
16	6.2	4.4	3.5	3.5	5.0	7.0	18	25	17	7.8	6.6	3.2
17	6.8	5.8	4.5	3.0	4.0	7.0	14	24	18	8.4	9.9	3.1
18	5.8	5.3	5.0	3.0	4.0	8.0	11	28	17	8.3	7.5	3.1
19	6.7	5.0	5.0	3.0	4.0	10	15	33	16	9.1	6.7	3.3
20	7.2	4.7	5.0	3.0	4.0	12	19	41	16	7.3	6.0	3.6
21	6.5	4.0	5.0	3.0	4.5	11	19	48	15	6.9	5.6	4.0
22	4.7	3.5	5.0	3.5	4.5	10	19	45	15	6.4	5.1	3.5
23	8.2	2.7	4.0	4.0	4.5	10	24	40	15	6.3	4.9	3.3
24	7.9	3.0	4.0	4.0	5.0	10	28	37	15	8.3	5.0	3.2
25	7.2	3.0	4.0	4.0	5.0	12	27	37	15	7.3	5.7	3.0
26	6.4	3.0	4.0	4.0	5.0	13	25	32	14	7.0	5.4	3.1
27	6.5	3.0	4.0	5.0	5.0	14	21	31	13	9.3	5.2	3.2
28	6.3	3.0	4.0	5.0	5.0	14	22	30	12	7.9	4.5	3.6
29	6.0	3.5	4.0	5.0	5.0	13	27	33	12	7.4	4.2	3.5
30	6.2	4.0	4.0	4.0	---	12	34	32	13	6.5	5.4	3.2
31	6.0	---	4.0	4.0	---	9.0	---	32	---	5.7	5.2	---
TOTAL	214.6	139.7	136.5	122.5	128.5	251.5	467.3	977	624	272.6	218.2	109.1
MEAN	6.92	4.66	4.40	3.95	4.43	8.11	15.6	31.5	20.8	8.79	7.04	3.64
AC-FT	426	277	271	243	255	499	927	1940	1240	541	433	216
MAX	11	6.5	6.0	5.0	5.0	14	34	48	34	12	17	5.7
MIN	4.7	2.7	3.5	3.0	4.0	4.0	6.9	19	12	5.7	4.2	3.0

CAL YR	2007	TOTAL	6502.7	MEAN	17.8	MAX	88	MIN	2.0	AC-FT	12900
WTR YR	2008	TOTAL	3661.5	MEAN	10.0	MAX	48	MIN	2.7	AC-FT	7260

MAX DISCH: 59.5 CFS AT 02:30 ON May. 6, 2008 GH 2.84 FT. SHIFT -0.05 FT.  
MAX GH: 2.84 FT. AT 02:30 ON May. 6, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08231000 LA GARITA CREEK NEAR LA GARITA CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08235250 ALAMOSA RIVER ABOVE WIGHTMAN FORK NEAR JASPER, CO

**LOCATION.**--Lat 37°24'09", long 106°31'17", in SE¼SW¼ sec.35, T.37 N., R.4 E., Rio Grande Co. Hydrologic Unit 13010002, Rio Grande National Forest, on left bank 150' upstream from Wightman Fork, 1.9 mi downstream from Bitter Creek, 4.1 mi west of Jasper, and 4.2 mi southeast of Summitville.

**DRAINAGE AREA AND PERIOD OF RECORD.**--37.8 mi<sup>2</sup>.

**GAGE.**--Sutron Accubar water level sensor and satellite telemetry data collection platform in a 4 ft by 4 ft by 8 ft steel building. Data collection platform also monitors Hydrolab for water-quality (water temperature, conductance, and pH) data collection. The Accubar gage-height is set using an outside staff gage.

**REMARKS.**-- Record is complete for period of operation: Oct. 1 to Nov. 3, 2007; May 3 to Sep. 30, 2008, except for Nov. 3, 2007, May 3, and Sep. 27, 2008 when there was missing satellite data ('a' record). Due to the apparent inability of the pressure transducer installation to consistently and accurately track stream stage (painting, trash hanging up on the installation, unexplained pressure transducer corrections) and the instability of the channel and control, the record is rated fair. Periods of missing gage-height are rated poor. Due to uncertainty in the upper end of rating curve and distribution of large gage-height and trash corrections, the periods of May 19-21, May 28 to June 22, and Jul. 11 to Aug. 3, 2008, including peak gage-height and flow information are also considered poor. Station maintained and record developed by private consultant; record reviewed by Div. III Personnel.

**RATING TABLE.**--ALAWIGCO05 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

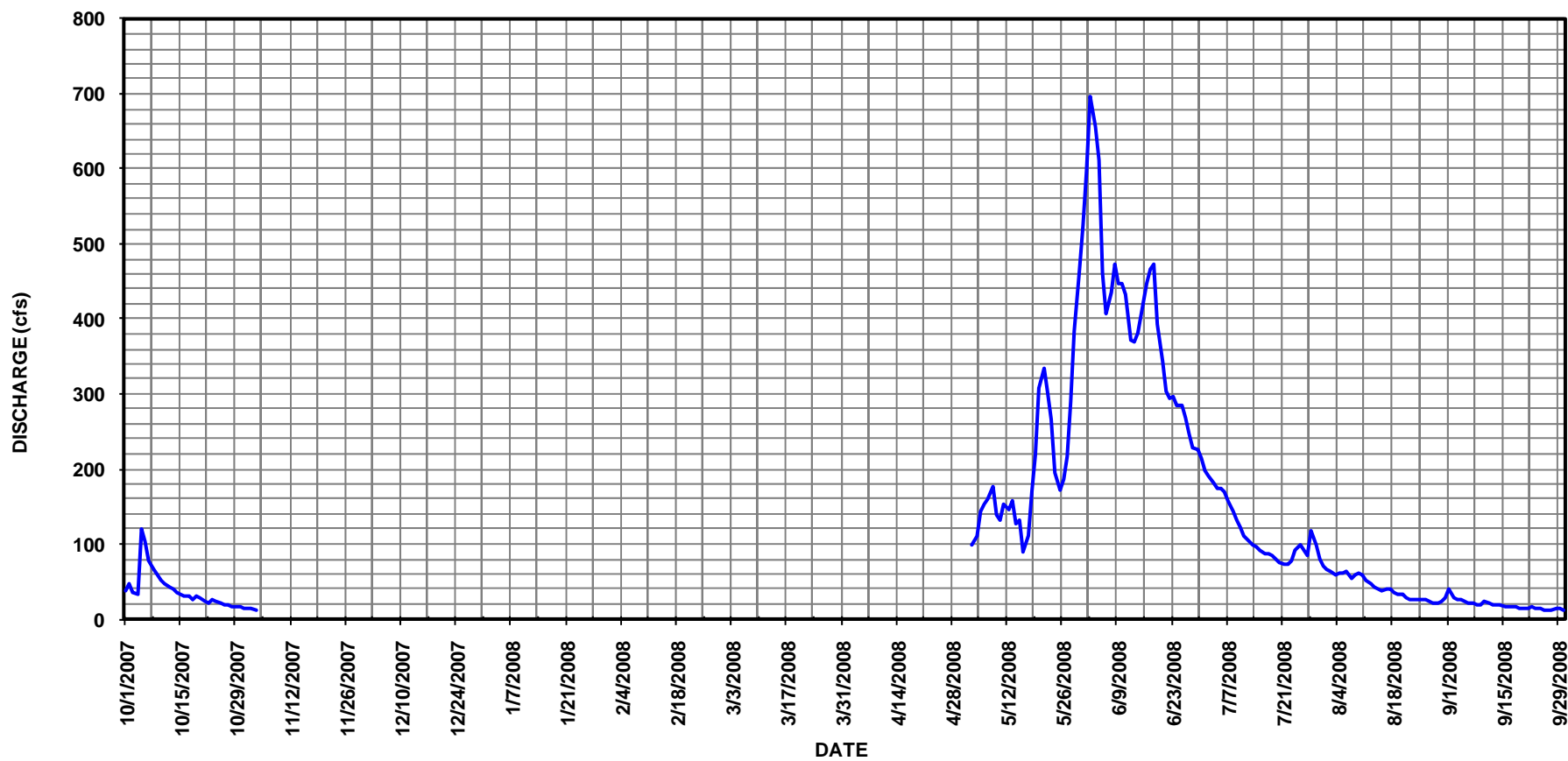
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	15	---	---	---	---	---	---	598	197	66	41
2	48	14	---	---	---	---	---	---	696	190	63	29
3	36	12	---	---	---	---	---	100	657	182	59	27
4	33	---	---	---	---	---	---	111	611	175	61	25
5	119	---	---	---	---	---	---	143	460	174	62	23
6	103	---	---	---	---	---	---	152	408	169	63	22
7	77	---	---	---	---	---	---	161	436	158	55	21
8	66	---	---	---	---	---	---	176	473	143	60	20
9	58	---	---	---	---	---	---	138	448	132	62	20
10	53	---	---	---	---	---	---	133	447	122	59	24
11	48	---	---	---	---	---	---	153	432	111	53	21
12	43	---	---	---	---	---	---	146	372	103	47	20
13	40	---	---	---	---	---	---	158	370	99	43	19
14	36	---	---	---	---	---	---	127	380	96	41	18
15	34	---	---	---	---	---	---	131	406	92	38	17
16	31	---	---	---	---	---	---	90	448	88	41	17
17	30	---	---	---	---	---	---	110	466	88	40	16
18	26	---	---	---	---	---	---	170	473	85	36	16
19	30	---	---	---	---	---	---	219	393	80	34	15
20	28	---	---	---	---	---	---	307	343	76	32	15
21	24	---	---	---	---	---	---	334	303	74	29	15
22	22	---	---	---	---	---	---	300	295	74	27	17
23	26	---	---	---	---	---	---	267	297	77	25	15
24	23	---	---	---	---	---	---	195	284	91	26	14
25	21	---	---	---	---	---	---	172	285	100	25	13
26	19	---	---	---	---	---	---	187	268	92	25	13
27	18	---	---	---	---	---	---	216	248	85	24	13
28	17	---	---	---	---	---	---	290	229	117	22	14
29	17	---	---	---	---	---	---	383	225	99	22	14
30	16	---	---	---	---	---	---	465	213	81	23	13
31	15	---	---	---	---	---	---	524	---	71	28	---
TOTAL	1194	41	---	---	---	---	---	6058	11964	3521	1291	567
MEAN	38.5	13.7	---	---	---	---	---	209	399	114	41.6	18.9
AC-FT	2370	81	---	---	---	---	---	12020	23730	6980	2560	1120
MAX	119	15	---	---	---	---	---	524	696	197	66	41
MIN	15	12	---	---	---	---	---	90	213	71	22	13

WTR YR 2008 TOTAL 24636 MEAN 133 MAX 696 MIN 12 AC-FT 48870 (PARTIAL YEAR RECORD)

MAX DISCH: 612 CFS AT 22:30 ON Jun. 2, 2008 GH 5.80 FT. GH CORR. -0.32 FT. SHIFT -0.22 FT.  
MAX GH: 5.48 FT. (GH CORR. -0.32 FT. APPLIED) AT 22:30 ON Jun. 2, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08235250 ALAMOSA RIVER ABOVE WIGHTMAN FORK NEAR JASPER CO  
WY2008 HYDROGRAPH





RIO GRANDE BASIN

08235270 WIGHTMAN FORK BELOW CROPSY CREEK NEAR SUMMITVILLE, CO

**LOCATION.**--Lat. 37°25'45", long 106°35'03", in NW¼NW¼ sec. 29, T.37N., R.4 E., Rio Grande Co., Hydrologic Unit 13010002, on left bank about 200 ft. downstream from Cropsy Crek, and 0.25 mi east of Summitville.

**DRAINAGE AREA AND PERIOD OF RECORD.**--4.44 mi<sup>2</sup>. July 1995 to current year (seasonal records only).

**GAGE.**--The primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a Sutron Accubar bubbler gage in a 4 ft. by 4 ft. 8 ft. steel building. Elevation of gage is 11,120 ft. above sea level.

**REMARKS.**--Record is complete for period of operation: October 1 to November 3, 2007 and May 4, to September 30, 2008, except for November 3, 2007 and May 4, 2008 when there was missing data. Stage discharge relationship was affected by ice on October 22, 27, 30, 31, Nov. 1, 2, 2007, and May 7, 8, 17-21, 2008. Data from the staff gage was used to apply corrections to DCP data. The Accubar pressure sensor continuously 'hunts' the point of pressure equilibrium creating some uncertainty in gage-height record. Due to this uncertainty, the record is fair, except for periods of no-gage height and ice-affected record, which are poor. Maximum discharge value and days with an average daily gage height greater than 5.09 ft (May 22, 28-31, June 1-10,2008) should be considered poor due uncertainty of shifts above that gage height. Due to uncertainty in shift distribution from Aug. 3 to Aug. 11, 2008, record for this period is also considered poor. Due to uncertainty in determining the actual PZF the accuracy of the low flow period of Sep. 13-30 should also be considered poor. Station maintained and record developed by private consultant; record reviewed by Div. III Hydrographic Staff.

**RATING TABLE.**--WFKCROCO05 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

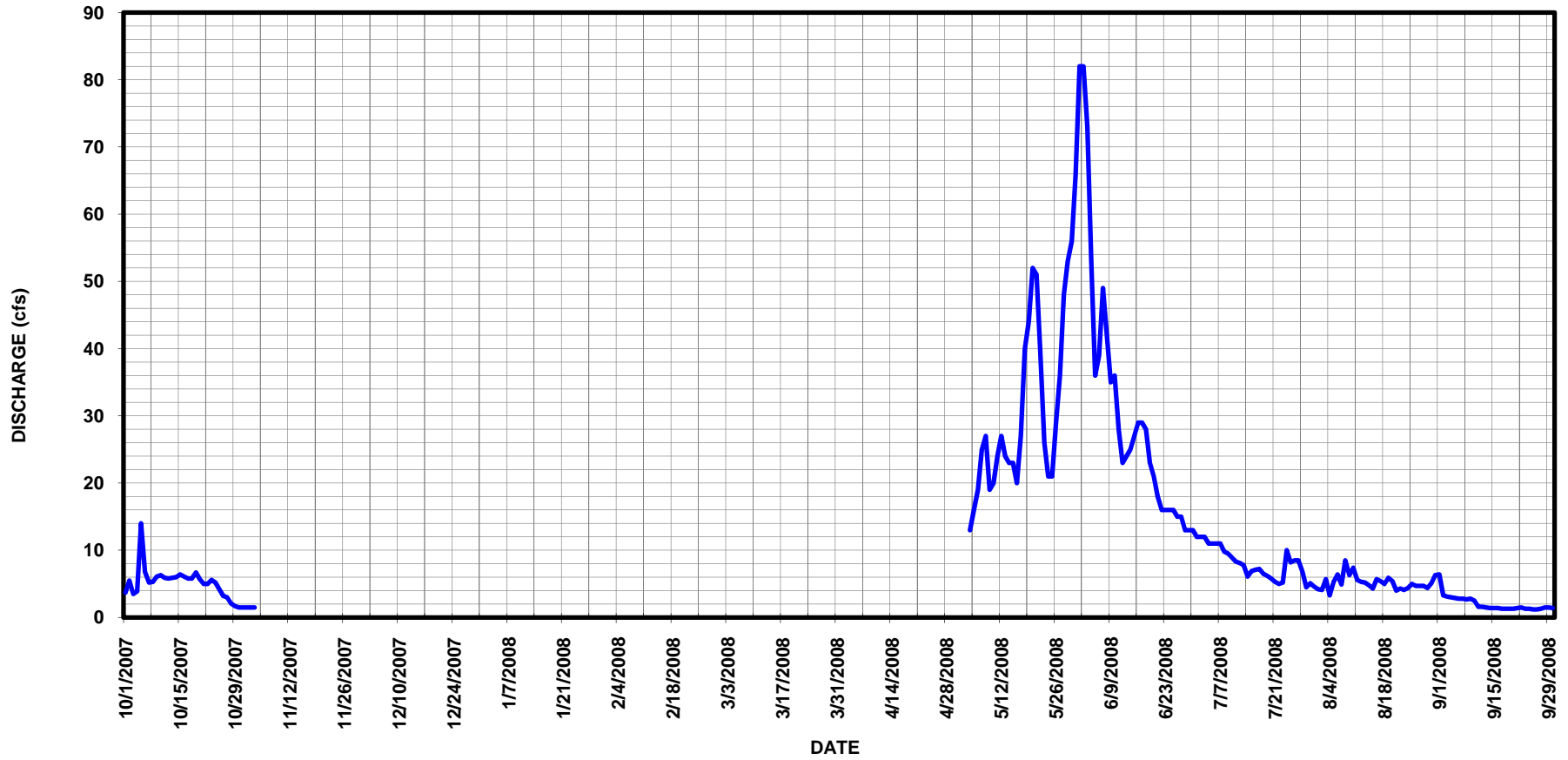
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	1.5	---	---	---	---	---	---	82	12	4.2	6.4
2	5.5	1.5	---	---	---	---	---	---	82	12	4.1	3.3
3	3.5	1.5	---	---	---	---	---	---	73	12	5.7	3.1
4	3.9	---	---	---	---	---	---	13	53	11	3.3	3.0
5	14	---	---	---	---	---	---	16	36	11	5.3	2.9
6	6.8	---	---	---	---	---	---	19	39	11	6.4	2.8
7	5.2	---	---	---	---	---	---	25	49	11	4.9	2.8
8	5.3	---	---	---	---	---	---	27	42	9.8	8.5	2.7
9	6.1	---	---	---	---	---	---	19	35	9.5	6.3	2.8
10	6.3	---	---	---	---	---	---	20	36	8.9	7.4	2.5
11	5.9	---	---	---	---	---	---	24	28	8.3	5.6	1.6
12	5.8	---	---	---	---	---	---	27	23	8.1	5.3	1.6
13	5.9	---	---	---	---	---	---	24	24	7.8	5.2	1.5
14	6.0	---	---	---	---	---	---	23	25	6.1	4.8	1.4
15	6.4	---	---	---	---	---	---	23	27	6.9	4.3	1.4
16	6.1	---	---	---	---	---	---	20	29	7.1	5.7	1.4
17	5.8	---	---	---	---	---	---	27	29	7.2	5.4	1.3
18	5.8	---	---	---	---	---	---	40	28	6.5	5.0	1.3
19	6.7	---	---	---	---	---	---	44	23	6.2	5.9	1.3
20	5.7	---	---	---	---	---	---	52	21	5.8	5.4	1.3
21	5.0	---	---	---	---	---	---	51	18	5.3	4.0	1.4
22	5.0	---	---	---	---	---	---	39	16	5.0	4.3	1.5
23	5.6	---	---	---	---	---	---	26	16	5.2	4.1	1.3
24	5.2	---	---	---	---	---	---	21	16	10	4.4	1.3
25	4.2	---	---	---	---	---	---	21	16	8.2	5.0	1.2
26	3.2	---	---	---	---	---	---	29	15	8.5	4.7	1.2
27	3.0	---	---	---	---	---	---	36	15	8.5	4.7	1.3
28	2.1	---	---	---	---	---	---	48	13	6.8	4.7	1.5
29	1.7	---	---	---	---	---	---	53	13	4.5	4.4	1.5
30	1.5	---	---	---	---	---	---	56	13	5.1	5.1	1.4
31	1.5	---	---	---	---	---	---	66	---	4.6	6.3	---
TOTAL	158.4	4.5	---	---	---	---	---	889	935	249.9	160.4	60.0
MEAN	5.11	1.50	---	---	---	---	---	31.7	31.2	8.06	5.17	2.00
AC-FT	314	8.9	---	---	---	---	---	1760	1850	496	318	119
MAX	14	1.5	---	---	---	---	---	66	82	12	8.5	6.4
MIN	1.5	1.5	---	---	---	---	---	13	13	4.5	3.3	1.2

WTR YR 2008 TOTAL 2457.2 MEAN 13.4 MAX 82 MIN 1.2 AC-FT 4870 (PARTIAL YEAR RECORD)

MAX DISCH: 143 CFS AT 16:15 ON Jun. 1, 2008 GH 5.83 FT. GH CORR. -0.02 FT. SHIFT 0.05 FT.  
MAX GH: 6.00 FT. (ICE AFFECTED) AT 14:15 ON May. 7, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08235270 WIGHTMAN FORK BELOW CROPSY CREEK NEAR SUMMITVILLE CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08235290 WIGHTMAN FORK AT MOUTH NEAR JASPER, CO

**LOCATION.**--Lat. 37°24'14", long 106°31'16", in SE¼SW¼ sec. 35, T.37 N., R.4 E., Rio Grande County, Hydrologic Unit 13010002, on right bank 25' downstream from bridge on Forest Development Road No. 250, about 300' upstream from confluence with Alamosa River, and 4.3 mi southwest of Jasper.

**DRAINAGE AREA AND PERIOD OF RECORD.**--16.1 mi<sup>2</sup>. July 1995 to current year (seasonal record only).

**GAGE.**--Shelter is a 4 ft by 4 ft by 8 ft steel building for this station and includes equipment for the station "Alamosa River above Wightman Fork". Equipment for this station includes a DCP (data collection platform) which collects gage-height data from a Sutron Accubar and water quality data from a Hydrolab. The DCP is satellite monitored. Primary reference gage is an outside staff gage.

**REMARKS.**--Record is complete for the period of operation: October 1 - November 3, 2007, May 3 to September 30, 2008, except for November 3, 2007 and May 3, 2008 when there was missing satellite data. Gage height was affected by ice October 19 - 23, November 1, 2, 2007. Record is good, except for periods of no gage height and ice affected record, which are poor. Record period from May 16-21, 2008 should be considered poor due to uncertainty in shift distribution above gage-height of 4.51 feet. Maximum discharge should be considered poor due to uncertainty in shift distribution and the fact that the peak discharge is greater than double the highest measured flow. Station maintained and record developed by private consultant; record reviewed by Div. III Hydrographic Staff.

**RATING TABLE.**--WFKMOUCO05 USED FROM 01-Oct-2007 TO 21-May-2008  
 WFKMOUCO06 USED FROM 21-May-2008 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
 MEAN VALUES

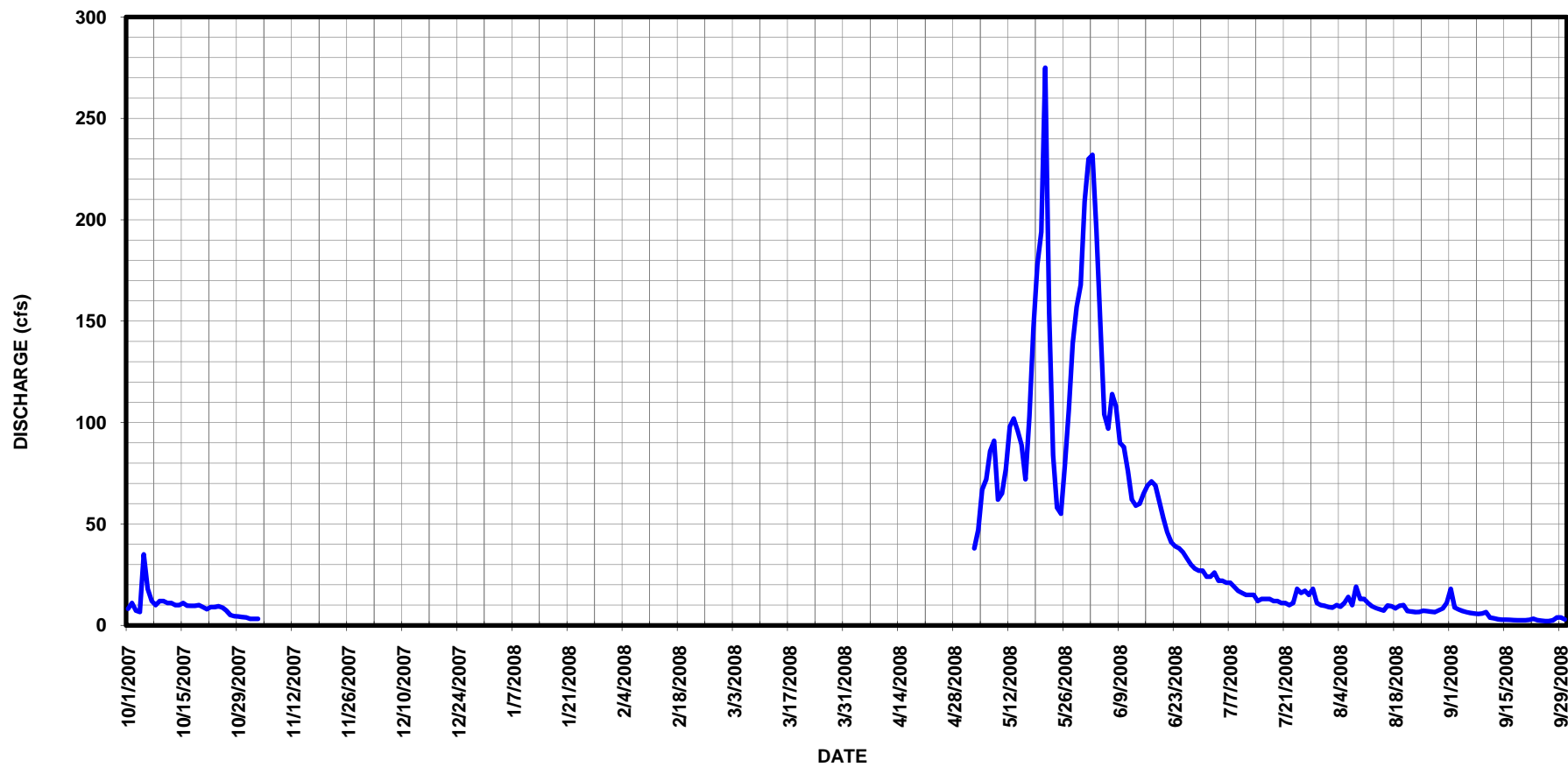
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	3.2	---	---	---	---	---	---	230	24	9.0	18
2	11	3.2	---	---	---	---	---	---	232	24	8.7	8.8
3	7.3	3.2	---	---	---	---	---	38	195	26	10	7.8
4	6.6	---	---	---	---	---	---	47	149	22	9.2	7.1
5	35	---	---	---	---	---	---	67	104	22	11	6.5
6	18	---	---	---	---	---	---	72	97	21	14	6.1
7	12	---	---	---	---	---	---	86	114	21	10	5.8
8	10	---	---	---	---	---	---	91	108	19	19	5.6
9	12	---	---	---	---	---	---	62	90	17	13	5.8
10	12	---	---	---	---	---	---	65	88	16	13	6.5
11	11	---	---	---	---	---	---	77	76	15	11	3.8
12	11	---	---	---	---	---	---	98	62	15	9.4	3.5
13	10	---	---	---	---	---	---	102	59	15	8.5	3.0
14	10	---	---	---	---	---	---	96	60	12	7.9	2.8
15	11	---	---	---	---	---	---	89	65	13	7.3	2.8
16	9.7	---	---	---	---	---	---	72	69	13	9.8	2.7
17	9.6	---	---	---	---	---	---	103	71	13	9.4	2.6
18	9.6	---	---	---	---	---	---	147	69	12	8.4	2.5
19	10	---	---	---	---	---	---	178	61	12	9.6	2.5
20	9.0	---	---	---	---	---	---	194	53	11	10	2.5
21	8.0	---	---	---	---	---	---	275	46	11	7.1	2.7
22	9.0	---	---	---	---	---	---	154	41	10	6.8	3.3
23	9.0	---	---	---	---	---	---	84	39	11	6.5	2.6
24	9.4	---	---	---	---	---	---	58	38	18	6.6	2.3
25	8.7	---	---	---	---	---	---	55	36	16	7.2	2.1
26	7.2	---	---	---	---	---	---	79	33	17	7.0	2.1
27	5.1	---	---	---	---	---	---	106	30	15	6.7	2.5
28	4.5	---	---	---	---	---	---	139	28	18	6.5	3.9
29	4.4	---	---	---	---	---	---	157	27	11	7.4	3.9
30	4.1	---	---	---	---	---	---	168	27	10	8.3	2.9
31	3.9	---	---	---	---	---	---	209	---	9.6	11	---
TOTAL	306.3	9.6	---	---	---	---	---	3168	2397	489.6	289.3	135.0
MEAN	9.88	3.20	---	---	---	---	---	109	79.9	15.8	9.33	4.50
AC-FT	608	19	---	---	---	---	---	6280	4750	971	574	268
MAX	35	3.2	---	---	---	---	---	275	232	26	19	18
MIN	3.9	3.2	---	---	---	---	---	38	27	9.6	6.5	2.1

WTR YR 2008 TOTAL 6794.8 MEAN 36.7 MAX 275 MIN 2.1 AC-FT 13480 (PARTIAL YEAR RECORD)

MAX DISCH: 532 CFS AT 22:15 ON May. 20, 2008 GH 5.27 FT. SHIFT 0.11 FT.  
 MAX GH: 5.27 FT. AT 22:15 ON May. 20, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08235290 WIGHTMAN FORK AT MOUTH NEAR JASPER CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

ALAMOSA RIVER BELOW RANGER CREEK, CO

**LOCATION.**--Lat. 37°23'23", long. 106°22'41", Conejos County, on right bank, 30' above Silver Lakes Road Bridge, 0.4 miles below Ranger Creek and 4 miles above Terrace Reservoir.

**DRAINAGE AREA AND PERIOD OF RECORD.**--N/A. Station established in water year 2003.

**GAGE.**--Sutron Accubar water level sensor and satellite telemetry data collection platform (DCP) in a 4' x 4' x 8' foot steel building. The DCP also monitors a Hydrolab to collect water quality information. Outside staff gage installed as base gage.

**REMARKS.**--Record is complete and reliable for the period of operation: Oct. 1 to Nov. 3, 2007 and Apr. 30 to Sep. 30, 2008, except for Nov. 3, 2007, Apr. 30, 2008, when there was missing data. There were two large, nearly offsetting, pressure transducer corrections on June 3 and June 22, 2008. The corrections were distributed from May 29 to June 6, 2008 to best-fit flows at Alamosa Creek above Terrace Reservoir, which is approximately 2.5 miles downstream. Graphical analysis of the gage-height record indicates that the Accubar pressure sensor continuously 'hunts' the point of pressure equilibrium. This hunting creates some uncertainty in gage-height record. Due to this uncertainty, the record should be considered fair, except for periods of no gage-height record, which are poor. Due to uncertainty in the distribution of the two large pressure transducer corrections, the period from May 25 to June 6, 2008 should also be considered poor. Station maintained and record developed by private consultant; record reviewed by Div. III Hydrographic Staff.

**RATING TABLE.**--ALARANCO05 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

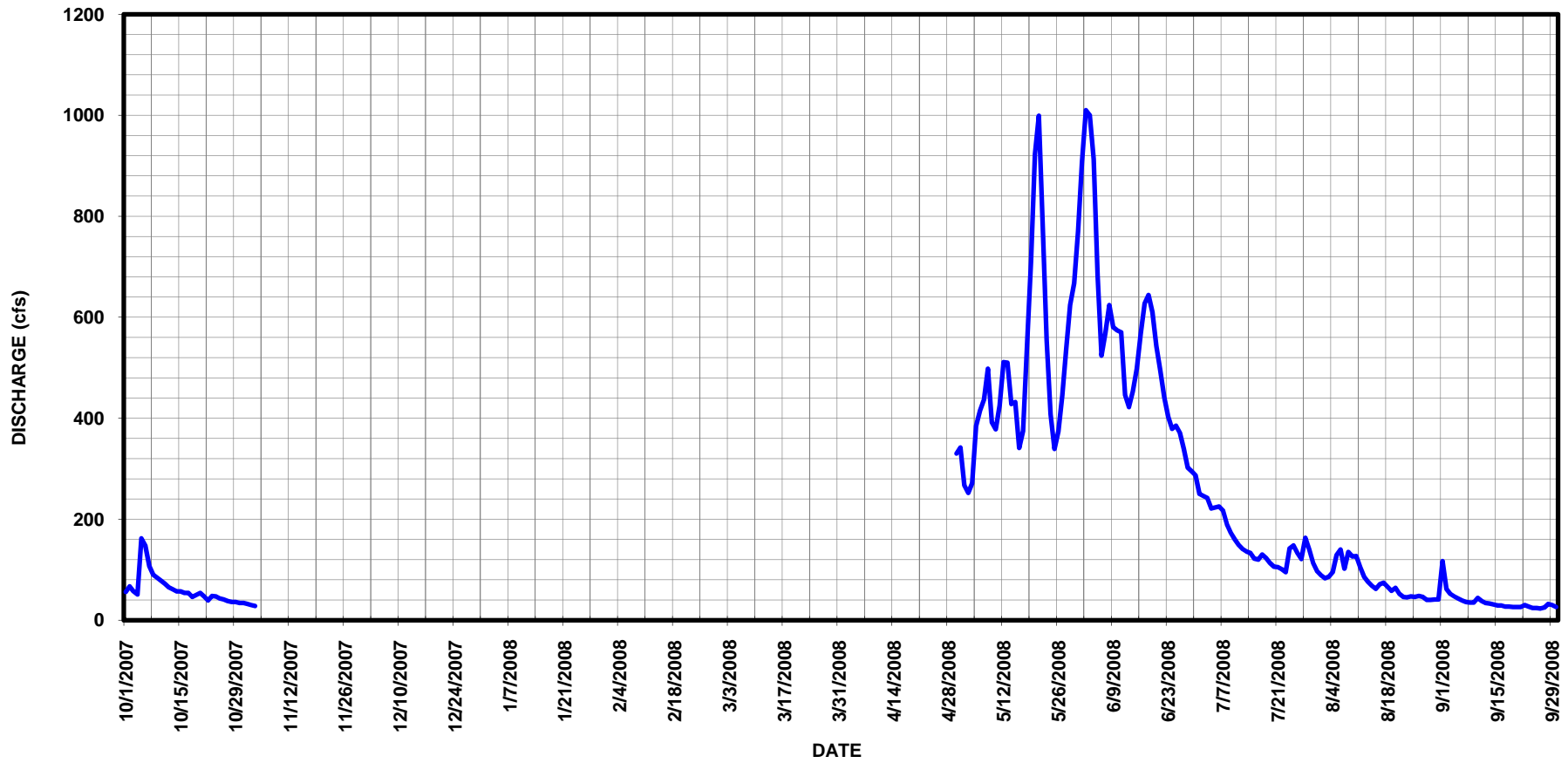
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	32	---	---	---	---	---	342	907	250	89	117
2	67	30	---	---	---	---	---	267	1010	246	83	62
3	57	28	---	---	---	---	---	252	1000	242	86	52
4	51	---	---	---	---	---	---	271	913	221	95	47
5	162	---	---	---	---	---	---	384	683	223	129	43
6	148	---	---	---	---	---	---	415	524	225	140	39
7	107	---	---	---	---	---	---	437	569	217	102	36
8	90	---	---	---	---	---	---	498	624	190	135	35
9	84	---	---	---	---	---	---	392	580	173	126	35
10	78	---	---	---	---	---	---	378	574	160	127	44
11	72	---	---	---	---	---	---	425	570	149	105	38
12	65	---	---	---	---	---	---	511	446	141	86	34
13	61	---	---	---	---	---	---	510	422	136	76	33
14	57	---	---	---	---	---	---	428	453	133	68	31
15	57	---	---	---	---	---	---	432	498	122	62	29
16	54	---	---	---	---	---	---	341	567	120	71	29
17	54	---	---	---	---	---	---	375	627	130	74	27
18	46	---	---	---	---	---	---	548	644	123	66	27
19	50	---	---	---	---	---	---	711	610	113	58	26
20	54	---	---	---	---	---	---	923	543	106	64	26
21	47	---	---	---	---	---	---	999	495	105	52	26
22	39	---	---	---	---	---	---	779	441	101	46	30
23	48	---	---	---	---	---	---	554	403	95	45	27
24	47	---	---	---	---	---	---	408	379	142	47	24
25	43	---	---	---	---	---	---	339	385	148	46	24
26	41	---	---	---	---	---	---	374	371	133	48	23
27	38	---	---	---	---	---	---	445	339	121	46	25
28	36	---	---	---	---	---	---	537	302	163	40	32
29	36	---	---	---	---	---	---	624	295	140	40	30
30	34	---	---	---	---	---	330	667	287	113	41	26
31	34	---	---	---	---	---	---	770	---	97	41	---
TOTAL	1913	90	---	---	---	---	330	15336	16461	4778	2334	1077
MEAN	61.7	30.0	---	---	---	---	330	495	549	154	75.3	35.9
AC-FT	3790	179	---	---	---	---	655	30420	32650	9480	4630	2140
MAX	162	32	---	---	---	---	330	999	1010	250	140	117
MIN	34	28	---	---	---	---	330	252	287	95	40	23

WTR YR 2008 TOTAL 42319 MEAN 225 MAX 1010 MIN 23 AC-FT 83940 (PARTIAL YEAR RECORD)

MAX DISCH: 1170 CFS AT 00:30 ON May. 21, 2008 GH 5.78 FT. SHIFT 0 FT.  
MAX GH: 5.78 FT. AT 00:30 ON May. 21, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

### ALAMOSA RIVER BELOW RANGER CREEK CO WY2008 HYDROGRAPH



RIO GRANDE BASIN

08236000 ALAMOSA CREEK ABOVE TERRACE RESERVOIR, CO

**LOCATION.**--Lat 37°22'29", long 106°20'03", in NW¼NE¼ sec. 17, T.36 N., R.6 E., Conejos County, Hydrologic Unit 13100002, on left bank 0.8 mi upstream from high-water line of Terrace Reservoir at elevation 8,568 ft., 3.0 mi. downstream from French Creek, and 15 mi. northwest of Capulin.

**DRAINAGE AREA.**--107 mi<sup>2</sup>.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage height data from a float operated shaft encoder in a 4-ft. diameter metal shelter and well. Station is also equipped with an air temperature sensor. Graphic water-stage recorder is operated as a data backup. Datum of gage is 8,600 ft., from topographic map.

**REMARKS.**--Record is complete and reliable, except for Dec. 10, 2007 through Mar. 31, 2008 when the station was closed for the winter. Stage-discharge relation was affected by ice Nov. 22-30, Dec. 1-9, 2007. Record is good, except for the periods of ice-affected record and no gage height record, which are fair. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--ALATERCO17 USED FROM 01-Oct-2007 TO 30-Sep-2008

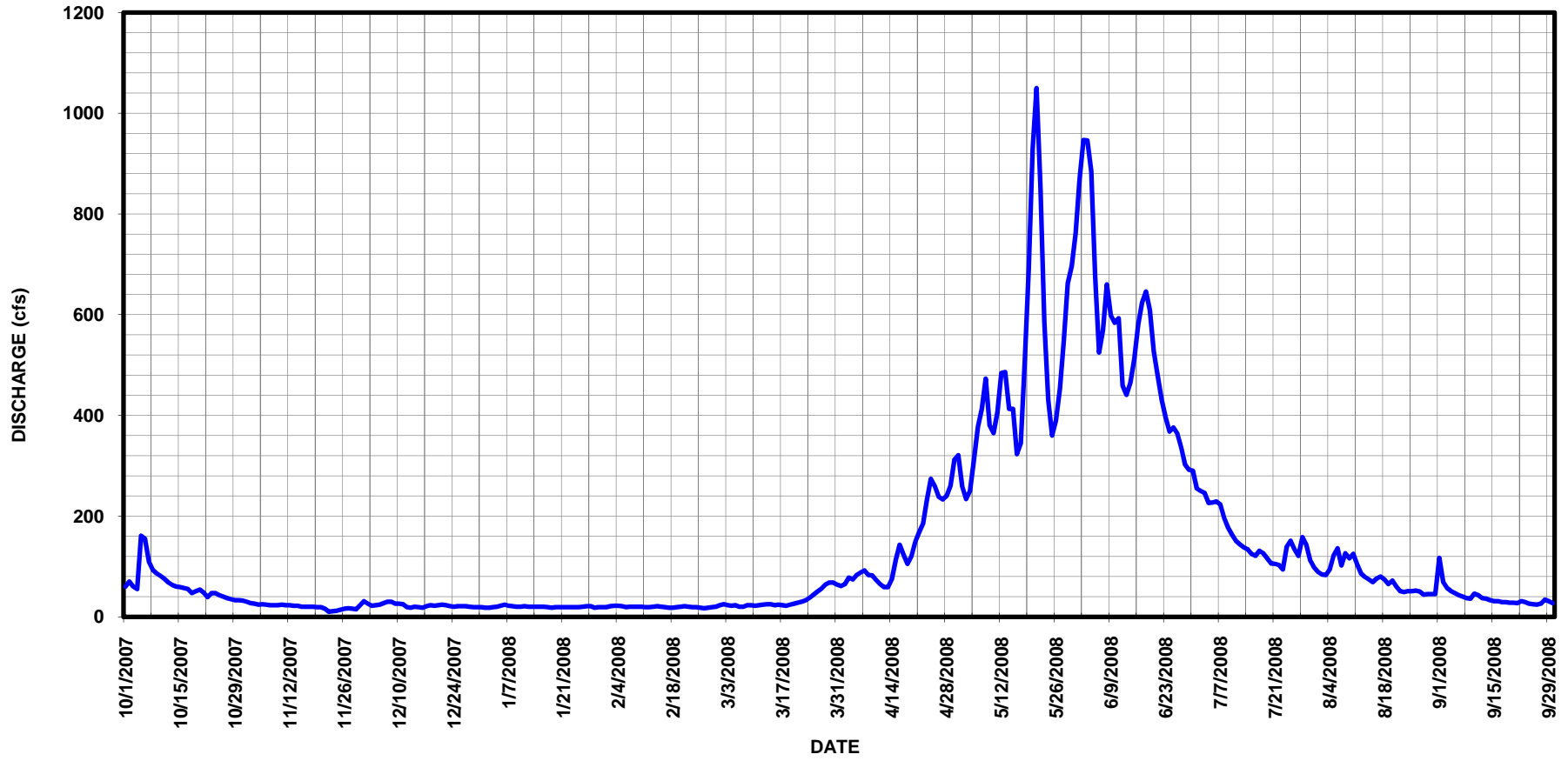
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	30	31	18	19	23	61	321	869	255	89	117
2	70	27	26	18	21	25	65	259	947	250	84	69
3	60	26	22	19	22	23	78	234	946	246	83	57
4	55	24	23	20	22	22	74	250	885	226	94	51
5	161	25	24	22	21	23	83	311	676	227	122	47
6	155	24	27	24	19	20	88	377	525	229	136	43
7	109	23	30	22	20	20	92	413	569	223	102	40
8	93	23	30	21	20	23	83	473	660	196	126	37
9	86	23	26	20	20	23	82	380	599	177	116	36
10	81	24	26	20	20	22	73	365	584	163	125	46
11	75	23	25	21	19	23	65	406	593	151	104	43
12	68	23	19	20	19	24	59	484	459	144	86	37
13	63	22	18	20	20	25	59	486	441	138	79	36
14	60	22	20	20	21	25	75	413	465	134	74	33
15	59	20	19	20	20	23	113	413	512	125	69	31
16	57	20	18	20	19	24	143	323	580	121	76	31
17	55	20	21	19	18	23	123	345	624	131	80	29
18	47	20	23	18	18	22	105	511	646	126	74	29
19	51	19	22	19	19	24	120	691	609	116	65	28
20	54	19	23	19	20	26	149	929	527	106	72	28
21	48	16	24	19	21	28	168	1050	479	105	60	27
22	39	10	23	19	20	30	185	854	431	103	51	31
23	47	11	21	19	19	33	233	585	396	94	49	29
24	47	12	20	19	19	38	274	431	368	139	51	26
25	43	14	21	19	18	44	259	360	376	151	51	25
26	40	16	21	20	17	50	238	390	364	134	52	24
27	37	17	21	21	18	56	233	453	336	121	50	26
28	35	16	20	21	19	64	240	549	302	158	44	34
29	33	15	19	18	20	68	260	662	292	143	45	31
30	33	23	19	19	---	68	312	697	290	112	45	27
31	32	---	19	19	---	64	---	762	---	98	45	---
TOTAL	1953	607	701	613	568	1006	4192	15177	16350	4842	2399	1148
MEAN	63.0	20.2	22.6	19.8	19.6	32.5	140	490	545	156	77.4	38.3
AC-FT	3870	1200	1390	1220	1130	2000	8310	30100	32430	9600	4760	2280
MAX	161	30	31	24	22	68	312	1050	947	255	136	117
MIN	32	10	18	18	17	20	59	234	290	94	44	24
CAL YR 2007	TOTAL	42466	MEAN	116	MAX	698	MIN	10	AC-FT	84230		
WTR YR 2008	TOTAL	49556	MEAN	135	MAX	1050	MIN	10	AC-FT	98290		

MAX DISCH: 1230 CFS AT 23:45 ON May. 20, 2008 GH 3.50 FT. GH CORR. -0.01 FT. SHIFT -0.02 FT.  
MAX GH: 3.49 FT. (GH CORR. -0.01 FT. APPLIED) AT 23:45 ON May. 20, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08236000 ALAMOSA CREEK ABOVE TERRACE RESERVOIR CO  
WY2008 HYDROGRAPH





RIO GRANDE BASIN

08236500 ALAMOSA CREEK BELOW TERRACE RESERVOIR, CO

**LOCATION.**--Lat 37°21'15", long 106°16'45", NE¼SE¼ sec. 23, T.36 N., R.6 E., Conejos County, Hydrologic Unit 13010002, on left bank 0.5 mi downstream from Terrace Reservoir, 12.0 mi northwest of Capulin, Co.

**DRAINAGE AREA.**--116 mi².

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. The primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 6-foot square concrete aggregate shelter and 3 foot diameter concrete well. A graphic water-stage recorder is operated as a data backup. Elevation of gage is 8,375 ft, from topographic map.

**REMARKS.**--Record is complete and reliable, except for December 26, 2007 to March 12, 2008 when the well was frozen. Record is good, except for period of no gage height record, which is fair. Period of no gage-height record is rated fair, rather than poor, because the gage is directly below a reservoir and gage changes were not made during this period. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--ALABELCO13 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

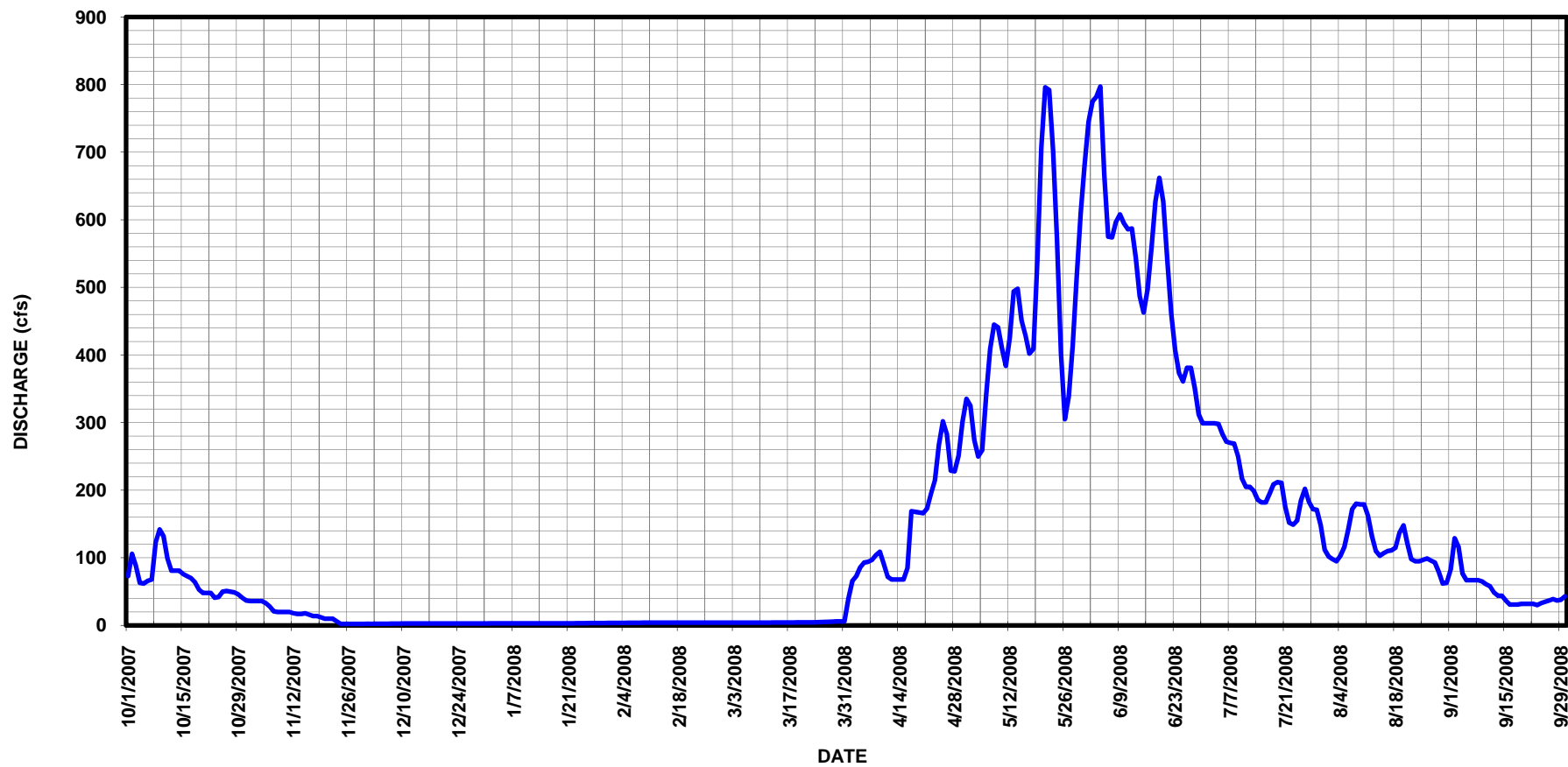
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	36	2.6	3.2	3.8	4.2	40	335	745	299	102	83
2	106	36	2.4	3.2	3.8	4.2	66	325	775	299	98	129
3	88	36	2.5	3.2	3.8	4.2	73	274	782	299	95	116
4	63	36	2.5	3.2	3.8	4.2	86	250	797	298	103	77
5	62	33	2.5	3.2	4.0	4.2	93	259	667	283	116	67
6	66	28	2.6	3.2	4.0	4.2	94	342	575	272	142	67
7	68	21	2.7	3.2	4.0	4.2	97	409	574	270	172	67
8	123	20	2.7	3.2	4.0	4.2	104	445	597	269	180	67
9	142	20	2.8	3.2	4.2	4.2	109	441	608	250	179	65
10	132	20	2.9	3.2	4.2	4.2	91	410	595	217	179	61
11	99	20	3.0	3.2	4.2	4.2	72	384	586	205	162	58
12	81	18	3.0	3.2	4.2	4.2	68	426	587	205	132	49
13	81	17	3.0	3.2	4.2	4.3	68	494	544	199	110	44
14	81	17	3.0	3.2	4.2	4.3	68	498	487	186	103	44
15	76	18	3.0	3.2	4.2	4.3	68	451	463	182	107	37
16	73	16	3.0	3.2	4.2	4.3	85	429	497	182	110	31
17	70	14	3.0	3.2	4.2	4.3	169	402	558	195	111	31
18	64	14	3.0	3.2	4.2	4.4	168	409	627	209	115	31
19	53	12	3.0	3.2	4.2	4.5	167	541	662	212	137	32
20	48	10	3.0	3.2	4.2	4.5	166	707	627	211	148	32
21	48	10	3.0	3.2	4.2	4.5	173	796	543	175	121	32
22	48	10	3.0	3.2	4.2	4.5	195	792	461	152	98	32
23	41	6.1	3.0	3.4	4.2	4.5	215	702	407	149	95	30
24	42	2.3	3.0	3.4	4.2	4.8	267	570	373	155	95	33
25	50	2.3	3.0	3.4	4.2	5.0	302	403	361	185	97	35
26	51	2.3	3.0	3.6	4.2	5.1	283	305	381	202	99	37
27	50	2.3	3.0	3.6	4.2	5.4	229	339	381	183	96	39
28	49	2.3	3.0	3.6	4.2	5.7	228	414	351	172	93	37
29	46	2.3	3.0	3.6	4.2	6.0	251	514	312	171	79	38
30	41	2.3	3.0	3.6	---	6.1	302	610	299	148	62	43
31	37	---	3.0	3.8	---	5.9	---	682	---	112	63	---
TOTAL	2152	484.2	89.2	102.4	119.4	142.8	4397	14358	16222	6546	3599	1544
MEAN	69.4	16.1	2.88	3.30	4.12	4.61	147	463	541	211	116	51.5
AC-FT	4270	960	177	203	237	283	8720	28480	32180	12980	7140	3060
MAX	142	36	3.0	3.8	4.2	6.1	302	796	797	299	180	129
MIN	37	2.3	2.4	3.2	3.8	4.2	40	250	299	112	62	30

CAL YR	2007	TOTAL	42893.1	MEAN	118	MAX	658	MIN	2.3	AC-FT	85080
WTR YR	2008	TOTAL	49756	MEAN	136	MAX	797	MIN	2.3	AC-FT	98690

MAX DISCH: 832 CFS AT 11:30 ON May 21, 2008 GH 4.61 FT. SHIFT -0.09 FT.  
MAX GH: 4.61 FT. AT 11:30 ON May 21, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08236500 ALAMOSA CREEK BELOW TERRACE RESERVOIR CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08238000 LA JARA CREEK AT GALLEGOS RANCH NEAR CAPULIN, CO

**LOCATION.**--Lat 37°12'32", long 106°11'16", in NE¼ sec. 10, T.34 N., R.7 E., Conejos County, Hydrologic Unit 13010002, on left bank 2.7 mi. downstream from Canyon Del Rancho, 7 mi. southwest of Capulin, and 16.5 mi. downstream from La Jara Reservoir.

**DRAINAGE AREA.**--98 mi<sup>2</sup>.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. The primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder and precipitation data from a tipping-bucket rain gage in a 42-inch diameter CMP shelter and well. A graphic water-stage recorder is operated as a data backup. Elevation of gage is 8,130 ft from topographic map.

**REMARKS.**--Record is complete and reliable, except for Dec. 17, 2007 through Mar. 31, 2008 when the shaft encoder float was frozen in an oil cylinder and May 29 through June 17, 2008 when inlet problems were occurring. Stage-discharge relation was affected by ice Nov. 22-30, and Dec. 1-5, 9-16, 2007. Record is good, except for periods of no gage-height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--LAJCAPCO19TMP USED FROM 01-Oct-2007 TO 30-Sep-2008

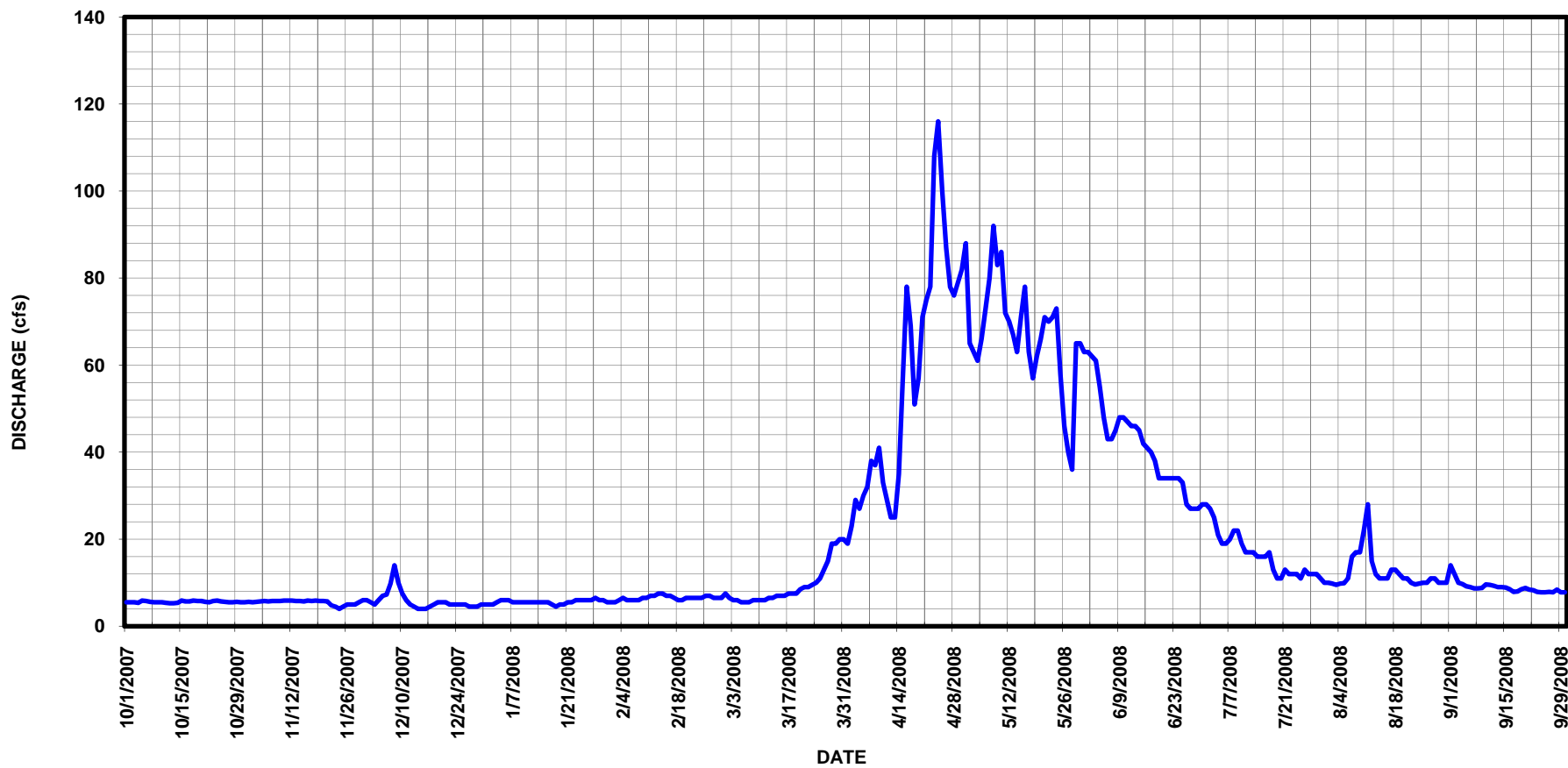
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	5.6	6.0	5.0	5.5	7.5	19	88	63	28	10	14
2	5.5	5.5	5.5	5.0	5.5	6.5	23	65	62	27	9.8	12
3	5.5	5.6	5.0	5.5	6.0	6.0	29	63	61	25	9.5	10
4	5.4	5.7	6.0	6.0	6.5	6.0	27	61	55	21	9.8	9.7
5	5.9	5.8	7.0	6.0	6.0	5.5	30	66	48	19	9.9	9.2
6	5.8	5.7	7.3	6.0	6.0	5.5	32	73	43	19	11	9.0
7	5.6	5.8	9.8	5.5	6.0	5.5	38	80	43	20	16	8.7
8	5.5	5.8	14	5.5	6.0	6.0	37	92	45	22	17	8.7
9	5.5	5.8	10	5.5	6.5	6.0	41	83	48	22	17	8.8
10	5.5	5.9	7.5	5.5	6.5	6.0	33	86	48	19	22	9.6
11	5.4	5.9	6.0	5.5	7.0	6.0	29	72	47	17	28	9.5
12	5.3	5.9	5.0	5.5	7.0	6.5	25	70	46	17	15	9.3
13	5.3	5.8	4.5	5.5	7.5	6.5	25	67	46	17	12	9.0
14	5.4	5.8	4.0	5.5	7.5	7.0	35	63	45	16	11	9.0
15	5.9	5.7	4.0	5.5	7.0	7.0	57	71	42	16	11	8.9
16	5.7	5.9	4.0	5.5	7.0	7.0	78	78	41	16	11	8.5
17	5.7	5.8	4.5	5.0	6.5	7.5	69	63	40	17	13	7.9
18	5.9	5.9	5.0	4.5	6.0	7.5	51	57	38	13	13	8.0
19	5.8	5.8	5.5	5.0	6.0	7.5	57	62	34	11	12	8.5
20	5.8	5.8	5.5	5.0	6.5	8.5	71	66	34	11	11	8.8
21	5.6	5.7	5.5	5.5	6.5	9.0	75	71	34	13	11	8.4
22	5.5	4.8	5.0	5.5	6.5	9.0	78	70	34	12	10	8.3
23	5.8	4.5	5.0	6.0	6.5	9.5	108	71	34	12	9.6	7.9
24	5.9	4.0	5.0	6.0	6.5	10	116	73	34	12	9.8	7.8
25	5.7	4.5	5.0	6.0	7.0	11	100	58	33	11	10	7.8
26	5.6	5.0	5.0	6.0	7.0	13	87	46	28	13	10	7.9
27	5.5	5.0	4.5	6.0	6.5	15	78	40	27	12	11	7.8
28	5.5	5.0	4.5	6.5	6.5	19	76	36	27	12	11	8.4
29	5.6	5.5	4.5	6.0	6.5	19	79	65	27	12	10	7.8
30	5.5	6.0	5.0	6.0	---	20	82	65	28	11	10	7.8
31	5.5	---	5.0	5.5	---	20	---	63	---	10	10	---
TOTAL	173.6	165.5	180.1	173.0	188.0	286.0	1685	2084	1235	503	381.4	267.0
MEAN	5.60	5.52	5.81	5.58	6.48	9.23	56.2	67.2	41.2	16.2	12.3	8.90
AC-FT	344	328	357	343	373	567	3340	4130	2450	998	757	530
MAX	5.9	6.0	14	6.5	7.5	20	116	92	63	28	28	14
MIN	5.3	4.0	4.0	4.5	5.5	5.5	19	36	27	10	9.5	7.8
CAL YR 2007	TOTAL	5422.6	MEAN	14.9	MAX	70	MIN	4	AC-FT	10760		
WTR YR 2008	TOTAL	7321.6	MEAN	20	MAX	116	MIN	4	AC-FT	14520		

MAX DISCH: 160 CFS AT 03:00 ON Apr. 24, 2008 GH 2.36 FT. SHIFT -0.01 FT.  
MAX GH: 2.36 FT. AT 03:00 ON Apr. 24, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08238000 LA JARA CREEK AT GALLEGOS RANCH NEAR CAPULIN CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

SOUTH CHANNEL NORTON DRAIN DITCH NEAR LA SAUSES, CO

**LOCATION.**--Lat 37°17'54", long 105°51'00, SW¼SW¼ sec. 2, T.35 N., R.10 E., Conejos County, Hydrologic Unit 13100002, on right bank of ditch.

**DRAINAGE AREA.**--N/A

**GAGE.**--The primary reference gage is drop tape from a mark chiseled in the shelf support frame. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a steel shelter and a 24-inch diameter CMP well at a three-foot Parshall Flume. A graphic water-stage recorder is operated as a data backup.

**REMARKS.**--Record is complete and reliable, except for December 11-19, 2007 when the well was frozen; December 20, 2007 through March 31, 2008 when station was closed for the winter. Stage-discharge relation was affected by ice November 15-19, 21-29, December 1-4, 9, 10, 2007, and April 11-13, 2008. Record is good except for periods of no gage-height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--NORDSCCO01 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

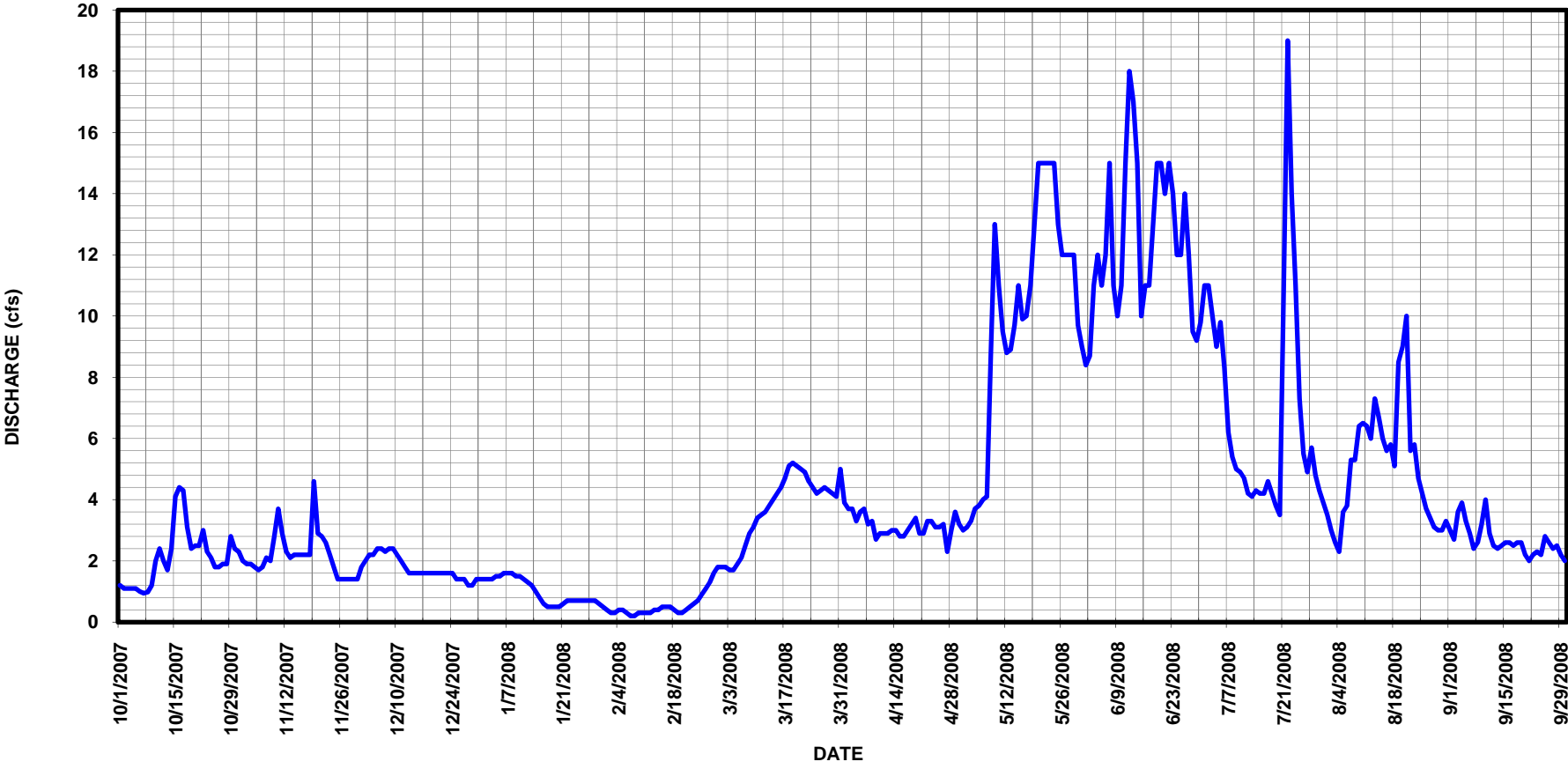
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	2.0	1.8	1.4	.40	1.8	3.9	3.0	8.4	11	3.5	3.0
2	1.1	1.9	2.0	1.4	.30	1.8	3.7	3.1	8.7	11	3.0	2.7
3	1.1	1.9	2.2	1.4	.30	1.7	3.7	3.3	11	10	2.6	3.6
4	1.1	1.8	2.2	1.5	.40	1.7	3.3	3.7	12	9.0	2.3	3.9
5	1.1	1.7	2.4	1.5	.40	1.9	3.6	3.8	11	9.8	3.6	3.3
6	1.0	1.8	2.4	1.6	.30	2.1	3.7	4.0	12	8.3	3.8	2.9
7	.94	2.1	2.3	1.6	.20	2.5	3.2	4.1	15	6.2	5.3	2.4
8	.98	2.0	2.4	1.6	.20	2.9	3.3	8.8	11	5.4	5.3	2.6
9	1.2	2.8	2.4	1.5	.30	3.1	2.7	13	10	5.0	6.4	3.2
10	2.0	3.7	2.2	1.5	.30	3.4	2.9	11	11	4.9	6.5	4.0
11	2.4	2.9	2.0	1.4	.30	3.5	2.9	9.5	15	4.7	6.4	2.9
12	2.0	2.3	1.8	1.3	.30	3.6	2.9	8.8	18	4.2	6.0	2.5
13	1.7	2.1	1.6	1.2	.40	3.8	3.0	8.9	17	4.1	7.3	2.4
14	2.4	2.2	1.6	1.0	.40	4.0	3.0	9.7	15	4.3	6.7	2.5
15	4.1	2.2	1.6	.80	.50	4.2	2.8	11	10	4.2	6.0	2.6
16	4.4	2.2	1.6	.60	.50	4.4	2.8	9.9	11	4.2	5.6	2.6
17	4.3	2.2	1.6	.50	.50	4.7	3.0	10	11	4.6	5.8	2.5
18	3.1	2.2	1.6	.50	.40	5.1	3.2	11	13	4.2	5.1	2.6
19	2.4	4.6	1.6	.50	.30	5.2	3.4	13	15	3.8	8.5	2.6
20	2.5	2.9	1.6	.50	.30	5.1	2.9	15	15	3.5	9.0	2.2
21	2.5	2.8	1.6	.60	.40	5.0	2.9	15	14	11	10	2.0
22	3.0	2.6	1.6	.70	.50	4.9	3.3	15	15	19	5.6	2.2
23	2.3	2.2	1.6	.70	.60	4.6	3.3	15	14	14	5.8	2.3
24	2.1	1.8	1.6	.70	.70	4.4	3.1	15	12	11	4.7	2.2
25	1.8	1.4	1.4	.70	.90	4.2	3.1	13	12	7.3	4.2	2.8
26	1.8	1.4	1.4	.70	1.1	4.3	3.2	12	14	5.5	3.7	2.6
27	1.9	1.4	1.4	.70	1.3	4.4	2.3	12	12	4.9	3.4	2.4
28	1.9	1.4	1.2	.70	1.6	4.3	3.0	12	9.5	5.7	3.1	2.5
29	2.8	1.4	1.2	.70	1.8	4.2	3.6	12	9.2	4.8	3.0	2.2
30	2.4	1.4	1.4	.60	---	4.1	3.2	9.7	9.8	4.3	3.0	2.0
31	2.3	---	1.4	.50	---	5.0	---	9.0	---	3.9	3.3	---
TOTAL	65.82	65.3	54.7	30.60	15.90	115.9	94.9	304.3	371.6	213.8	158.5	80.2
MEAN	2.12	2.18	1.76	.99	.55	3.74	3.16	9.82	12.4	6.90	5.11	2.67
AC-FT	131	130	108	61	32	230	188	604	737	424	314	159
MAX	4.4	4.6	2.4	1.6	1.8	5.2	3.9	15	18	19	10	4.0
MIN	.94	1.4	1.2	.50	.20	1.7	2.3	3.0	8.4	3.5	2.3	2.0

CAL YR	2007	TOTAL	1484.38	MEAN	4.07	MAX	39	MIN	.9	AC-FT	2940
WTR YR	2008	TOTAL	1571.52	MEAN	4.29	MAX	19	MIN	.2	AC-FT	3120

MAX DISCH: 29.4 CFS AT 20:30 ON Jul. 21, 2008 GH 1.77 FT. SHIFT 0 FT.  
MAX GH: 1.77 FT. AT 20:30 ON Jul. 21, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

SOUTH CHANNEL NORTON DRAIN DITCH NEAR LA SAUSES CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

NORTON DRAIN NEAR LA SAUSES, CO

**LOCATION.**--Lat 37°20'10", long 105°46'13", NE¼SW¼ sec. 28, T.36 N., R.11 E., Conejos County, Hydrologic Unit 13010002, on left bank 2.5 mi east by northeast along canal from State Route 158.

**DRAINAGE AREA.**--N/A

**GAGE.**--Primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 36-inch diameter CMP shelter and well at a six-foot Parshall Flume. A graphic water-stage recorder is operated as a data backup. Note: On September 27, 2007 the flume was modified with steel ramp inserts to increase sensitivity and eliminate gage isolation at low flows.

**REMARKS.**--Record is complete and reliable, except for Nov. 22-Dec 19, 2007 when the well was frozen and Dec. 20, 2007 - Mar. 19, 2008 when the station was closed for the winter. Stage-discharge relation was affected by ice Oct. 22, 23, Nov. 5-8, 12, 15-21, 2007 and Mar. 20-25, Apr. 11-13, 2008. Record is good except for periods of no gage-height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--NORDLSCO03 USED FROM 01-Oct-2007 TO 31-Dec-2007  
 NORDLSCO04T1 USED FROM 01-Jan-2008 TO 30-Sep-2008

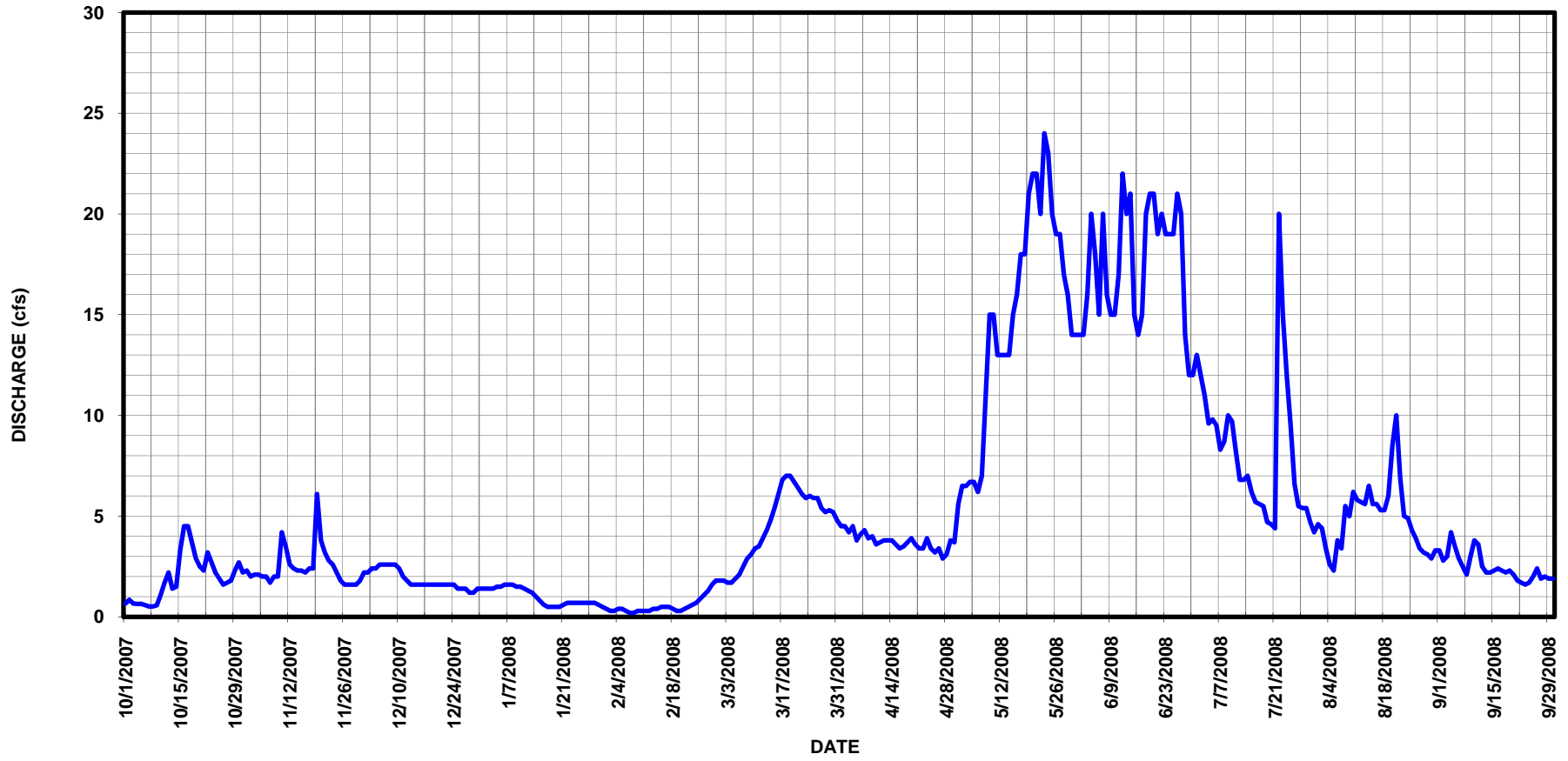
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.67	2.3	2.2	1.4	.40	1.8	4.5	5.6	14	13	4.6	3.3
2	.85	2.0	2.2	1.4	.30	1.8	4.5	6.5	14	12	4.4	2.8
3	.66	2.1	2.4	1.4	.30	1.7	4.2	6.5	16	11	3.4	3.0
4	.64	2.1	2.4	1.5	.40	1.7	4.5	6.7	20	9.6	2.6	4.2
5	.65	2.0	2.6	1.5	.40	1.9	3.8	6.7	18	9.8	2.3	3.5
6	.59	2.0	2.6	1.6	.30	2.1	4.1	6.2	15	9.5	3.8	2.9
7	.52	1.7	2.6	1.6	.20	2.5	4.3	7.0	20	8.3	3.4	2.5
8	.52	2.0	2.6	1.6	.20	2.9	3.9	11	16	8.7	5.5	2.1
9	.57	2.0	2.6	1.5	.30	3.1	4.0	15	15	10	5.0	3.0
10	1.1	4.2	2.4	1.5	.30	3.4	3.6	15	15	9.7	6.2	3.8
11	1.7	3.5	2.0	1.4	.30	3.5	3.7	13	17	8.2	5.8	3.6
12	2.2	2.6	1.8	1.3	.30	3.9	3.8	13	22	6.8	5.7	2.5
13	1.4	2.4	1.6	1.2	.40	4.3	3.8	13	20	6.8	5.6	2.2
14	1.5	2.3	1.6	1.0	.40	4.8	3.8	13	21	7.0	6.5	2.2
15	3.3	2.3	1.6	.80	.50	5.4	3.6	15	15	6.2	5.6	2.3
16	4.5	2.2	1.6	.60	.50	6.1	3.4	16	14	5.7	5.6	2.4
17	4.5	2.4	1.6	.50	.50	6.8	3.5	18	15	5.6	5.3	2.3
18	3.7	2.4	1.6	.50	.40	7.0	3.7	18	20	5.5	5.3	2.2
19	2.9	6.1	1.6	.50	.30	7.0	3.9	21	21	4.7	6.0	2.3
20	2.5	3.8	1.6	.50	.30	6.7	3.6	22	21	4.6	8.5	2.1
21	2.3	3.2	1.6	.60	.40	6.4	3.4	22	19	4.4	10	1.8
22	3.2	2.8	1.6	.70	.50	6.1	3.4	20	20	20	6.9	1.7
23	2.7	2.6	1.6	.70	.60	5.9	3.9	24	19	15	5.0	1.6
24	2.2	2.2	1.6	.70	.70	6.0	3.4	23	19	12	4.9	1.7
25	1.9	1.8	1.4	.70	.90	5.9	3.2	20	19	9.5	4.3	2.0
26	1.6	1.6	1.4	.70	1.1	5.9	3.4	19	21	6.6	3.9	2.4
27	1.7	1.6	1.4	.70	1.3	5.4	2.9	19	20	5.5	3.4	1.9
28	1.8	1.6	1.2	.70	1.6	5.2	3.1	17	14	5.4	3.2	2.0
29	2.3	1.6	1.2	.70	1.8	5.3	3.8	16	12	5.4	3.1	1.9
30	2.7	1.8	1.4	.60	---	5.2	3.7	14	12	4.7	2.9	1.9
31	2.2	---	1.4	.50	---	4.8	---	14	---	4.2	3.3	---
TOTAL	59.57	73.2	57.0	30.60	15.90	140.5	112.4	456.2	524	255.4	152.0	74.1
MEAN	1.92	2.44	1.84	.99	.55	4.53	3.75	14.7	17.5	8.24	4.90	2.47
AC-FT	118	145	113	61	32	279	223	905	1040	507	301	147
MAX	4.5	6.1	2.6	1.6	1.8	7.0	4.5	24	22	20	10	4.2
MIN	.52	1.6	1.2	.50	.20	1.7	2.9	5.6	12	4.2	2.3	1.6
CAL YR 2007	TOTAL	2136.07	MEAN	5.85	MAX	50	MIN	.52	AC-FT	4240		
WTR YR 2008	TOTAL	1950.87	MEAN	5.33	MAX	24	MIN	.2	AC-FT	3870		

MAX DISCH: 26.4 CFS AT 03:45 ON Jul. 22, 2008 GH 1.08 FT. GH CORR. 0.01 FT. SHIFT 0 FT.  
 MAX GH: 1.33 FT. AT 07:45 ON Mar. 20, 2008 (Ice affected)

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

NORTON DRAIN NEAR LA SAUSES CO  
WY2008 HYDROGRAPH





RIO GRANDE BASIN

08240000 RIO GRANDE ABOVE MOUTH OF TRINCHERA CREEK NEAR LASAUSES, CO

**LOCATION.**--Lat 37°18'58", long 105°44'32", in sec. 35, T.36 N., R.11 E., Conejos County, Hydrologic Unit 13010002, on right bank 0.2 mi upstream from the historical channel of Trinchera Creek, 3.2 mi north of Lasauses, and 13 mi southeast of Alamosa.

**DRAINAGE AREA AND PERIOD OF RECORD.**--5,740 mi<sup>2</sup>., approximately, includes 2,940 mi<sup>2</sup>. in closed basin in northern part of San Luis Valley, Co. May 1936 to current year. Water quality data from 1993 to 1996.

**GAGE.**--Primary reference gage is a drop tape from reference point on shelf. The primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 7 ft. by 7 ft. exposed aggregate building with 4 ft. diameter concrete well. A graphic water-stage recorder is operated as a data backup. Elevation of gage is 7,500 ft, estimated from nearby level lines. Although the name of the station is Rio Grande above Mouth of Trinchera Creek, over a period of years Trinchera Creek has shifted allowing the majority of Trinchera Creek water to enter the Rio Grande River above the station.

**REMARKS.**--Record is complete and reliable, except for Dec. 19, 2007 when well was frozen, Dec. 20, 2007 through Mar. 21, 2008 when the station was closed for the winter, and October 13-22, 2007, August 4-6, 10-13, 20, 21, September 30, 2008 when the inlets were temporarily plugging and naturally flushing. Stage-discharge relation was affected by ice December 15-18, 2007. Record is good, except for periods of no gage height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--RIOTRICO12 USED FROM 01-Oct-2007 TO 30-Sep-2008

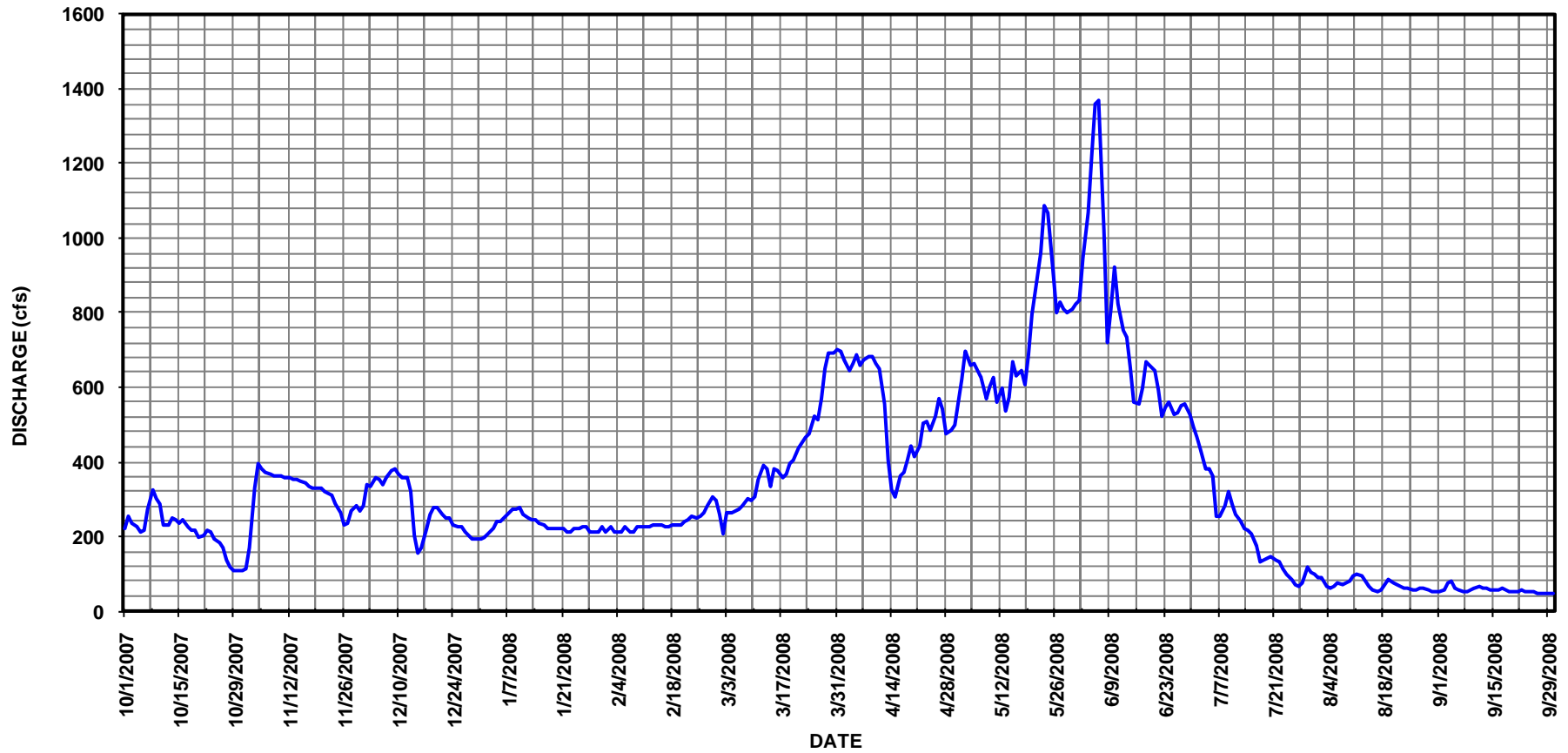
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	223	115	284	200	215	260	696	559	836	469	89	53
2	256	169	340	210	225	210	676	622	946	435	88	58
3	234	330	337	220	215	265	644	698	1070	382	66	78
4	225	398	360	240	215	265	665	658	1220	381	60	82
5	212	383	355	240	215	270	687	665	1360	363	68	64
6	219	372	338	250	225	275	661	647	1370	254	78	57
7	276	366	358	265	215	285	675	627	1020	255	70	53
8	324	362	376	275	215	300	685	569	721	281	77	52
9	300	362	381	275	225	295	685	602	810	320	83	59
10	287	361	369	280	225	305	663	629	922	287	97	64
11	231	360	359	260	225	355	652	563	822	260	99	65
12	232	358	358	250	225	390	558	599	753	241	94	61
13	250	356	320	245	230	380	404	536	735	220	79	63
14	246	353	204	245	230	335	326	577	656	219	65	59
15	238	350	155	235	230	380	308	667	561	208	56	57
16	246	344	170	230	225	375	364	632	556	177	51	58
17	229	335	220	220	225	360	373	646	597	131	57	63
18	216	330	260	220	230	370	405	607	667	136	70	56
19	218	332	280	220	230	395	442	690	661	143	85	52
20	197	332	280	220	230	405	416	795	647	146	74	53
21	205	323	260	220	240	440	445	896	596	138	72	55
22	218	318	250	215	245	453	505	963	521	133	69	59
23	214	312	250	215	255	466	508	1090	549	115	61	55
24	192	288	230	220	250	475	484	1070	560	98	60	53
25	186	264	225	220	255	521	524	915	530	85	57	55
26	168	233	225	225	265	515	568	800	532	73	58	50
27	139	238	215	225	285	568	544	827	553	69	61	48
28	119	267	205	215	305	648	474	811	557	77	60	49
29	109	284	195	215	295	691	484	801	526	118	57	49
30	109	269	195	215	---	694	498	812	494	103	55	50
31	111	---	195	225	---	702	---	826	---	99	53	---
TOTAL	6629	9464	8549	7210	6865	12648	16019	22399	22348	6416	2169	1730
MEAN	214	315	276	233	237	408	534	723	745	207	70.0	57.7
AC-FT	13150	18770	16960	14300	13620	25090	31770	44430	44330	12730	4300	3430
MAX	324	398	381	280	305	702	696	1090	1370	469	99	82
MIN	109	115	155	200	215	210	308	536	494	69	51	48
CAL YR 2007	TOTAL	103335	MEAN	283	MAX	914	MIN	97	AC-FT	205000		
WTR YR 2008	TOTAL	122446	MEAN	335	MAX	1370	MIN	48	AC-FT	242900		

MAX DISCH: 1430 CFS AT 07:00 ON Jun. 6, 2008 GH 5.75 FT. SHIFT -0.14 FT.  
MAX GH: 5.75 FT. AT 07:00 ON Jun. 6, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08240000 RIO GRANDE ABOVE MOUTH OF TRINCHERA CREEK NEAR LASAUSES CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08240500 TRINCHERA CREEK ABOVE TURNERS RANCH, NEAR FORT GARLAND, CO

**LOCATION.**--Lat 37°22'16", long 105°17'05", Costilla County, Hydrologic Unit 13010002, in Sangre de Cristo Grant, on right bank 0.9 mi downstream from North Fork, 1.0 mi upstream from Turners Ranch, and 8.3 mi southeast of Fort Garland.

**DRAINAGE AREA.**--45 mi<sup>2</sup>.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. The primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 6 ft. by 6 ft. exposed aggregate shelter and 3 ft. concrete well. A graphic water-stage recorder is operated as a data backup. Elevation of gage is 8,520 ft, from topographic map.

**REMARKS.**--Record is complete and reliable, except for Dec. 28, 2007 to March 2, 2008 when floats were affected by ice in well. The stage-discharge relation was affected by ice Nov. 22-29, Dec. 3, 9-27, 2007, and Mar. 3-8, 2008. Record is good, except for periods of no gage height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--TRITURCO14 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

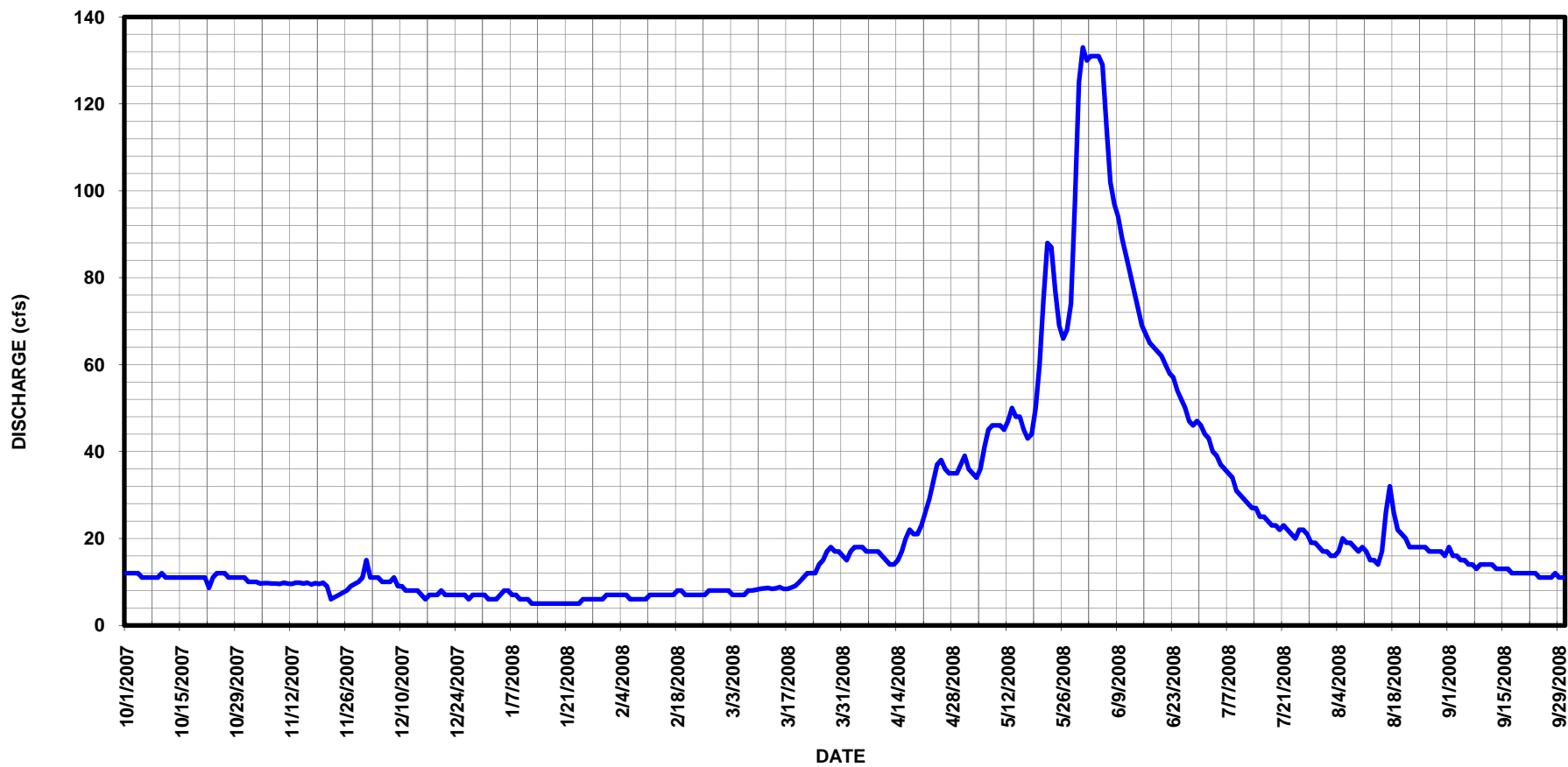
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	10	15	6.0	7.0	8.0	15	39	130	44	17	18
2	12	10	11	6.0	7.0	8.0	17	36	131	43	16	16
3	12	10	11	6.0	7.0	7.0	18	35	131	40	16	16
4	12	9.6	11	7.0	7.0	7.0	18	34	131	39	17	15
5	11	9.7	10	8.0	7.0	7.0	18	36	129	37	20	15
6	11	9.7	10	8.0	6.0	7.0	17	41	115	36	19	14
7	11	9.6	10	7.0	6.0	8.0	17	45	102	35	19	14
8	11	9.6	11	7.0	6.0	8.0	17	46	97	34	18	13
9	11	9.5	9.0	6.0	6.0	8.2	17	46	94	31	17	14
10	12	9.8	9.0	6.0	6.0	8.4	16	46	89	30	18	14
11	11	9.6	8.0	6.0	7.0	8.5	15	45	85	29	17	14
12	11	9.5	8.0	5.0	7.0	8.6	14	47	81	28	15	14
13	11	9.8	8.0	5.0	7.0	8.4	14	50	77	27	15	13
14	11	9.8	8.0	5.0	7.0	8.5	15	48	73	27	14	13
15	11	9.6	7.0	5.0	7.0	8.8	17	48	69	25	17	13
16	11	9.8	6.0	5.0	7.0	8.4	20	45	67	25	26	13
17	11	9.4	7.0	5.0	7.0	8.4	22	43	65	24	32	12
18	11	9.7	7.0	5.0	8.0	8.7	21	44	64	23	26	12
19	11	9.5	7.0	5.0	8.0	9.1	21	50	63	23	22	12
20	11	9.8	8.0	5.0	7.0	10	23	60	62	22	21	12
21	11	9.0	7.0	5.0	7.0	11	26	75	60	23	20	12
22	8.6	6.0	7.0	5.0	7.0	12	29	88	58	22	18	12
23	11	6.5	7.0	5.0	7.0	12	33	87	57	21	18	12
24	12	7.0	7.0	5.0	7.0	12	37	77	54	20	18	11
25	12	7.5	7.0	6.0	7.0	14	38	69	52	22	18	11
26	12	8.0	7.0	6.0	8.0	15	36	66	50	22	18	11
27	11	9.0	6.0	6.0	8.0	17	35	68	47	21	17	11
28	11	9.5	7.0	6.0	8.0	18	35	74	46	19	17	12
29	11	10	7.0	6.0	8.0	17	35	97	47	19	17	11
30	11	11	7.0	6.0	---	17	37	125	46	18	17	11
31	11	---	7.0	7.0	---	16	---	133	---	17	16	---
TOTAL	346.6	277.5	257.0	181.0	204.0	325.0	693	1843	2372	846	576	391
MEAN	11.2	9.25	8.29	5.84	7.03	10.5	23.1	59.5	79.1	27.3	18.6	13.0
AC-FT	687	550	510	359	405	645	1370	3660	4700	1680	1140	776
MAX	12	11	15	8.0	8.0	18	38	133	131	44	32	18
MIN	8.6	6.0	6.0	5.0	6.0	7.0	14	34	46	17	14	11

CAL YR	2007	TOTAL	10312.4	MEAN	28.3	MAX	161	MIN	5.2	AC-FT	20450
WTR YR	2008	TOTAL	8312.1	MEAN	22.7	MAX	133	MIN	5.0	AC-FT	16490

MAX DISCH: 136 CFS AT 23:00 ON May. 30, 2008 GH 4.57 FT. SHIFT 0.02 FT.  
MAX GH: 4.57 FT. AT 23:00 ON May. 30, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08240500 TRINCHERA CREEK ABOVE TURNERS RANCH, NEAR FORT GARLAND CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08241000 TRINCHERA CREEK ABOVE MOUNTAIN HOME RESERVOIR, CO

**LOCATION.**--Lat 37°23'41", long 105°22'09", SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 31, T.31 S., R.71 W., (unsurveyed) Costilla County, Hydrologic Unit 13010002, on right bank 150 ft downstream from bridge, 1000 ft upstream from Mountain Home Reservoir, and 5 mi southeast of Ft. Garland, Co.

**DRAINAGE AREA.**--57 mi<sup>2</sup>.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. The primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 4-ft. diameter corrugated metal shelter and well. A graphic water-stage recorder is operated as a data backup.

**REMARKS.**--Record is complete and reliable, except for Jan. 12-15, 2008 when floats were obstructed by the winter floor. Stage-discharge relation was affected by ice Nov. 23, 2007 to Jan. 11, 2008, Jan. 16-Feb. 20, March 3-7, 2008. From September 10, 2008 until September 25, 2008, significant beaver dam construction on the control occurred. Record is good, except for periods of no gage-height and ice and beaver dam affected record, which are fair to poor. Also, record during period of shifting control associated with the natural flush event from May 20 to June 3, 2008 should be considered fair to poor due to the uncertain nature of the event. The maximum gage-height was estimated since it occurred when floats were obstructed by the winter floor and should be considered poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--TRIMTNC07 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

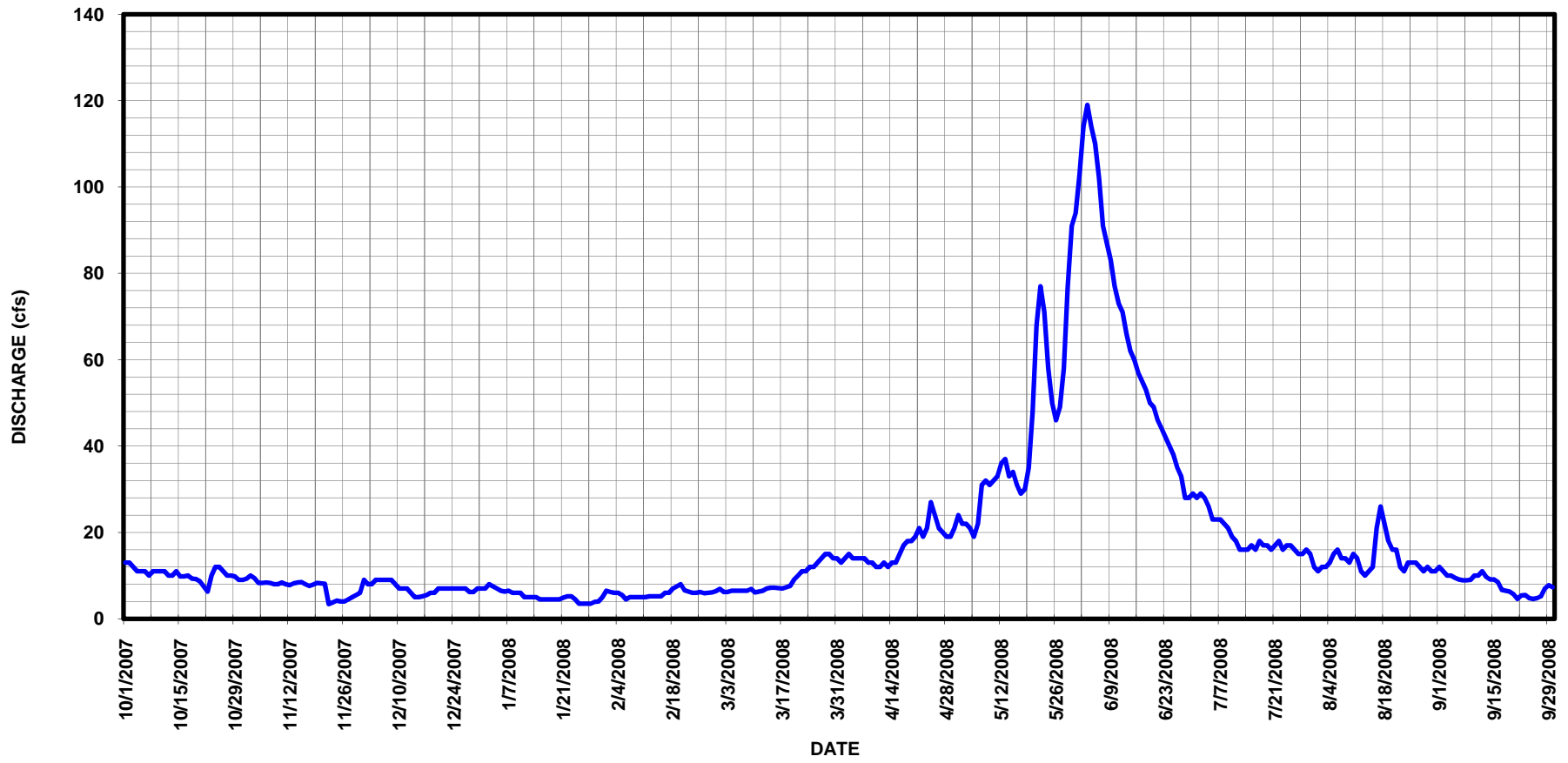
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	9.3	9.0	7.0	6.5	6.9	13	24	103	28	11	12
2	13	10	8.0	8.0	6.2	6.2	14	22	114	29	12	11
3	12	9.4	8.0	7.5	6.0	6.2	15	22	119	28	12	10
4	11	8.3	9.0	7.0	6.0	6.5	14	21	114	26	13	10
5	11	8.3	9.0	6.5	5.5	6.5	14	19	110	23	15	9.5
6	11	8.4	9.0	6.3	4.5	6.5	14	22	102	23	16	9.1
7	10	8.3	9.0	6.5	5.0	6.5	14	31	91	23	14	8.9
8	11	8.0	9.0	6.0	5.0	6.5	13	32	87	22	14	8.9
9	11	8.0	8.0	6.0	5.0	6.9	13	31	83	21	13	9.0
10	11	8.4	7.0	6.0	5.0	6.1	12	32	77	19	15	10
11	11	8.0	7.0	5.0	5.0	6.3	12	33	73	18	14	10
12	10	7.8	7.0	5.0	5.2	6.5	13	36	71	16	11	11
13	10	8.2	6.0	5.0	5.2	7.0	12	37	66	16	10	9.7
14	11	8.4	5.0	5.0	5.2	7.2	13	33	62	16	11	9.1
15	9.8	8.5	5.0	4.5	5.2	7.2	13	34	60	17	12	9.1
16	9.8	8.0	5.2	4.5	6.0	7.1	15	31	57	16	21	8.5
17	10	7.6	5.5	4.5	6.0	7.0	17	29	55	18	26	6.7
18	9.3	7.9	6.0	4.5	7.0	7.3	18	30	53	17	22	6.5
19	9.2	8.3	6.0	4.5	7.5	7.6	18	35	50	17	18	6.3
20	8.7	8.2	7.0	4.5	8.0	9.1	19	48	49	16	16	5.7
21	7.5	8.1	7.0	4.9	6.6	10	21	68	46	17	16	4.6
22	6.3	3.4	7.0	5.2	6.3	11	19	77	44	18	12	5.4
23	10	3.8	7.0	5.2	6.0	11	21	71	42	16	11	5.5
24	12	4.2	7.0	4.5	6.0	12	27	58	40	17	13	4.8
25	12	4.0	7.0	3.5	6.2	12	24	50	38	17	13	4.6
26	11	4.0	7.0	3.5	5.9	13	21	46	35	16	13	4.8
27	10	4.5	7.0	3.5	6.0	14	20	49	33	15	12	5.2
28	10	5.0	6.2	3.5	6.1	15	19	58	28	15	11	7.0
29	9.8	5.5	6.2	3.9	6.4	15	19	77	28	16	12	7.8
30	9.0	6.0	7.0	4.0	---	14	21	91	29	15	11	7.3
31	9.0	---	7.0	5.0	---	14	---	94	---	12	11	---
TOTAL	319.4	215.8	220.1	160.5	170.5	278.1	498	1341	1959	583	431	238.0
MEAN	10.3	7.19	7.10	5.18	5.88	8.97	16.6	43.3	65.3	18.8	13.9	7.93
AC-FT	634	428	437	318	338	552	988	2660	3890	1160	855	472
MAX	13	10	9.0	8.0	8.0	15	27	94	119	29	26	12
MIN	6.3	3.4	5.0	3.5	4.5	6.1	12	19	28	12	10	4.6

CAL YR	2007	TOTAL	8277.8	MEAN	22.7	MAX	136	MIN	2.8	AC-FT	16420
WTR YR	2008	TOTAL	6414.4	MEAN	17.5	MAX	119	MIN	3.4	AC-FT	12720

MAX DISCH: 125 CFS AT 05:30 ON Jun. 3, 2008 GH 1.63 FT. SHIFT 0.07 FT.  
MAX GH: 1.74 FT. (ESTIMATED & ICE AFFECTED) AT 10:00 ON Jan. 13, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08241000 TRINCHERA CREEK ABOVE MOUNTAIN HOME RESERVOIR CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08241500 SANGRE DE CRISTO CREEK NEAR FORT GARLAND, CO

**LOCATION.**--Lat 37°25'30", long 105°24'52", Costilla County, Hydrologic Unit 13010002, in Sangre de Cristo Grant, on left bank at ice house road bridge, 2,200 ft upstream from Garland Canal, 1.0 mi east of Fort Garland, and 6.3 mi upstream from Ute Creek.

**DRAINAGE AREA.**--190 mi<sup>2</sup>.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. The primary record is an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 48-inch diameter CMP shelter and well. A graphic water-stage recorder is operated as a data backup. Elevation of gage is 7,900 ft, from topographic map.

**REMARKS.**--Record is complete and reliable, except for Jan. 16-26, 2008 when there was an ice plug in the oil cylinder and March 20, 21, 2008 when there was missing shaft encoder data. Stage-discharge relation was affected by ice Nov, 25-29, Dec. 2, 10-31, 2007, Jan. 1-15, 27-31, Feb. 1-29, Mar. 1-9, 2008. Record is good except for periods of no gage-height and ice affected record, which are fair to poor. Peak discharge is rated fair due to uncertainty of channel control shifts above highest measured gage heights. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--SANFTGCO18 USED FROM 01-Oct-2007 TO 30-Sep-2008

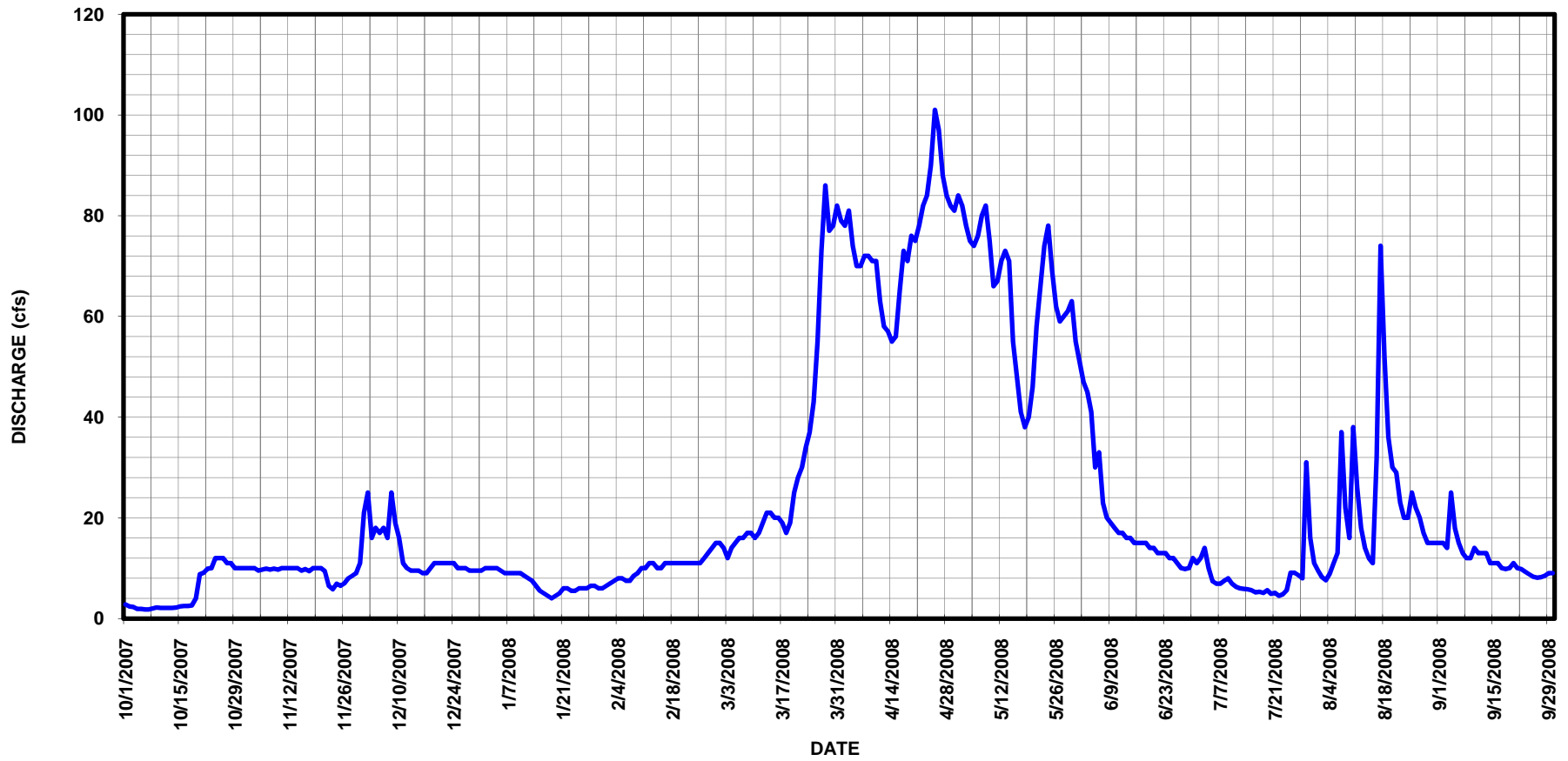
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	10	21	10	6.5	15	79	84	51	11	9.5	15
2	2.4	10	25	10	7.0	14	78	82	47	12	8.2	15
3	2.3	10	16	10	7.5	12	81	78	45	14	7.6	14
4	1.9	9.5	18	10	8.0	14	74	75	41	10	8.9	25
5	1.9	9.7	17	9.5	8.0	15	70	74	30	7.4	11	18
6	1.8	9.9	18	9.0	7.5	16	70	76	33	6.9	13	15
7	1.8	9.7	16	9.0	7.5	16	72	80	23	6.9	37	13
8	2.0	9.9	25	9.0	8.5	17	72	82	20	7.5	22	12
9	2.2	9.7	19	9.0	9.0	17	71	75	19	8.0	16	12
10	2.1	10	16	9.0	10	16	71	66	18	6.9	38	14
11	2.1	10	11	8.5	10	17	63	67	17	6.3	26	13
12	2.1	10	10	8.0	11	19	58	71	17	6.0	18	13
13	2.1	10	9.5	7.5	11	21	57	73	16	5.9	14	13
14	2.2	10	9.5	6.5	10	21	55	71	16	5.8	12	11
15	2.4	9.5	9.5	5.5	10	20	56	55	15	5.6	11	11
16	2.5	9.8	9.0	5.0	11	20	65	48	15	5.2	32	11
17	2.5	9.4	9.0	4.5	11	19	73	41	15	5.3	74	10
18	2.6	10	10	4.0	11	17	71	38	15	5.1	52	9.8
19	4.0	10	11	4.5	11	19	76	40	14	5.6	36	10
20	8.8	10	11	5.0	11	25	75	46	14	4.9	30	11
21	9.1	9.4	11	6.0	11	28	78	58	13	5.1	29	10
22	9.9	6.5	11	6.0	11	30	82	66	13	4.5	23	9.8
23	10	5.8	11	5.5	11	34	84	74	13	4.8	20	9.3
24	12	6.9	11	5.5	11	37	90	78	12	5.6	20	8.8
25	12	6.5	10	6.0	11	43	101	69	12	9.1	25	8.3
26	12	7.0	10	6.0	12	55	97	62	11	9.1	22	8.1
27	11	8.0	10	6.0	13	73	88	59	10	8.6	20	8.2
28	11	8.5	9.5	6.5	14	86	84	60	9.8	8.0	17	8.5
29	10	9.0	9.5	6.5	15	77	82	61	10	31	15	9.0
30	10	11	9.5	6.0	---	78	81	63	12	16	15	9.0
31	10	---	9.5	6.0	---	82	---	55	---	11	15	---
TOTAL	169.5	275.7	402.5	219.5	295.5	973	2254	2027	596.8	259.1	697.2	354.8
MEAN	5.47	9.19	13.0	7.08	10.2	31.4	75.1	65.4	19.9	8.36	22.5	11.8
AC-FT	336	547	798	435	586	1930	4470	4020	1180	514	1380	704
MAX	12	11	25	10	15	86	101	84	51	31	74	25
MIN	1.8	5.8	9.0	4.0	6.5	12	55	38	9.8	4.5	7.6	8.1
CAL YR 2007	TOTAL	7346.91	MEAN	20.1	MAX	135	MIN	.63	AC-FT	14570		
WTR YR 2008	TOTAL	8524.6	MEAN	23.3	MAX	101	MIN	1.8	AC-FT	16910		

MAX DISCH: 110 CFS AT 06:45 ON Aug. 17, 2008 GH 2.84 FT. SHIFT -0.16 FT.  
MAX GH: 2.84 FT. AT 06:45 ON Aug. 17, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08241500 SANGRE DE CRISTO CREEK NEAR FORT GARLAND CO  
WY2008 HYDROGRAPH





RIO GRANDE BASIN

08242500 UTE CREEK NEAR FORT GARLAND, CO

**LOCATION.**--Lat 37°26'50", long 105°25'33", Costilla County, Hydrologic Unit 13010002, in Sangre de Cristo Grant, on left bank 2,300 ft upstream from Newton ditch, 1.4 mi north of Fort Garland, and 5.7 mi upstream from mouth.

**DRAINAGE AREA AND PERIOD OF RECORD.**--32 mi<sup>2</sup>. Staff gage established on weir Mar. 1915 and operated to Oct. 1916. Continuous record from May 1923 to present at various locations close to present site.

**GAGE.**--Primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 4 ft CMP shelter and well. A graphic water-stage recorder is operated as a data backup. Elevation of gage is 8,045 ft, from topographic map.

**REMARKS.**--Record is complete and reliable, except for Nov. 25, 26, 2007 when the well was frozen and Nov. 27, 2007 through Mar. 25, 2008 when the station was closed for the winter. Stage-discharge relation was affected by ice Nov. 21-24, 2007. June 2, 2008 was flagged with an 'e' - "GH not representative of average" due to apparent inlet siphoning. Record is good except for periods of no gage-height and ice affected record, which are poor. Record for the period Jun. 2-4, 2008 should be considered fair due to inlet hydraulics issue. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--UTEFTGCO18 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

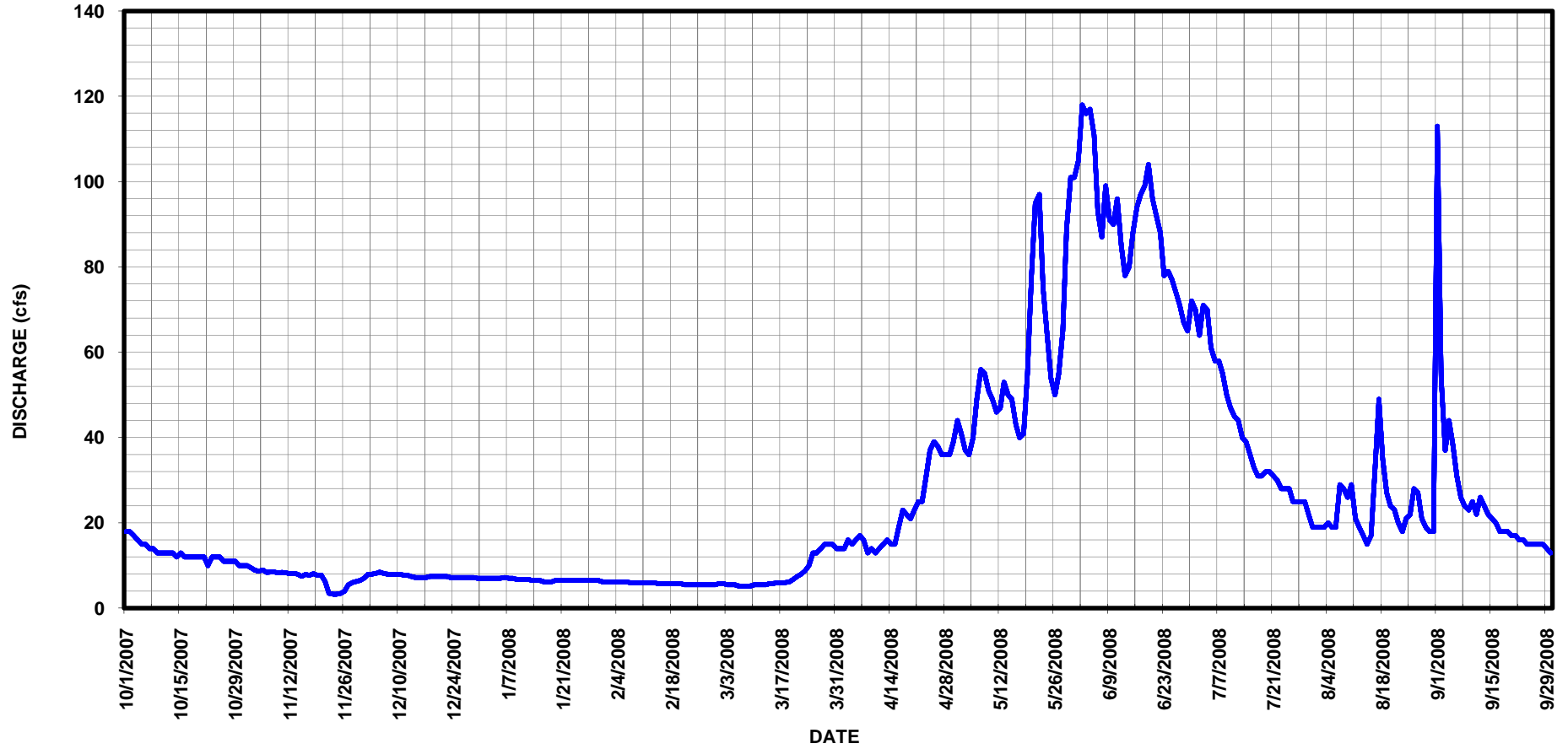
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	10	7.0	7.0	6.2	5.8	14	44	105	70	19	113
2	18	9.5	8.0	7.0	6.2	5.8	14	41	118	64	19	54
3	17	8.9	8.0	7.0	6.2	5.5	16	37	116	71	19	37
4	16	8.7	8.2	7.0	6.2	5.5	15	36	117	70	20	44
5	15	9.0	8.5	7.0	6.2	5.5	16	40	111	61	19	38
6	15	8.4	8.2	7.2	6.2	5.2	17	49	93	58	19	31
7	14	8.5	8.0	7.0	6.0	5.2	16	56	87	58	29	26
8	14	8.5	8.0	7.0	6.0	5.2	13	55	99	55	28	24
9	13	8.3	8.0	6.8	6.0	5.2	14	51	91	50	26	23
10	13	8.4	8.0	6.8	6.0	5.5	13	49	90	47	29	25
11	13	8.3	7.8	6.8	6.0	5.5	14	46	96	45	21	22
12	13	8.1	7.8	6.8	6.0	5.5	15	47	85	44	19	26
13	13	8.2	7.5	6.5	6.0	5.5	16	53	78	40	17	24
14	12	8.0	7.2	6.5	5.8	5.8	15	50	80	39	15	22
15	13	7.5	7.2	6.5	5.8	5.8	15	49	88	36	17	21
16	12	7.9	7.2	6.2	5.8	6.0	19	43	94	33	32	20
17	12	7.7	7.2	6.2	5.8	6.0	23	40	97	31	49	18
18	12	8.1	7.5	6.2	5.8	6.0	22	41	99	31	35	18
19	12	7.7	7.5	6.5	5.8	6.2	21	55	104	32	27	18
20	12	7.8	7.5	6.5	5.8	6.8	23	78	96	32	24	17
21	12	6.2	7.5	6.5	5.5	7.5	25	95	92	31	23	17
22	10	3.5	7.5	6.5	5.5	8.0	25	97	88	30	20	16
23	12	3.3	7.2	6.5	5.5	8.8	31	75	78	28	18	16
24	12	3.3	7.2	6.5	5.5	10	37	64	79	28	21	15
25	12	3.5	7.2	6.5	5.5	13	39	54	77	28	22	15
26	11	4.0	7.2	6.5	5.5	13	38	50	74	25	28	15
27	11	5.5	7.2	6.5	5.5	14	36	55	71	25	27	15
28	11	6.0	7.2	6.5	5.5	15	36	65	67	25	21	15
29	11	6.3	7.2	6.5	5.5	15	36	89	65	25	19	14
30	10	6.5	7.0	6.5	---	15	39	101	72	22	18	13
31	10	---	7.0	6.2	---	14	---	101	---	19	18	---
TOTAL	399	215.6	233.7	205.7	169.3	246.8	673	1806	2707	1253	718	772
MEAN	12.9	7.19	7.54	6.64	5.84	7.96	22.4	58.3	90.2	40.4	23.2	25.7
AC-FT	791	428	464	408	336	490	1330	3580	5370	2490	1420	1530
MAX	18	10	8.5	7.2	6.2	15	39	101	118	71	49	113
MIN	10	3.3	7.0	6.2	5.5	5.2	13	36	65	19	15	13

CAL YR	2007	TOTAL	7612.3	MEAN	20.9	MAX	96	MIN	3.3	AC-FT	15100
WTR YR	2008	TOTAL	9399.1	MEAN	25.7	MAX	118	MIN	3.3	AC-FT	18640

MAX DISCH: 170 CFS AT 11:45 ON Sep. 1, 2008 GH 2.99 FT. SHIFT -0.01 FT.  
MAX GH: 2.99 FT. AT 11:45 ON Sep. 1, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08242500 UTE CREEK NEAR FORT GARLAND CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08243500 TRINCHERA CREEK BELOW SMITH RESERVOIR, NEAR BLANCA, CO

**LOCATION.**--Lat 37°23'10", long 105°33'02", in sec. 4, T.31 S., R.73 W., (unsurveyed), Costilla County, Hydrologic Unit 13010002, on right bank 150 ft downstream from bridge, 0.75 mi downstream from Smith Reservoir, and 5.0 mi southwest of Blanca, Co.

**DRAINAGE AREA.**--396 mi<sup>2</sup>.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 42 inch diameter corrugated metal shelter and well. The shaft encoder float is operated in an oil cylinder. A graphic water-stage recorder is operated as a data backup. Elevation of gage is 7,700 ft, estimated from nearby U.S. Coast and Geodetic Survey level lines.

**REMARKS.**--Record is complete and reliable, except for Jan. 12 - Feb. 20, 2008 when float was affected by an ice plug in the oil cylinder. Stage-discharge relation was affected by ice Dec. 11, 2007 and Mar. 5, 6, 2008. Record is good, except for periods of no gage height and ice affected record, which are fair. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--TRISMIC011 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

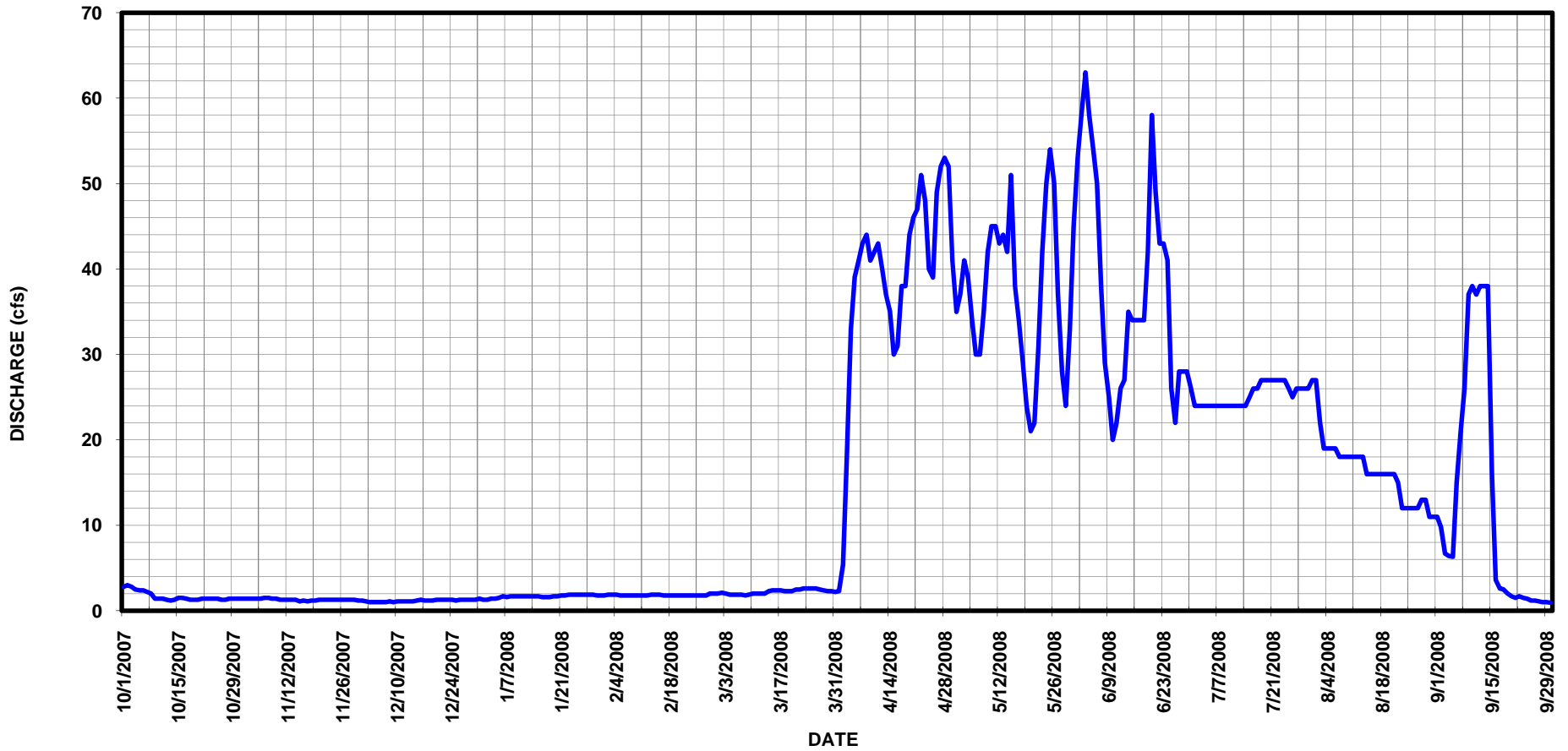
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	1.4	1.2	1.3	1.8	2.0	2.3	35	53	24	27	11
2	3.0	1.4	1.1	1.3	1.9	2.1	5.4	37	58	24	22	9.8
3	2.8	1.4	1.0	1.4	1.9	2.0	18	41	63	24	19	6.7
4	2.5	1.4	1.0	1.4	1.9	1.9	33	39	58	24	19	6.4
5	2.4	1.4	1.0	1.5	1.8	1.9	39	34	54	24	19	6.3
6	2.4	1.5	1.0	1.7	1.8	1.9	41	30	50	24	19	15
7	2.2	1.5	1.0	1.6	1.8	1.9	43	30	38	24	18	21
8	2.0	1.4	1.1	1.7	1.8	1.8	44	35	29	24	18	26
9	1.4	1.4	1.0	1.7	1.8	1.9	41	42	25	24	18	37
10	1.4	1.3	1.1	1.7	1.8	2.0	42	45	20	24	18	38
11	1.4	1.3	1.1	1.7	1.8	2.0	43	45	22	24	18	37
12	1.3	1.3	1.1	1.7	1.8	2.0	40	43	26	24	18	38
13	1.2	1.3	1.1	1.7	1.9	2.0	37	44	27	24	18	38
14	1.3	1.3	1.1	1.7	1.9	2.3	35	42	35	24	16	38
15	1.5	1.1	1.2	1.7	1.9	2.4	30	51	34	25	16	16
16	1.5	1.2	1.3	1.6	1.8	2.4	31	38	34	26	16	3.6
17	1.4	1.1	1.2	1.6	1.8	2.4	38	34	34	26	16	2.6
18	1.3	1.2	1.2	1.6	1.8	2.3	38	29	34	27	16	2.5
19	1.3	1.2	1.2	1.7	1.8	2.3	44	24	42	27	16	2.0
20	1.3	1.3	1.3	1.7	1.8	2.3	46	21	58	27	16	1.7
21	1.4	1.3	1.3	1.8	1.8	2.5	47	22	49	27	16	1.5
22	1.4	1.3	1.3	1.8	1.8	2.5	51	31	43	27	15	1.7
23	1.4	1.3	1.3	1.9	1.8	2.6	48	42	43	27	12	1.5
24	1.4	1.3	1.3	1.9	1.8	2.6	40	50	41	27	12	1.4
25	1.4	1.3	1.2	1.9	1.8	2.6	39	54	26	26	12	1.2
26	1.3	1.3	1.3	1.9	1.8	2.6	49	50	22	25	12	1.2
27	1.3	1.3	1.3	1.9	1.8	2.5	52	37	28	26	12	1.1
28	1.4	1.3	1.3	1.9	2.0	2.4	53	28	28	26	13	1.0
29	1.4	1.3	1.3	1.9	2.0	2.3	52	24	28	26	13	.99
30	1.4	1.2	1.3	1.8	---	2.3	41	33	26	26	11	.94
31	1.4	---	1.4	1.8	---	2.2	---	45	---	27	11	---
TOTAL	51.6	39.3	36.6	52.5	53.2	68.9	1162.7	1155	1128	784	502	369.13
MEAN	1.66	1.31	1.18	1.69	1.83	2.22	38.8	37.3	37.6	25.3	16.2	12.3
AC-FT	102	78	73	104	106	137	2310	2290	2240	1560	996	732
MAX	3.0	1.5	1.4	1.9	2.0	2.6	53	54	63	27	27	38
MIN	1.2	1.1	1.0	1.3	1.8	1.8	2.3	21	20	24	11	.94

CAL YR 2007 TOTAL 4828.78 MEAN 13.2 MAX 68 MIN .90 AC-FT 9580  
WTR YR 2008 TOTAL 5402.93 MEAN 14.8 MAX 63 MIN .94 AC-FT 10720

MAX DISCH: 63.6 CFS AT 05:00 ON Jun. 3, 2008 GH 3.75 FT. SHIFT 0.08 FT.  
MAX GH: 3.75 FT. AT 05:00 ON Jun. 3, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08243500 TRINCHERA CREEK BELOW SMITH RESERVOIR, NEAR BLANCA CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08245000 CONEJOS RIVER BELOW PLATORO RESERVOIR, CO

**LOCATION.**--Lat 37°21'18", long 106°32'37", Conejos County, Hydrologic Unit 13010005, on left bank 1,100 ft downstream from valve house for Platoro Reservoir and 0.7 mi northwest of Platoro.

**DRAINAGE AREA AND PERIOD OF RECORD.**--40 mi<sup>2</sup>. 1937 - 1953 at site one mile downstream. May 1952 to current year at present site.

**GAGE.**--Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a timber shelter and concrete well. A graphic water-stage recorder is operated as a data backup. The station is also equipped with an air temperature sensor. The control is a concrete weir with sloping sides. Datum of gage is 9,866.60 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Record is complete and reliable, except for November 19, 2007 through April 29, 2008 when the station was closed for the winter. Record is good, except for period of no gage-height record, which is fair. Period of no gage height record is rated fair, rather than poor, because the gage is directly below a reservoir and gate changes were not made during the period. Increase in discharge is due solely to the increase in reservoir head associated with spring runoff, and was estimated as such. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--CONPLACO13 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

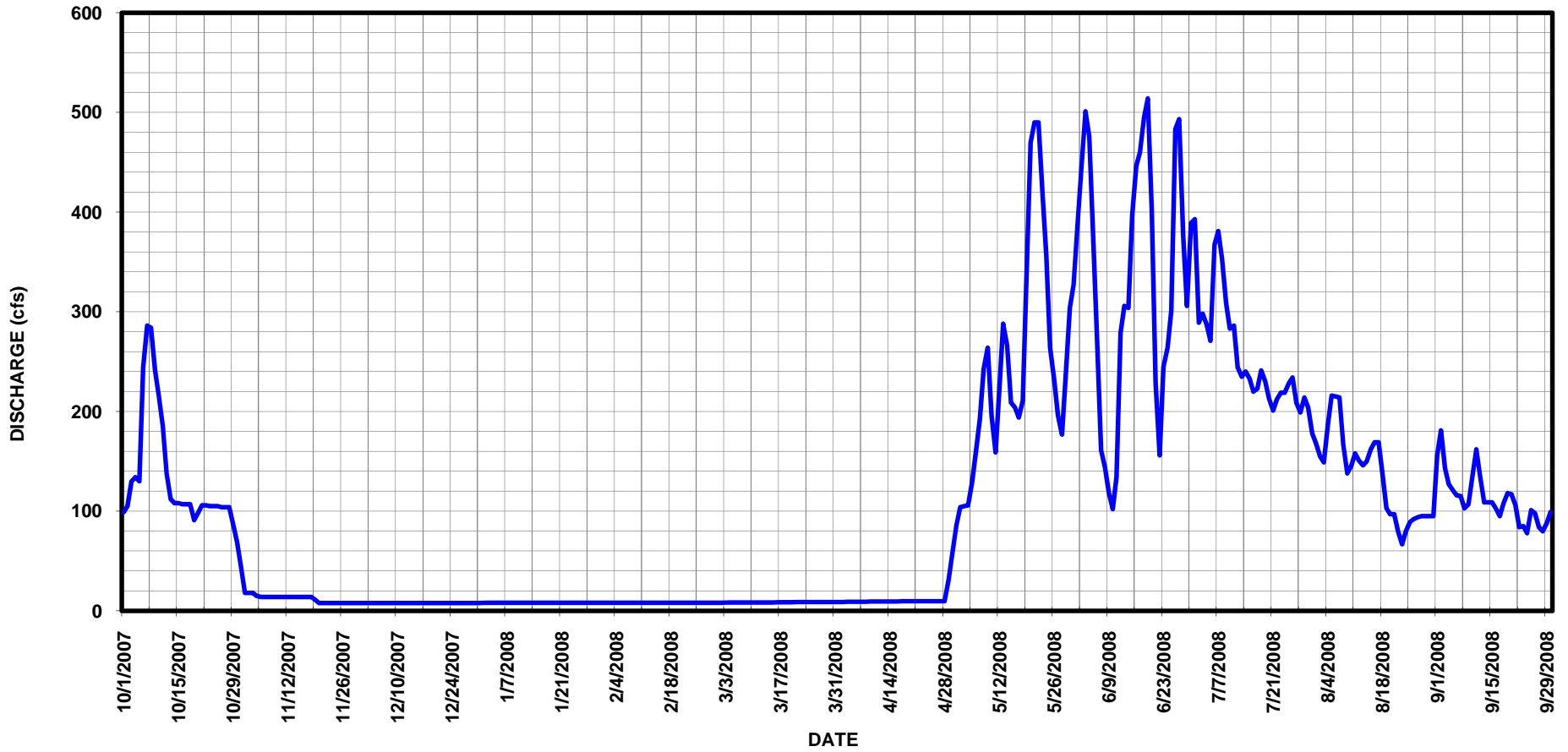
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	18	7.8	8.0	8.2	8.2	9.0	86	389	393	168	156
2	105	18	7.8	8.0	8.2	8.2	9.0	104	444	289	155	181
3	130	18	7.8	8.0	8.2	8.4	9.2	105	501	298	149	143
4	134	15	7.8	8.0	8.2	8.4	9.2	106	476	287	187	127
5	130	14	7.8	8.0	8.2	8.4	9.2	129	373	271	216	121
6	244	14	7.8	8.0	8.2	8.4	9.2	159	273	367	215	116
7	286	14	7.8	8.0	8.2	8.4	9.2	193	161	381	214	115
8	284	14	7.8	8.0	8.2	8.4	9.2	243	144	353	167	103
9	241	14	7.8	8.0	8.2	8.4	9.4	264	118	309	138	107
10	216	14	7.8	8.0	8.2	8.4	9.4	196	102	283	145	134
11	185	14	7.8	8.0	8.2	8.4	9.4	159	134	286	158	162
12	138	14	7.8	8.0	8.2	8.4	9.4	223	279	244	151	135
13	112	14	7.8	8.0	8.2	8.4	9.4	288	306	235	146	109
14	108	14	7.8	8.0	8.2	8.4	9.4	266	304	240	150	109
15	108	14	7.8	8.0	8.2	8.4	9.4	209	397	233	162	109
16	107	14	7.8	8.0	8.2	8.6	9.4	204	446	220	169	103
17	107	14	7.8	8.0	8.2	8.6	9.6	194	460	223	169	95
18	107	14	7.8	8.0	8.2	8.6	9.6	211	495	241	138	108
19	91	11	7.8	8.0	8.2	8.6	9.6	338	514	230	103	118
20	98	7.8	7.8	8.0	8.2	8.6	9.6	470	400	213	97	117
21	106	7.8	7.8	8.0	8.2	8.8	9.8	490	229	201	97	106
22	106	7.8	7.8	8.0	8.2	8.8	9.8	490	156	212	80	84
23	105	7.8	7.8	8.0	8.2	8.8	9.8	423	245	219	67	85
24	105	7.8	7.8	8.0	8.2	8.8	9.8	356	264	219	80	78
25	105	7.8	7.8	8.0	8.2	8.8	9.8	264	301	228	89	101
26	104	7.8	7.8	8.0	8.2	8.8	9.8	232	483	234	92	98
27	104	7.8	7.8	8.0	8.2	8.8	9.8	196	493	208	94	84
28	104	7.8	7.8	8.0	8.2	9.0	9.8	177	376	199	95	80
29	86	7.8	7.8	8.0	8.2	9.0	31	237	306	214	95	88
30	69	7.8	7.8	8.0	---	9.0	58	304	389	204	95	99
31	45	---	7.8	8.0	---	9.0	---	327	---	178	95	---
TOTAL	4069	361.8	241.8	248.0	237.8	266.2	354.2	7643	9958	7912	4176	3371
MEAN	131	12.1	7.80	8.00	8.20	8.59	11.8	247	332	255	135	112
AC-FT	8070	718	480	492	472	528	703	15160	19750	15690	8280	6690
MAX	286	18	7.8	8.0	8.2	9.0	58	490	514	393	216	181
MIN	45	7.8	7.8	8.0	8.2	8.2	9.0	86	102	178	67	78

CAL YR	2007	TOTAL	32643.7	MEAN	89.4	MAX	403	MIN	7.6	AC-FT	64750
WTR YR	2008	TOTAL	38838.8	MEAN	106	MAX	514	MIN	7.8	AC-FT	77040

MAX DISCH: 565 CFS AT 9:05 ON Jun. 27, 2008 GH 3.13 FT. SHIFT -0.16 FT.  
MAX GH: 3.13 FT. AT 9:05 ON Jun. 27, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08245000 CONEJOS RIVER BELOW PLATORO RESERVOIR CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08246500 CONEJOS RIVER NEAR MOGOTE, CO

**LOCATION.**--Lat 37°03'14", long 106°11'13", in SE¼SE¼ sec. 34, T.33 N., R.7 E., Conejos County, Hydrologic Unit 13010005, on left bank 75 ft downstream from bridge on State Highway 174, 0.4 mi downstream from Fox Creek, 5.3 mi west of Mogote, and 10 mi west of Antonito.

**DRAINAGE AREA AND PERIOD OF RECORD.**--282 mi<sup>2</sup>. Intermittent, non-recording data from 1903-1915 at various sites. Water stage recorder from 1915-Oct. 1988 at different site. Oct. 1988-present, water stage recorder at current site.

**GAGE.**--Primary record is generated by an electronic data logger with satellite transmitter and phone modem, which records gage-height data from a float-operated shaft encoder in a 5 ft. diameter metal shelter and well. A graphic water-stage recorder is operated as a data backup. Station is also equipped with an air temperature sensor and a tipping bucket rain gage. Datum of gage is 8,271.54 ft, Colorado State Highway datum.

**REMARKS.**--Record is complete and reliable, except for Dec. 29, 2007 through Feb. 13, 2008 when floats were affected by ice in well. The stage-discharge relation was affected by ice Nov. 23 - Dec. 28, 2007 and Feb. 14 - Mar. 24, 2008. Record is good, except for periods of no gage height and ice-affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--CONMOGCO12 USED FROM 01-Oct-2007 TO 03-Mar-2008  
CONMOGCO13 USED FROM 03-Mar-2008 TO 30-Sep-2008

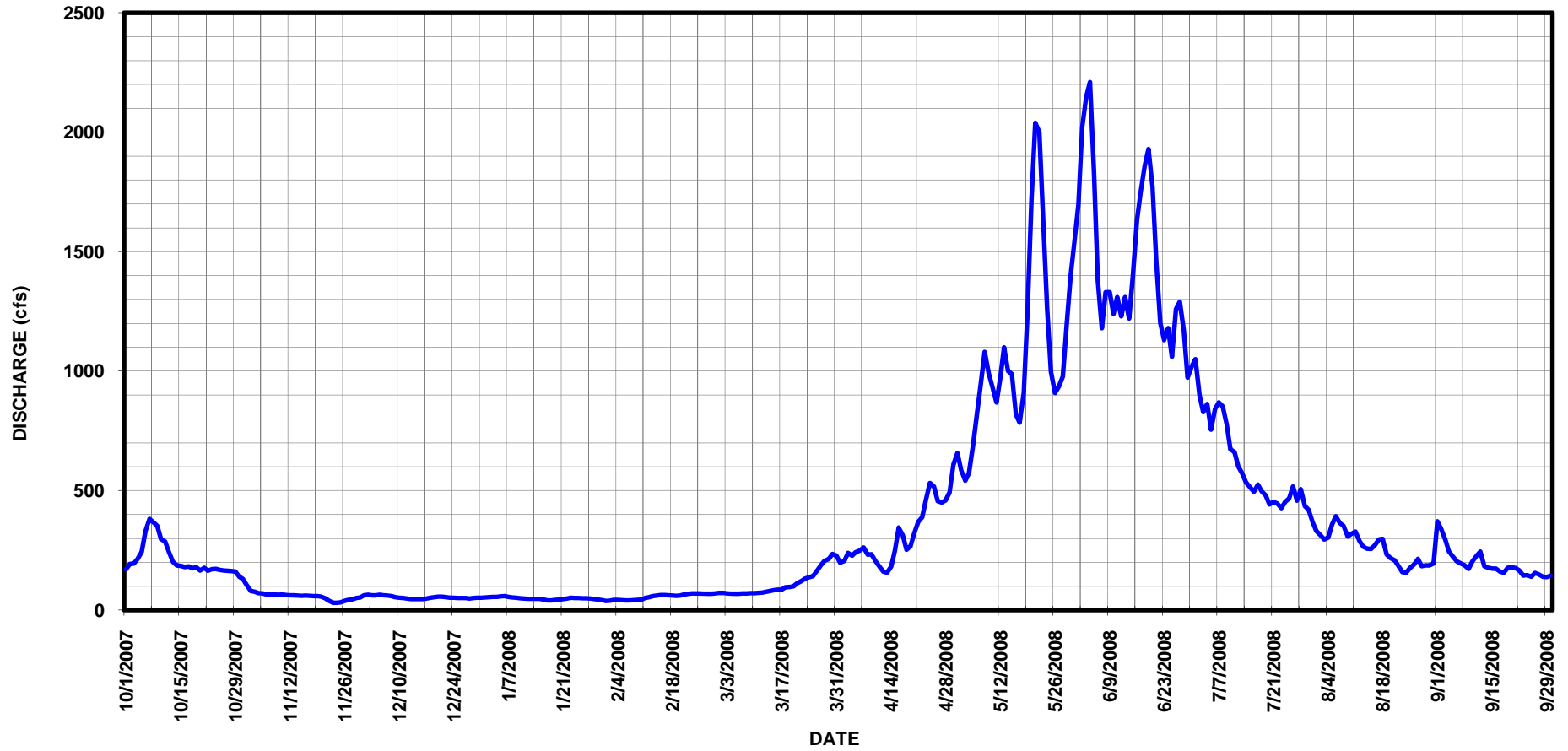
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	170	102	62	53	38	72	198	657	1700	1050	330	371
2	193	80	64	54	39	72	205	585	2020	901	314	340
3	195	76	62	55	42	70	239	542	2150	829	295	296
4	214	71	62	55	42	68	228	574	2210	862	303	245
5	244	70	64	57	41	68	242	690	1830	755	357	223
6	330	65	62	58	40	68	249	816	1380	842	393	204
7	381	65	60	55	40	70	262	950	1180	869	364	195
8	368	65	58	53	41	70	232	1080	1330	853	352	187
9	352	64	54	51	42	71	233	991	1330	778	308	172
10	297	65	52	49	44	71	205	932	1240	673	319	204
11	286	63	50	48	50	72	182	869	1310	661	328	226
12	243	62	48	47	54	73	161	972	1230	602	291	245
13	202	62	46	47	58	76	157	1100	1310	571	265	184
14	187	61	46	47	60	80	181	1000	1220	534	257	177
15	185	59	46	47	63	83	249	988	1400	514	256	174
16	180	61	46	44	63	85	345	818	1630	495	272	173
17	182	59	48	40	62	85	314	784	1750	525	296	161
18	175	58	52	40	60	95	252	909	1860	496	298	156
19	179	58	54	42	59	97	267	1240	1930	480	232	177
20	165	56	56	44	61	99	323	1720	1770	442	217	179
21	177	49	56	46	65	113	370	2040	1460	452	209	176
22	164	39	54	48	67	120	388	2000	1200	446	185	166
23	171	30	52	51	69	132	465	1640	1130	426	159	144
24	172	30	52	50	70	137	531	1260	1180	453	157	146
25	168	32	50	50	70	142	517	997	1060	467	177	139
26	166	38	50	49	68	163	456	909	1260	517	190	155
27	164	42	50	49	68	187	450	935	1290	458	214	149
28	163	45	48	48	68	206	459	978	1170	505	184	140
29	161	50	50	46	69	213	493	1190	973	435	187	138
30	140	53	52	44	---	235	608	1400	1020	420	187	144
31	129	---	52	41	---	228	---	1540	---	368	195	---
TOTAL	6503	1730	1658	1508	1613	3421	9461	33106	43523	18679	8091	5786
MEAN	210	57.7	53.5	48.6	55.6	110	315	1068	1451	603	261	193
AC-FT	12900	3430	3290	2990	3200	6790	18770	65670	86330	37050	16050	11480
MAX	381	102	64	58	70	235	608	2040	2210	1050	393	371
MIN	129	30	46	40	38	68	157	542	973	368	157	138
CAL YR 2007	TOTAL	102802	MEAN	282	MAX	1360	MIN	30	AC-FT	203900		
WTR YR 2008	TOTAL	135079	MEAN	369	MAX	2210	MIN	30	AC-FT	267900		

MAX DISCH: 2350 CFS AT 05:30 ON Jun. 4, 2008 GH 5.59 FT. SHIFT -0.01 FT.  
MAX GH: 5.59 FT. AT 05:30 ON Jun. 4, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08246500 CONEJOS RIVER NEAR MOGOTE CO  
WY2008 HYDROGRAPH





RIO GRANDE BASIN

08247500 SAN ANTONIO RIVER AT ORTIZ, CO

**LOCATION.**--Lat 36°59'35", long 106°02'17", in NE¼SE¼ sec. 24, T.32 N., R.8 E., Rio Arriba County, New Mexico, Hydrologic Unit 13010005, on left bank 800 ft south of Colorado-New Mexico State line, 0.4 mi southeast of Ortiz, and 0.4 mi upstream from Los Pinos River.

**DRAINAGE AREA AND PERIOD OF RECORD.**--110 mi<sup>2</sup>. April 1919 to Oct. 1920, Oct. 1924 to current year(no winter record prior to 1941). Monthly data only for some periods.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 42-inch metal pipe shelter and well. A graphic water-stage recorder is operated as a data backup. Elevation of gage is 7,970 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Record is complete and reliable, except for Dec. 31, 2007 through Mar. 17, 2008 when the well and oil cylinder were frozen. The stage-discharge relation was affected by ice Nov. 23 through Dec. 30, 2007, and Mar. 18-26, 2008. Trash and leaves were cleaned from the control on Oct. 1, 15, and Nov. 1, 2007, resulting in change of gage-height. These corrections to the gage-height were considered a change in control and were accounted for by shift distribution instead of gage-height correction. Record is good, except for periods when discharge exceeded 340 cfs and periods of no gage-height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--SANORTCO14 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

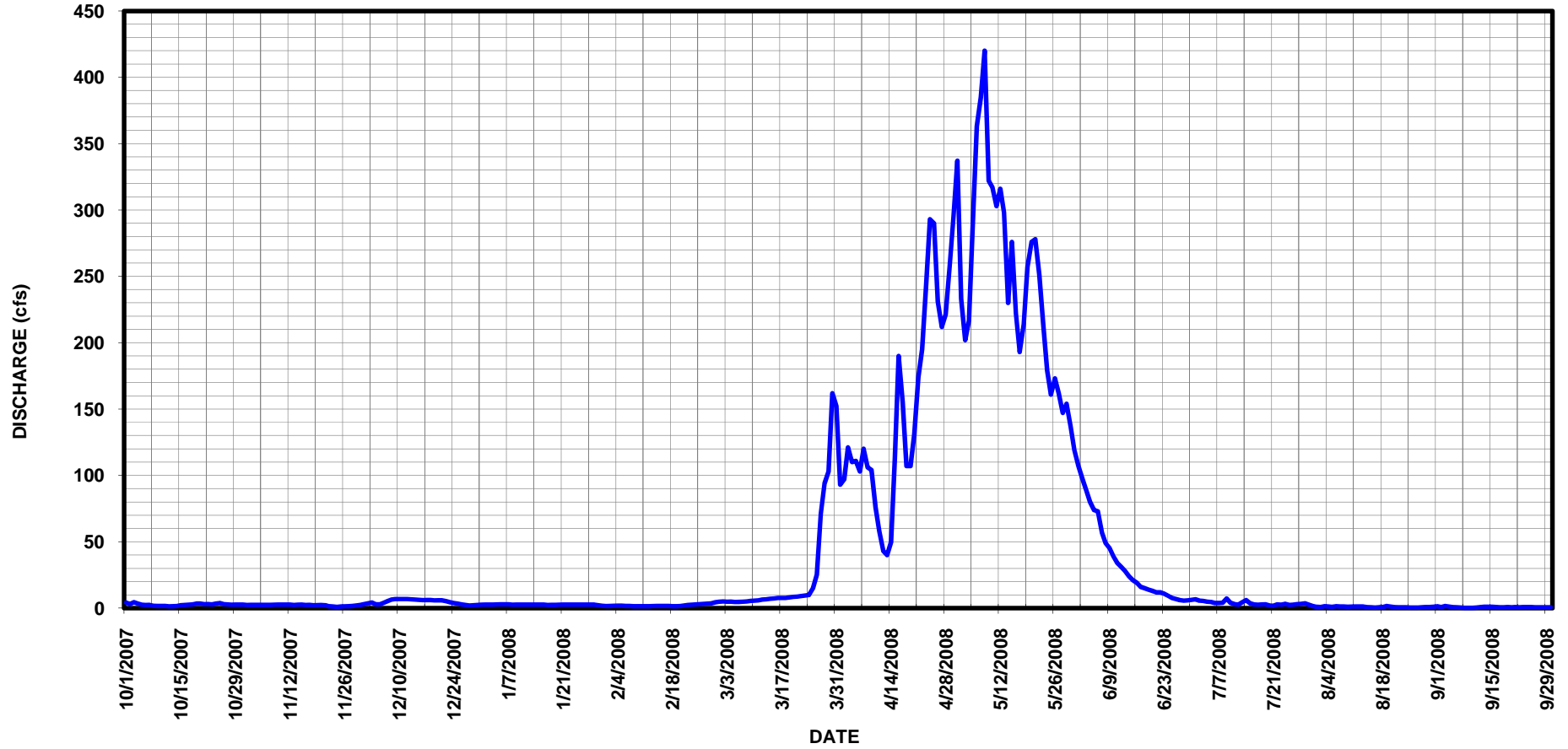
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	2.4	3.0	2.7	1.5	4.8	93	337	107	6.6	1.0	1.3
2	3.1	2.4	3.6	2.7	1.6	5.0	97	233	98	5.7	.81	.86
3	4.4	2.4	4.2	2.7	1.7	4.8	121	202	89	5.4	1.3	1.6
4	3.5	2.3	2.9	2.8	1.8	4.8	110	217	80	4.8	1.1	1.1
5	2.5	2.3	2.9	2.9	1.7	4.6	111	294	74	4.7	1.0	.70
6	2.4	2.4	4.0	2.9	1.6	4.6	103	363	73	3.9	1.3	.51
7	2.3	2.4	5.2	2.8	1.5	4.8	120	385	57	3.9	1.2	.38
8	1.7	2.5	6.4	2.7	1.4	5.0	106	420	49	4.0	1.2	.26
9	1.5	2.5	6.8	2.7	1.3	5.4	104	322	45	7.3	1.0	.16
10	1.5	2.5	6.9	2.7	1.3	5.6	76	317	39	4.1	1.1	.16
11	1.5	2.6	6.8	2.7	1.4	5.8	58	303	34	3.1	1.2	.35
12	1.4	2.6	6.8	2.7	1.4	6.4	43	316	31	2.7	1.1	.68
13	1.3	2.4	6.6	2.6	1.5	6.6	40	298	28	4.4	1.1	.95
14	1.5	2.5	6.4	2.6	1.6	7.0	50	230	24	6.0	.72	1.0
15	2.1	2.6	6.2	2.6	1.6	7.2	113	276	21	3.7	.49	.93
16	2.4	2.3	6.0	2.5	1.6	7.6	190	222	19	2.8	.39	.77
17	2.7	2.4	6.0	2.4	1.5	7.6	155	193	16	2.5	.57	.60
18	2.9	2.2	6.0	2.4	1.4	7.6	107	214	15	2.9	.84	.63
19	3.4	2.2	5.9	2.4	1.4	8.0	107	257	14	2.8	1.5	.72
20	3.4	2.3	5.9	2.5	1.6	8.4	131	276	13	2.0	1.2	.64
21	3.1	2.1	5.8	2.6	2.0	8.6	174	278	12	1.7	.87	.81
22	3.0	1.3	5.2	2.6	2.4	9.0	195	251	12	2.8	.64	.66
23	2.8	1.1	4.4	2.7	2.6	9.6	244	215	11	2.6	.66	.74
24	3.4	.90	3.8	2.6	2.9	10	293	179	9.3	3.2	.48	.75
25	3.8	1.1	3.4	2.5	3.1	15	290	161	7.7	2.4	.31	.75
26	3.1	1.3	2.8	2.6	3.2	25	231	173	6.8	2.5	.43	.65
27	2.8	1.4	2.4	2.5	3.4	71	212	162	6.1	3.0	.45	.55
28	2.6	1.5	2.0	2.5	3.7	94	221	147	5.6	3.3	.56	.63
29	2.6	1.9	2.2	2.5	4.4	103	257	154	5.9	3.7	.84	.55
30	2.6	2.4	2.4	2.2	---	162	294	137	6.2	2.5	.86	.59
31	2.5	---	2.6	1.8	---	152	---	119	---	1.6	.90	---
TOTAL	82.0	63.20	145.5	80.1	58.1	780.8	4446	7651	1008.6	112.6	27.12	20.98
MEAN	2.65	2.11	4.69	2.58	2.00	25.2	148	247	33.6	3.63	.87	.70
AC-FT	163	125	289	159	115	1550	8820	15180	2000	223	54	42
MAX	4.4	2.6	6.9	2.9	4.4	162	294	420	107	7.3	1.5	1.6
MIN	1.3	.90	2.0	1.8	1.3	4.6	40	119	5.6	1.6	.31	.16

CAL YR	2007	TOTAL	6482.7	MEAN	17.8	MAX	162	MIN	0	AC-FT	12860
WTR YR	2008	TOTAL	14476	MEAN	39.6	MAX	420	MIN	.16	AC-FT	28710

MAX DISCH: 508 CFS AT 05:30 ON May. 8, 2008 GH 4.80 FT. SHIFT -0.27 FT.  
MAX GH: 4.80 FT. AT 05:30 ON May. 8, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08247500 SAN ANTONIO RIVER AT ORTIZ CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08248000 LOS PINOS RIVER NEAR ORTIZ, CO

**Location.**--Lat 36°58'56", long 106°04'23", on line between secs. 26 and 27, T.32 N., R.8 E., Rio Arriba County, New Mexico, Hydrologic Unit 13010005, on left bank 0.9 mi south of Colorado-New Mexico State line, 2.1 mi southwest of Ortiz, and 2.9 mi upstream from mouth.

**DRAINAGE AREA AND PERIOD OF RECORD.**--167 mi<sup>2</sup>. Jan. 1, 1915 to Apr. 14, 1955, water stage recorder at location 350' upstream. Apr. 15, 1955 relocated to present site.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 42-inch metal pipe shelter and well. A graphic water-stage recorder is operated as a data backup. Supplemental outside chain gage. Elevation of gage is 8,040 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Record is complete and reliable, except for Dec. 17, 2007 through Mar. 17, 2008 when the well and oil cylinder were frozen. Stage-discharge relation was affected by ice Nov. 20 through Dec. 16, 2007 and Mar. 18-26, 2008. Record is good except for periods of no gage height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--LOSORTCO13 USED FROM 01-Oct-2007 TO 30-Sep-2008

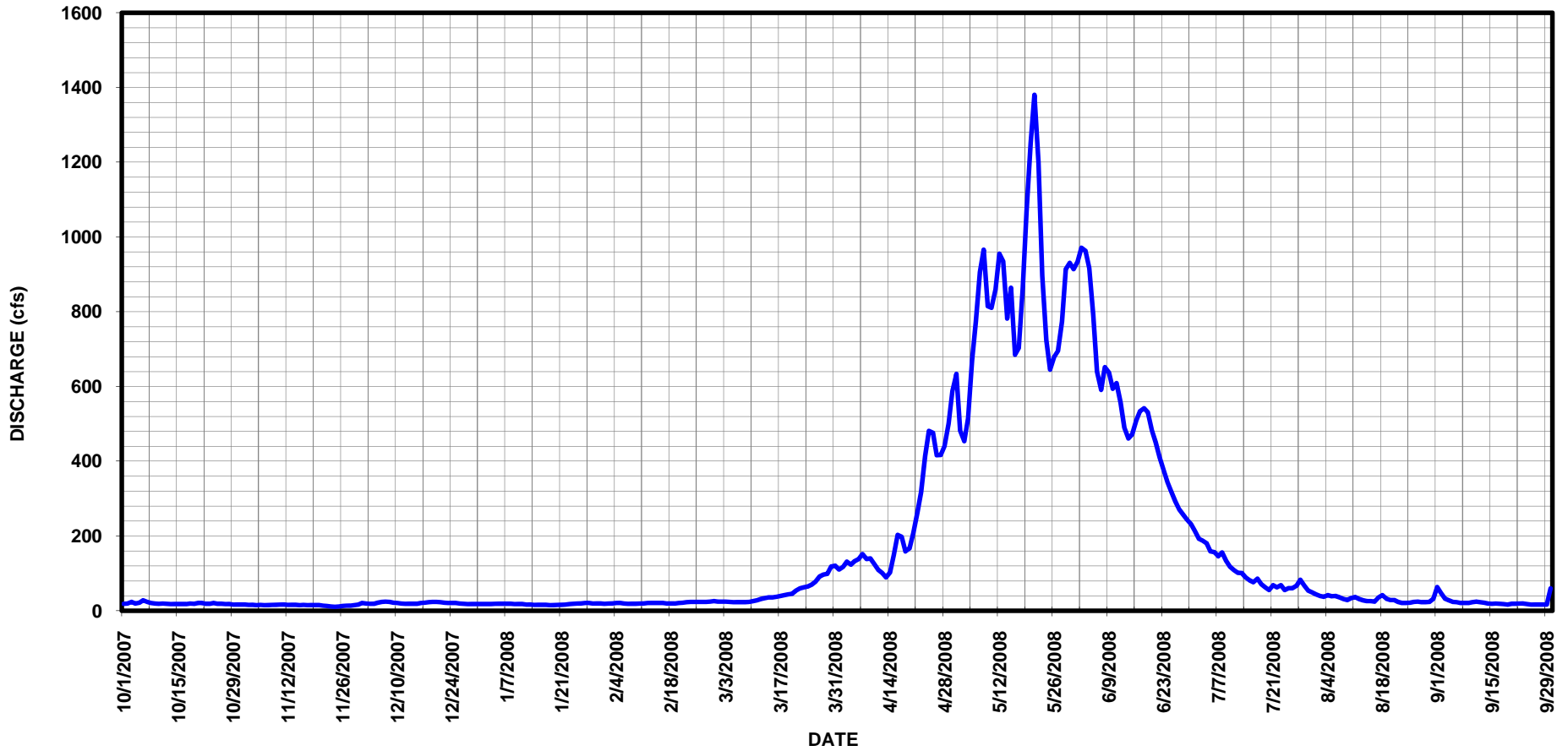
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	17	21	18	19	25	111	634	934	214	44	64
2	20	16	20	18	20	25	118	481	971	193	40	48
3	24	16	19	18	20	25	132	454	963	188	38	33
4	20	15	19	19	21	24	124	515	917	181	42	28
5	22	16	22	19	21	23	133	670	791	159	39	24
6	28	15	24	19	20	23	139	774	639	157	40	23
7	24	15	25	19	19	23	152	906	591	146	36	21
8	21	16	24	19	19	23	139	966	652	156	32	21
9	20	16	22	18	19	24	140	815	637	134	29	21
10	19	17	21	18	20	26	125	811	594	119	34	23
11	20	17	20	18	20	28	110	860	609	109	37	25
12	19	16	19	17	21	32	101	955	557	102	32	23
13	18	16	19	17	21	34	90	935	490	101	28	22
14	18	16	19	16	21	36	103	782	461	90	26	20
15	18	15	19	16	21	36	150	864	472	82	26	19
16	18	16	21	16	21	38	203	685	509	77	25	20
17	18	15	22	16	20	40	198	703	534	86	36	19
18	20	15	23	15	20	42	159	864	542	72	42	18
19	19	15	24	15	20	44	167	1070	531	63	33	17
20	21	15	24	16	21	46	208	1250	483	56	29	19
21	21	14	23	16	22	54	262	1380	451	69	29	19
22	19	13	22	17	23	60	317	1200	410	63	24	20
23	19	12	21	18	24	63	414	897	378	69	21	20
24	21	11	21	19	24	65	481	724	344	56	21	18
25	19	12	21	20	24	70	476	645	319	61	22	17
26	19	13	20	20	24	78	416	679	293	61	24	17
27	18	14	19	21	24	92	417	695	272	67	25	17
28	18	14	18	21	25	97	441	774	257	83	23	17
29	17	15	18	20	26	99	501	914	244	67	23	17
30	17	17	18	20	---	119	588	931	232	54	24	60
31	17	---	18	20	---	121	---	914	---	49	33	---
TOTAL	611	450	646	559	620	1535	7115	25747	16077	3184	957	730
MEAN	19.7	15.0	20.8	18.0	21.4	49.5	237	831	536	103	30.9	24.3
AC-FT	1210	893	1280	1110	1230	3040	14110	51070	31890	6320	1900	1450
MAX	28	17	25	21	26	121	588	1380	971	214	44	64
MIN	17	11	18	15	19	23	90	454	232	49	21	17
CAL YR 2007	TOTAL	37014	MEAN	101	MAX	797	MIN	11	AC-FT	73420		
WTR YR 2008	TOTAL	58231	MEAN	159	MAX	1380	MIN	11	AC-FT	115500		

MAX DISCH: 1580 CFS AT 01:30 ON May. 21, 2008 GH 6.41 FT. SHIFT -0.45 FT.  
MAX GH: 6.41 FT. AT 01:30 ON May. 21, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08248000 LOS PINOS RIVER NEAR ORTIZ CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08248500 SAN ANTONIO RIVER AT MOUTH, NEAR MANASSA, CO

**LOCATION.**--Lat 37°10'37", long 105°52'39", in SE¼NE¼ sec. 21, T.34 N., R.10 E., Conejos County, Hydrologic Unit 13010005, on right bank 0.3 mi. downstream from bridge on State Highway 142, 2.2 mi. upstream from mouth, and 3.3 mi. east of Manassa, Co.

**DRAINAGE AREA.**--348 mi<sup>2</sup>.

**GAGE.**--Primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in metal pipe shelter and well. A graphic water-stage recorder is operated as a data backup. On Sep. 20, 2007, the existing CMP shelter was reset on a new concrete well at same location but further from stream bank. New inlet pipes and valves were installed. Altitude of gage is 7,650 ft. from topographic map.

**REMARKS.**--Record is complete and reliable, except for Nov. 25, 2007, when the well was frozen, Nov. 26, 2007 through March 24, 2008 when the station was closed for the winter. The stage-discharge relation was affected by ice Nov. 22-24, 2007, Mar. 25-27, 2008. There was no flow Oct. 1 through Nov. 20, 2007 and Aug. 16, 19-31, Sep. 1-30, 2008. There was no flow for 95 days. Record is good, except for periods of no gage height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--SANMANCO19B USED FROM 01-Oct-2007 TO 30-Sep-2008

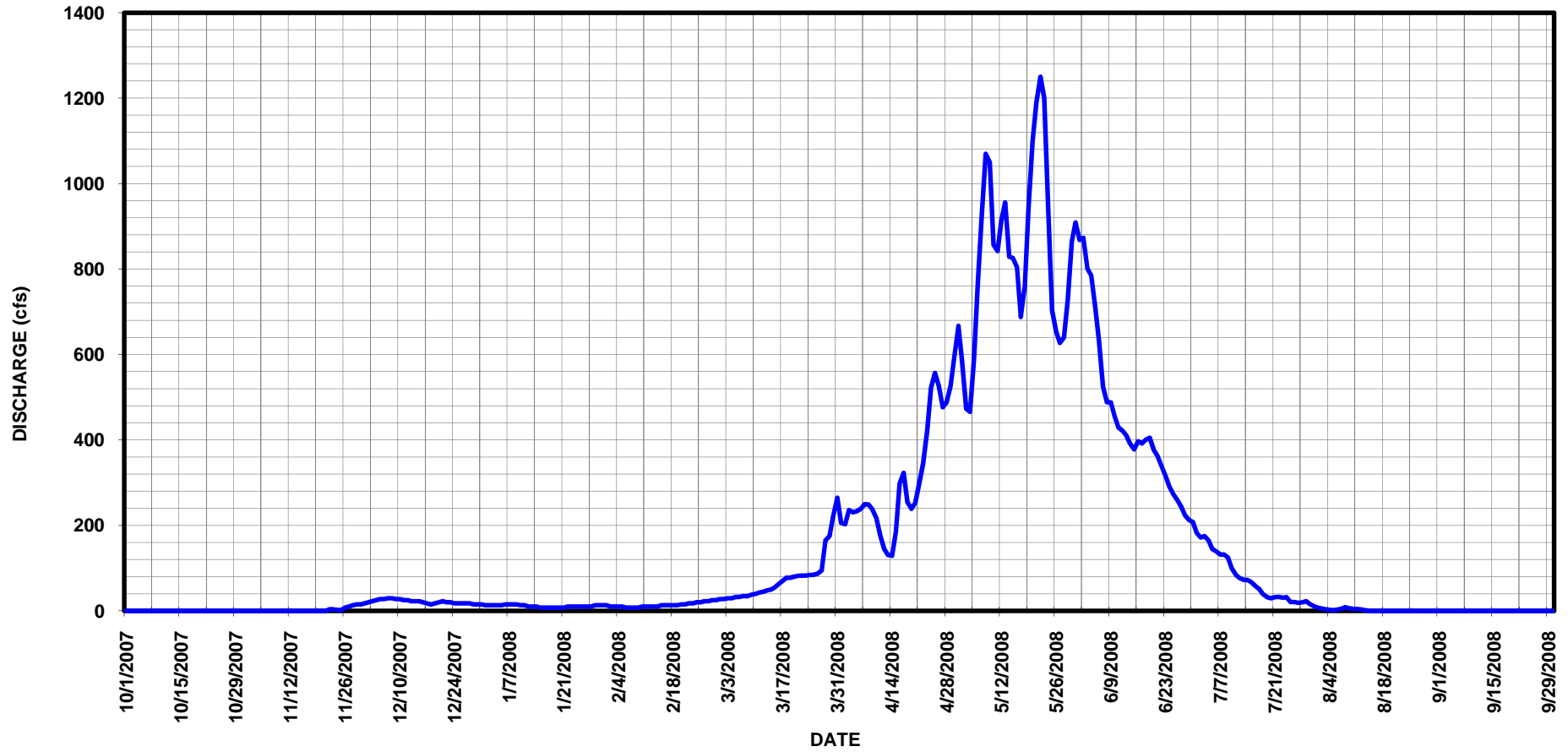
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	18	13	13	28	206	667	868	183	7.7	0
2	0	0	20	13	10	28	203	581	873	172	5.7	0
3	0	0	23	13	10	30	236	473	801	175	3.6	0
4	0	0	25	13	10	30	231	466	785	165	2.3	0
5	0	0	28	13	10	33	233	593	712	145	1.7	0
6	0	0	28	15	7.5	33	239	769	632	139	2.9	0
7	0	0	30	15	7.5	35	250	932	524	132	5.0	0
8	0	0	30	15	7.5	35	249	1070	489	132	8.7	0
9	0	0	28	15	7.5	38	238	1050	488	125	6.4	0
10	0	0	28	13	10	40	217	857	455	100	4.8	0
11	0	0	25	13	10	43	177	842	429	85	4.7	0
12	0	0	25	10	10	45	145	914	422	77	4.0	0
13	0	0	23	10	10	48	131	956	411	73	1.6	0
14	0	0	23	10	10	50	129	829	391	73	.75	0
15	0	0	23	7.5	13	55	185	826	378	67	.21	0
16	0	0	20	7.5	13	63	298	804	397	59	0	0
17	0	0	18	7.5	13	70	323	688	392	51	.02	0
18	0	0	15	7.5	13	78	254	761	401	39	.03	0
19	0	0	18	7.5	13	78	239	945	405	32	0	0
20	0	0	20	7.5	15	80	253	1100	377	30	0	0
21	0	.02	23	7.5	15	82	300	1190	362	32	0	0
22	0	4.0	20	10	18	83	345	1250	338	33	0	0
23	0	3.8	20	10	18	83	421	1200	317	31	0	0
24	0	2.8	18	10	20	84	521	936	291	32	0	0
25	0	2.0	18	10	20	85	557	704	274	21	0	0
26	0	7.5	18	10	23	87	527	654	260	21	0	0
27	0	10	18	10	23	95	477	627	245	19	0	0
28	0	13	18	10	25	165	488	640	224	20	0	0
29	0	15	15	13	25	175	527	728	213	23	0	0
30	0	15	15	13	---	223	596	864	208	16	0	0
31	0	---	15	13	---	265	---	909	---	11	0	---
TOTAL	0	73.12	666	342.5	400.0	2367	9195	25825	13362	2313	60.11	0
MEAN	0	2.44	21.5	11.0	13.8	76.4	307	833	445	74.6	1.94	0
AC-FT	0	145	1320	679	793	4690	18240	51220	26500	4590	119	0
MAX	0	15	30	15	25	265	596	1250	873	183	8.7	0
MIN	0	0	15	7.5	7.5	28	129	466	208	11	0	0
CAL YR 2007	TOTAL	25318.07	MEAN	69.4	MAX	567	MIN	0	AC-FT	50220		
WTR YR 2008	TOTAL	54603.73	MEAN	149	MAX	1250	MIN	0	AC-FT	108300		

MAX DISCH: 1290 CFS AT 18:30 ON May. 22, 2008 GH 6.61 FT. SHIFT -0.08 FT.  
MAX GH: 6.61 FT. AT 18:30 ON May. 22, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08248500 SAN ANTONIO RIVER AT MOUTH, NEAR MANASSA CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08249000 CONEJOS RIVER, MAIN (NORTH) CHANNEL, NEAR LASAUSES, CO

**LOCATION.**--Lat 37°18'01", long 105°44'47", in SW¼SW¼ sec. 2, T. 35 N., R. 11 E., Conejos County, on left bank of main channel 125 ft downstream from bridge on State Route 158, 1.0 mi upstream from mouth, 2.1 mi north of LaSausés, and 13 mi southeast of Alamosa.

**DRAINAGE AREA AND PERIOD OF RECORD.**--887 mi<sup>2</sup>. Water stage recorder since March 29, 1921 at five sites close to present location.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a four foot square timber shelter and well. A graphic water-stage recorder is operated as a data backup. Supplementary outside chain gage is no longer operational. Station is also equipped with an air temperature sensor. Datum of gage is 7,495.02 ft above mean sea level (levels by Bureau of Reclamation). At present site and datum since Oct. 1, 1937.

**REMARKS.**--Record is complete and reliable, except for Nov. 25-28, 2007, Dec. 28, 2007 to Feb. 15, 2008 when floats were affected by ice in well; and Mar. 26, 31, Apr. 1 when inlets were plugged for a portion of day. The stage-discharge relation was affected by ice Nov. 29, Dec. 12-27, 2007, and Feb. 16 to Mar. 7, 2008. There is some uncertainty on several days in the record from Mar. 26 to May 5, 2008 due to flush corrections and the inlets siphoning/circulating which affected the gage-height. Due to numerous observations/measurements during this period, the record is considered good. The siphoning problem was resolved on May 5, 2008 by closing the lower inlet. Record good, except for periods of no gage height and ice affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**-- NORLASCO15 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

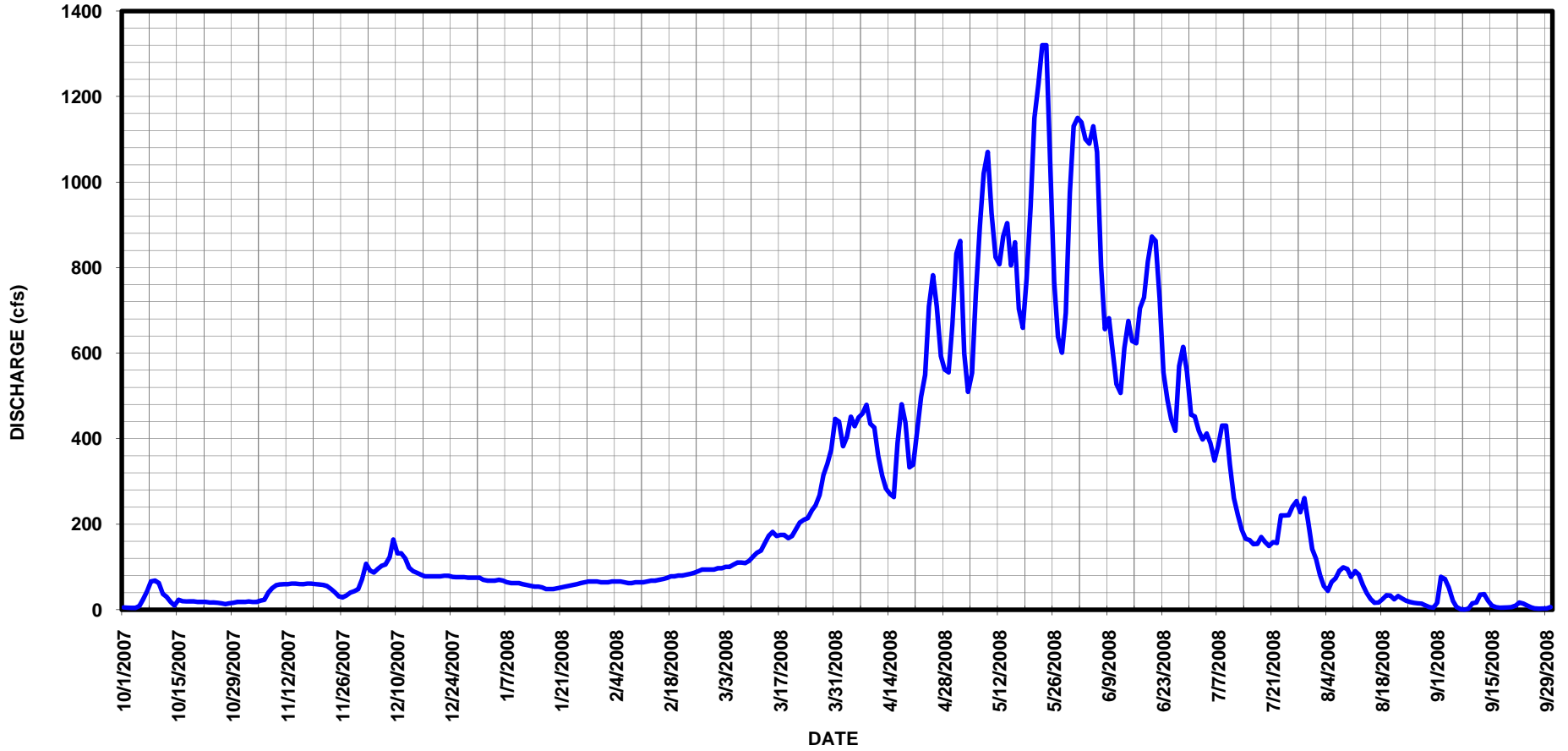
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	18	71	70	64	97	440	833	1150	452	119	16
2	4.9	19	107	68	64	97	382	862	1140	418	81	77
3	3.8	18	92	68	66	100	404	599	1100	398	55	72
4	3.9	18	87	68	66	100	451	509	1090	412	44	52
5	8.4	21	95	70	66	105	429	554	1130	389	65	21
6	24	23	103	68	64	110	450	739	1070	349	73	6.2
7	44	40	106	64	62	110	459	898	803	384	91	.98
8	66	50	122	62	62	109	479	1020	656	430	99	.25
9	68	57	164	62	64	114	435	1070	681	430	95	2.2
10	62	59	132	62	64	124	426	927	603	340	77	15
11	37	60	132	60	64	133	361	824	527	261	90	17
12	30	60	120	58	66	138	313	808	507	222	82	35
13	18	61	98	56	68	155	283	872	612	187	57	36
14	9.8	61	90	54	68	173	270	904	675	166	39	21
15	23	60	86	54	70	182	263	805	628	163	24	9.3
16	20	60	82	52	72	172	390	859	623	153	16	6.0
17	19	61	78	48	74	175	480	704	705	154	17	4.9
18	19	61	78	48	78	175	437	659	730	170	24	4.6
19	19	60	78	48	78	167	333	773	814	158	34	5.3
20	18	59	78	50	80	172	339	943	872	149	33	5.7
21	18	58	78	52	80	189	421	1150	862	158	24	8.8
22	18	55	79	54	82	204	498	1230	727	156	32	17
23	17	48	79	56	84	210	549	1320	555	220	26	14
24	17	41	77	58	86	214	709	1320	490	220	21	10
25	16	31	76	60	90	232	782	1050	445	221	18	5.2
26	15	29	76	62	94	244	709	767	418	241	16	2.9
27	13	33	76	64	94	268	594	639	569	254	15	2.0
28	15	40	75	66	94	314	562	601	614	228	14	2.6
29	16	43	75	66	94	341	555	694	556	261	10	2.8
30	18	48	75	66	---	374	667	975	456	206	5.8	6.2
31	18	---	75	64	---	446	---	1130	---	142	4.9	---
TOTAL	684.3	1352	2840	1858	2158	5744	13870	27038	21808	8092	1401.7	478.93
MEAN	22.1	45.1	91.6	59.9	74.4	185	462	872	727	261	45.2	16.0
AC-FT	1360	2680	5630	3690	4280	11390	27510	53630	43260	16050	2780	950
MAX	68	61	164	70	94	446	782	1320	1150	452	119	77
MIN	3.8	18	71	48	62	97	263	509	418	142	4.9	.25
CAL YR 2007	TOTAL	38054.7	MEAN	104	MAX	537	MIN	2.5	AC-FT	75480		
WTR YR 2008	TOTAL	87324.93	MEAN	239	MAX	1320	MIN	.25	AC-FT	173200		

MAX DISCH: 1360 CFS AT 03:45 ON May. 24, 2008 GH 6.56 FT. SHIFT -0.39 FT.

MAX GH: 6.56 FT. AT 03:45 ON May. 24, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08249000 CONEJOS RIVER, MAIN (NORTH) CHANNEL, NEAR LASAUSES CO  
WY2008 HYDROGRAPH





RIO GRANDE BASIN

08249000 CONEJOS RIVER, SECONDARY (SOUTH) CHANNEL, NEAR LASAUSES, CO

**LOCATION.**--Lat 37°18'01", long 105°44'47", in SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec. 10, T. 35 N., R. 11 E., Conejos County, on left bank of secondary channel 230 ft upstream from bridge on State Route 158, 1.0 mi upstream from mouth, 2.0 mi north of LaSausas, and 13 mi southeast of Alamosa.

**DRAINAGE AREA AND PERIOD OF RECORD.**--887 mi<sup>2</sup>. Water stage recorder since March 29, 1921 at various sites close to present location.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a 42 inch metal pipe shelter and well. A graphic water-stage recorder is operated as a data backup. The 42 inch metal pipe shelter was moved and reset on a 3 ft. concrete manhole well, with a steel piling weir with low flow notch, that was constructed on Dec. 12, 2007 at a location approximately 1320 feet upstream. The new station was opened Mar. 21, 2008, using same data collection equipment. The low flow notch in weir was modified (area increased) above stage of 1.34 ft. on Apr. 23, 2008. Datum of old gage location is 7,496.89 ft above mean sea level (levels by Bureau of Reclamation). Datum of new gage location was determined by levels on July 29, 2008 to be 2.97 ft. higher than previous gage datum, or 7499.86 ft above MSL.

**REMARKS.**--Record is complete and reliable, except for Dec. 3, 2007-Mar. 21, 2008 when the station was closed for winter. The stage-discharge relation was affected by ice Nov. 22-Dec. 2, 2007. There was no flow Aug. 13 through Sep. 30, 2008 (49 days). Due to unstable stage-discharge relation caused by degraded channel and weed growth before the new gage was in operation, record is fair, except for periods of no gage-height and ice affected record, which are poor. After opening the new gage on Mar. 21, 2008, the record should be considered good. Station maintained and record developed by Div. III Hydrographic Staff.

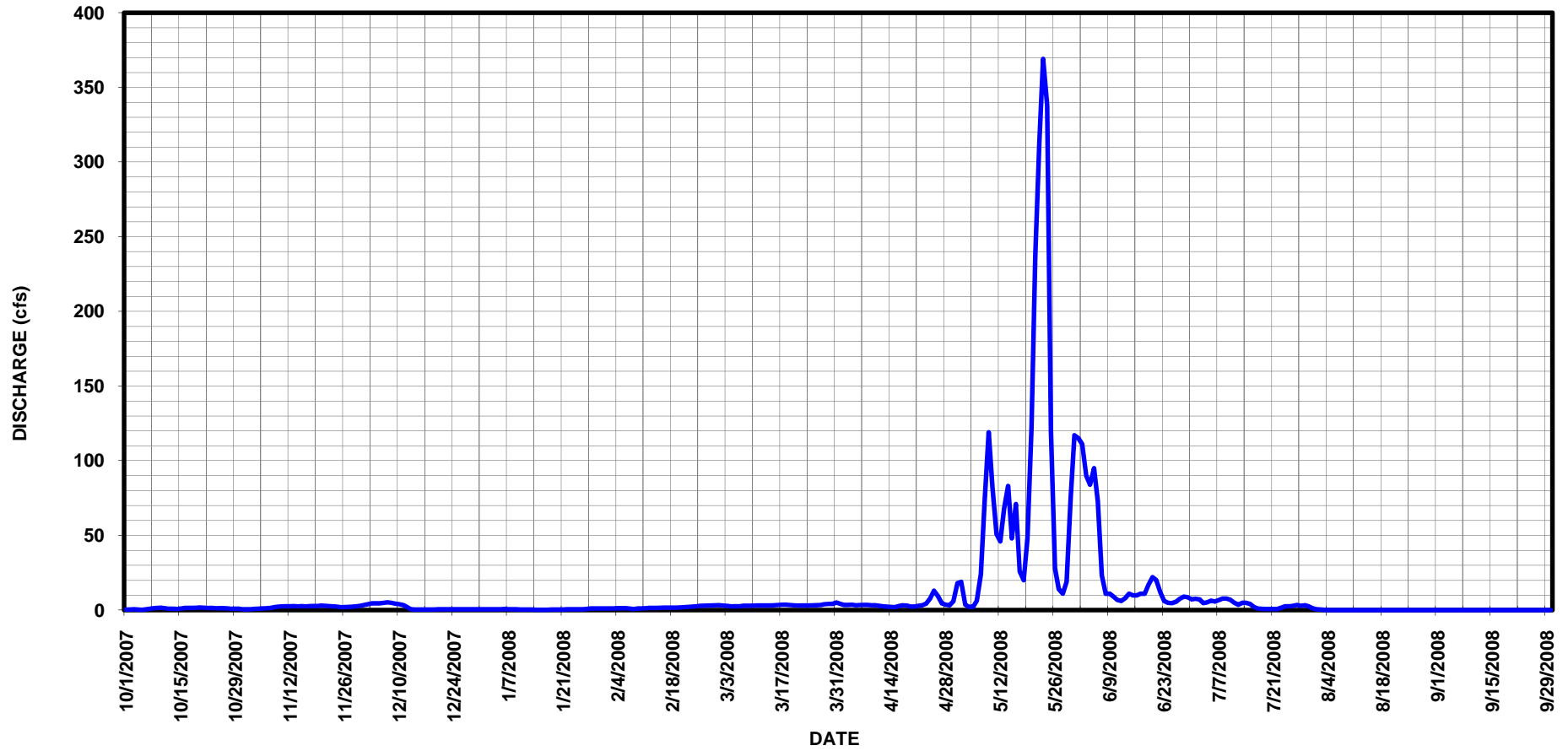
**RATING TABLE.**--SOULASCO08 USED FROM 01-Oct-2007 TO 21-Mar-2008  
SOULASCO09 USED FROM 21-Mar-2008 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	.58	3.4	.50	1.0	3.2	4.2	18	115	7.5	.55	0
2	.30	.49	4.0	.50	1.0	3.0	3.4	19	111	7.2	.34	0
3	.53	.84	4.6	.50	1.1	2.8	3.4	3.6	90	4.7	.17	0
4	.39	.91	4.6	.50	1.2	2.6	3.6	2.1	84	5.2	.09	0
5	.24	1.1	4.6	.60	1.3	2.6	3.3	2.2	95	6.3	.05	0
6	.51	1.2	4.9	.70	1.2	2.6	3.5	6.3	73	5.8	.03	0
7	.90	1.5	5.2	.60	1.0	2.8	3.4	24	23	6.7	.02	0
8	1.3	2.0	4.8	.50	.80	2.8	3.5	73	11	7.7	.07	0
9	1.5	2.3	4.4	.50	1.0	2.8	3.3	119	11	7.8	.06	0
10	1.6	2.6	3.9	.40	1.0	3.0	3.2	82	9.0	6.9	.05	0
11	1.2	2.6	3.5	.40	1.2	3.0	2.9	51	6.9	4.8	.03	0
12	.88	2.6	2.0	.30	1.4	3.0	2.6	46	6.2	3.7	.01	0
13	.84	2.7	.50	.30	1.4	3.0	2.3	68	7.9	4.9	0	0
14	.71	2.6	.40	.20	1.5	3.1	2.2	83	11	4.8	0	0
15	1.1	2.7	.40	.20	1.6	3.2	2.0	48	9.9	4.2	0	0
16	1.4	2.6	.40	.20	1.6	3.4	2.7	71	9.9	2.1	0	0
17	1.4	2.7	.40	.20	1.6	3.6	3.3	26	11	1.0	0	0
18	1.4	2.7	.40	.30	1.6	3.6	3.1	20	11	.85	0	0
19	1.6	2.7	.40	.30	1.6	3.4	2.4	48	17	.67	0	0
20	1.8	3.0	.50	.30	1.8	3.2	2.3	122	22	.64	0	0
21	1.7	2.9	.60	.40	2.0	3.0	2.8	237	20	.79	0	0
22	1.5	2.7	.60	.50	2.2	3.0	3.3	313	12	.67	0	0
23	1.4	2.6	.60	.50	2.4	3.0	4.3	369	6.1	1.6	0	0
24	1.3	2.4	.50	.60	2.6	3.1	7.5	338	4.8	2.6	0	0
25	1.3	2.0	.50	.60	2.8	3.2	13	120	4.7	2.5	0	0
26	1.2	1.9	.50	.60	2.9	3.3	9.6	28	5.6	2.9	0	0
27	1.0	2.1	.50	.80	3.0	3.4	4.5	14	7.6	3.5	0	0
28	.94	2.4	.50	1.0	3.0	3.9	3.6	11	9.1	2.9	0	0
29	.88	2.6	.50	1.1	3.2	4.1	3.2	19	8.6	3.3	0	0
30	.82	2.8	.50	1.1	---	4.1	5.9	75	7.3	2.6	0	0
31	.56	---	.50	1.0	---	5.1	---	117	---	1.2	0	---
TOTAL	32.48	64.82	59.10	16.20	50.00	99.9	118.3	2573.2	820.6	118.02	1.47	0
MEAN	1.05	2.16	1.91	.52	1.72	3.22	3.94	83.0	27.4	3.81	.047	0
AC-FT	64	129	117	32	99	198	235	5100	1630	234	2.9	0
MAX	1.8	3.0	5.2	1.1	3.2	5.1	13	369	115	7.8	.55	0
MIN	.24	.49	.40	.20	.80	2.6	2.0	2.1	4.7	.64	0	0

CAL YR 2007 TOTAL 1011.45 MEAN 2.77 MAX 21 MIN 0 AC-FT 2010  
WTR YR 2008 TOTAL 3954.09 MEAN 10.8 MAX 369 MIN 0 AC-FT 7840  
MAX DISCH: 396 CFS AT 00:15 ON May. 24, 2008 GH 3.72 FT. GH CORR. 0.01 FT. SHIFT 0 FT.  
MAX GH: 3.73 FT. (GH CORR. 0.01 FT. APPLIED) AT 00:15 ON May. 24, 2008

08249000 CONEJOS RIVER, SECONDARY (SOUTH) CHANNEL, NEAR LASAUSES CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08249000 CONEJOS RIVER NEAR LASAUSES, CO (COMBINED)

**LOCATION.**--Lat 37°18'01", long 105°44'47", in SW¼SW¼ sec. 2, and SE¼NE¼ sec. 10 (two channels), T.35 N., R.11 E., Conejos County, Hydrologic Unit 13010005, on left bank of main channel 125 ft downstream from bridge on State Highway 158 and on left bank of secondary channel 230 ft upstream from bridge on State Route 158, 1.0 mi upstream from mouth, 2.1 mi north of Lasauses, and 13 mi southeast of Alamosa.

**DRAINAGE AREA AND PERIOD OF RECORD.**--887 mi<sup>2</sup>. Mar. 1921, water stage recorders, at several locations close to present sites.

**GAGE.**--Combined record is from Main (north) channel and Secondary (south channel). See individual records for gage descriptions and changes during WY2008. Datum of gage on main (north) channel is 7,495.02 ft above National Geodetic Vertical Datum of 1929, and on secondary (south) channel was 7,496.89 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation) prior to Dec. 12, 2007. Datum of new south channel gage location was determined by levels on July 29, 2008 to be 2.97 ft. higher than previous gage datum, or 7499.86 ft above MSL.

**REMARKS.**--Record good, except for periods of no gage height, ice affected, and degraded channel/weed growth affected record in the south channel before gage was re-located, which are poor. See individual records for main (north) and secondary (south) channels. Diversions above station for irrigation of about 75,000 acres. Practically entire flow is diverted and record represents mainly return flow. Record developed by Div. III Hydrographic Staff.

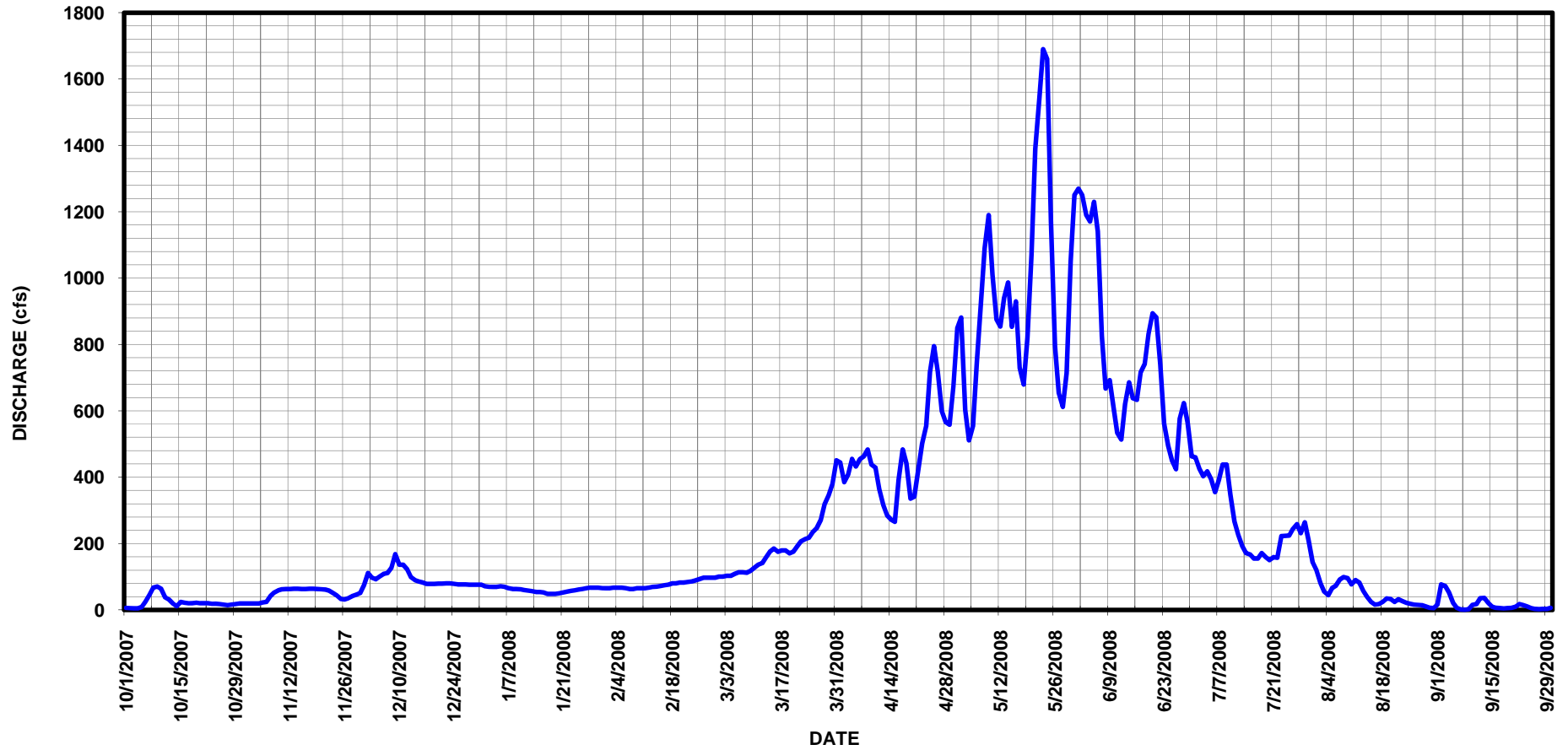
**COMBINED CONEJOS RIVER NEAR LASAUSES CO (NORTH AND SOUTH CHANNELS)**

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	19	74	71	65	100	444	851	1270	460	120	16
2	5.2	19	111	69	65	100	385	881	1250	425	81	77
3	4.3	19	97	69	67	103	407	603	1190	403	55	72
4	4.3	19	92	69	67	103	455	511	1170	417	44	52
5	8.6	22	100	71	67	108	432	556	1230	395	65	21
6	25	24	108	69	65	113	454	745	1140	355	73	6.2
7	45	42	111	65	63	113	462	922	826	391	91	.98
8	67	52	127	63	63	112	483	1090	667	438	99	.25
9	70	59	168	63	65	117	438	1190	692	438	95	2.2
10	64	62	136	62	65	127	429	1010	612	347	77	15
11	38	63	136	60	65	136	364	875	534	266	90	17
12	31	63	122	58	67	141	316	854	513	226	82	35
13	19	64	99	56	69	158	285	940	620	192	57	36
14	11	64	90	54	70	176	272	987	686	171	39	21
15	24	63	86	54	72	185	265	853	638	167	24	9.3
16	21	63	82	52	74	175	393	930	633	155	16	6
17	20	64	78	48	76	179	483	730	716	155	17	4.9
18	20	64	78	48	80	179	440	679	741	171	24	4.6
19	21	63	78	48	80	170	335	821	831	159	34	5.3
20	20	62	79	50	82	175	341	1070	894	150	33	5.7
21	20	61	79	52	82	192	424	1390	882	159	24	8.8
22	20	58	80	55	84	207	501	1540	739	157	32	17
23	18	51	80	57	86	213	553	1690	561	222	26	14
24	18	43	78	59	89	217	717	1660	495	223	21	10
25	17	33	77	61	93	235	795	1170	450	224	18	5.2
26	16	31	77	63	97	247	719	795	424	244	16	2.9
27	14	35	77	65	97	271	599	653	577	258	15	2
28	16	42	76	67	97	318	566	612	623	231	14	2.6
29	17	46	76	67	97	345	558	713	565	264	10	2.8
30	19	51	76	67	---	378	673	1050	463	209	5.8	6.2
31	19	---	76	65	---	451	---	1250	---	143	4.9	---
TOTAL	718.2	1421	2904	1877	2209	5844	13988	29621	22632	8215	1402.7	478.93
MEAN	23.2	47.4	93.7	60.5	76.2	189	466	956	754	265	45.2	16.0
AC-FT	1420	2820	5760	3720	4380	11590	27750	58750	44890	16290	2780	950
MAX	70	64	168	71	97	451	795	1690	1270	460	120	77
MIN	4.3	19	74	48	63	100	265	511	424	143	4.9	.25
CAL YR 2007	TOTAL	39087.3	MEAN	107	MAX	552	MIN	2.5	AC-FT	77530		
WTR YR 2008	TOTAL	91310.83	MEAN	249	MAX	1690	MIN	.25	AC-FT	181100		

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08249000 CONEJOS RIVER NEAR LASAUSES CO (COMBINED)  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08250000 CULEBRA CREEK AT SAN LUIS, CO

**LOCATION.**--Lat 37°11'01", long 105°25'31", Costilla County, Hydrologic Unit 13010002, in Beaubien Grant, on left bank at bridge 1.0 mi. south of San Luis and 1.0 mi. upstream from Rito Seco.

**DRAINAGE AREA AND PERIOD OF RECORD.**--220 mi<sup>2</sup>. Station established April 1, 1927 by Colo. State Engineer's Office at present site, different datum. May 1931 new flume installed and datum established at the same site.

**GAGE.**--Primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a metal shelter and rock well. A graphic water-stage recorder is operated as a data backup. Elevation of gage is 8,000 ft from topographic map.

**REMARKS.**--Record is complete and reliable, except for December 14, 2007 to March 9, 2008 when the well was affected by ice and April 3-9, 2008 when satellite data failed to transmit and chart recorder was not operating. Record is good, except for period when well was frozen and period when satellite data failed to transmit, which are considered poor. During the winter the record may show a pattern of jagged peaks in the late morning hours. While this pattern does appear to be ice affected record, it has been verified by the hydrographic staff of Division 3 that this is caused by ice dams releasing water above the gage, and that this is good record. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--CULSANCO06 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

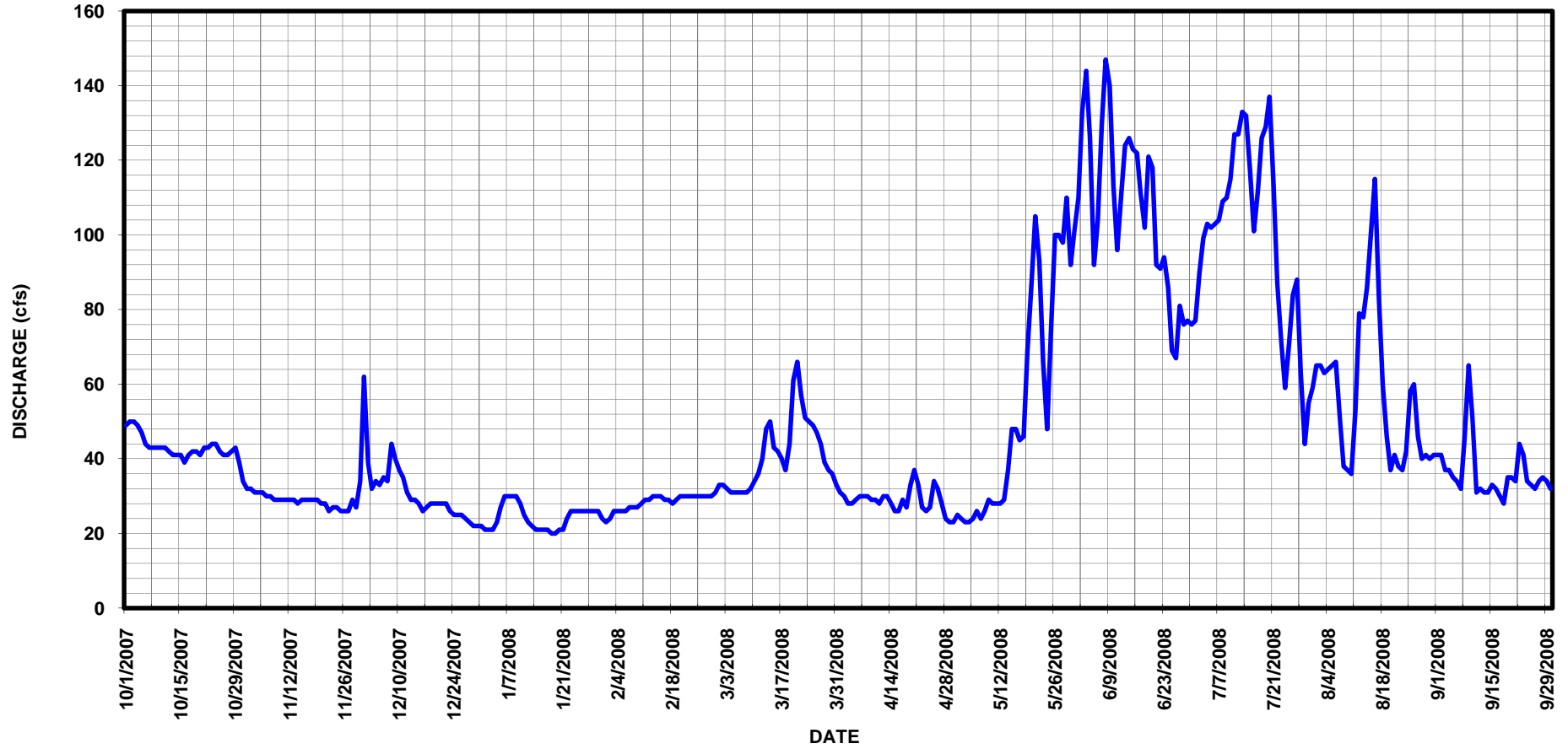
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	32	62	21	23	33	31	25	110	77	65	41
2	50	32	39	21	24	33	30	24	133	90	65	41
3	50	31	32	21	26	32	28	23	144	99	63	37
4	49	31	34	23	26	31	28	23	126	103	64	37
5	47	31	33	27	26	31	29	24	92	102	65	35
6	44	30	35	30	26	31	30	26	104	103	66	34
7	43	30	34	30	27	31	30	24	130	104	51	32
8	43	29	44	30	27	31	30	26	147	109	38	46
9	43	29	40	30	27	32	29	29	140	110	37	65
10	43	29	37	28	28	34	29	28	113	115	36	51
11	43	29	35	25	29	36	28	28	96	127	53	31
12	42	29	31	23	29	40	30	28	111	127	79	32
13	41	29	29	22	30	48	30	29	124	133	78	31
14	41	28	29	21	30	50	28	37	126	132	86	31
15	41	29	28	21	30	43	26	48	123	117	101	33
16	39	29	26	21	29	42	26	48	122	101	115	32
17	41	29	27	21	29	40	29	45	111	112	83	30
18	42	29	28	20	28	37	27	46	102	126	60	28
19	42	29	28	20	29	44	33	69	121	129	46	35
20	41	28	28	21	30	61	37	87	118	137	37	35
21	43	28	28	21	30	66	33	105	92	113	41	34
22	43	26	28	24	30	57	27	93	91	87	38	44
23	44	27	26	26	30	51	26	66	94	71	37	41
24	44	27	25	26	30	50	27	48	86	59	42	34
25	42	26	25	26	30	49	34	74	69	71	58	33
26	41	26	25	26	30	47	32	100	67	84	60	32
27	41	26	24	26	30	44	28	100	81	88	46	34
28	42	29	23	26	30	39	24	98	76	63	40	35
29	43	27	22	26	31	37	23	110	77	44	41	34
30	39	34	22	26	---	36	23	92	76	55	40	32
31	34	---	22	24	---	33	---	101	---	59	41	---
TOTAL	1330	868	949	753	824	1269	865	1704	3202	3047	1772	1090
MEAN	42.9	28.9	30.6	24.3	28.4	40.9	28.8	55.0	107	98.3	57.2	36.3
AC-FT	2640	1720	1880	1490	1630	2520	1720	3380	6350	6040	3510	2160
MAX	50	34	62	30	31	66	37	110	147	137	115	65
MIN	34	26	22	20	23	31	23	23	67	44	36	28

CAL YR 2007 TOTAL 16975 MEAN 46.5 MAX 147 MIN 18 AC-FT 33670  
WTR YR 2008 TOTAL 17673 MEAN 48.3 MAX 147 MIN 20 AC-FT 35050

MAX DISCH: 156 CFS AT 07:30 ON Jun. 4, 2008 GH 1.85 FT. GH CORR. -0.01 FT. SHIFT 0.03 FT.  
MAX GH: 1.84 FT. (GH CORR. -0.01 FT. APPLIED) AT 07:30 ON Jun. 4, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08250000 CULEBRA CREEK AT SAN LUIS CO  
WY2008 HYDROGRAPH



RIO GRANDE BASIN

08251500 RIO GRANDE NEAR LOBATOS, CO

**LOCATION.**--Lat 37°04'43", long 105°45'23", in NE¼NW¼ sec. 27, T.33 N., R.11 E., Conejos County, Hydrologic Unit 13010002, on right bank at highway bridge, 5.7 mi north of Colorado-New Mexico State line, 8 mi downstream from Culebra Creek, 11 mi east of Lobatos, and 14 mi east of Antonito.

**DRAINAGE AREA AND PERIOD OF RECORD.**--7,700 mi<sup>2</sup>. approximately, includes 2,940 mi<sup>2</sup>. in closed basin in northern part of San Luis Valley, Colo. June 28, 1899-Nov. 7, 1910, non-recording gage; Nov. 8, 1910, water stage recorder, at present site and datum.

**GAGE.**--The primary reference gage is a drop tape from reference point on shelf. Primary record is generated by an electronic data logger with satellite transmitter, which records gage-height data from a float-operated shaft encoder in a four foot square timber shelter and cobblestone well. A graphic water-stage recorder is operated as a data backup. Station is also equipped with a water temperature sensor. Auxiliary outside slope gage. Datum of gage is 7,427.63 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Record is complete and reliable, except for Jan. 19 to Feb. 15, 2008 when float was affected by an ice plug in the oil cylinder. The stage-discharge relation was affected by ice Nov. 23-30, Dec. 1, 2, 11-31, 2007, Jan. 1-18, Feb. 16-29, and Mar. 1-13, 2008. Record is good, except for periods of no gage-height and ice-affected record, which are poor. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--RIOLOBCO03 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

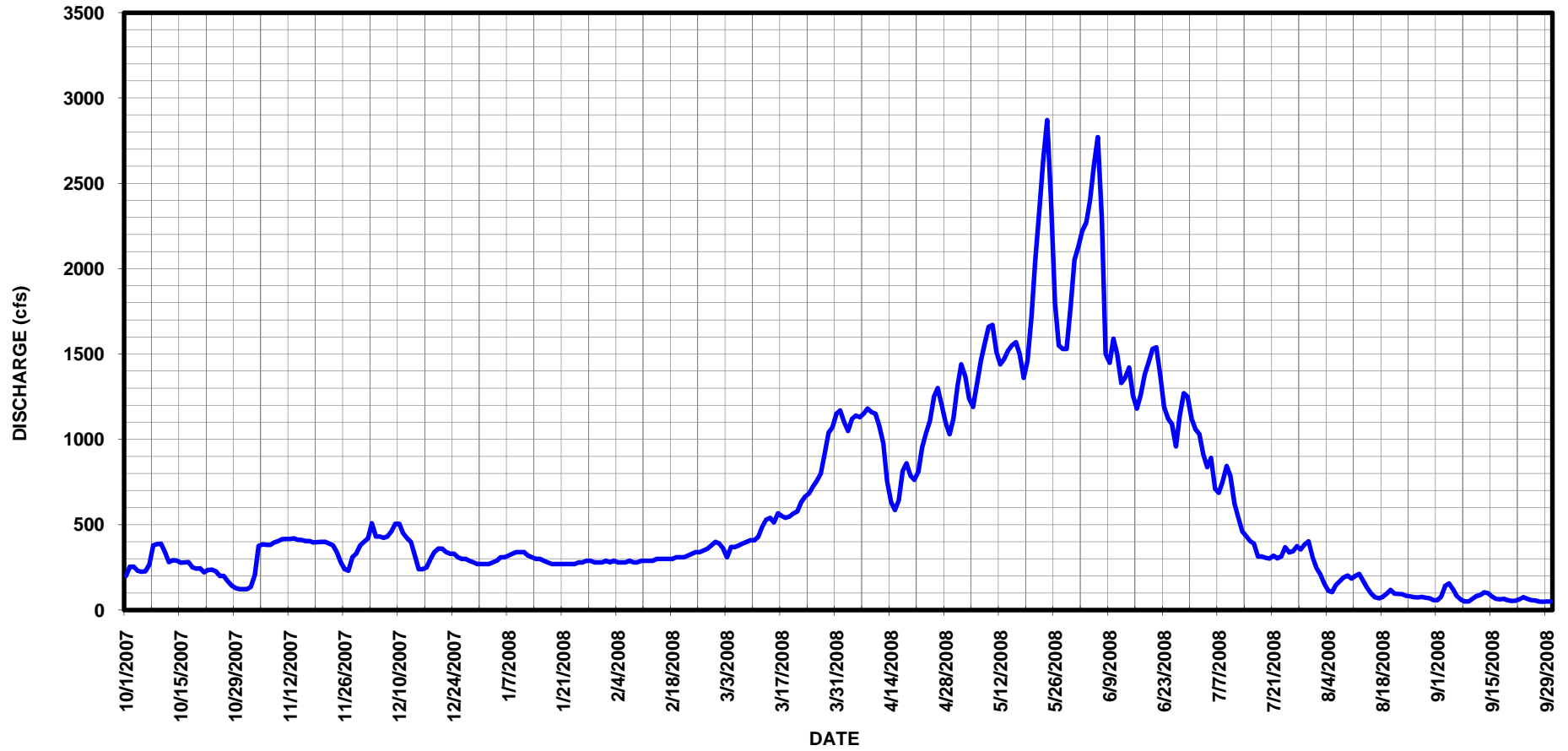
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	124	400	270	290	390	1170	1310	2130	1060	248	58
2	255	136	420	270	280	360	1100	1440	2220	1030	208	79
3	254	206	509	280	290	310	1050	1370	2270	915	157	143
4	230	376	432	290	280	370	1120	1240	2400	838	114	156
5	225	386	431	310	280	370	1140	1190	2610	891	106	121
6	228	382	423	310	280	380	1130	1320	2770	711	147	82
7	269	383	431	320	290	390	1150	1460	2290	688	171	62
8	379	397	461	330	280	400	1180	1560	1500	752	191	51
9	387	405	506	340	280	410	1160	1660	1450	844	202	50
10	388	416	505	340	290	410	1150	1670	1590	786	185	66
11	339	417	450	340	290	430	1080	1510	1500	626	200	82
12	282	417	420	320	290	490	978	1440	1330	544	211	89
13	292	420	400	310	290	530	756	1470	1360	461	170	104
14	291	413	320	300	300	540	632	1520	1420	435	131	100
15	278	411	240	300	300	513	586	1550	1260	404	98	79
16	280	404	240	290	300	567	642	1570	1180	391	76	67
17	281	405	250	280	300	551	815	1500	1260	314	70	63
18	251	397	300	270	300	540	859	1360	1380	315	78	66
19	244	398	340	270	310	548	787	1460	1450	306	96	58
20	245	400	360	270	310	565	764	1720	1530	302	118	54
21	221	400	360	270	310	578	810	2050	1540	320	97	56
22	235	391	340	270	320	632	953	2340	1370	304	95	63
23	237	380	330	270	330	666	1040	2630	1190	315	93	76
24	227	340	330	270	340	683	1110	2870	1120	369	83	67
25	201	280	310	280	340	724	1250	2410	1090	339	81	59
26	201	240	300	280	350	757	1300	1800	959	344	76	57
27	171	230	300	290	360	799	1200	1550	1140	375	75	51
28	146	310	290	290	380	913	1100	1530	1270	356	77	49
29	130	330	280	280	400	1040	1030	1530	1250	386	72	51
30	123	380	270	280	---	1070	1120	1780	1120	403	70	51
31	123	---	270	280	---	1150	---	2050	---	309	59	---
TOTAL	7613	10574	11218	9070	8960	18076	30162	51860	46949	16433	3855	2210
MEAN	246	352	362	293	309	583	1005	1673	1565	530	124	73.7
AC-FT	15100	20970	22250	17990	17770	35850	59830	102900	93120	32590	7650	4380
MAX	388	420	509	340	400	1150	1300	2870	2770	1060	248	156
MIN	123	124	240	270	280	310	586	1190	959	302	59	49

CAL YR	2007	TOTAL	145652	MEAN	399	MAX	1510	MIN	123	AC-FT	288900
WTR YR	2008	TOTAL	216980	MEAN	593	MAX	2870	MIN	49	AC-FT	430400

MAX DISCH: 2940 CFS AT 14:00 ON May. 24, 2008 GH 4.63 FT. SHIFT -0.39 FT.  
MAX GH: 4.63 FT. AT 14:00 ON May. 24, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

08251500 RIO GRANDE NEAR LOBATOS CO  
WY2008 HYDROGRAPH





TRANSMOUNTAIN DIVERSION TO

RIO GRANDE BASIN

09118200 TARBELL DITCH NEAR COCHETOPA PASS, CO

**LOCATION.**--Tarbell ditch diverts water from Lake Fork Cochetopa Creek (tributary to Cochetopa Creek), in NW¼ sec. 18, T.43 N., R.2 E., in Gunnison River basin, to Lake Fork Creek (tributary to Middle Fork Saguache Creek) in NE¼ sec. 18, T.43 N., R.2 E., in Rio Grande basin.

**DRAINAGE AREA.**--N/A

**GAGE.**--Graphic water-stage recorder with satellite monitoring system at a 2.5-ft. Parshall Flume.

**REMARKS.**--Record is complete and reliable. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--TARBELCO01 USED FROM 01-OCT-2007 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

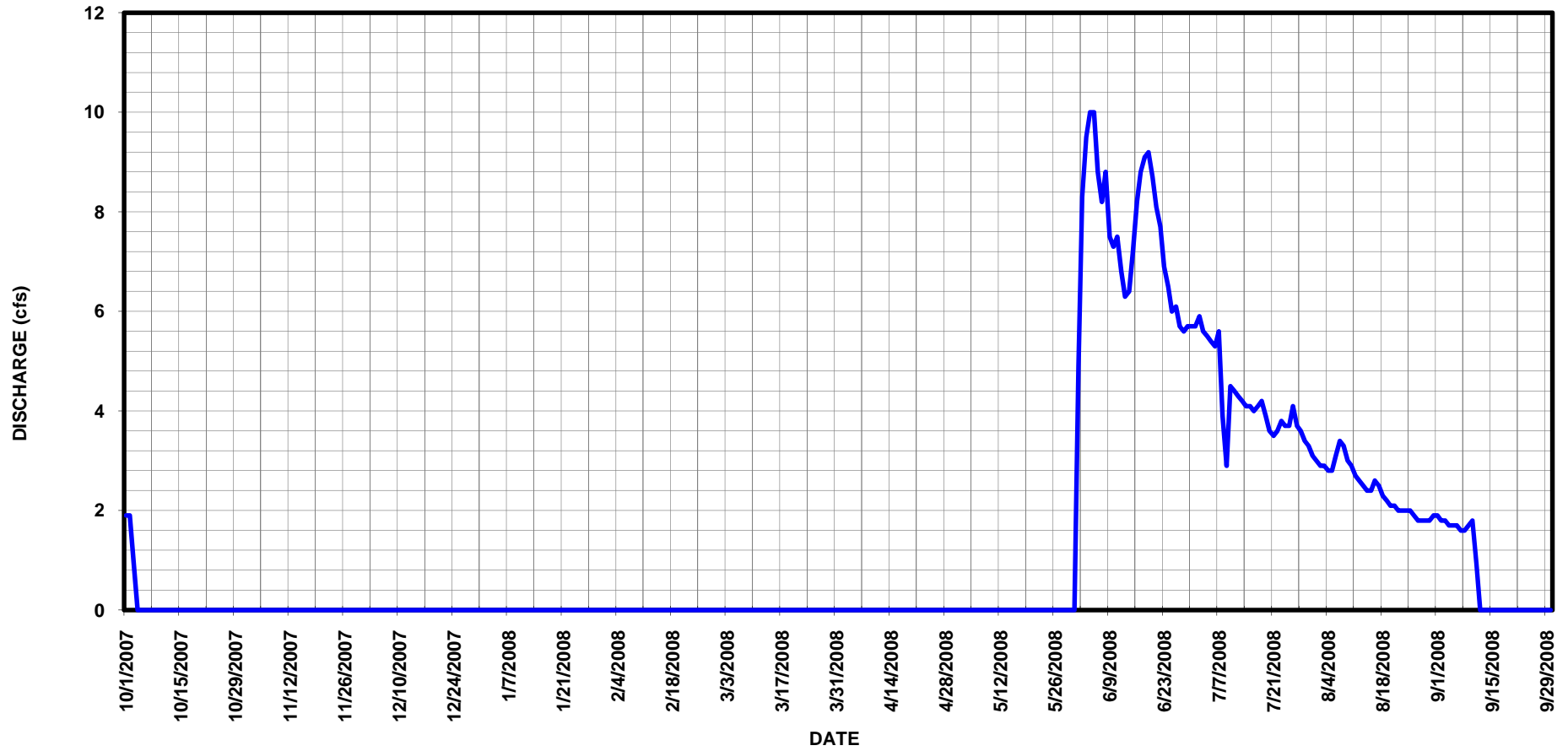
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	0	0	0	0	0	0	0	4.9	5.7	3.0	1.9
2	1.9	0	0	0	0	0	0	0	8.3	5.9	2.9	1.8
3	.91	0	0	0	0	0	0	0	9.5	5.6	2.9	1.8
4	0	0	0	0	0	0	0	0	10	5.5	2.8	1.7
5	0	0	0	0	0	0	0	0	10	5.4	2.8	1.7
6	0	0	0	0	0	0	0	0	8.8	5.3	3.1	1.7
7	0	0	0	0	0	0	0	0	8.2	5.6	3.4	1.6
8	0	0	0	0	0	0	0	0	8.8	3.9	3.3	1.6
9	0	0	0	0	0	0	0	0	7.5	2.9	3.0	1.7
10	0	0	0	0	0	0	0	0	7.3	4.5	2.9	1.8
11	0	0	0	0	0	0	0	0	7.5	4.4	2.7	.92
12	0	0	0	0	0	0	0	0	6.8	4.3	2.6	0
13	0	0	0	0	0	0	0	0	6.3	4.2	2.5	0
14	0	0	0	0	0	0	0	0	6.4	4.1	2.4	0
15	0	0	0	0	0	0	0	0	7.2	4.1	2.4	0
16	0	0	0	0	0	0	0	0	8.2	4.0	2.6	0
17	0	0	0	0	0	0	0	0	8.8	4.1	2.5	0
18	0	0	0	0	0	0	0	0	9.1	4.2	2.3	0
19	0	0	0	0	0	0	0	0	9.2	3.9	2.2	0
20	0	0	0	0	0	0	0	0	8.7	3.6	2.1	0
21	0	0	0	0	0	0	0	0	8.1	3.5	2.1	0
22	0	0	0	0	0	0	0	0	7.7	3.6	2.0	0
23	0	0	0	0	0	0	0	0	6.9	3.8	2.0	0
24	0	0	0	0	0	0	0	0	6.5	3.7	2.0	0
25	0	0	0	0	0	0	0	0	6.0	3.7	2.0	0
26	0	0	0	0	0	0	0	0	6.1	4.1	1.9	0
27	0	0	0	0	0	0	0	0	5.7	3.7	1.8	0
28	0	0	0	0	0	0	0	0	5.6	3.6	1.8	0
29	0	0	0	0	0	0	0	0	5.7	3.4	1.8	0
30	0	0	0	0	---	0	0	0	5.7	3.3	1.8	0
31	0	---	0	0	---	0	---	0	---	3.1	1.9	---
TOTAL	4.71	0	0	0	0	0	0	0	225.5	130.7	75.5	18.22
MEAN	.15	0	0	0	0	0	0	0	7.52	4.22	2.44	.61
AC-FT	9.3	0	0	0	0	0	0	0	447	259	150	36
MAX	1.9	0	0	0	0	0	0	0	10	5.9	3.4	1.9
MIN	0	0	0	0	0	0	0	0	4.9	2.9	1.8	0

CAL YR	2007	TOTAL	505.51	MEAN	1.38	MAX	9.2	MIN	0	AC-FT	1000
WTR YR	2008	TOTAL	454.63	MEAN	1.24	MAX	10	MIN	0	AC-FT	902

MAX DISCH: 12.1 CFS AT 19:15 ON Jun. 3, 2008 GH 1.17 FT. SHIFT -0.04 FT.  
MAX GH: 1.17 FT. AT 19:15 ON Jun. 3, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09118200 TARBELL DITCH NEAR COCHETOPA PASS CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

RIO GRANDE BASIN

09121000 TABOR DITCH AT SPRING CREEK PASS, CO

**LOCATION.**--Lat 37°56'30", long 107°09'00"; Tabor ditch diverts water from tributaries of Cebolla Creek in secs, 29 and 36, T.43 N., R.3 W., in Gunnison River basin, to Big Spring Creek (tributary to North Clear Creek) in sec. 35, T.43 N., R.3 W., in Rio Grande basin.

**DRAINAGE AREA.**--N/A

**GAGE.**--Steven's Data Logger and satellite monitoring system at 3-ft. Parshall Flume.

**REMARKS.**--Record is complete and reliable. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--TABDITCO01 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

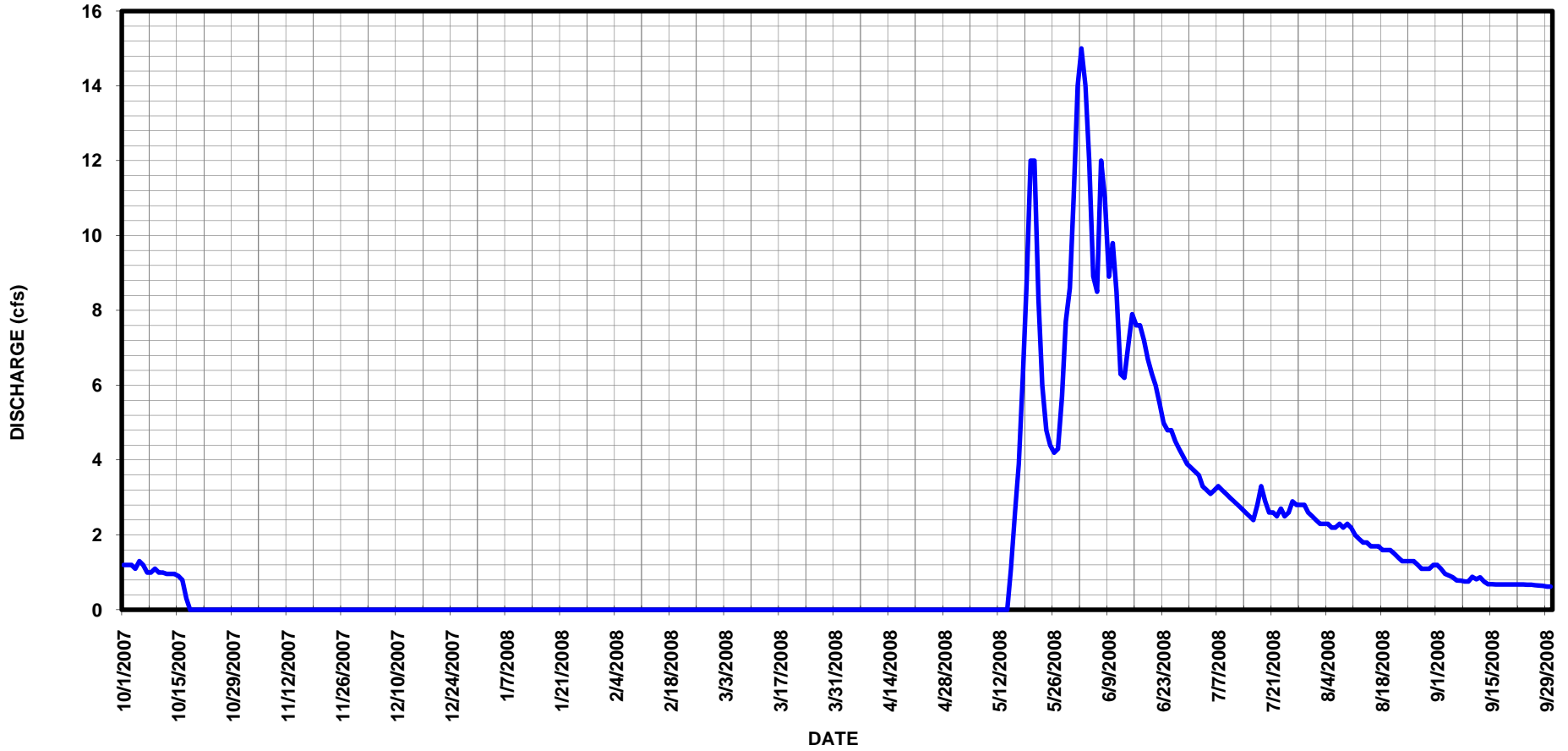
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	0	0	0	0	0	0	0	14	3.7	2.4	1.2
2	1.2	0	0	0	0	0	0	0	15	3.6	2.3	1.1
3	1.2	0	0	0	0	0	0	0	14	3.3	2.3	.96
4	1.1	0	0	0	0	0	0	0	12	3.2	2.3	.92
5	1.3	0	0	0	0	0	0	0	8.9	3.1	2.2	.87
6	1.2	0	0	0	0	0	0	0	8.5	3.2	2.2	.79
7	1.0	0	0	0	0	0	0	0	12	3.3	2.3	.78
8	1.0	0	0	0	0	0	0	0	11	3.2	2.2	.76
9	1.1	0	0	0	0	0	0	0	8.9	3.1	2.3	.76
10	1.0	0	0	0	0	0	0	0	9.8	3.0	2.2	.88
11	1.0	0	0	0	0	0	0	0	8.5	2.9	2.0	.82
12	.96	0	0	0	0	0	0	0	6.3	2.8	1.9	.87
13	.96	0	0	0	0	0	0	0	6.2	2.7	1.8	.75
14	.96	0	0	0	0	0	0	0	7.1	2.6	1.8	.69
15	.90	0	0	0	0	0	0	1.1	7.9	2.5	1.7	.69
16	.80	0	0	0	0	0	0	2.6	7.6	2.4	1.7	.68
17	.30	0	0	0	0	0	0	3.9	7.6	2.8	1.7	.68
18	0	0	0	0	0	0	0	6.2	7.2	3.3	1.6	.68
19	0	0	0	0	0	0	0	8.7	6.7	2.9	1.6	.68
20	0	0	0	0	0	0	0	12	6.3	2.6	1.6	.68
21	0	0	0	0	0	0	0	12	6.0	2.6	1.5	.68
22	0	0	0	0	0	0	0	8.3	5.5	2.5	1.4	.68
23	0	0	0	0	0	0	0	6.0	5.0	2.7	1.3	.68
24	0	0	0	0	0	0	0	4.8	4.8	2.5	1.3	.67
25	0	0	0	0	0	0	0	4.4	4.8	2.6	1.3	.67
26	0	0	0	0	0	0	0	4.2	4.5	2.9	1.3	.66
27	0	0	0	0	0	0	0	4.3	4.3	2.8	1.2	.65
28	0	0	0	0	0	0	0	5.7	4.1	2.8	1.1	.64
29	0	0	0	0	0	0	0	7.7	3.9	2.8	1.1	.62
30	0	0	0	0	---	0	0	8.6	3.8	2.6	1.1	.62
31	0	---	0	0	---	0	---	11	---	2.5	1.2	---
TOTAL	17.18	0	0	0	0	0	0	111.5	232.2	89.5	53.9	22.81
MEAN	.55	0	0	0	0	0	0	3.60	7.74	2.89	1.74	.76
AC-FT	34	0	0	0	0	0	0	221	461	178	107	45
MAX	1.3	0	0	0	0	0	0	12	15	3.7	2.4	1.2
MIN	0	0	0	0	0	0	0	0	3.8	2.4	1.1	.62

CAL YR	2007	TOTAL	622.08	MEAN	1.70	MAX	14	MIN	0	AC-FT	1230
WTR YR	2008	TOTAL	527.09	MEAN	1.44	MAX	15	MIN	0	AC-FT	1050

MAX DISCH: 17.3 CFS AT 19:30 ON Jun. 2, 2008 GH 1.19 FT. SHIFT 0.07 FT.  
MAX GH: 1.19 FT. AT 19:30 ON Jun. 2, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09121000 TABOR DITCH AT SPRING CREEK PASS CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

RIO GRANDE BASIN

09341000 TREASURE PASS DITCH AT WOLF CREEK PASS, CO

**LOCATION.**--Treasure Pass diversion ditch diverts water from tributaries of Wolf Creek in San Juan River basin, to tributary of South Fork Rio Grande in sec. 5, T.37 N., R.2 E., in Rio Grande basin.

**DRAINAGE AREA.**--N/A

**GAGE.**--Graphic water-stage recorder at a 2-ft. Parshall Flume.

**REMARKS.**--Record is complete and reliable. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--TREDITCO01 USED FROM 27-MAY-2008 TO 30-JUL-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

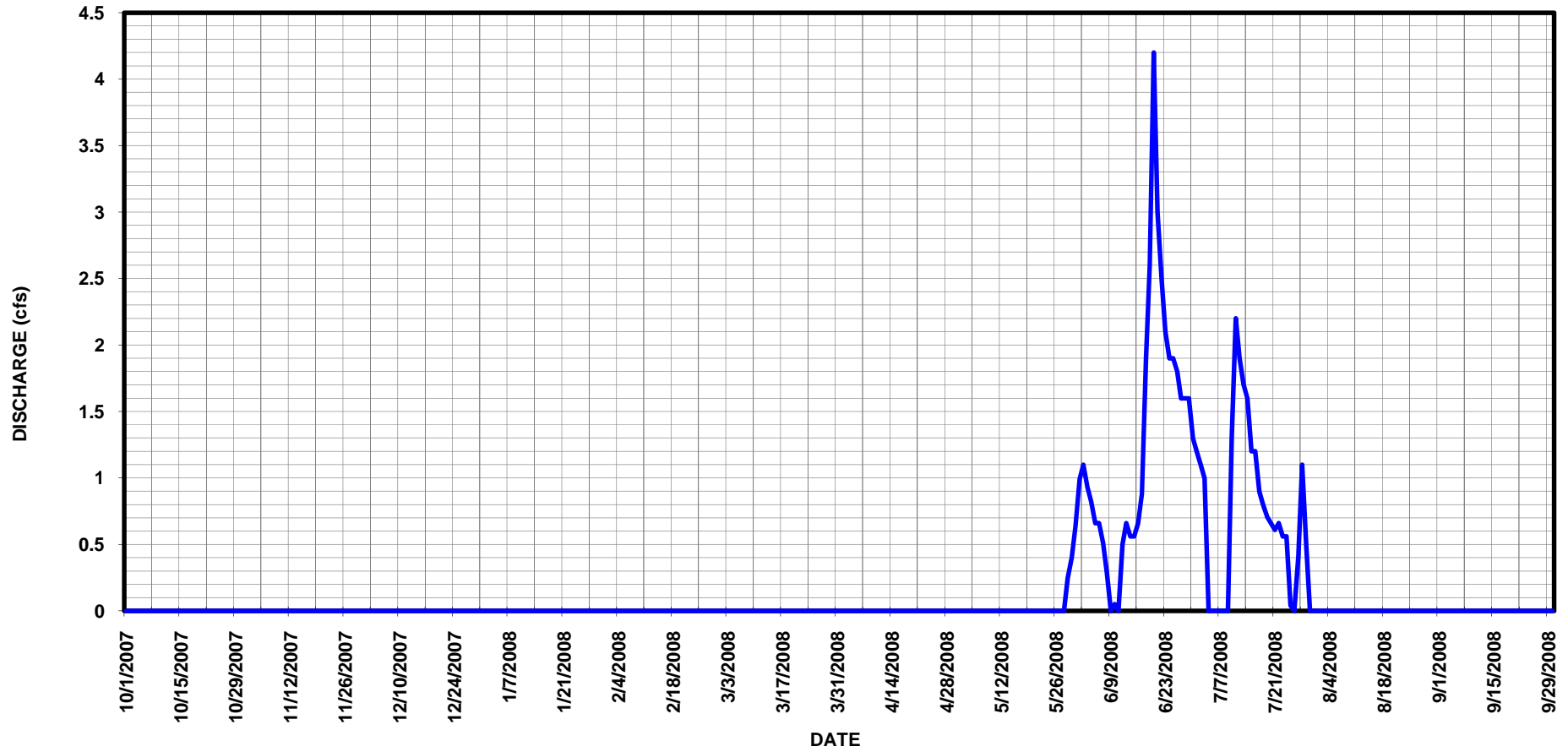
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	.99	1.2	0	0
2	0	0	0	0	0	0	0	0	1.1	1.1	0	0
3	0	0	0	0	0	0	0	0	.93	1.0	0	0
4	0	0	0	0	0	0	0	0	.82	0	0	0
5	0	0	0	0	0	0	0	0	.66	0	0	0
6	0	0	0	0	0	0	0	0	.66	0	0	0
7	0	0	0	0	0	0	0	0	.51	0	0	0
8	0	0	0	0	0	0	0	0	.29	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	.05	1.3	0	0
11	0	0	0	0	0	0	0	0	0	2.2	0	0
12	0	0	0	0	0	0	0	0	.50	1.9	0	0
13	0	0	0	0	0	0	0	0	.66	1.7	0	0
14	0	0	0	0	0	0	0	0	.56	1.6	0	0
15	0	0	0	0	0	0	0	0	.56	1.2	0	0
16	0	0	0	0	0	0	0	0	.66	1.2	0	0
17	0	0	0	0	0	0	0	0	.88	.90	0	0
18	0	0	0	0	0	0	0	0	1.9	.80	0	0
19	0	0	0	0	0	0	0	0	2.6	.71	0	0
20	0	0	0	0	0	0	0	0	4.2	.66	0	0
21	0	0	0	0	0	0	0	0	3.0	.61	0	0
22	0	0	0	0	0	0	0	0	2.5	.66	0	0
23	0	0	0	0	0	0	0	0	2.1	.56	0	0
24	0	0	0	0	0	0	0	0	1.9	.56	0	0
25	0	0	0	0	0	0	0	0	1.9	.04	0	0
26	0	0	0	0	0	0	0	0	1.8	0	0	0
27	0	0	0	0	0	0	0	0	1.6	.41	0	0
28	0	0	0	0	0	0	0	0	1.6	1.1	0	0
29	0	0	0	0	0	0	0	.25	1.6	.50	0	0
30	0	0	0	0	---	0	0	.40	1.3	0	0	0
31	0	---	0	0	---	0	---	.64	---	0	0	---
TOTAL	0	0	0	0	0	0	0	1.29	37.83	21.91	0	0
MEAN	0	0	0	0	0	0	0	.042	1.26	.71	0	0
AC-FT	0	0	0	0	0	0	0	2.6	75	43	0	0
MAX	0	0	0	0	0	0	0	.64	4.2	2.2	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0

CAL YR	2007	TOTAL	100.6	MEAN	.28	MAX	6.4	MIN	0	AC-FT	200
WTR YR	2008	TOTAL	61.03	MEAN	.17	MAX	4.2	MIN	0	AC-FT	121

MAX DISCH: 5.12 CFS AT 17:15 ON Jun. 20, 2008 GH 0.67 FT. SHIFT 0.08 FT.  
MAX GH: 0.67 FT. AT 17:15 ON Jun. 20, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09341000 TREASURE PASS DITCH AT WOLF CREEK PASS CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

RIO GRANDE BASIN

09347000 DON LA FONT DITCH NO.1 AT PIEDRA PASS, CO

**LOCATION.**--SW¼ sec. 33, T.39 N., R.1 W., at Piedra Pass, Co. Diversion is from tributaries of Piedra River Basin to Red Mountain Creek in Rio Grande River Basin.

**DRAINAGE AREA.**--N/A

**GAGE.**--Graphic water-stage recorder at 9-in. Parshall Flume.

**REMARKS.**--Record is complete and reliable. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--DLFDT1CO02 USED FROM 01-OCT-2007 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

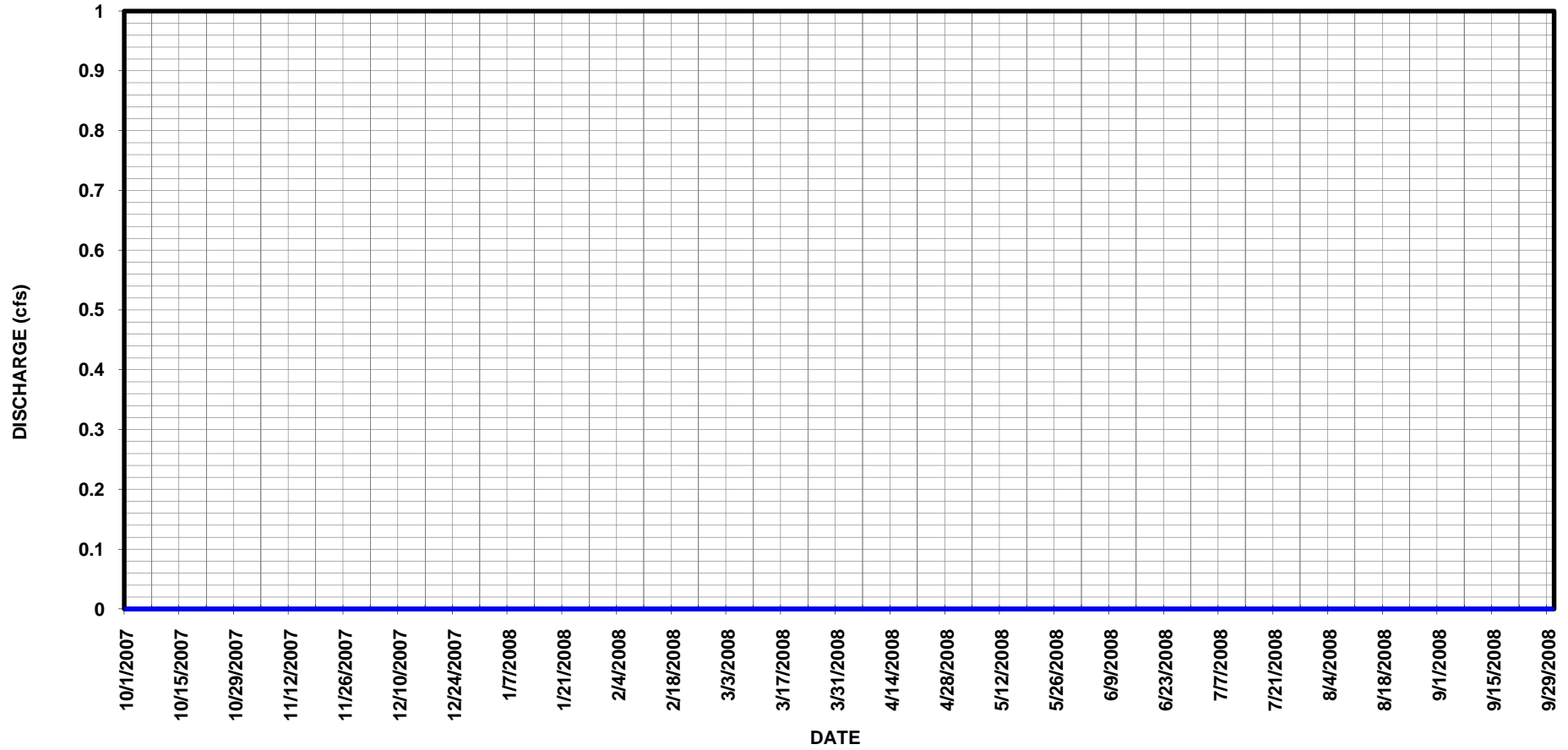
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	---	0	0	0	0	0	0	0
31	0	---	0	0	---	0	---	0	---	0	0	---
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	0	0	0	0	0
MAX	0	0	0	0	0	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0

CAL YR 2007 TOTAL 7.37 MEAN .02 MAX 1.5 MIN 0 AC-FT 15  
WTR YR 2008 TOTAL 0 MEAN 0 MAX 0 MIN 0 AC-FT 0

MAX DISCH: 0 CFS

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09347000 DON LA FONT DITCH NO.1 AT PIEDRA PASS CO  
WY2008 HYDROGRAPH





TRANSMOUNTAIN DIVERSION TO

RIO GRANDE BASIN

09347000 DON LA FONT DITCH N0.2 AT PIEDRA PASS, CO

**LOCATION.**--SW<sup>1</sup>/<sub>4</sub> sec. 33, T.39 N., R.1 W., at Piedra Pass, Co. Diversion is from tributaries of Piedra River in San Juan River Basin to Red Mountain Creek in Rio Grande River Basin.

**DRAINAGE AREA.**--N/A

**GAGE.**--Stevens Data logger and satellite monitoring system at 1.5-ft Parshall Flume.

**REMARKS.**--Record is complete and reliable. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--DLFDT2CO02 USED FROM 1-OCT-2007 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

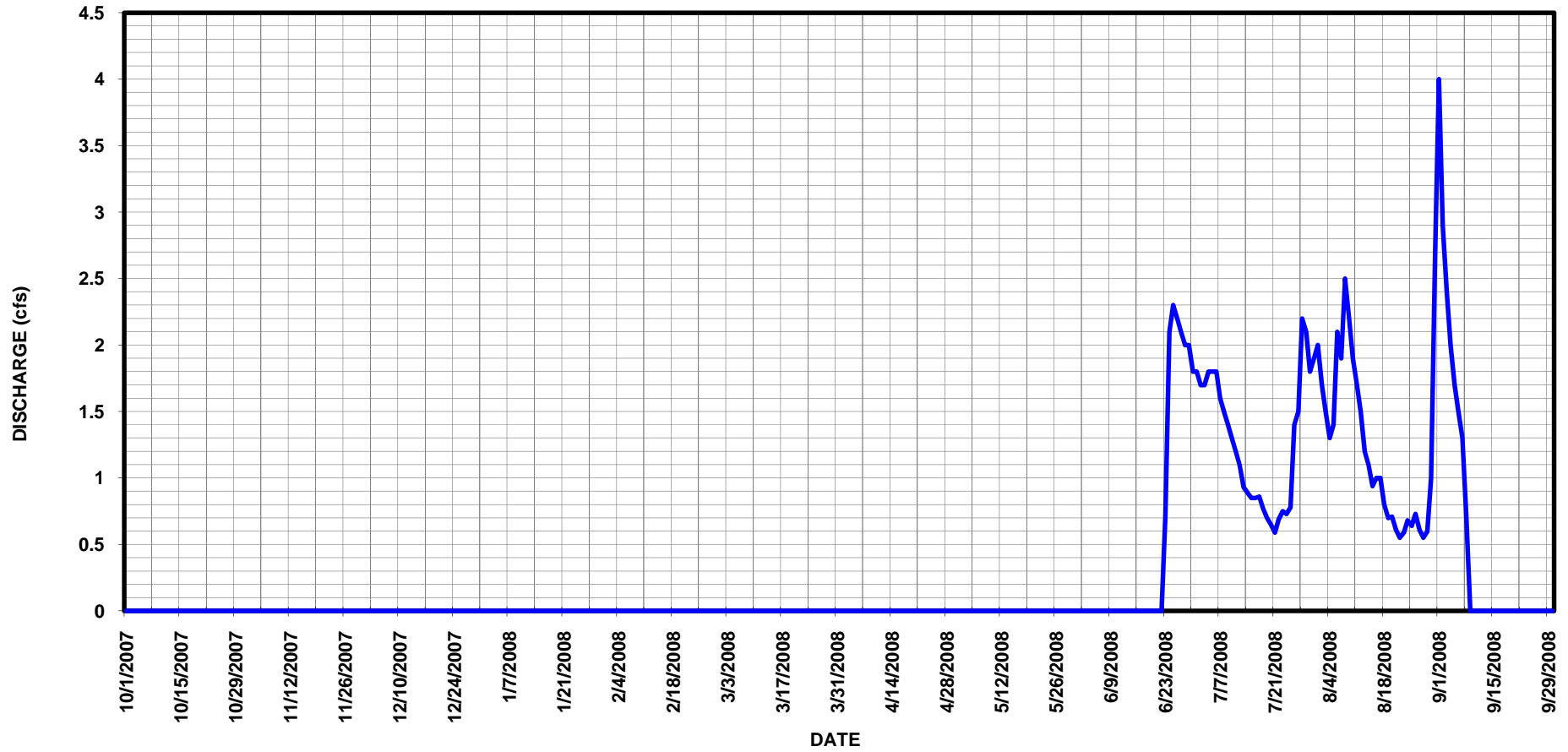
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	1.8	2.0	4.0
2	0	0	0	0	0	0	0	0	0	1.7	1.7	2.9
3	0	0	0	0	0	0	0	0	0	1.7	1.5	2.4
4	0	0	0	0	0	0	0	0	0	1.8	1.3	2.0
5	0	0	0	0	0	0	0	0	0	1.8	1.4	1.7
6	0	0	0	0	0	0	0	0	0	1.8	2.1	1.5
7	0	0	0	0	0	0	0	0	0	1.6	1.9	1.3
8	0	0	0	0	0	0	0	0	0	1.5	2.5	.72
9	0	0	0	0	0	0	0	0	0	1.4	2.2	0
10	0	0	0	0	0	0	0	0	0	1.3	1.9	0
11	0	0	0	0	0	0	0	0	0	1.2	1.7	0
12	0	0	0	0	0	0	0	0	0	1.1	1.5	0
13	0	0	0	0	0	0	0	0	0	.93	1.2	0
14	0	0	0	0	0	0	0	0	0	.89	1.1	0
15	0	0	0	0	0	0	0	0	0	.85	.94	0
16	0	0	0	0	0	0	0	0	0	.85	1.0	0
17	0	0	0	0	0	0	0	0	0	.86	1.0	0
18	0	0	0	0	0	0	0	0	0	.77	.80	0
19	0	0	0	0	0	0	0	0	0	.70	.70	0
20	0	0	0	0	0	0	0	0	0	.65	.71	0
21	0	0	0	0	0	0	0	0	0	.59	.61	0
22	0	0	0	0	0	0	0	0	0	.69	.55	0
23	0	0	0	0	0	0	0	0	.71	.75	.59	0
24	0	0	0	0	0	0	0	0	2.1	.73	.68	0
25	0	0	0	0	0	0	0	0	2.3	.78	.64	0
26	0	0	0	0	0	0	0	0	2.2	1.4	.73	0
27	0	0	0	0	0	0	0	0	2.1	1.5	.61	0
28	0	0	0	0	0	0	0	0	2.0	2.2	.55	0
29	0	0	0	0	0	0	0	0	2.0	2.1	.60	0
30	0	0	0	0	---	0	0	0	1.8	1.8	1.0	0
31	0	---	0	0	---	0	---	0	---	1.9	2.7	---
TOTAL	0	0	0	0	0	0	0	0	15.21	39.64	38.41	16.52
MEAN	0	0	0	0	0	0	0	0	.51	1.28	1.24	.55
AC-FT	0	0	0	0	0	0	0	0	30	79	76	33
MAX	0	0	0	0	0	0	0	0	2.3	2.2	2.7	4.0
MIN	0	0	0	0	0	0	0	0	0	.59	.55	0

CAL YR	2007	TOTAL	128.12	MEAN	.35	MAX	5.3	MIN	0	AC-FT	254
WTR YR	2008	TOTAL	109.78	MEAN	.3	MAX	4	MIN	0	AC-FT	218

MAX DISCH: 13 CFS AT 16:15 ON Jul. 26, 2008 GH 1.63 FT. SHIFT 0.02 FT.  
MAX GH: 1.63 FT. AT 16:15 ON Jul. 26, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09347000 DON LA FONT DITCH N0.2 AT PIEDRA PASS CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

RIO GRANDE BASIN

09347000 DON LA FONT DITCH, COMBINED, AT PIEDRA PASS, CO

**LOCATION.**--Don La Font ditches 1 and 2 divert water from tributaries of Piedra River between headgates in NW¼ sec. 4, T.38 N., R.1 W., and SW¼ sec. 33, T.39 N., R.1 W., and Piedra pass, in San Juan River basin, to Red Mountain Creek in sec. 33, T.39 N., R.1 W., in Rio Grande basin.

**DRAINAGE AREA.**--N/A

**GAGE.**--Graphic water-stage recorders.

**REMARKS.**--Record is complete and reliable. Station maintained and record developed by Div. III Hydrographic Staff.

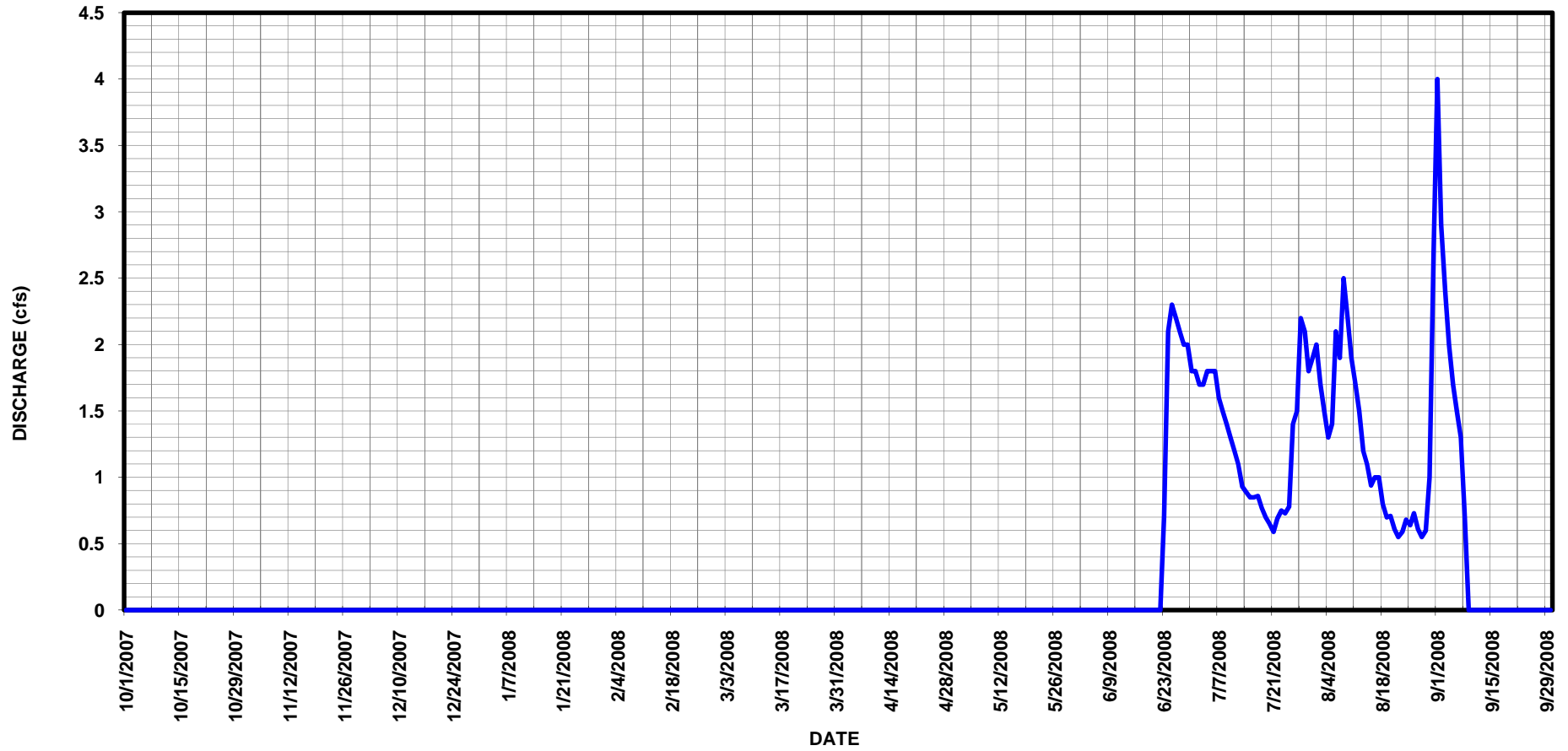
**DON LA FONT DITCH COMBINED (DITCH NO. 1 & 2)**

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	1.8	2	4
2	0	0	0	0	0	0	0	0	0	1.7	1.7	2.9
3	0	0	0	0	0	0	0	0	0	1.7	1.5	2.4
4	0	0	0	0	0	0	0	0	0	1.8	1.3	2
5	0	0	0	0	0	0	0	0	0	1.8	1.4	1.7
6	0	0	0	0	0	0	0	0	0	1.8	2.1	1.5
7	0	0	0	0	0	0	0	0	0	1.6	1.9	1.3
8	0	0	0	0	0	0	0	0	0	1.5	2.5	.72
9	0	0	0	0	0	0	0	0	0	1.4	2.2	0
10	0	0	0	0	0	0	0	0	0	1.3	1.9	0
11	0	0	0	0	0	0	0	0	0	1.2	1.7	0
12	0	0	0	0	0	0	0	0	0	1.1	1.5	0
13	0	0	0	0	0	0	0	0	0	.93	1.2	0
14	0	0	0	0	0	0	0	0	0	.89	1.1	0
15	0	0	0	0	0	0	0	0	0	.85	.94	0
16	0	0	0	0	0	0	0	0	0	.85	1	0
17	0	0	0	0	0	0	0	0	0	.86	1	0
18	0	0	0	0	0	0	0	0	0	.77	.8	0
19	0	0	0	0	0	0	0	0	0	.7	.7	0
20	0	0	0	0	0	0	0	0	0	.65	.71	0
21	0	0	0	0	0	0	0	0	0	.59	.61	0
22	0	0	0	0	0	0	0	0	0	.69	.55	0
23	0	0	0	0	0	0	0	0	.71	.75	.59	0
24	0	0	0	0	0	0	0	0	2.1	.73	.68	0
25	0	0	0	0	0	0	0	0	2.3	.78	.64	0
26	0	0	0	0	0	0	0	0	2.2	1.4	.73	0
27	0	0	0	0	0	0	0	0	2.1	1.5	.61	0
28	0	0	0	0	0	0	0	0	2	2.2	.55	0
29	0	0	0	0	0	0	0	0	2	2.1	.6	0
30	0	0	0	0	---	0	0	0	1.8	1.8	1	0
31	0	---	0	0	---	0	---	0	---	1.9	2.7	---
TOTAL	0	0	0	0	0	0	0	0	15.21	39.64	38.41	16.52
MEAN	0	0	0	0	0	0	0	0	.51	1.28	1.24	.55
AC-FT	0	0	0	0	0	0	0	0	30	79	76	33
MAX	0	0	0	0	0	0	0	0	2.3	2.2	2.7	4.0
MIN	0	0	0	0	0	0	0	0	0	.59	.55	0
CAL YR 2007	TOTAL	135.42	MEAN	.37	MAX	6.8	MIN	0	AC-FT	269		
WTR YR 2008	TOTAL	109.78	MEAN	.30	MAX	4.0	MIN	0	AC-FT	218		

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09347000 DON LA FONT DITCH, COMBINED, AT PIEDRA PASS CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

RIO GRANDE BASIN

09348000 WILLIAM'S CREEK-SQUAW PASS DITCH AT SQUAW PASS, CO

**LOCATION.**--William's Creek-Squaw Pass ditch diverts water from William's Creek (tributary to Piedra River) in sec. 21, T.39 N., R.3 W., in San Juan River basin, to Squaw Creek in sec. 21, T.39 N., R.3 W., in Rio Grande basin.

**DRAINAGE AREA.**--N/A

**GAGE.**--Satellite monitored DCP at a 2-ft. Parshall Flume.

**REMARKS.**--Record is complete and reliable. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--WCSGITCO02 USED FROM 01-OCT-2007 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

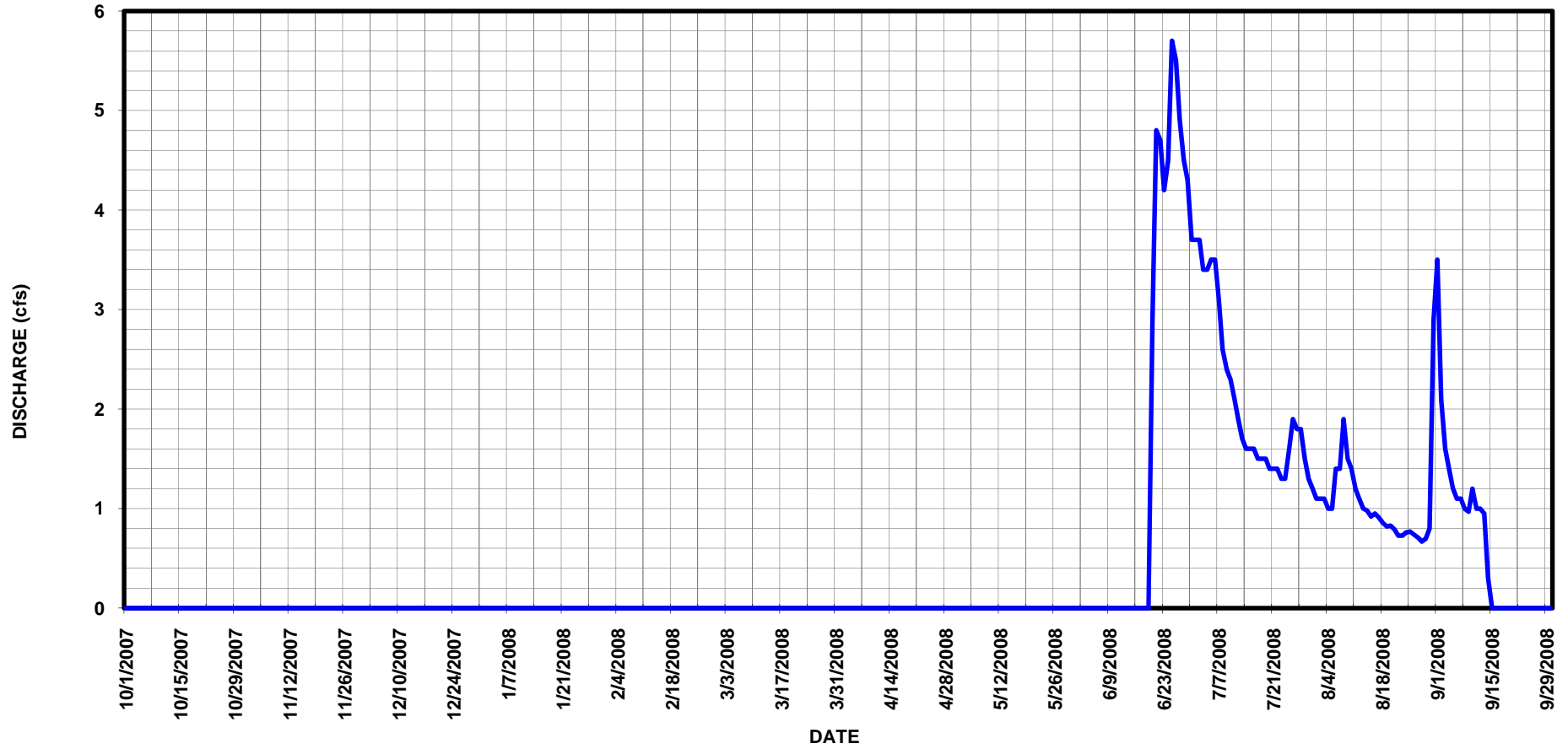
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	3.7	1.1	3.5
2	0	0	0	0	0	0	0	0	0	3.7	1.1	2.1
3	0	0	0	0	0	0	0	0	0	3.4	1.1	1.6
4	0	0	0	0	0	0	0	0	0	3.4	1.0	1.4
5	0	0	0	0	0	0	0	0	0	3.5	1.0	1.2
6	0	0	0	0	0	0	0	0	0	3.5	1.4	1.1
7	0	0	0	0	0	0	0	0	0	3.1	1.4	1.1
8	0	0	0	0	0	0	0	0	0	2.6	1.9	1.0
9	0	0	0	0	0	0	0	0	0	2.4	1.5	.97
10	0	0	0	0	0	0	0	0	0	2.3	1.4	1.2
11	0	0	0	0	0	0	0	0	0	2.1	1.2	1.0
12	0	0	0	0	0	0	0	0	0	1.9	1.1	1.0
13	0	0	0	0	0	0	0	0	0	1.7	1.0	.95
14	0	0	0	0	0	0	0	0	0	1.6	.98	.31
15	0	0	0	0	0	0	0	0	0	1.6	.92	0
16	0	0	0	0	0	0	0	0	0	1.6	.95	0
17	0	0	0	0	0	0	0	0	0	1.5	.91	0
18	0	0	0	0	0	0	0	0	0	1.5	.86	0
19	0	0	0	0	0	0	0	0	0	1.5	.82	0
20	0	0	0	0	0	0	0	0	2.9	1.4	.83	0
21	0	0	0	0	0	0	0	0	4.8	1.4	.79	0
22	0	0	0	0	0	0	0	0	4.7	1.4	.73	0
23	0	0	0	0	0	0	0	0	4.2	1.3	.73	0
24	0	0	0	0	0	0	0	0	4.5	1.3	.76	0
25	0	0	0	0	0	0	0	0	5.7	1.6	.77	0
26	0	0	0	0	0	0	0	0	5.5	1.9	.74	0
27	0	0	0	0	0	0	0	0	4.9	1.8	.71	0
28	0	0	0	0	0	0	0	0	4.5	1.8	.67	0
29	0	0	0	0	0	0	0	0	4.3	1.5	.70	0
30	0	0	0	0	---	0	0	0	3.7	1.3	.80	0
31	0	---	0	0	---	0	---	0	---	1.2	2.9	---
TOTAL	0	0	0	0	0	0	0	0	49.7	64.5	32.77	18.43
MEAN	0	0	0	0	0	0	0	0	1.66	2.08	1.06	.61
AC-FT	0	0	0	0	0	0	0	0	99	128	65	37
MAX	0	0	0	0	0	0	0	0	5.7	3.7	2.9	3.5
MIN	0	0	0	0	0	0	0	0	0	1.2	.67	0

CAL YR	2007	TOTAL	234.97	MEAN	.64	MAX	8.2	MIN	0	AC-FT	466
WTR YR	2008	TOTAL	165.4	MEAN	.45	MAX	5.7	MIN	0	AC-FT	328

MAX DISCH: 10.1 CFS AT 17:15 ON Aug. 31, 2008 GH 0.95 FT. SHIFT 0 FT.  
MAX GH: 0.95 FT. AT 17:15 ON Aug. 31, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09348000 WILLIAM'S CREEK-SQUAW PASS DITCH AT SQUAW PASS CO  
WY2008 HYDROGRAPH



TRANSMOUNTAIN DIVERSION TO

RIO GRANDE BASIN

09351500 PINE RIVER WEMINUCHE PASS DITCH AT WEMINUCHE PASS, CO

**LOCATION.**--Pine River-Weminuche Pass ditch diverts water from right bank of north fork of Los Pinos River in sec. 4, T.39 N., R.4 W., in San Juan River basin, to Weminuche Creek in sec. 33, T.40 N., R.4 W., in Rio Grande basin.

**DRAINAGE AREA.**--N/A

**GAGE.**--Graphic water-stage recorder and Sutron satellite monitoring system at 3-ft Parshall Flume.

**REMARKS.**--Record is complete and reliable. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--PRWDITCO04 USED FROM 01-OCT-2007 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

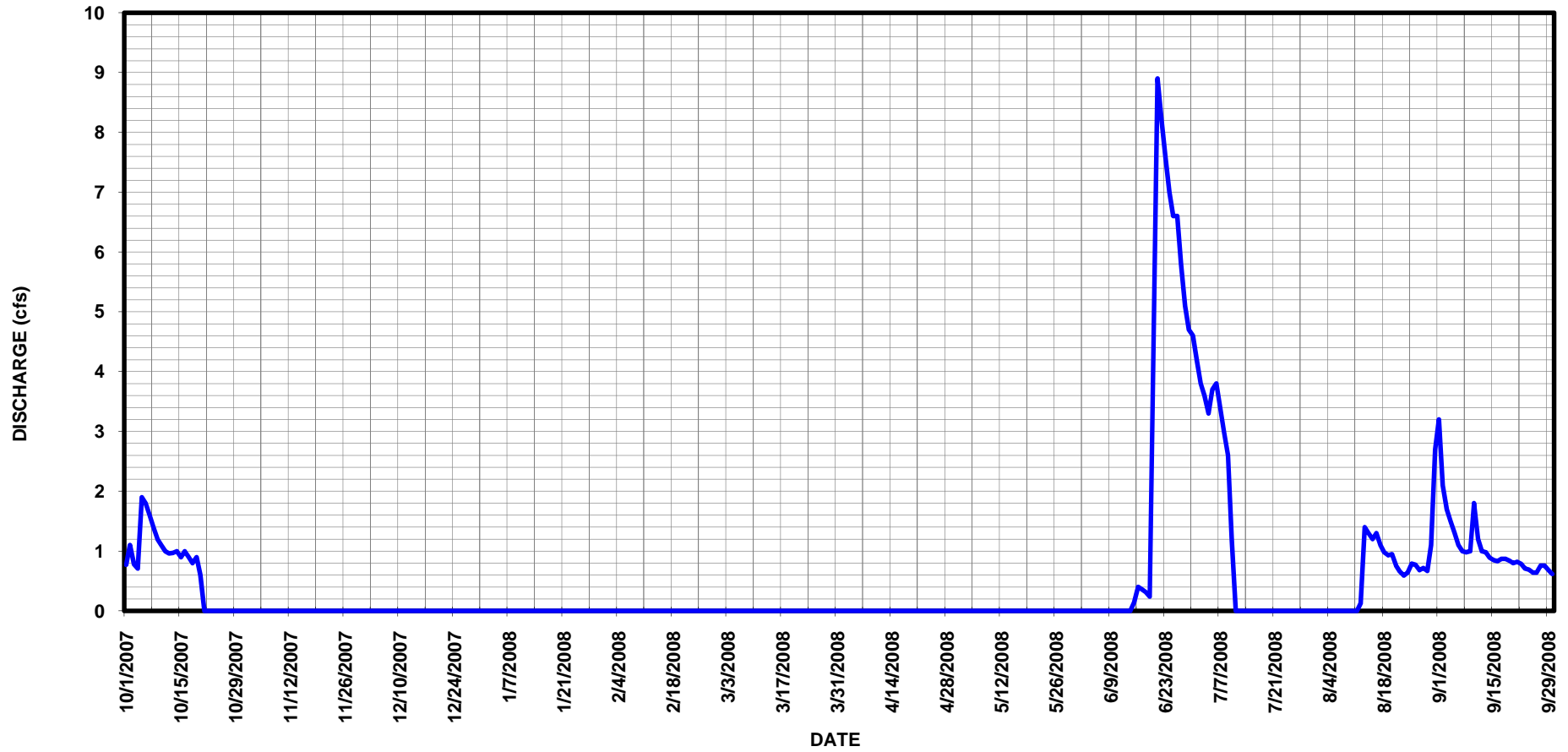
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.77	0	0	0	0	0	0	0	0	4.2	0	3.2
2	1.1	0	0	0	0	0	0	0	0	3.8	0	2.1
3	.78	0	0	0	0	0	0	0	0	3.6	0	1.7
4	.71	0	0	0	0	0	0	0	0	3.3	0	1.5
5	1.9	0	0	0	0	0	0	0	0	3.7	0	1.3
6	1.8	0	0	0	0	0	0	0	0	3.8	0	1.1
7	1.6	0	0	0	0	0	0	0	0	3.4	0	1.0
8	1.4	0	0	0	0	0	0	0	0	3.0	0	.98
9	1.2	0	0	0	0	0	0	0	0	2.6	0	1.0
10	1.1	0	0	0	0	0	0	0	0	1.2	0	1.8
11	1.0	0	0	0	0	0	0	0	0	0	0	1.2
12	.96	0	0	0	0	0	0	0	0	0	.13	1.0
13	.97	0	0	0	0	0	0	0	0	0	1.4	.98
14	1.0	0	0	0	0	0	0	0	0	0	1.3	.89
15	.90	0	0	0	0	0	0	0	.14	0	1.2	.85
16	1.0	0	0	0	0	0	0	0	.40	0	1.3	.83
17	.90	0	0	0	0	0	0	0	.36	0	1.1	.87
18	.80	0	0	0	0	0	0	0	.31	0	.98	.87
19	.90	0	0	0	0	0	0	0	.24	0	.93	.84
20	.60	0	0	0	0	0	0	0	4.7	0	.95	.80
21	0	0	0	0	0	0	0	0	8.9	0	.76	.82
22	0	0	0	0	0	0	0	0	8.2	0	.66	.79
23	0	0	0	0	0	0	0	0	7.6	0	.59	.71
24	0	0	0	0	0	0	0	0	7.0	0	.64	.69
25	0	0	0	0	0	0	0	0	6.6	0	.79	.64
26	0	0	0	0	0	0	0	0	6.6	0	.77	.64
27	0	0	0	0	0	0	0	0	5.8	0	.68	.76
28	0	0	0	0	0	0	0	0	5.1	0	.72	.76
29	0	0	0	0	0	0	0	0	4.7	0	.67	.68
30	0	0	0	0	---	0	0	0	4.6	0	1.1	.62
31	0	---	0	0	---	0	---	0	---	0	2.7	---
TOTAL	21.39	0	0	0	0	0	0	0	71.25	32.6	19.37	31.92
MEAN	.69	0	0	0	0	0	0	0	2.37	1.05	.62	1.06
AC-FT	42	0	0	0	0	0	0	0	141	65	38	63
MAX	1.9	0	0	0	0	0	0	0	8.9	4.2	2.7	3.2
MIN	0	0	0	0	0	0	0	0	0	0	0	.62

CAL YR	2007	TOTAL	266.89	MEAN	.73	MAX	12	MIN	0	AC-FT	529
WTR YR	2008	TOTAL	176.53	MEAN	.48	MAX	8.9	MIN	0	AC-FT	350

MAX DISCH: 9.48 CFS AT 13:15 ON Jun. 20, 2008 GH 0.91 FT. SHIFT -0.05 FT.  
MAX GH: 0.91 FT. AT 13:15 ON Jun. 20, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09351500 PINE RIVER WEMINUCHE PASS DITCH AT WEMINUCHE PASS CO  
WY2008 HYDROGRAPH





TRANSMOUNTAIN DIVERSION TO

RIO GRANDE BASIN

09351500 WEMINUCHE PASS DITCH AT WEMINUCHE PASS, CO

**LOCATION.**--Weminuche Pass ditch diverts water from left bank of Rincon la Vaca Creek (tributary to Los Pinos River) in sec. 5, T.39 N., R.4 W., in San Juan River basin, to Weminuche Creek in sec. 33, T.40 N., R.4 W., in Rio Grande basin.

**DRAINAGE AREA.**--N/A

**GAGE.**--Graphic water-stage recorder at a 5-ft. Parshall Flume.

**REMARKS.**--Record is complete and reliable. Station maintained and record developed by Div. III Hydrographic Staff.

**RATING TABLE.**--WEMDITCO05 USED FROM 01-OCT-2007 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

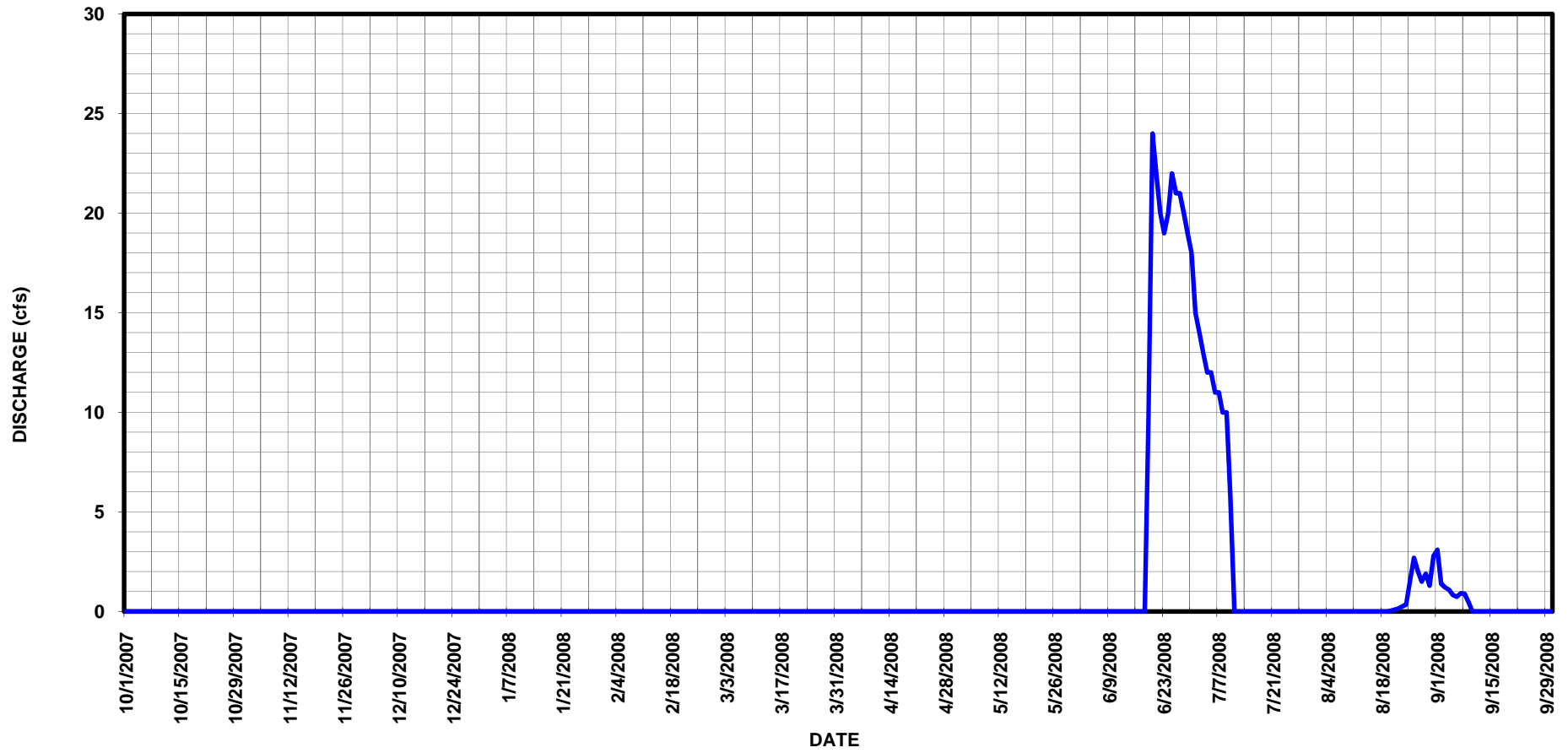
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	15	0	3.1
2	0	0	0	0	0	0	0	0	0	14	0	1.4
3	0	0	0	0	0	0	0	0	0	13	0	1.2
4	0	0	0	0	0	0	0	0	0	12	0	1.1
5	0	0	0	0	0	0	0	0	0	12	0	.83
6	0	0	0	0	0	0	0	0	0	11	0	.75
7	0	0	0	0	0	0	0	0	0	11	0	.92
8	0	0	0	0	0	0	0	0	0	10	0	.89
9	0	0	0	0	0	0	0	0	0	10	0	.46
10	0	0	0	0	0	0	0	0	0	5.7	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	9.8	0	0	0
20	0	0	0	0	0	0	0	0	24	0	.04	0
21	0	0	0	0	0	0	0	0	22	0	.09	0
22	0	0	0	0	0	0	0	0	20	0	.15	0
23	0	0	0	0	0	0	0	0	19	0	.26	0
24	0	0	0	0	0	0	0	0	20	0	.35	0
25	0	0	0	0	0	0	0	0	22	0	1.6	0
26	0	0	0	0	0	0	0	0	21	0	2.7	0
27	0	0	0	0	0	0	0	0	21	0	2.0	0
28	0	0	0	0	0	0	0	0	20	0	1.5	0
29	0	0	0	0	0	0	0	0	19	0	1.9	0
30	0	0	0	0	---	0	0	0	18	0	1.3	0
31	0	---	0	0	---	0	---	0	---	0	2.8	---
TOTAL	0	0	0	0	0	0	0	0	235.8	113.7	14.69	10.65
MEAN	0	0	0	0	0	0	0	0	7.86	3.67	.47	.36
AC-FT	0	0	0	0	0	0	0	0	468	226	29	21
MAX	0	0	0	0	0	0	0	0	24	15	2.8	3.1
MIN	0	0	0	0	0	0	0	0	0	0	0	0

CAL YR 2007 TOTAL 527.6 MEAN 1.45 MAX 27 MIN 0 AC-FT 1050  
WTR YR 2008 TOTAL 374.84 MEAN 1.02 MAX 24 MIN 0 AC-FT 743

MAX DISCH: 27.4 CFS AT 21:30 ON Jun. 19, 2008 GH 1.24 FT. SHIFT -0.02 FT.  
MAX GH: 1.24 FT. AT 21:30 ON Jun. 19, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09351500 WEMINUCHE PASS DITCH AT WEMINUCHE PASS CO  
WY2008 HYDROGRAPH



GUNNISON RIVER BASIN

09131490 MUDDY CREEK ABOVE PAONIA RESERVOIR

**LOCATION.**--Lat 38°59'15", long 107°20'53", in the NE¼ SE¼ NW¼ sec 28, T.12 S., R.89 W. in Gunnison County on the right bank 700 ft. downstream from county bridge and 1400 ft. upstream from high water line of Paonia Reservoir.

**GAGE.**--Satellite equipment (high data rate Sutron 8210 DCP and shaft encoder) and strip chart recorder (Stevens A35) in a culvert type shelter. The recorder and shaft encoder operate on separate floats and are set to an inside drop tape. A Sutron Accububble installed Nov 4, 2002 is used during the winter period. An oil cylinder was installed on Nov 29, 2007. There was a common float actuating the shaft encoder and strip chart until Apr. 14, 2008, when the oil cylinder was removed and the two floats went back into operation. The gage is also equipped with an air temperature sensor.

**REMARKS.**--The record is complete. The primary record is 15-minute satellite data. Any missing satellite data were filled in directly using data from the DCP datalogger file. Data from the bubbler gage were used Feb 19 to Feb 24, 2008 and were confirmed by the strip chart. The value for Feb 22, 2008 was taken from the strip chart. The record is reliable and good, except for the periods when the stage-discharge relationship was affected by ice. The ice periods were from Nov 23, 2007 to Dec 8; Dec 13, 2007 to Feb 15, 2008 and Feb 18-20, 2008. These periods are estimated and poor. Station maintained by Steven W. Tuck, Doug Wist, and Gerald M. Thrush and record developed by Gerald M. Thrush.

**RATING TABLE.**--MUDAPRC07 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	36	e26	e20	e28	46	126	933	922	265	41	32
2	55	35	e28	e22	e30	48	131	688	964	256	38	33
3	55	33	e30	e26	e30	40	162	585	1030	240	34	29
4	43	31	e32	e28	e30	45	159	571	962	224	36	29
5	43	31	e34	e30	e28	40	177	676	862	217	35	26
6	55	30	e36	e36	e30	37	162	875	744	215	40	25
7	50	30	e40	e38	e30	41	183	914	717	207	74	25
8	43	30	e38	e32	e30	40	174	1430	786	181	102	24
9	41	31	35	e34	e26	34	197	1140	664	151	73	22
10	39	32	38	e32	e24	35	165	1170	627	129	67	25
11	37	30	38	e30	e22	35	141	1030	653	114	50	24
12	35	30	36	e30	e26	38	136	1240	578	102	45	36
13	34	29	e26	e28	e28	38	182	1140	500	92	42	33
14	35	29	e28	e28	e32	38	333	870	490	84	38	35
15	39	26	e22	e30	e30	36	471	913	522	76	37	31
16	36	27	e28	e32	34	36	488	1050	562	68	37	29
17	42	27	e26	e34	33	37	371	1330	576	69	37	29
18	46	27	e30	e32	e22	38	402	1610	570	69	34	30
19	42	26	e32	e28	e26	42	564	1840	580	66	32	31
20	43	26	e30	e22	e28	48	685	2240	557	64	31	28
21	45	25	e28	e26	28	51	691	2160	503	64	30	29
22	36	23	e22	e32	28	53	721	1520	468	68	30	28
23	39	e24	e24	e30	29	55	838	1020	452	63	28	26
24	40	e18	e28	e28	28	63	864	807	422	61	27	26
25	41	e20	e30	e34	33	76	720	703	382	59	28	26
26	40	e22	e26	e30	32	95	664	759	385	59	29	26
27	38	e20	e28	e28	35	135	672	856	356	54	31	28
28	38	e22	e26	e24	36	138	783	933	313	50	29	27
29	37	e18	e28	e28	39	132	926	924	300	47	29	27
30	37	e24	e28	e28	---	141	1030	946	285	46	28	28
31	37	---	e24	e28	---	185	---	911	---	44	31	---
TOTAL	1274	812	925	908	855	1916	13318	33784	17732	3504	1243	847
MEAN	41.1	27.1	29.8	29.3	29.5	61.8	444	1090	591	113	40.1	28.2
AC-FT	2530	1610	1830	1800	1700	3800	26420	67010	35170	6950	2470	1680
MAX	55	36	40	38	39	185	1030	2240	1030	265	102	36
MIN	33	18	22	20	22	34	126	571	285	44	27	22

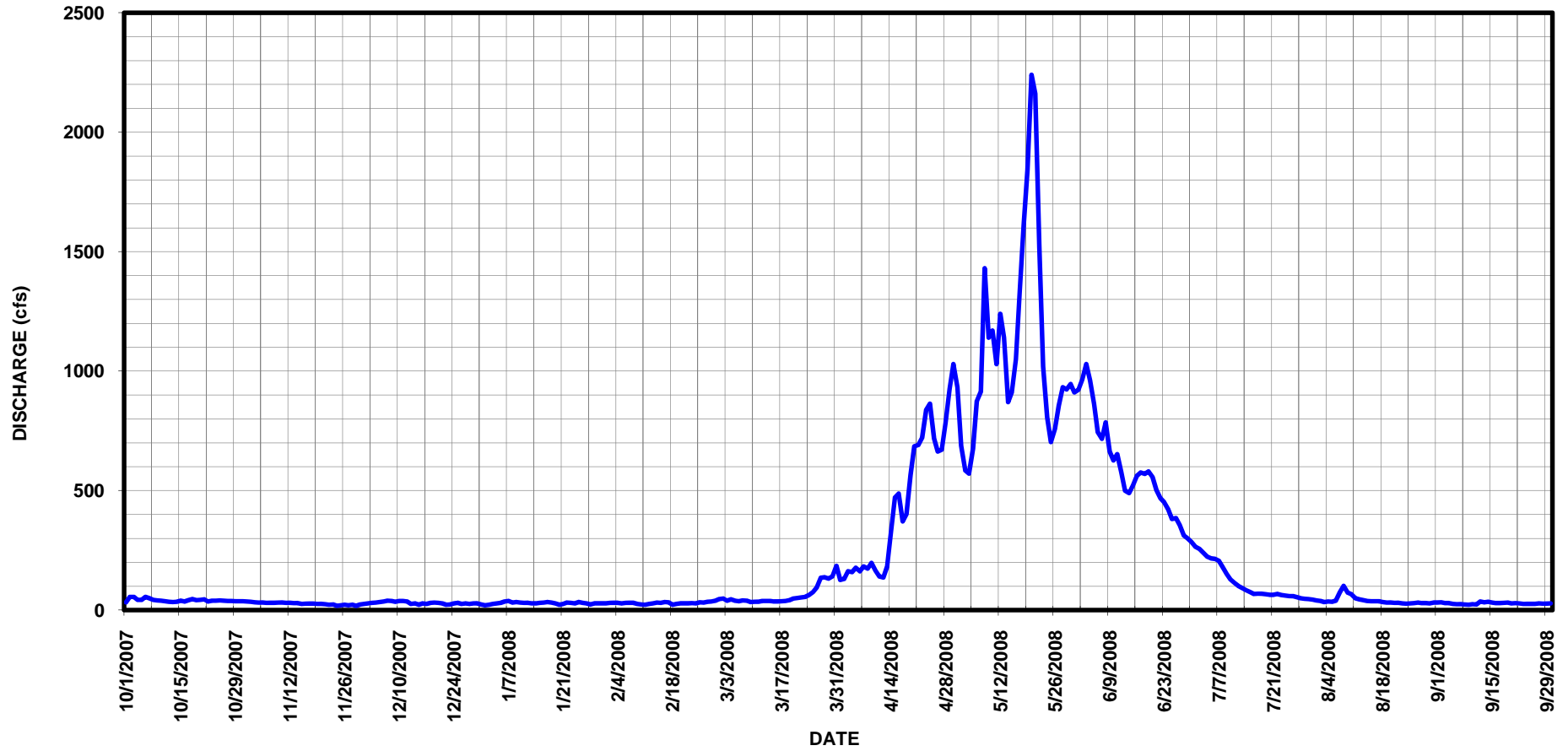
CAL YR	2007	TOTAL	39243	MEAN	108	MAX	575	MIN	18	AC-FT	77840
WTR YR	2008	TOTAL	77118	MEAN	211	MAX	2240	MIN	18	AC-FT	153000

MAX DISCH: 3230 CFS AT 22:15 ON May. 20, 2008 GH 8.96 FT. SHIFT 0.35 FT.  
MAX GH: 8.96 FT. AT 22:15 ON May. 20, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

e-Estimated.

09131490 MUDDY CREEK ABOVE PAONIA RESERVOIR CO  
WY2008 HYDROGRAPH



GUNNISON RIVER BASIN

09131500 MUDDY CREEK BELOW PAONIA RESERVOIR

**LOCATION.**--Lat 38°56'26", long 107°21'24" in the SE¼ NW¼ NE¼ sec. 8, T.13 S., R. 89 W. (in Gunnison County on the right hand bank), and about 100 feet above county bridge and about 1100 feet below Paonia Reservoir outlet.

**GAGE.**--Shaft encoder and high data rate satellite DCP (Sutron SatLink) and strip chart recorder (Stevens A 35) in a culvert type shelter. The recorder and shaft encoder are on separate floats. The primary reference gage is steel drop tape referenced to an adjustable reference point inside the gage house. The secondary reference gage is a bank-operated cantilever outside chain gage is located just upstream of the station. The DCP is in an outside NEMA box. The control is a concrete ramp flume.

**REMARKS.**--The primary record is the electronic data from the Sutron SatLink electronic data logger (EDL). Data from the chart record were used to fill in missing DCP data without loss of accuracy. The record is complete and reliable. The record is rated good. Station maintained by Steven W. Tuck, Doug Wist, and Gerald M. Thrush. Record developed by Gerald M. Thrush.

**RATING TABLE.**--MUDBPRCO09A USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

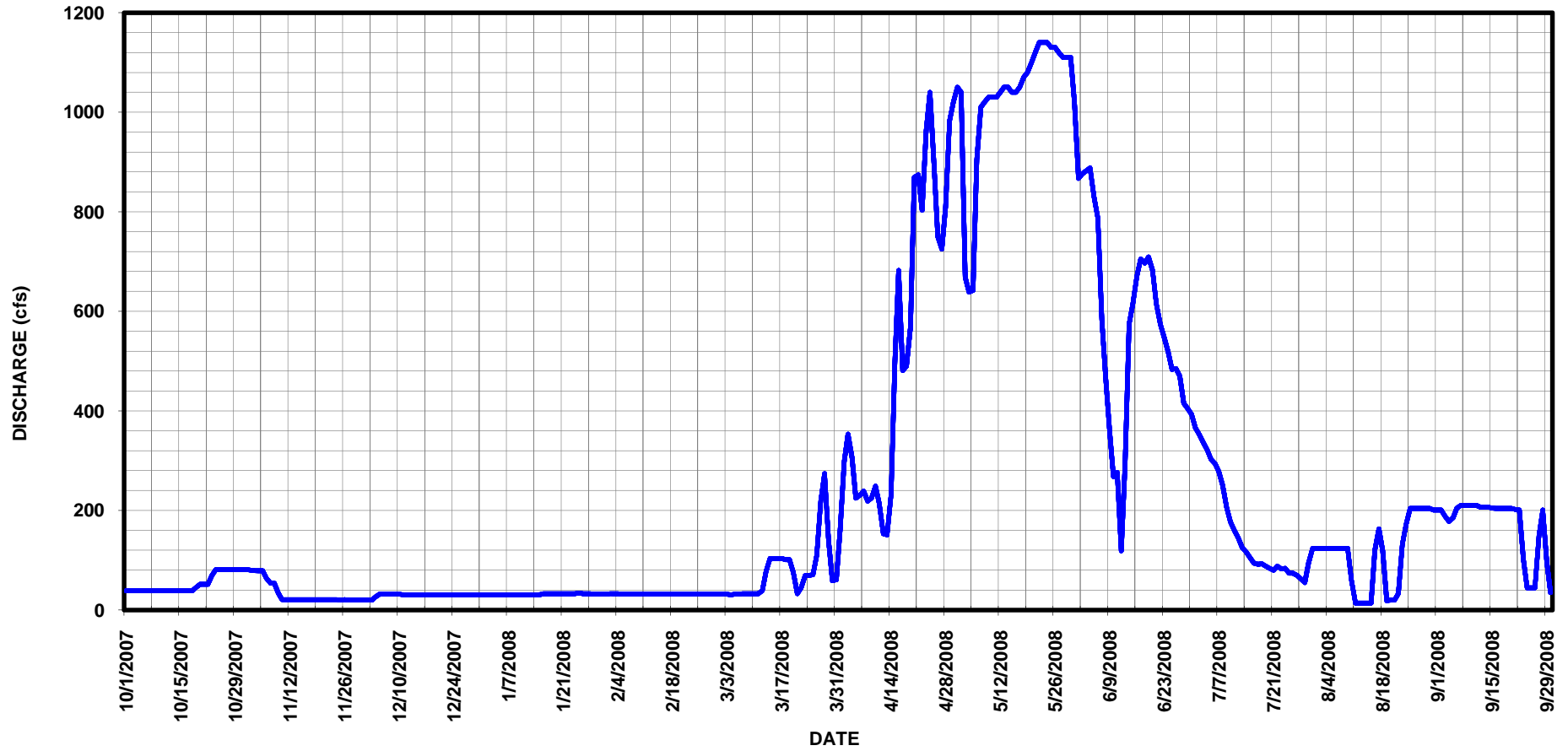
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	81	20	31	32	32	162	1050	867	366	124	201
2	39	80	20	31	33	32	298	1040	876	352	124	201
3	39	79	20	31	33	32	353	668	882	337	124	188
4	39	79	27	31	33	31	306	639	888	321	124	178
5	39	79	32	31	32	32	225	642	829	303	124	185
6	39	64	32	31	32	32	231	905	787	294	124	205
7	39	54	32	31	32	33	239	1010	583	278	124	210
8	39	54	32	31	32	33	219	1020	468	251	124	210
9	39	34	32	31	32	33	225	1030	358	206	124	210
10	39	21	32	31	32	33	249	1030	268	177	60	210
11	39	21	31	31	32	33	214	1030	276	159	14	210
12	39	21	31	31	32	39	153	1040	119	145	14	207
13	39	21	31	31	32	78	151	1050	292	125	14	207
14	39	21	31	31	32	104	233	1050	574	117	14	207
15	39	21	31	31	32	104	496	1040	615	105	14	205
16	39	21	31	33	32	104	682	1040	671	94	121	204
17	39	21	31	33	32	104	481	1050	705	92	163	204
18	39	21	31	33	32	101	490	1070	697	93	119	204
19	46	21	31	33	32	101	569	1080	709	88	19	204
20	52	21	31	33	32	76	869	1100	682	84	20	204
21	52	21	31	33	32	33	874	1120	615	80	20	202
22	52	21	31	33	32	45	803	1140	574	88	33	201
23	70	21	31	33	32	69	963	1140	548	83	132	102
24	81	21	31	33	32	70	1040	1140	518	84	172	45
25	81	20	31	34	32	71	895	1130	483	74	204	45
26	81	21	31	33	32	110	750	1130	485	74	204	45
27	81	20	31	33	32	220	725	1120	470	70	204	150
28	81	20	31	33	32	274	810	1110	415	63	204	201
29	81	20	31	32	32	140	983	1110	405	55	204	97
30	81	20	31	32	---	59	1020	1110	393	95	204	35
31	81	---	31	32	---	61	---	1020	---	124	201	---
TOTAL	1622	1040	930	991	931	2319	15708	31854	17052	4877	3470	5177
MEAN	52.3	34.7	30.0	32.0	32.1	74.8	524	1028	568	157	112	173
AC-FT	3220	2060	1840	1970	1850	4600	31160	63180	33820	9670	6880	10270
MAX	81	81	32	34	33	274	1040	1140	888	366	204	210
MIN	39	20	20	31	32	31	151	639	119	55	14	35

CAL YR	2007	TOTAL	45041.1	MEAN	123	MAX	595	MIN	8.0	AC-FT	89340
WTR YR	2008	TOTAL	85971	MEAN	235	MAX	1140	MIN	14	AC-FT	170500

MAX DISCH: 1150 CFS AT 11:30 ON May. 23, 2008 GH 6.47 FT. SHIFT 0.18 FT.  
MAX GH: 6.47 FT. AT 11:30 ON May. 23, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09131500 MUDDY CREEK BELOW PAONIA RESERVOIR CO  
WY2008 HYDROGRAPH



GUNNISON RIVER BASIN

AB LATERAL CANAL NEAR MONTROSE, CO

**LOCATION.**--Lat 38°29'06", long 107°44'57", in SE¼ NE¼ NE¼ sec. 27, T.49 N., R.8 W., Montrose County, on left bank of canal 270 ft. below takeout from South Canal, such takeout being 1700 ft. below the west portal of the Gunnison Tunnel.

**GAGE.**--Sutron Satlink 2 HDR data collection platform with shaft encoder and strip chart recorder (Stevens A35) in a 36-in. diameter CMP shelter over a 24-in diameter CMP stilling well. The recorder and shaft encoder operate from separate floats and are set to an inside drop tape referenced to an adjustable RP on the instrument shelf. The primary record is electronic data from the DCP and shaft encoder with the chart serving as backup.

**REMARKS.**-- The primary record is the electronic data from the Sutron SatLink electronic data logger. Record is complete and reliable, except for December 26, 2007-January 2, 2008, and January 5-14, 2008, when the stage-discharge relationship was affected by ice; March 20-27, April 10-May 6, 2008, when the closed gates downstream submerged the control. The operating period of the canal was from Oct. 1-31, 2007 and from March 31-Sep. 30, 2008. During the winter period there were normal seepage flows from the Gunnison Tunnel and nine occurrences of increased flow when the Gunnison Tunnel was turned on to fill Fairview Reservoir and the AB Lateral head gate was left open. The record is good, except periods of ice affect and submerged control conditions, which are poor. The period Dec. 15, 2007-Feb. 10, 2008 is fair due to ice in the stilling well if it isn't already rated poor because of ice on the control. The AB and C Drop aka the AB Lateral Canal is part of the Gunnison Tunnel complex. The South Canal is the other part. The two structures are combined to account for the total diversion through the Gunnison Tunnel. Station maintained and record developed by Gerald M. Thrush.

**RATING TABLE.**--ABCLATCO01 USED FROM 01-Oct-2007 TO 30-Sep-2008

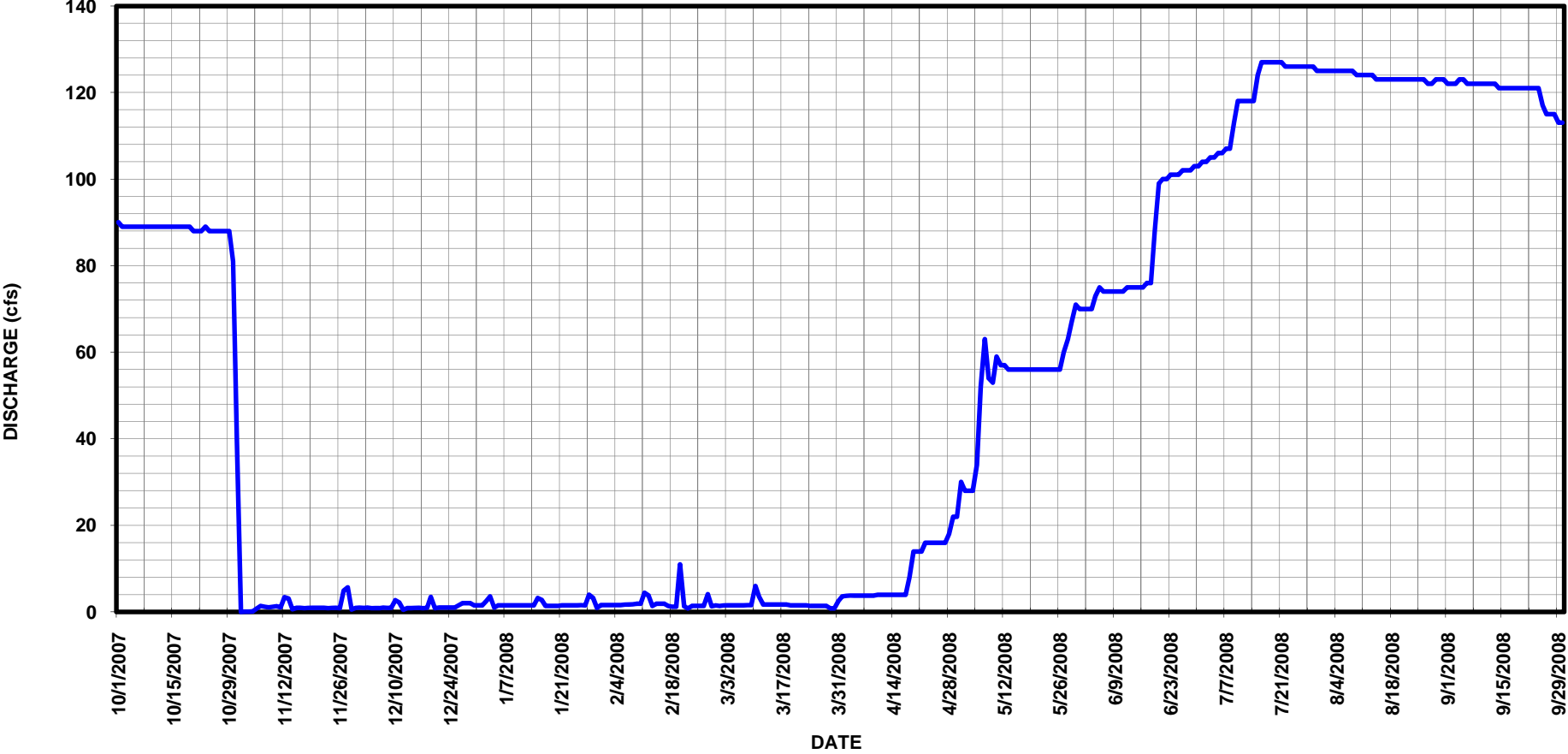
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	0	.98	e1.5	1.6	1.4	3.6	e30	70	104	125	122
2	89	.06	.95	e2.5	1.6	1.5	3.7	e28	70	104	125	122
3	89	.08	1.0	3.6	1.6	1.5	3.8	e28	70	105	125	122
4	89	.11	.91	1.0	1.6	1.5	3.8	e28	73	105	125	123
5	89	.83	.91	e1.5	1.6	1.5	3.8	e34	75	106	125	123
6	89	1.4	.91	e1.5	1.7	1.5	3.8	e52	74	106	125	122
7	89	1.2	1.0	e1.5	1.7	1.5	3.8	63	74	107	125	122
8	89	1.1	.95	e1.5	1.8	1.6	3.8	54	74	107	125	122
9	89	1.2	.94	e1.5	1.9	1.6	3.8	53	74	113	124	122
10	89	1.3	2.7	e1.5	1.9	6.0	e4.0	59	74	118	124	122
11	89	1.1	2.2	e1.5	4.4	3.5	e4.0	57	74	118	124	122
12	89	3.4	.52	e1.5	3.8	1.7	e4.0	57	75	118	124	122
13	89	3.1	.91	e1.5	1.4	1.7	e4.0	56	75	118	124	122
14	89	.61	.91	e1.5	1.9	1.7	e4.0	56	75	118	123	121
15	89	.92	.92	3.2	1.9	1.7	e4.0	56	75	124	123	121
16	89	.92	.92	2.8	1.9	1.7	e4.0	56	75	127	123	121
17	89	.91	.90	1.4	1.4	1.7	e4.0	56	76	127	123	121
18	89	.92	.92	1.4	1.2	1.7	e8.0	56	76	127	123	121
19	89	.92	3.5	1.4	1.2	1.5	e 14	56	88	127	123	121
20	88	.92	.90	1.4	1.1	e1.5	e 14	56	99	127	123	121
21	88	.92	1.0	1.5	1.3	e1.5	e 14	56	100	127	123	121
22	88	.92	1.0	1.5	.84	e1.5	e 16	56	100	126	123	121
23	89	.89	1.0	1.5	1.4	e1.5	e 16	56	101	126	123	121
24	88	.92	1.0	1.5	1.4	e1.4	e 16	56	101	126	123	121
25	88	.92	1.0	1.5	1.4	e1.4	e 16	56	101	126	123	117
26	88	.91	e1.5	1.6	1.4	e1.4	e 16	56	102	126	123	115
27	88	4.9	e2.0	1.5	4.1	e1.4	e 16	60	102	126	122	115
28	88	5.7	e2.0	4.0	1.3	1.4	e 18	63	102	126	122	115
29	88	.60	e2.0	3.2	1.5	.81	e 22	67	103	126	123	113
30	81	.94	e1.5	.93	---	.83	e 22	71	103	125	123	113
31	40	---	e1.5	1.6	---	2.5	---	70	---	125	123	---
TOTAL	2694	38.62	39.35	55.53	61.74	53.64	273.9	1658	2531	3691	3832	3607
MEAN	86.9	1.29	1.27	1.79	2.13	1.73	9.13	53.5	84.4	119	124	120
AC-FT	5340	77	78	110	122	106	543	3290	5020	7320	7600	7150
MAX	90	5.7	3.5	4.0	11	6.0	22	71	103	127	125	123
MIN	40	0	.52	.93	.84	.81	3.6	28	70	104	122	113

CAL YR 2007 TOTAL 20980.21 MEAN 57.5 MAX 155 MIN 0 AC-FT 41610  
WTR YR 2008 TOTAL 18535.78 MEAN 50.6 MAX 127 MIN 0 AC-FT 36770  
MAX DISCH: 148 CFS AT 11:15 ON Jul. 15, 2008 GH 3.18 FT. SHIFT -0.14 FT.  
MAX GH: 3.24 FT. AT 09:00 ON Mar. 10, 2008

e Estimated.

AB LATERAL CANAL NEAR MONTROSE CO  
WY2008 HYDROGRAPH





GUNNISON RIVER BASIN

SOUTH CANAL NEAR MONTROSE, CO

**LOCATION.**--Lat 38°29'01", long 107°45'20", in NE¼ SW¼ NE¼ sec 27, T.49 N., R.8 W., Montrose County, on right bank of canal approximately 3600 ft. below the west portal of the Gunnison Tunnel.

**GAGE.**--Sutron stage discharge recorder connected via SDI-12 radio bridge to a Sutron SatLink Logger DCP in the AB Lateral gage shelter, and a Stevens A-35 strip chart recorder in a 42 inch CMP shelter and well. The recorder and shaft encoder operate from separate floats. They are set to an inside drop tape.

**REMARKS.**--The primary record is hourly averages of 15-minute data from the DCP electronic data logger file. The record is complete, reliable, and good. There were several instances when one or two 15 minute values weren't transmitted to, or received by, the DCP at the AB Lateral. These sporadic values of zero were verified and corrected using the chart record with no loss of accuracy. There are periods, just after the fall shut down and after the 11 runs during the winter when there is a small amount of water observed below the level of the inlets. These trailing off values are below the 5% threshold of the total mean winter values and have been ignored as miniscule bank storage. Station maintained and record developed by Gerald M. Thrush.

**RATING TABLE.**--SOUCANCO16A USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

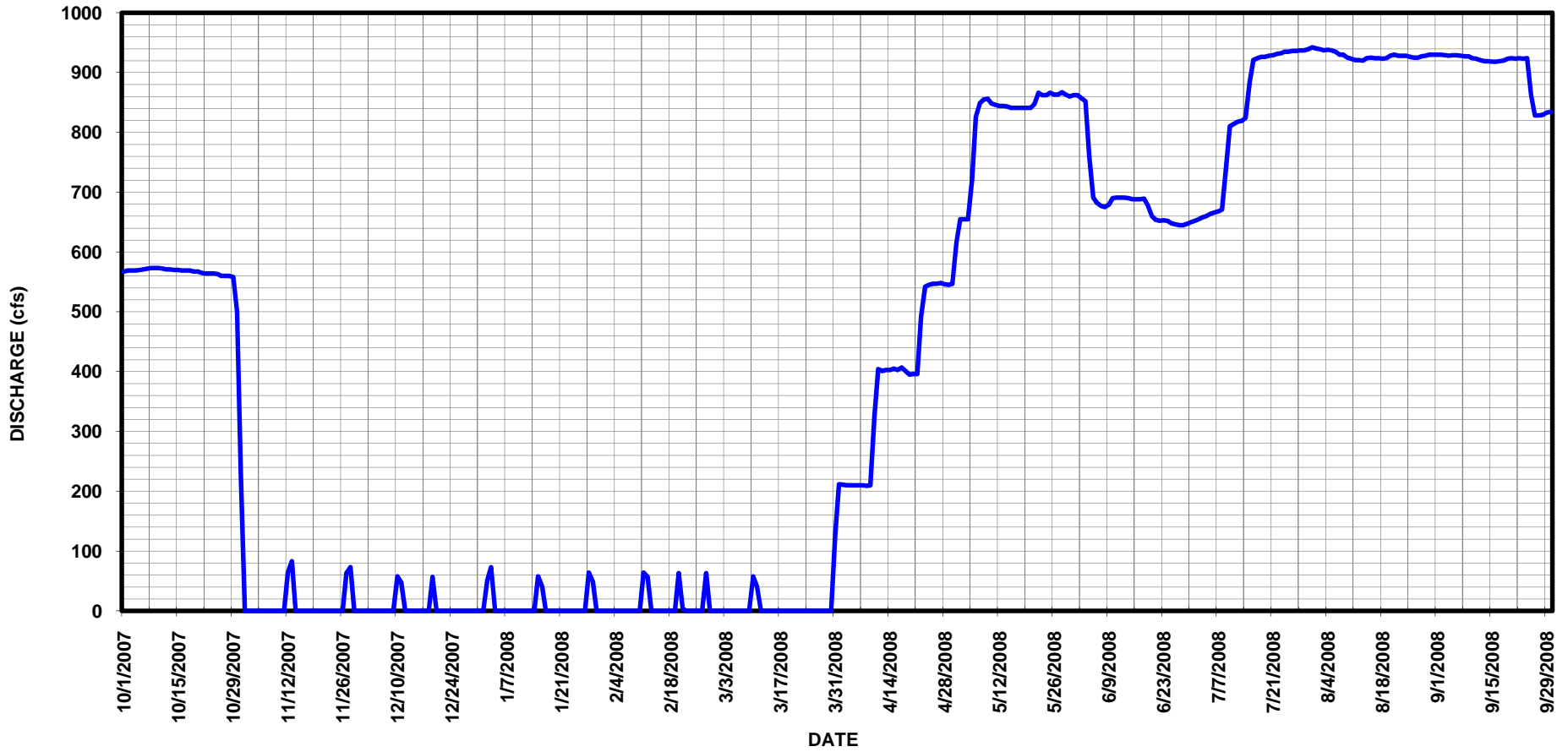
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	567	0	0	0	0	0	212	616	862	652	940	930
2	569	0	0	51	0	0	211	655	857	655	939	930
3	569	0	0	73	0	0	210	655	852	658	937	929
4	569	0	0	0	0	0	210	655	761	660	938	928
5	570	0	0	0	0	0	210	721	691	664	937	929
6	571	0	0	0	0	0	210	826	682	666	935	929
7	572	0	0	0	0	0	210	849	677	668	930	928
8	573	0	0	0	0	0	209	855	675	671	930	927
9	573	0	0	0	0	0	210	856	679	741	925	927
10	573	0	58	0	0	58	325	848	690	810	923	924
11	572	0	48	0	64	41	404	846	691	814	921	923
12	571	64	0	0	57	0	401	844	691	818	921	921
13	571	83	0	0	0	0	403	844	691	819	920	919
14	570	0	0	0	0	0	403	843	690	824	924	919
15	570	0	0	58	0	0	405	841	688	883	925	918
16	569	0	0	41	0	0	403	841	688	921	924	918
17	569	0	0	0	0	0	407	841	688	924	924	919
18	569	0	0	0	0	0	401	841	689	926	923	920
19	567	0	57	0	0	0	395	841	678	926	924	923
20	567	0	0	0	63	0	396	841	660	928	928	924
21	565	0	0	0	3.5	0	396	847	654	929	930	923
22	564	0	0	0	0	0	492	866	652	931	928	924
23	564	0	0	0	0	0	542	862	653	932	928	923
24	564	0	0	0	0	0	545	862	652	935	928	924
25	563	0	0	0	0	0	547	866	648	935	926	862
26	560	0	0	0	0	0	547	863	646	936	925	828
27	560	63	0	0	63	0	548	863	645	936	925	828
28	560	73	0	64	0	0	546	867	645	937	927	829
29	558	0	0	49	0	0	545	863	647	937	928	833
30	500	0	0	0	---	0	547	860	650	939	930	834
31	230	---	0	0	---	127	---	862	---	942	930	---
TOTAL	17189	283	163	336	250.5	226	11490	25440	20772	25917	28773	27193
MEAN	554	9.43	5.26	10.8	8.64	7.29	383	821	692	836	928	906
AC-FT	34090	561	323	666	497	448	22790	50460	41200	51410	57070	53940
MAX	573	83	58	73	64	127	548	867	862	942	940	930
MIN	230	0	0	0	0	0	209	616	645	652	920	828

CAL YR	2007	TOTAL	158201	MEAN	433	MAX	901	MIN	0	AC-FT	313800
WTR YR	2008	TOTAL	158032.5	MEAN	432	MAX	942	MIN	0	AC-FT	313500

MAX DISCH: 945 CFS AT 17:00 ON Jul. 31, 2008 GH 3.46 FT. SHIFT -0.57 FT.  
MAX GH: 3.89 FT. AT 12:00 ON Sep. 24, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

### SOUTH CANAL NEAR MONTROSE CO WY2008 HYDROGRAPH



GUNNISON RIVER BASIN

UNCOMPAHGRE RIVER NEAR OLATHE, CO

**LOCATION.**--Lat 38°36'5", long 107°58'58", SW¼S W¼ of NW¼ sec. 15, T.50 N., R. 10W, NMPM, and about 3,100 ft. above the S. H. 348 bridge and about 5,100 ft below the East Canal headgate and diversion structure, both stream distance. The gage is on the right bank and in Montrose County.

**DRAINAGE AREA.**--N/A

**GAGE.**--Stevens A35 graphic recorder and Sutron SatLink 2 with shaft encoder in a 48" spiral culvert and stilling well. Graphic water recorder and shaft encoder are both activated by separate floats in the stilling well. The primary reference gage is a steel drop tape referenced to an adjustable RP located in the gage.

**REMARKS.**--Primary record is 5-minute DCP log data with the graphic chart recorder and satellite data used for backup purposes. This record is complete and reliable. The record is good. Station maintained by by Gerald M. Thrush, Stephen W. Tuck, and Doug Wist and record developed by Gerald M. Thrush.

**RATING TABLE.**--UNCOLACO08A USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

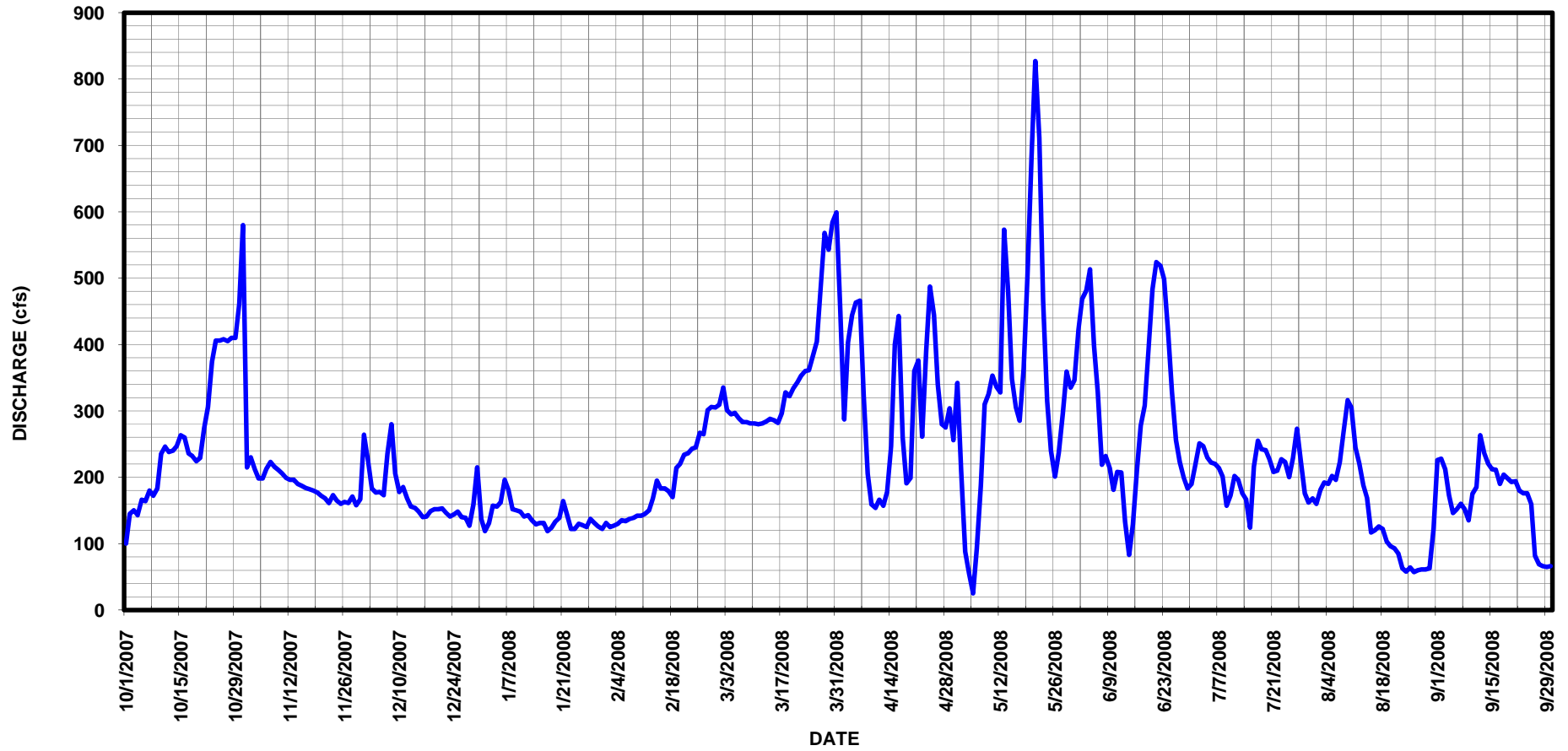
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	215	264	119	131	309	456	342	422	219	160	226
2	145	230	225	131	125	335	287	210	469	251	181	228
3	150	212	183	157	127	301	403	88	481	247	192	212
4	143	198	177	156	130	295	444	55	513	230	190	173
5	166	198	178	162	135	297	463	25	398	222	202	146
6	164	213	173	196	134	289	466	93	328	220	196	152
7	180	223	235	181	137	283	324	188	219	214	223	160
8	172	216	280	152	139	283	205	310	232	201	269	152
9	183	211	205	150	142	281	159	326	214	157	316	135
10	235	206	178	148	142	281	154	353	181	172	305	175
11	246	199	185	141	145	280	166	336	208	202	245	185
12	238	196	168	143	150	281	157	328	207	196	221	263
13	240	196	156	135	168	284	178	573	133	176	188	236
14	247	190	154	129	195	288	247	480	83	167	169	221
15	263	187	148	131	183	286	400	348	129	124	117	212
16	260	184	140	131	183	282	443	305	211	216	120	211
17	236	182	141	119	179	296	260	285	278	255	126	190
18	232	180	149	124	170	328	191	364	308	242	122	204
19	224	177	152	133	214	322	199	503	392	241	103	198
20	229	172	152	139	220	334	360	681	483	227	96	193
21	274	168	153	164	234	343	376	827	524	208	93	194
22	306	161	146	144	236	353	261	711	519	210	85	180
23	374	173	141	122	243	360	390	466	498	227	63	176
24	406	165	144	122	245	361	487	315	418	223	58	176
25	406	160	148	130	267	383	444	240	329	200	64	160
26	408	163	140	128	265	404	340	201	256	229	57	82
27	405	161	139	125	301	488	280	237	223	273	60	69
28	410	171	127	137	306	568	275	296	199	225	61	66
29	410	158	159	131	305	543	304	359	183	176	61	65
30	461	167	215	126	---	584	256	335	190	162	63	66
31	580	---	137	122	---	599	---	346	---	168	123	---
TOTAL	8493	5632	5292	4328	5551	10921	9375	10526	9228	6480	4529	5106
MEAN	274	188	171	140	191	352	313	340	308	209	146	170
AC-FT	16850	11170	10500	8580	11010	21660	18600	20880	18300	12850	8980	10130
MAX	580	230	280	196	306	599	487	827	524	273	316	263
MIN	100	158	127	119	125	280	154	25	83	124	57	65

CAL YR	2007	TOTAL	63780.7	MEAN	175	MAX	635	MIN	6.9	AC-FT	126500
WTR YR	2008	TOTAL	85461	MEAN	234	MAX	827	MIN	25	AC-FT	169500

MAX DISCH: 945 CFS AT 18:15 ON May. 21, 2008 GH 4.66 FT. SHIFT 0.01 FT.  
MAX GH: 4.66 FT. AT 18:15 ON May. 21, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

### UNCOMPAGRE RIVER NEAR OLATHE CO WY2008 HYDROGRAPH



GUNNISON RIVER BASIN

REDLANDS CANAL NEAR GRAND JUNCTION, CO

**LOCATION.**--Lat 39°01'49", long 108°33'51", in NW¼ SW¼ NW¼ Sec 35, T1S, R1W, Mesa County, on the right bank of canal 650 ft. below the Redlands diversion dam until Oct. 25, 2004. Beginning Apr. 1, 2005, Lat 39°02'52.93", long 108°34'33.16", in the NE¼ NW¼NE¼ Sec 27, T1S, R1W on the right bank just downstream of and attached to an old bridge.

**GAGE.**--A Sutron 9210 DCP with Modbus capabilities, Channel Master Acoustic Doppler Velocity Meter (ADVM) and a Sutron AccuBubble set to an outside staff gage. The Channel Master ADVM has the ability to give instantaneous flow readings. It produces the primary discharge record. A Sutron Satlink Logger 2 is controlled by the Sutron 9210 DCP and acts as the GOES radio transmitter. An LOS radio to a USBR programmable logic controller, enables control at the canal head gate. The LOS radio and Satlink Logger 2 are connected to the 9210 via serial cables and communication ports. The Satlink 2 is capable of logging data and as such can be used as an emergency back up for the 9210, but without the capabilities to use the LOS radio. The data logging and control/communication are normally performed by the 9210. The Channel Master and AccuBubble are connected to the 9210 DCP via SDI-12 communication. The Sutron AccuBubble continues to operate as a back up and cross check only.

**REMARKS.**--Directly measured flow from the ADVM is missing from October 1, 2007 to October 29, 2007. The ADVM was attached to a stainless steel plate and installed in the channel on October 29, 2007 when the canal shut down for routine maintenance. Data from October 30, 2007 to December 19, 2007 is good. On December 19, a firmware upgrade was interrupted by an SDI-12 command from the DCP. This rendered the Channel Master inoperable. This missing period lasted from the partial day of December 19, 2007 to February 22, 2008. On January 11, 2008 the instrument was removed by a diver and shipped to the factory. The instrument was reinstalled was by a diver on February 22, 2008. The ADVM worked until March 24, 2008 when canal was shut down and the ADVM was removed to prevent vandalism. The instrument was not reinstalled before the canal turned on again. This missing period lasted from March 25, 2008 to April 7, 2008 when the canal company reduced their diversion and the instrument was reinstalled. April 10, 24, and 25, July 23 and August 9, 2008 had four or more hours missing or out of reasonable range.

The missing data were estimated using power generation records supplied by Redlands Water and Power Canal Company. These data are total kilowatts generated in a 24-hour period, based on a reading taken daily at about 1500 hours. An Excel spreadsheet was used to average the day before and after with the subject day. This mid-point value was compared to the ADVM mean daily value for that same subject day and a correlation developed. The correlation varies throughout the year. This may be caused by the operating efficiency of the generator, the amount of bypass water spilling over check boards, and several other operational factors.

The record is rated good when the ADVM was operating from October 30, 2007 until December 18, 2007; April 8, 9, 11 - 23, 26 - 30; May 1 - July 22, July 24 - August 8, and August 10 - September 30, 2008. Power generation coefficients were used for October 1 - 29; December 19 - 31, 2007, January 1 - February 22; March 25 - April 7, April 10, 24, 25; July 23; and August 9, 2008. The periods are rated poor.

Station maintained and record developed by Gerald M. Thrush.

REDLANDS CANAL NEAR GRAND JUNCTION CO

**RATING TABLE.** --STCONVERT USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e800	e500	837	e778	e800	757	e804	785	821	828	785	857
2	e815	834	799	e786	e794	741	e806	776	819	829	805	838
3	e820	840	781	e794	e792	756	e796	773	815	814	812	820
4	e812	835	810	e806	e794	746	e796	802	820	795	816	819
5	e795	833	831	e804	e798	739	e798	814	808	800	807	811
6	e805	828	832	e804	e800	728	e800	831	813	812	808	809
7	e805	825	830	e796	e798	747	e808	816	786	811	820	812
8	e815	824	821	e788	e792	776	810	813	796	806	843	817
9	e805	821	768	e776	e794	770	808	780	828	779	e810	811
10	e805	821	799	e774	e800	768	e814	778	808	674	780	817
11	e805	817	820	e778	e806	750	807	792	822	763	825	826
12	e805	828	819	e786	e804	772	793	821	818	757	824	835
13	e805	830	829	e790	e804	759	798	842	815	745	813	845
14	e815	823	831	e784	e808	746	801	823	822	745	804	842
15	e825	825	825	e776	e808	759	792	812	828	726	809	838
16	e820	831	818	e770	e808	763	781	820	844	691	812	838
17	e825	832	822	e766	e808	764	761	826	857	645	815	830
18	e830	831	825	e766	e806	767	798	828	839	830	816	827
19	e825	829	e826	e768	e806	733	800	822	811	837	814	825
20	e830	827	e816	e770	e804	716	793	798	816	830	803	823
21	e820	835	e816	e772	e802	723	810	808	804	828	800	827
22	e815	836	e816	e770	e806	704	828	785	811	823	805	824
23	e820	832	e816	e770	799	608	822	785	825	e840	802	827
24	e830	831	e816	e480	782	195	e820	763	826	829	797	826
25	e830	786	e816	e 0	790	e 0	e820	791	831	825	799	826
26	e830	826	e816	e 0	787	e 0	802	782	811	815	804	822
27	e830	826	e820	e490	784	e300	790	813	811	826	805	817
28	e830	822	e828	e768	781	e746	796	829	796	826	810	815
29	e280	830	e834	e770	777	e746	806	811	793	786	806	812
30	0	834	e816	e784	---	e764	788	820	833	763	812	808
31	0	---	e798	e796	---	e790	---	816	---	761	825	---
TOTAL	23147	24492	25331	22060	23132	20633	24046	24955	24527	24439	25086	24744
MEAN	747	816	817	712	798	666	802	805	818	788	809	825
AC-FT	45910	48580	50240	43760	45880	40930	47700	49500	48650	48470	49760	49080
MAX	830	840	837	806	808	790	828	842	857	840	843	857
MIN	0	500	768	0	777	0	761	763	786	645	780	808
CAL YR 2007	TOTAL	291477	MEAN	799	MAX	865	MIN	0	AC-FT	578100		
WTR YR 2008	TOTAL	286592	MEAN	783	MAX	857	MIN	0	AC-FT	568500		

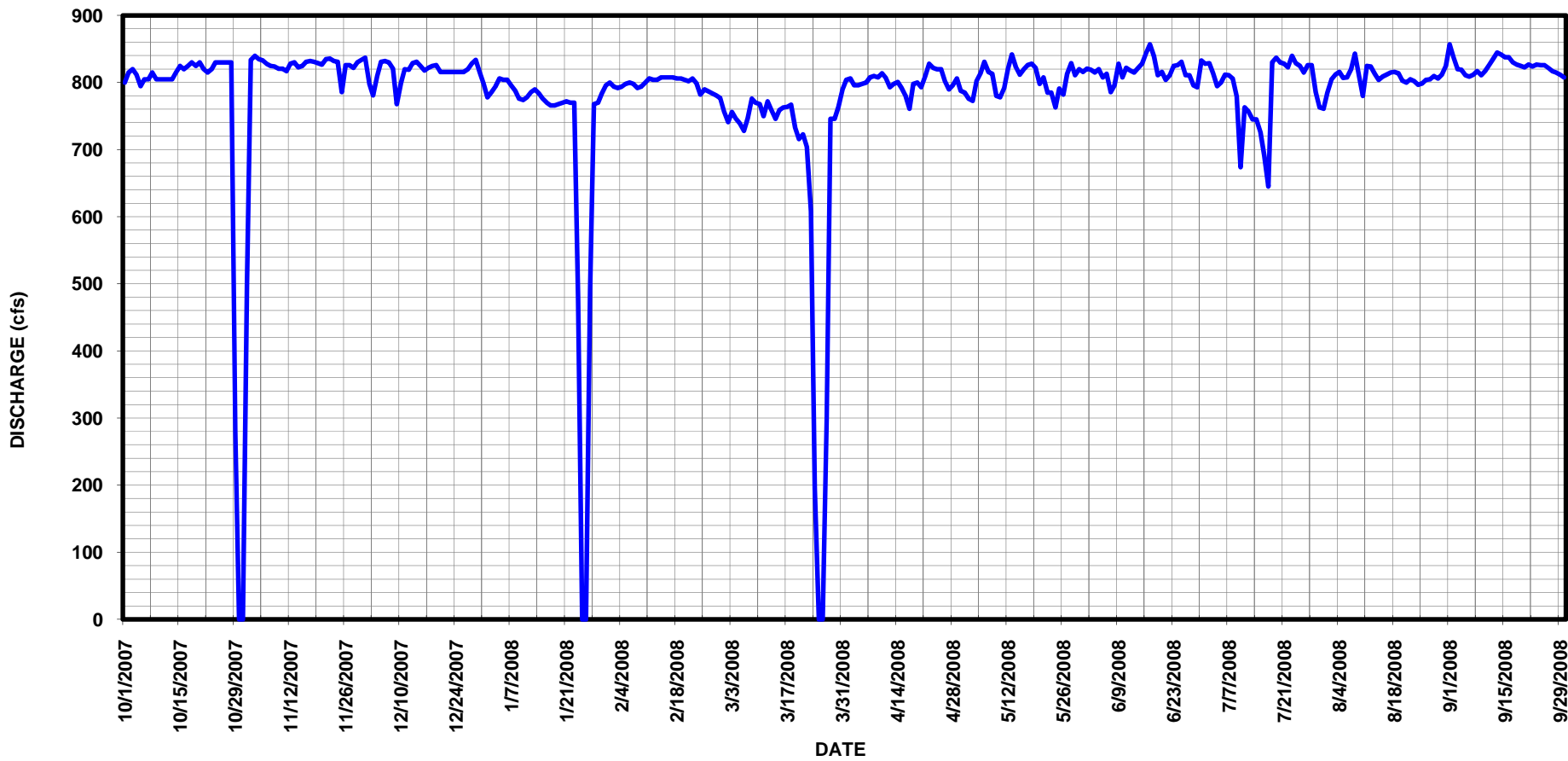
MAX DISCH: 923 CFS AT 11:00 ON Dec. 8, 2007 (GH NA and SHIFT NA)  
MAX GH: NA

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

e-Estimated.

e-Max Discharge was not considered on estimated days

REDLANDS CANAL NEAR GRAND JUNCTION CO  
WY2008 HYDROGRAPH



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GUNNISON RIVER BASIN

GUNNISON RIVER BELOW REDLANDS DIVERSION DAM NEAR GRAND JUNCTION, CO

**LOCATION.**--Lat 39°02'17", long 108°34'13", in SW¼ SW¼ sec 26, T1S, R1W, Mesa County, on the right bank of the Gunnison River just up stream of the Department of Energy Compound, about 1.6 miles above the mouth and the Colorado River, and about 0.78 miles below the Redlands Canal Diversion Dam.

**GAGE.**--Sutron SatLink Logger high data rate DCP controlling a Sutron accububble in a 48-inch diameter CMP shelter on a concrete pad. There is no back up strip chart. The primary reference is an outside cantilever chain gage which can be used at low gage readings if the bank is trenched; it is used up to gage height 13.00 ft. The secondary gage is a section of staff gage that is carried to and placed at the top of the brass nut at the end of the orifice line. Gage height of the brass nut is 0.70 ft. This is used to calibrate the AccuBubble at extremely low flows.

**REMARKS.**--The primary record is the electronic data from the Sutron SatLink Logger. The record is complete and reliable, except for December 28, 2007 - January 3, 2008 and January 15-23, 2008, when the stage-discharge relationship was affected by ice. The record is rated good, except periods when the stage-discharge relationship was affected by ice, which are rated poor. Station maintained and record developed by Gerald M. Thrush.

**RATING TABLE.**--GUNREDCO04 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1010	1720	1170	e1150	1670	1430	2280	8120	11300	2920	1000	1280
2	1090	1230	1520	e1000	1670	1200	2490	7530	11400	2840	953	1350
3	1290	1140	1110	e1030	1680	1160	2830	6590	11300	2700	988	1290
4	1170	1090	957	988	1710	934	3080	5910	10800	2520	1020	1260
5	1180	1090	946	1040	1680	734	3090	5840	9680	2450	969	1200
6	1310	1080	974	1090	1650	477	3070	6430	8850	2400	978	1180
7	1390	1080	1070	1080	1650	592	3080	7000	7750	2350	1080	1210
8	1410	1040	1490	975	1690	1180	2850	7890	7240	2290	1500	1250
9	1380	1030	1320	952	1700	1470	2860	8990	7100	2080	1960	1210
10	1360	1020	1100	949	1680	1470	3100	8240	6540	1970	1860	1260
11	1320	1010	958	964	1660	1540	3270	8050	6620	1760	1740	1390
12	1240	990	968	1110	1600	1870	3210	8090	6650	1710	1460	1470
13	1250	927	947	1080	1660	1610	3070	8300	5930	1620	1320	1570
14	1260	906	911	1050	1910	1380	3180	8160	5840	1610	1220	1550
15	1280	948	897	e1040	1910	1090	3920	7550	5980	1540	1140	1490
16	1290	929	856	e 980	1840	821	5230	7560	6180	1390	1100	1480
17	1300	929	870	e1030	1880	811	5040	7860	6420	1420	1110	1400
18	1510	926	895	e1350	1780	722	4720	8640	6480	1330	1090	1350
19	1510	926	912	e1580	1740	423	5020	9340	6560	1310	1060	1340
20	1360	930	858	e1880	1790	369	5980	10000	6420	1250	1010	1330
21	1410	903	905	e1860	1740	401	6610	10900	5860	1230	939	1340
22	1470	893	889	e1780	1960	411	6410	11800	5300	1200	921	1310
23	1430	867	848	e1800	1940	529	6570	11900	5080	1300	912	1260
24	1490	888	853	1740	1990	1090	7150	10700	4880	1250	915	1260
25	1530	922	883	2180	2090	1230	7230	10300	4450	1210	900	1260
26	1540	866	879	2530	2020	1290	6620	9940	4050	1150	881	1240
27	1480	880	853	1980	1970	1170	6180	9750	3730	1230	899	1190
28	1450	822	e 785	1670	1900	1070	6250	10100	3340	1240	885	1170
29	1980	803	e 910	1650	1820	1200	6740	10600	3090	1160	898	1170
30	2280	842	e1020	1650	---	1330	7800	10900	3020	1070	924	1140
31	2330	---	e1000	1630	---	1850	---	11100	---	1050	1020	---
TOTAL	44300	29627	30554	42788	51980	32854	138930	274080	197840	52550	34652	39200
MEAN	1429	988	986	1380	1792	1060	4631	8841	6595	1695	1118	1307
AC-FT	87870	58770	60600	84870	103100	65170	275600	543600	392400	104200	68730	77750
MAX	2330	1720	1520	2530	2090	1870	7800	11900	11400	2920	1960	1570
MIN	1010	803	785	949	1600	369	2280	5840	3020	1050	881	1140

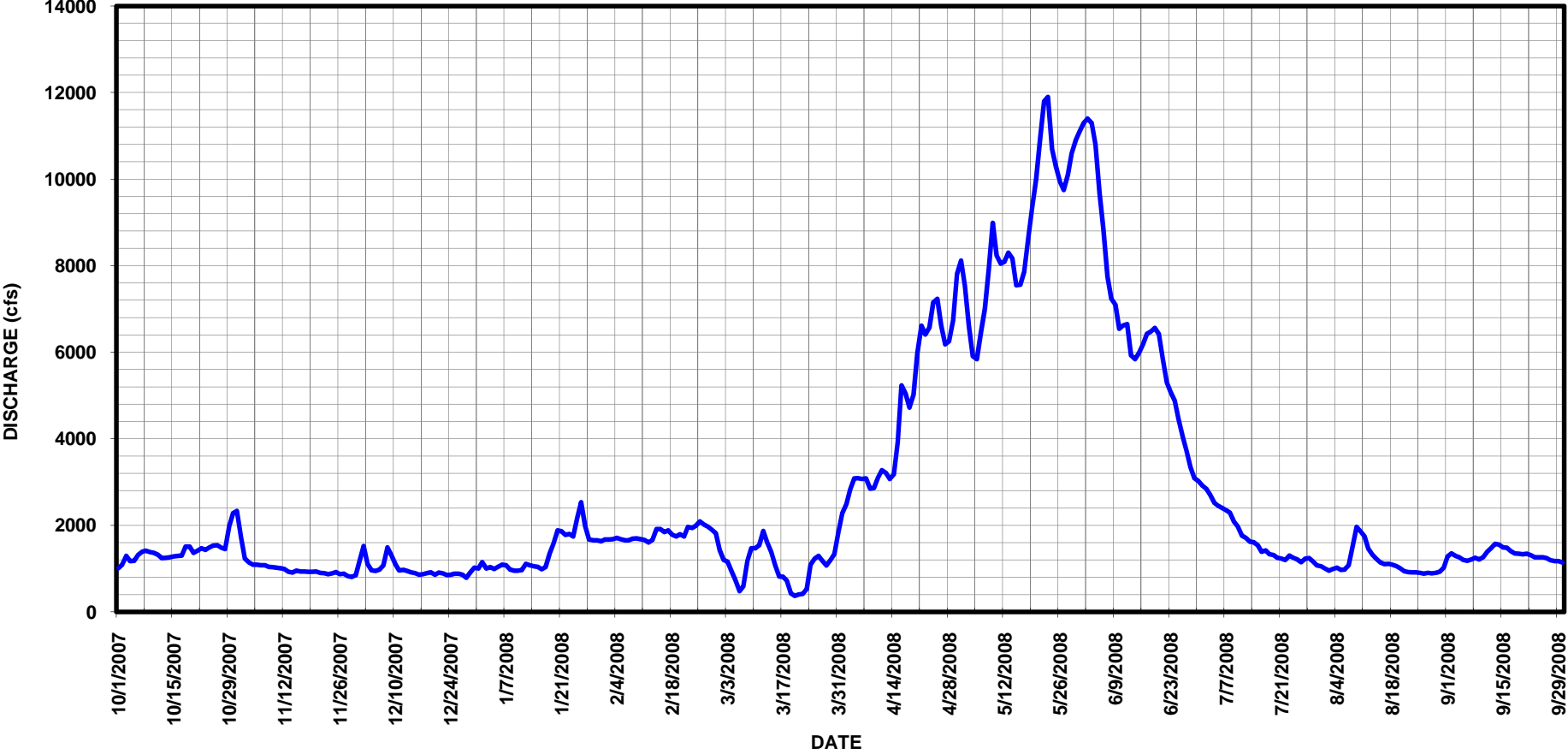
CAL YR	2007	TOTAL	456527	MEAN	1251	MAX	3330	MIN	285	AC-FT	905500
WTR YR	2008	TOTAL	969355	MEAN	2649	MAX	11900	MIN	369	AC-FT	1923000

MAX DISCH: 12600 CFS AT 00:15 ON May. 23, 2008 GH 10.86 FT. GH CORR. +0.02 FT. SHIFT -0.24 FT.  
MAX GH: 10.88 FT. (GH CORR. +0.02 FT. APPLIED) AT 00:15 ON May. 23, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

e = Estimated.

GUNNISON RIVER BELOW REDLANDS DIVERSION DAM NEAR GRAND JUNCTION CO  
WY2008 HYDROGRAPH



BLUE RIVER BASIN

BLUE RIVER AT HIGHWAY 9 BRIDGE BELOW BRECKENRIDGE, CO

**LOCATION.**--Lat 39°32'29", long 106°02'40", in SE¼ SW¼ Sec. 7, T6S, R77W, Hydrologic Unit 14010004 in Summit County. Located on right bank 25 ft. above Highway 9 Bridge, 3 1/2 miles north of Breckenridge and 2 1/4 miles south of Dillon Reservoir(Blue River Arm).

**DRAINAGE AREA.**--N/A.

**GAGE.**--Graphic water-stage recorder and satellite telemetry system (Sutron HDR 8210 DCP and shaft encoder) in precast concrete building. Well inside building has two intake pipes with flush risers outside. Recorder and shaft encoder are set by inside drop tape from adjustable reference point on instrument shelf. Primary record is satellite data and chart record is used for backup. AC power was installed in station in 2005. Control is rock and cobble riffle(low flows) and 8' culverts(high flows). Elevation of gage is 9180 ft. from topographic map.

**REMARKS.**--Record is complete and reliable. Upstream transmountain diversions occur through the Continental-Hoosier Tunnel and Boreas Pass Ditch. Record is good. Station maintained and record developed by Craig Bruner.

**RATING TABLE.**-- BLUNINCO08 USED FROM 01-Oct-2007 TO 16-Oct-2007  
BLUNINCO09 USED FROM 16-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

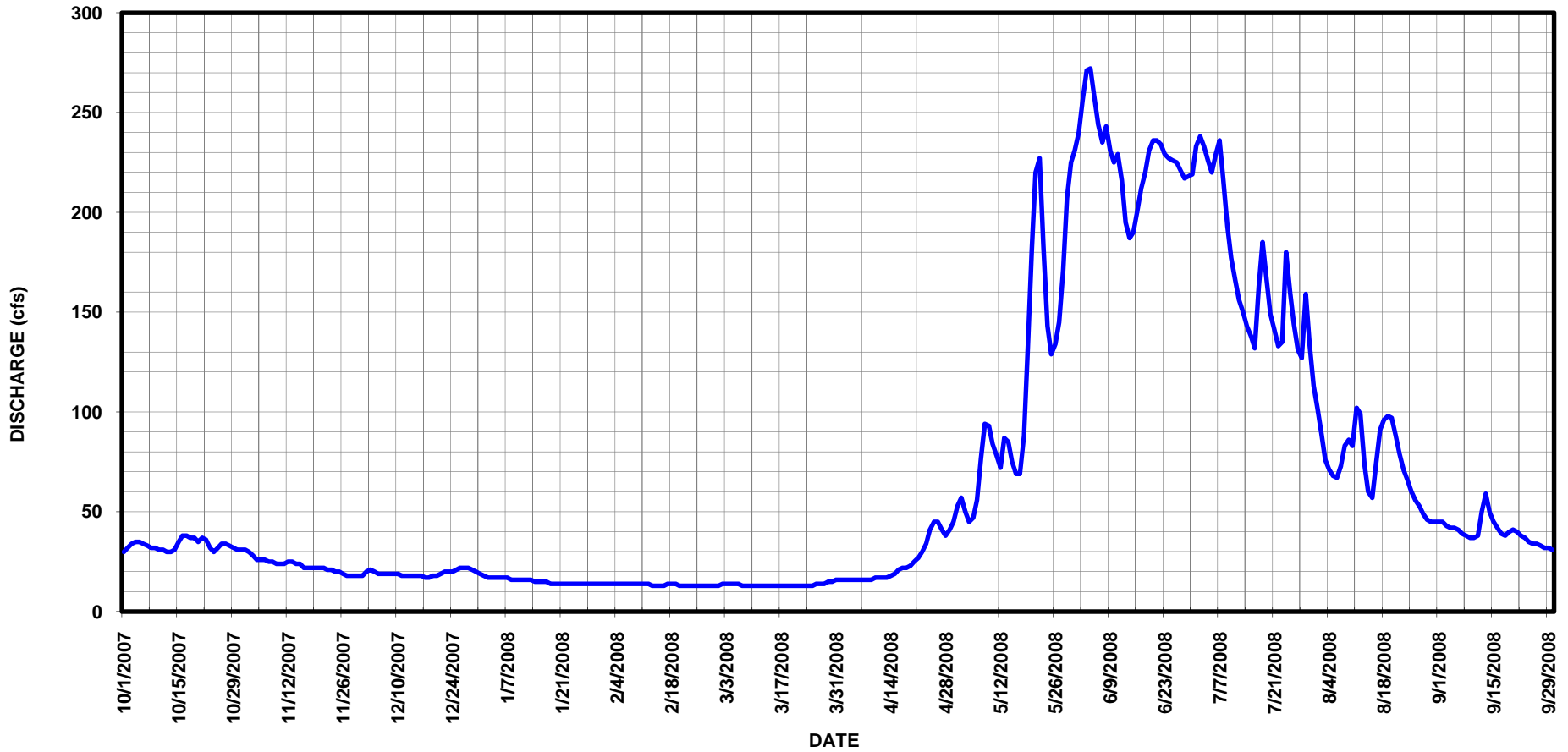
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	31	18	18	14	13	16	53	240	233	102	45
2	32	30	20	17	14	14	16	57	256	238	89	45
3	34	28	21	17	14	14	16	50	271	233	76	43
4	35	26	20	17	14	14	16	45	272	226	71	42
5	35	26	19	17	14	14	16	47	257	220	68	42
6	34	26	19	17	14	14	16	56	244	229	67	41
7	33	25	19	17	14	13	16	77	235	236	73	39
8	32	25	19	16	14	13	16	94	243	216	83	38
9	32	24	19	16	14	13	16	93	231	193	86	37
10	31	24	19	16	14	13	17	84	225	177	83	37
11	31	24	18	16	14	13	17	78	229	166	102	38
12	30	25	18	16	14	13	17	72	216	156	99	50
13	30	25	18	16	13	13	17	87	195	150	74	59
14	31	24	18	15	13	13	18	85	187	143	60	50
15	35	24	18	15	13	13	19	75	190	138	57	45
16	38	22	18	15	13	13	21	69	201	132	74	42
17	38	22	17	15	14	13	22	69	212	163	91	39
18	37	22	17	14	14	13	22	88	220	185	96	38
19	37	22	18	14	14	13	23	131	231	166	98	40
20	35	22	18	14	13	13	25	181	236	149	97	41
21	37	22	19	14	13	13	27	220	236	141	88	40
22	36	21	20	14	13	13	30	227	234	133	79	38
23	32	21	20	14	13	13	34	183	229	135	71	37
24	30	20	20	14	13	13	41	143	227	180	66	35
25	32	20	21	14	13	13	45	129	226	160	60	34
26	34	19	22	14	13	14	45	134	225	144	56	34
27	34	18	22	14	13	14	41	145	221	131	53	33
28	33	18	22	14	13	14	38	171	217	127	49	32
29	32	18	21	14	13	15	41	207	218	159	46	32
30	31	18	20	14	---	15	45	225	219	134	45	31
31	31	---	19	14	---	16	---	231	---	113	45	---
TOTAL	1032	692	597	472	392	418	749	3606	6843	5306	2304	1197
MEAN	33.3	23.1	19.3	15.2	13.5	13.5	25.0	116	228	171	74.3	39.9
AC-FT	2050	1370	1180	936	778	829	1490	7150	13570	10520	4570	2370
MAX	38	31	22	18	14	16	45	231	272	238	102	59
MIN	30	18	17	14	13	13	16	45	187	113	45	31

CAL YR	2007	TOTAL	27417	MEAN	75.1	MAX	473	MIN	17	AC-FT	54380
WTR YR	2008	TOTAL	23608	MEAN	64.5	MAX	272	MIN	13	AC-FT	46830

MAX DISCH: 279 CFS AT 08:00 ON Jun. 3, 2008 GH 1.92 FT. GH CORR. +0.01 FT. SHIFT 0.01 FT.  
MAX GH: 1.93 FT. (GH CORR. +0.01 FT. APPLIED) AT 08:00 ON Jun. 3, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

**BLUE RIVER AT HIGHWAY 9 BRIDGE BELOW BRECKENRIDGE CO  
WY2008 HYDROGRAPH**



BLUE RIVER BASIN

SNAKE RIVER AT KEYSTONE SKI AREA, CO

**LOCATION.**--Lat 39°36'24", long 105°57'06", in NE1/4 NE1/4 Sec. 24, T5S, R77W in Summit County. Located on left bank just below Keystone Ski Area snowmaking diversion, 0.5 mi below confluence with North Fork of Snake River, 1.5 mi above confluence with Keystone Gulch, and 3.2 mi upstream of Snake River Arm of Dillon Reservoir.

**DRAINAGE AREA.**--N/A.

**GAGE.**--Sutron Accububble sensor located in the gage pool downstream of the Keystone Ski Area snowmaking diversion. Accububble is wired to a Sutron SatLink DCP inside the pumphouse for snowmaking operations. The accububble is referenced to an outside staff gage below the snowmaking diversion point. Satellite data is primary record. Control is a "W"-shaped rock weir approximately 20 feet below the gage.

**REMARKS.**--Record is published as a partial year record (Oct 1-Mar 31) only. Hourly averages of fifteen minute satellite data were used to develop a record that is complete for the six month period of operation. Record is complete and reliable for the entire water year, except for the period from Oct. 1 through Oct. 12 when the bubbler orifice was buried during construction to upgrade the snowmaking diversion. Record is rated good, except for period of estimated daily discharge when the orifice was buried, which is poor. Station maintained and record developed by Craig Bruner.

**RATING TABLE.**--SNAKEYCO12 USED FROM 01-Oct-2007 TO 31-Mar-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

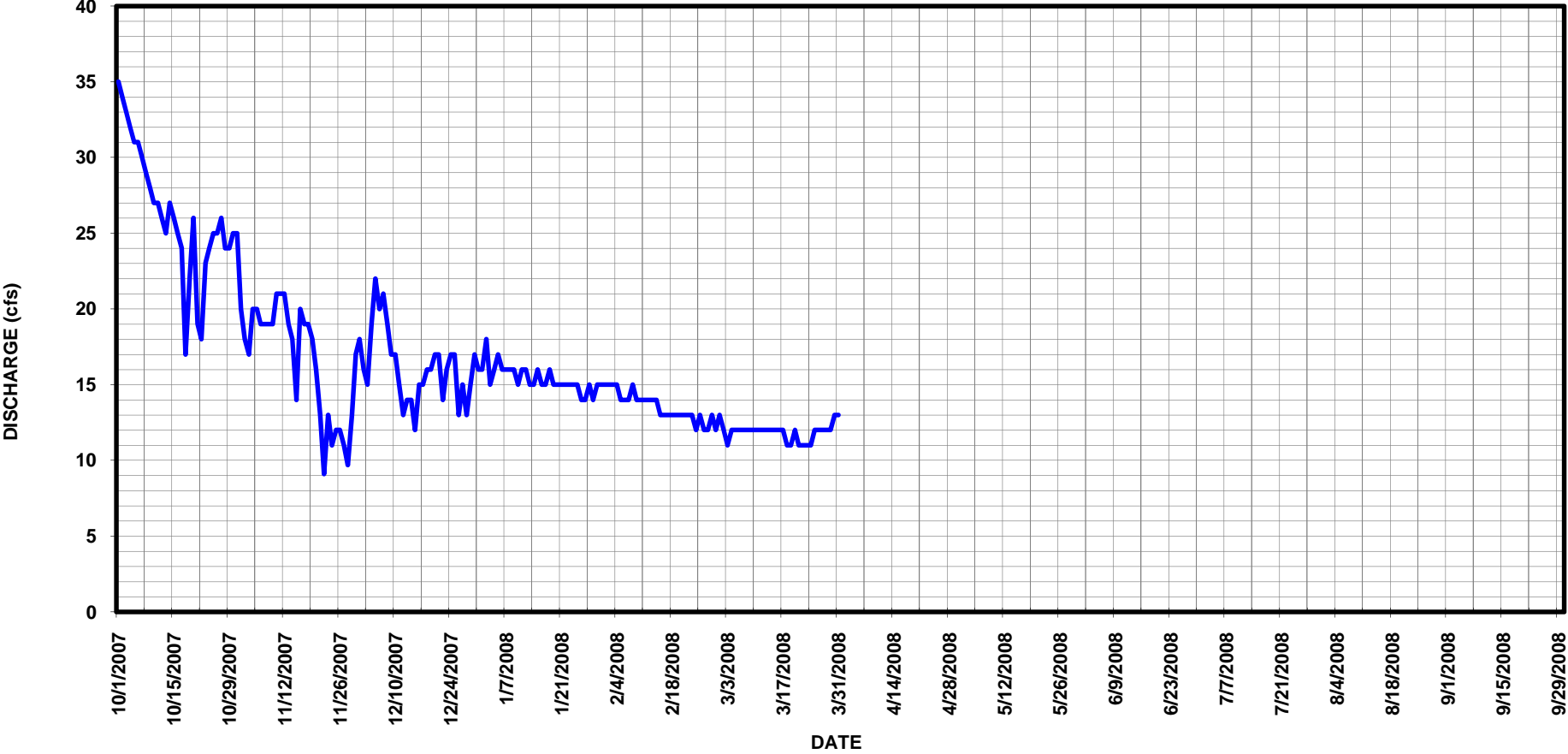
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	20	18	16	15	13	---	---	---	---	---	---
2	34	18	16	18	15	12	---	---	---	---	---	---
3	33	17	15	15	15	11	---	---	---	---	---	---
4	32	20	19	16	15	12	---	---	---	---	---	---
5	31	20	22	17	14	12	---	---	---	---	---	---
6	31	19	20	16	14	12	---	---	---	---	---	---
7	30	19	21	16	14	12	---	---	---	---	---	---
8	29	19	19	16	15	12	---	---	---	---	---	---
9	28	19	17	16	14	12	---	---	---	---	---	---
10	27	21	17	15	14	12	---	---	---	---	---	---
11	27	21	15	16	14	12	---	---	---	---	---	---
12	26	21	13	16	14	12	---	---	---	---	---	---
13	25	19	14	15	14	12	---	---	---	---	---	---
14	27	18	14	15	14	12	---	---	---	---	---	---
15	26	14	12	16	13	12	---	---	---	---	---	---
16	25	20	15	15	13	12	---	---	---	---	---	---
17	24	19	15	15	13	12	---	---	---	---	---	---
18	17	19	16	16	13	11	---	---	---	---	---	---
19	22	18	16	15	13	11	---	---	---	---	---	---
20	26	16	17	15	13	12	---	---	---	---	---	---
21	19	13	17	15	13	11	---	---	---	---	---	---
22	18	9.1	14	15	13	11	---	---	---	---	---	---
23	23	13	16	15	13	11	---	---	---	---	---	---
24	24	11	17	15	12	11	---	---	---	---	---	---
25	25	12	17	15	13	12	---	---	---	---	---	---
26	25	12	13	14	12	12	---	---	---	---	---	---
27	26	11	15	14	12	12	---	---	---	---	---	---
28	24	9.7	13	15	13	12	---	---	---	---	---	---
29	24	13	15	14	12	12	---	---	---	---	---	---
30	25	17	17	15	---	13	---	---	---	---	---	---
31	25	---	16	15	---	13	---	---	---	---	---	---
TOTAL	813	497.8	501	477	392	368	---	---	---	---	---	---
MEAN	26.2	16.6	16.2	15.4	13.5	11.9	---	---	---	---	---	---
AC-FT	1610	987	994	946	778	730	---	---	---	---	---	---
MAX	35	21	22	18	15	13	---	---	---	---	---	---
MIN	17	9.1	12	14	12	11	---	---	---	---	---	---

CAL YR	2007	TOTAL	3059.8	MEAN	16.7	MAX	34.6	MIN	9.1	AC-FT	6070	(PARTIAL YEAR RECORD)
WTR YR	2008	TOTAL	3048.8	MEAN	16.7	MAX	34.6	MIN	9.1	AC-FT	6050	(PARTIAL YEAR RECORD)

MAX DAILY DISCH: 34.6 CFS ON OCT. 1, 2007 (ESTIMATED)  
MAX GH: NOT DETERMINED (OCCURRED DURING PERIOD OF ESTIMATED RECORD)

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

SNAKE RIVER AT KEYSTONE SKI AREA CO  
WY2008 HYDROGRAPH



ROARING FORK RIVER BASIN

ROARING FORK RIVER BELOW MAROON CREEK NEAR ASPEN, CO

**LOCATION.**--Lat 39°13'30", long 106°51'20", NW¼ SW¼ Sec. 35, T9S, R85W in Pitkin County. Located on left bank at Aspen Consolidated Sanitation Plant 0.5 mi east of Aspen Airport and 0.8 mi downstream from confluence of Maroon Creek.

**DRAINAGE AREA.**--N/A.

**GAGE.**--Graphic water-stage recorder, shaft encoder, and Sutron 8004 satellite telemetry system in precast concrete building over stilling well. On Aug 19, 2008, a Sutron SDI shaft encoder (SE) and Sutron SatLink2 data collection platform (DCP) with high data rate satellite telemetry were installed. Recorder and shaft encoder are on separate floats and are set by inside drop tape from adjustable reference point on instrument shelf. Primary record is satellite data and chart record is used for backup. Control is a rock and cobble riffle (low flows) and boulders (high flows). Elevation of gage is 7560 ft from topographic map.

**REMARKS.**--Record is complete and reliable, except for the following days when the stage-discharge relationship was affected by ice: Dec 15-18, 23, 26-31, 2007; Jan 1-4, 8, 15-20, 30-31; and Feb 1-3, 6-11, 2008. Upstream transmountain diversions occur through Twin Lakes Tunnel and through Hunter Tunnel. Record is good except for periods of ice-affected record, which are fair. Station operated and maintained by James Kellogg. Record developed by James Kellogg.

**RATING TABLE.**--ROABMCCO04 USED FROM 01-Oct-2007 TO 29-Oct-2007  
 ROABMCCO05 USED FROM 29-Oct-2007 TO 30-Sep-2008

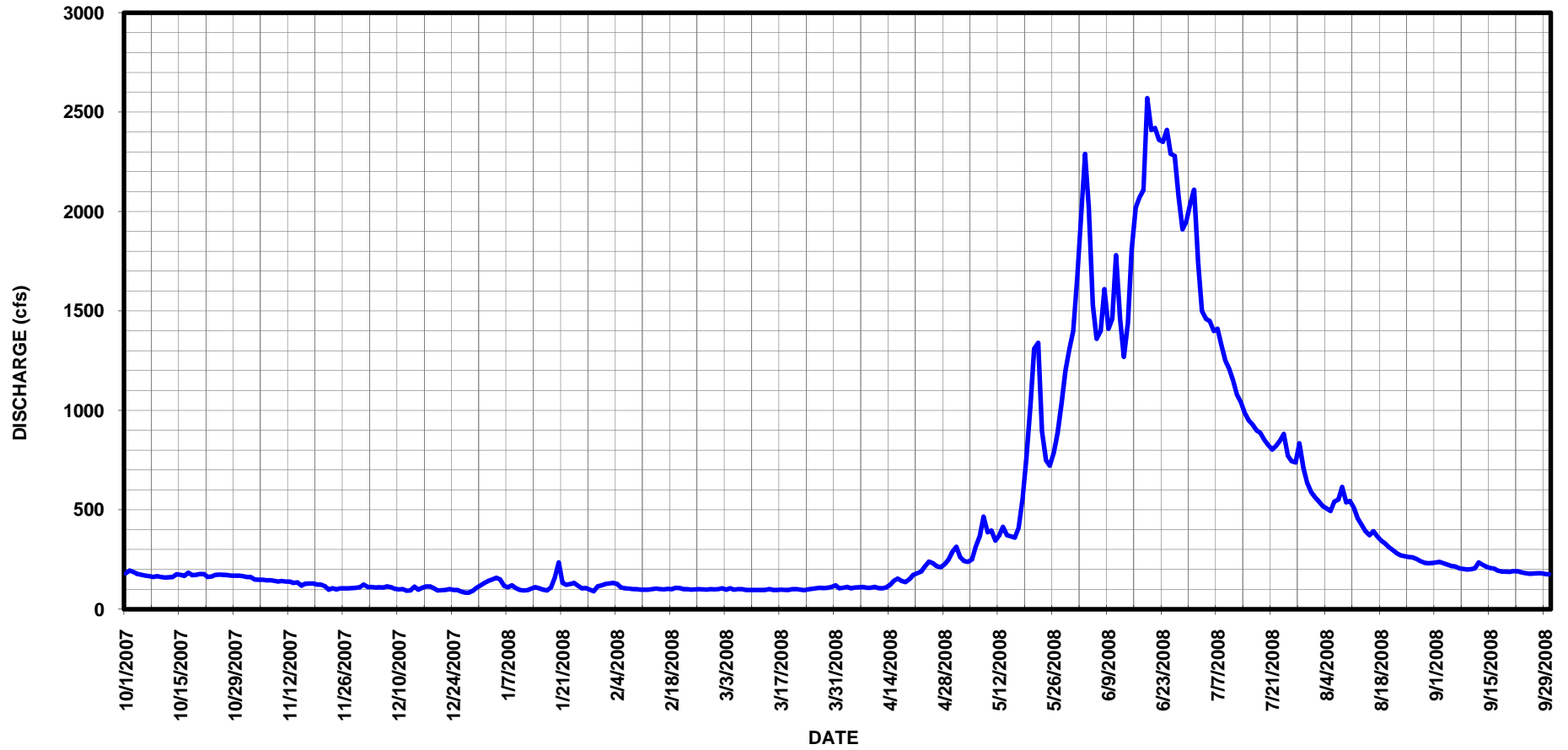
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	182	162	124	133	128	101	106	314	1670	2110	563	236
2	195	162	112	144	130	105	109	263	1970	1740	542	239
3	187	151	112	150	133	99	112	243	2290	1500	519	231
4	177	149	110	159	127	105	106	238	2020	1460	507	225
5	173	149	111	151	110	99	110	250	1530	1450	495	218
6	170	146	110	118	106	102	111	316	1360	1400	542	215
7	166	146	115	111	104	102	113	368	1400	1410	552	206
8	163	143	111	120	102	98	109	466	1610	1330	615	203
9	167	140	103	107	102	98	109	387	1410	1250	538	201
10	163	142	100	97	99	97	113	395	1460	1210	544	202
11	160	139	102	95	99	97	107	346	1780	1150	510	206
12	161	139	93	96	99	98	106	371	1460	1080	456	236
13	163	133	95	104	102	97	110	414	1270	1040	423	223
14	176	135	114	111	104	102	123	373	1440	988	392	214
15	174	119	99	106	102	98	143	367	1810	950	372	207
16	168	129	108	99	100	98	155	360	2020	929	393	204
17	184	130	115	95	103	99	142	409	2070	899	366	194
18	172	130	115	110	102	98	137	558	2110	888	346	190
19	173	125	105	159	109	98	152	758	2570	852	330	189
20	178	124	95	236	107	101	174	1020	2410	827	312	188
21	177	116	96	133	101	101	182	1310	2420	803	297	193
22	163	99	97	123	101	99	190	1340	2360	821	282	191
23	165	106	102	128	99	96	217	896	2350	848	271	185
24	174	100	98	133	100	100	240	749	2410	882	267	181
25	175	106	97	118	102	103	232	722	2290	774	263	179
26	174	106	89	106	100	105	217	789	2280	745	262	180
27	172	105	84	107	99	109	212	887	2080	739	254	182
28	170	107	84	99	101	107	226	1040	1910	834	243	181
29	169	109	93	91	100	108	250	1200	1950	711	234	177
30	169	111	108	115	---	112	288	1310	2040	635	232	176
31	167	---	120	120	---	121	---	1400	---	590	233	---
TOTAL	5327	3858	3217	3774	3071	3153	4701	19859	57750	32845	12155	6052
MEAN	172	129	104	122	106	102	157	641	1925	1060	392	202
AC-FT	10570	7650	6380	7490	6090	6250	9320	39390	114500	65150	24110	12000
MAX	195	162	124	236	133	121	288	1400	2570	2110	615	239
MIN	160	99	84	91	99	96	106	238	1270	590	232	176
CAL YR 2007	TOTAL	99684	MEAN	273	MAX	1230	MIN	84	AC-FT	197700		
WTR YR 2008	TOTAL	155762	MEAN	426	MAX	2570	MIN	84	AC-FT	309000		

MAX DISCH: 3010 CFS AT 01:15 ON Jun. 20, 2008 GH 5.3 FT. SHIFT 0.17 FT.  
 MAX GH: 5.3 FT. AT 01:15 ON Jun. 20, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

ROARING FORK RIVER BELOW MAROON CREEK NEAR ASPEN CO  
WY2008 HYDROGRAPH





ROARING FORK RIVER BASIN

ROARING FORK RIVER ABOVE FRYINGPAN RIVER NEAR BASALT, CO

**LOCATION.**--Lat 39° 21'40", long 107° 01'44" in SW1/4 NE1/4 Sec. 18, T8S, R86W in Pitkin County. Located on left bank of Roaring Fork River, just below Highway 82 bridge, 0.5 mi. above confluence with Fryingpan River, and 2.5 mi. above confluence with Sopris Creek.

**DRAINAGE AREA.**--N/A.

**GAGE.**--Sutron Model 5600 AccuBubble sensor and Sutron SatLink 2 data collection platform (DCP) housed in 2 ft rectangular steel shelter. AccuBubble sensor was referenced to an outside staff gage that was destroyed by ice in the winter of 2007/2008. The AccuBubble is now referenced to a cantilever chain gage that was constructed and calibrated on Apr 23, 2008. Primary record is DCP log data, with satellite data used as backup.

**REMARKS.**--The 15-minute DCP log data were used to develop the record, which is complete for the period of operation. A partial level run was performed on Mar 25, 2008 to verify the AccuBubble readings prior to construction and calibration of the cantilever chain gage on Apr 23, 2008. The record is not considered 100 percent reliable. Large calibration corrections to the AccuBubble were made on Jun 4 (-0.20 ft) and Sep 3 (+0.37 ft). During this period of sustained higher flows, the galvanized pipe holding the muffler and orifice were loose on the channel bed and the muffler was destroyed. During the Sep 3 visit, remaining muffler parts were removed and the loose muffler pipe was terminated at the end of the pipe as a temporary solution. This resulted in considerable gage height "bounce" for the remainder of the water year, when a permanent orifice cap was installed. Record is rated as fair due to problems with the AccuBubble orifice. The gage is operated on a seasonal basis (Apr 1 - Oct 31 only). Gaging station operated and maintained by James Kellogg. Discharge record was developed by James Kellogg.

**RATING TABLE.**--ROAFRYCO03 USED FROM 1-Apr-2008 TO 30-Sep-2008

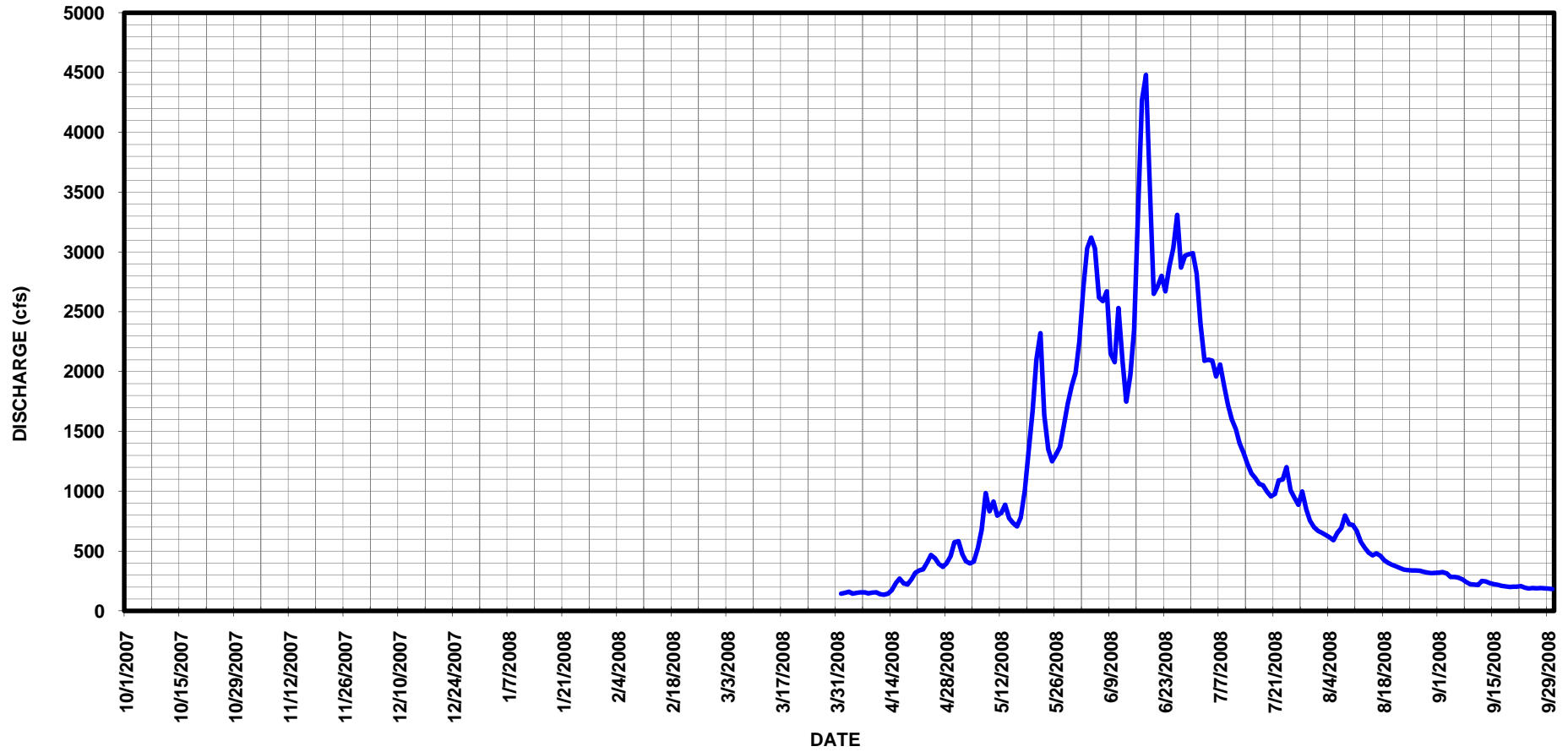
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	143	583	2250	2820	670	320
2	---	---	---	---	---	---	150	476	2700	2400	654	324
3	---	---	---	---	---	---	159	414	3030	2090	634	314
4	---	---	---	---	---	---	144	397	3120	2100	617	283
5	---	---	---	---	---	---	151	412	3030	2090	591	284
6	---	---	---	---	---	---	156	526	2620	1960	653	277
7	---	---	---	---	---	---	156	678	2590	2060	693	263
8	---	---	---	---	---	---	147	985	2670	1890	796	241
9	---	---	---	---	---	---	153	832	2150	1720	724	223
10	---	---	---	---	---	---	156	914	2080	1600	718	220
11	---	---	---	---	---	---	140	796	2530	1520	666	217
12	---	---	---	---	---	---	135	820	2090	1400	579	250
13	---	---	---	---	---	---	145	888	1750	1320	528	246
14	---	---	---	---	---	---	174	775	1970	1230	488	232
15	---	---	---	---	---	---	231	736	2350	1150	464	224
16	---	---	---	---	---	---	270	707	3370	1110	480	219
17	---	---	---	---	---	---	229	782	4270	1060	460	210
18	---	---	---	---	---	---	220	1010	4480	1050	425	206
19	---	---	---	---	---	---	263	1330	3570	995	401	200
20	---	---	---	---	---	---	318	1670	2650	956	386	202
21	---	---	---	---	---	---	339	2100	2710	978	373	202
22	---	---	---	---	---	---	347	2320	2800	1090	358	208
23	---	---	---	---	---	---	403	1640	2670	1100	346	194
24	---	---	---	---	---	---	466	1350	2880	1200	341	188
25	---	---	---	---	---	---	439	1250	3030	1010	338	191
26	---	---	---	---	---	---	392	1310	3310	949	338	189
27	---	---	---	---	---	---	367	1370	2870	888	336	191
28	---	---	---	---	---	---	398	1550	2970	997	328	190
29	---	---	---	---	---	---	458	1730	2980	848	320	187
30	---	---	---	---	---	---	573	1880	2990	754	315	183
31	---	---	---	---	---	---	---	1990	---	699	318	---
TOTAL	---	---	---	---	---	---	7822	34221	84480	43034	15338	6878
MEAN	---	---	---	---	---	---	261	1104	2816	1388	495	229
AC-FT	---	---	---	---	---	---	15510	67880	167600	85360	30420	13640
MAX	---	---	---	---	---	---	573	2320	4480	2820	796	324
MIN	---	---	---	---	---	---	135	397	1750	699	315	183

CAL YR 2007 TOTAL 103169 MEAN 564 MAX 1830 MIN 153 AC-FT 204600 (PARTIAL YEAR RECORD)  
WTR YR 2008 TOTAL 191773 MEAN 1048 MAX 4480 MIN 135 AC-FT 380400 (PARTIAL YEAR RECORD)

MAX DISCH: 6110 CFS AT 02:15 ON Jun. 19, 2008 GH 5.69 FT. GH CORR. -0.11 FT. SHIFT -0.02 FT.  
MAX GH: 5.58 FT. (GH CORR. -0.11 FT. APPLIED) AT 02:15 ON Jun. 19, 2008

### ROARING FORK RIVER ABOVE FRYINGPAN RIVER NEAR BASALT CO WY2008 HYDROGRAPH



ROARING FORK RIVER BASIN

09077200 FRYINGPAN RIVER NEAR IVANHOE LAKE, CO

**LOCATION.**--Lat 39°14'42", long 106°31'50", unsurveyed in Pitkin County, Hydrologic Unit 14010004. Located on left bank 100 ft downstream from diversion dam, 2 mi southwest of Ivanhoe Lake, and 9.1 mi southeast of Norrie, CO.

**DRAINAGE AREA.**--18.7 mi<sup>2</sup>.

**GAGE.**--Sutron stage discharge recorder (SDR) in 3'-0" square doghouse style metal-clad shelter on 24" diameter corrugated metal well located directly in stream. SDR is set by drop tape to an inside reference point on edge of equipment shelf. The SDR is hardwired to Chapman control house where a USBR SatLink2 data collection platform (DCP) provides satellite transmission. A USBR shaft encoder inside shelter (with separate float) is no longer used to collect gage height data. SDR log serves as primary data to develop record and satellite transmitted data is used as backup. Control is a 9.8-ft. wide sharp-crested concrete weir 20 ft. below gage. Elevation of gage is 9,945 ft from topographic map.

**REMARKS.**--SDR data were used to develop a record that is complete and reliable, except for the period of Nov 20, 2007 through Apr 15, 2008 when the well and control were frozen. Comparison with downstream gage at Thomasville (FRYTHOCO) was used to estimate record for this period. Satellite transmissions were sporadic during WY 2008. Record is good, except for period of no gage height record, which is poor. Gaging station operated by Craig Bruner and discharge record computed by James Kellogg.

**RATING TABLE.**-- FRYIVLC008 USED FROM 01-Oct-2007 TO 30-Sep-2008

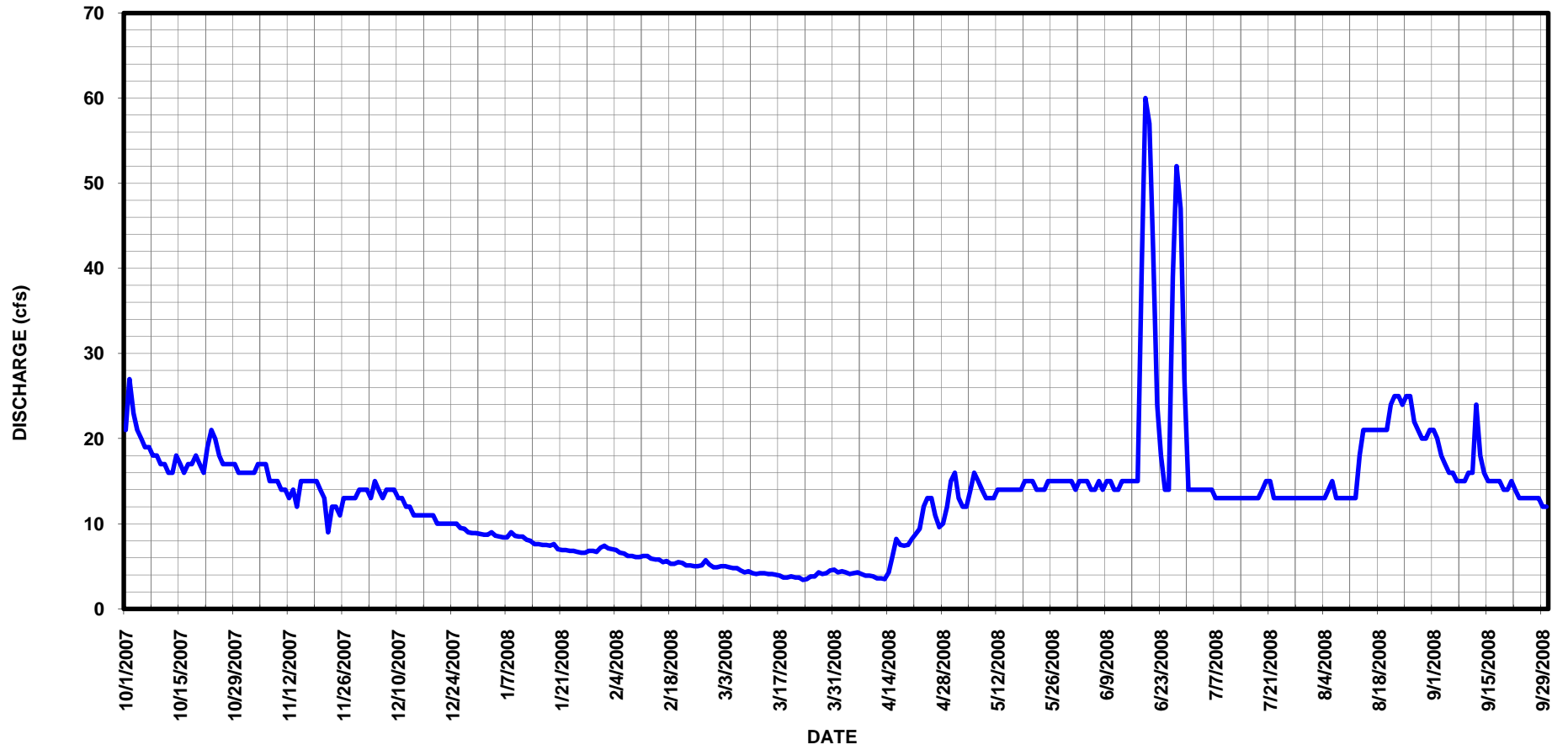
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	16	14	8.7	7.4	4.9	4.3	16	14	14	13	21
2	27	16	14	8.7	7.1	5.0	4.4	13	15	14	13	20
3	23	16	13	9.0	7.0	5.0	4.3	12	15	14	13	18
4	21	17	15	8.6	6.9	4.9	4.1	12	15	14	13	17
5	20	17	14	8.5	6.6	4.8	4.2	14	14	14	14	16
6	19	17	13	8.4	6.5	4.8	4.3	16	14	14	15	16
7	19	15	14	8.4	6.2	4.5	4.1	15	15	13	13	15
8	18	15	14	9.0	6.2	4.3	3.9	14	14	13	13	15
9	18	15	14	8.6	6.1	4.4	3.9	13	15	13	13	15
10	17	14	13	8.5	6.1	4.2	3.8	13	15	13	13	16
11	17	14	13	8.5	6.2	4.1	3.6	13	14	13	13	16
12	16	13	12	8.1	6.2	4.2	3.6	14	14	13	13	24
13	16	14	12	8.0	5.9	4.2	3.5	14	15	13	18	18
14	18	12	11	7.6	5.8	4.1	4.3	14	15	13	21	16
15	17	15	11	7.6	5.8	4.1	6.2	14	15	13	21	15
16	16	15	11	7.5	5.5	4.0	8.2	14	15	13	21	15
17	17	15	11	7.5	5.6	3.9	7.5	14	15	13	21	15
18	17	15	11	7.4	5.3	3.7	7.4	14	40	13	21	15
19	18	15	11	7.6	5.3	3.7	7.5	15	60	14	21	14
20	17	14	10	7.0	5.5	3.8	8.2	15	57	15	21	14
21	16	13	10	6.9	5.4	3.7	8.8	15	42	15	24	15
22	19	9.0	10	6.9	5.1	3.7	9.4	14	24	13	25	14
23	21	12	10	6.8	5.1	3.4	12	14	18	13	25	13
24	20	12	10	6.8	5.0	3.5	13	14	14	13	24	13
25	18	11	10	6.7	5.0	3.8	13	15	14	13	25	13
26	17	13	9.5	6.6	5.1	3.8	11	15	39	13	25	13
27	17	13	9.4	6.6	5.7	4.3	9.6	15	52	13	22	13
28	17	13	9.0	6.8	5.2	4.1	10	15	47	13	21	13
29	17	13	8.9	6.8	4.9	4.2	12	15	27	13	20	12
30	16	14	8.9	6.7	---	4.5	15	15	14	13	20	12
31	16	---	8.8	7.2	---	4.6	---	15	---	13	21	---
TOTAL	566	423.0	355.5	238.0	169.7	130.2	215.1	441	697	414	576	462
MEAN	18.3	14.1	11.5	7.68	5.85	4.20	7.17	14.2	23.2	13.4	18.6	15.4
AC-FT	1120	839	705	472	337	258	427	875	1380	821	1140	916
MAX	27	17	15	9.0	7.4	5.0	15	16	60	15	25	24
MIN	16	9.0	8.8	6.6	4.9	3.4	3.5	12	14	13	13	12
CAL YR 2007	TOTAL	5982.1	MEAN	16.4	MAX	60	MIN	4.0	AC-FT	11870		
WTR YR 2008	TOTAL	4687.5	MEAN	12.8	MAX	60	MIN	3.4	AC-FT	9300		

MAX DISCH: 125 CFS AT 20:30 ON Jun. 19, 2008 GH 2.44 FT. SHIFT 0.02 FT.  
MAX GH: 2.44 FT. AT 20:30 ON Jun. 19, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09077200 FRYINGPAN RIVER NEAR IVANHOE LAKE CO  
WY2008 HYDROGRAPH



ROARING FORK RIVER BASIN

09077610 IVANHOE CREEK NEAR NAST, CO

**LOCATION.**--Lat 39°17'13", long 106°33'31", unsurveyed in Pitkin County, Hydrologic Unit 14010004. Located on left bank 60 ft upstream from culvert under Nast Tunnel, 300 ft downstream from diversion dam, 2.3 mi east of Nast, and 5.8 mi southeast of Norrie, CO.

**DRAINAGE AREA.**--9.43 mi<sup>2</sup>.

**GAGE.**--Sutron stage discharge recorder (SDR) housed in a 3'-0" square metal-clad shelter on 24" diameter corrugated metal well located directly in stream. SDR is set by drop tape to an inside reference point on edge of equipment shelf. Primary record is SDR data. A USBR shaft encoder (with separate float) in the shelter is hard-wired to Chapman Control House for satellite transmission. No USBR data were available in WY 2008. Control is a 120° v-notch weir (low flows) 55 ft below the gage and 8 ft culvert (high flows) 60 feet below the gage. Elevation of gage is 9,980 ft from topographic map.

**REMARKS.**--Record is complete and reliable for the year, except for Nov. 15, 16, and 20, 2007, when control was ice affected, and Nov. 21, 2007 through Apr. 22, 2008, when the well and control were frozen. Record is good, except for periods of ice effect and no gage height record, which are poor. Station maintained by and record developed by Craig Bruner.

**RATING TABLE.**--IVCRNACO04 USED FROM 01-Oct-2007 TO 30-Sep-2008

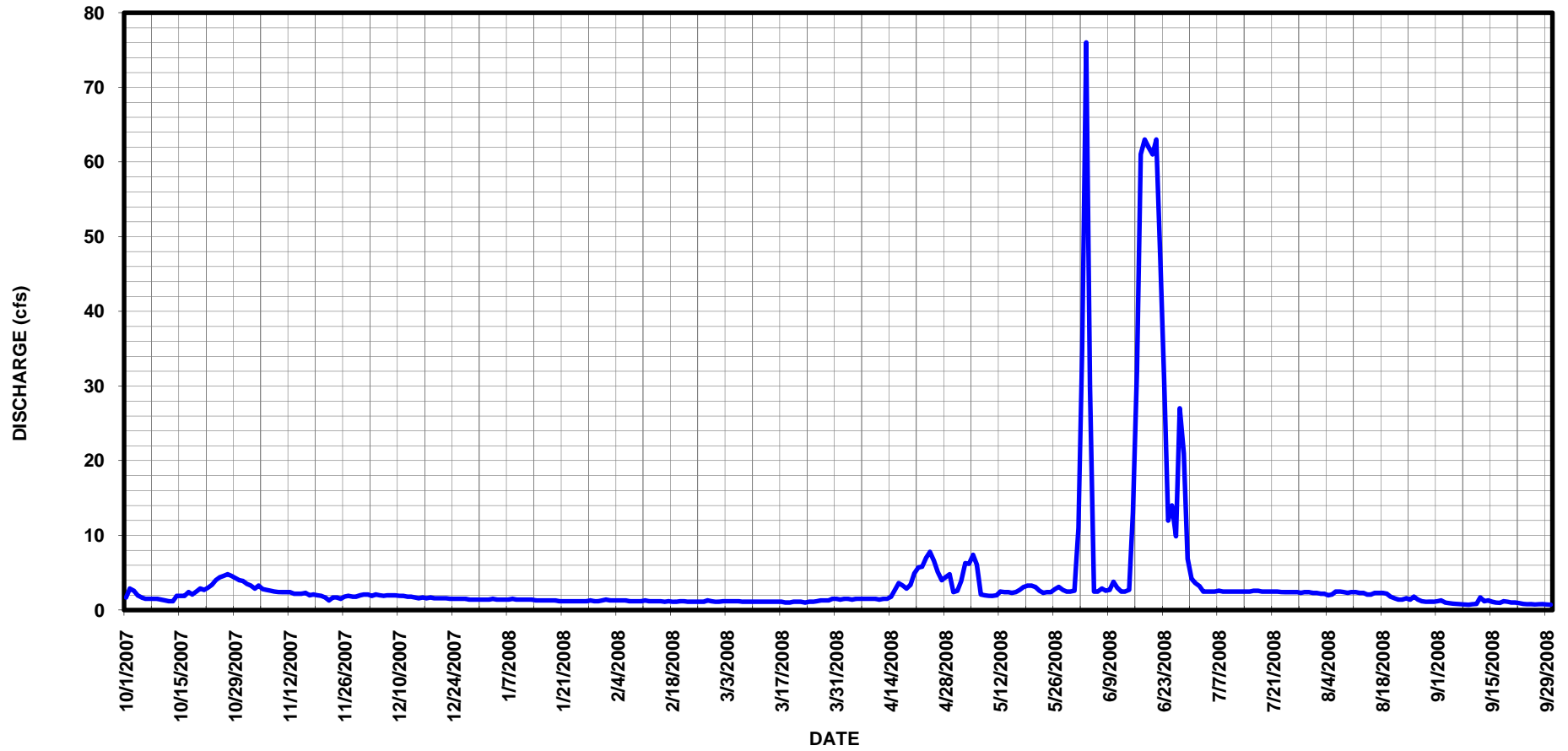
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	3.5	2.1	1.4	1.4	1.1	1.4	2.6	11	3.6	2.3	1.2
2	2.9	3.3	2.1	1.4	1.3	1.2	1.5	3.9	35	3.2	2.2	1.3
3	2.6	2.9	1.9	1.5	1.3	1.2	1.5	6.3	76	2.5	2.2	1.0
4	2.0	3.3	2.1	1.4	1.3	1.2	1.4	6.2	30	2.5	2.0	.95
5	1.7	2.8	2.0	1.4	1.3	1.2	1.5	7.4	2.5	2.5	2.1	.87
6	1.5	2.7	1.9	1.4	1.3	1.2	1.5	6.1	2.5	2.5	2.5	.82
7	1.5	2.6	2.0	1.4	1.2	1.1	1.5	2.1	2.9	2.6	2.5	.80
8	1.5	2.5	2.0	1.5	1.2	1.1	1.5	2.0	2.6	2.5	2.4	.76
9	1.5	2.4	2.0	1.4	1.2	1.1	1.5	1.9	2.7	2.5	2.3	.73
10	1.4	2.4	1.9	1.4	1.2	1.1	1.5	1.9	3.8	2.5	2.4	.80
11	1.3	2.4	1.9	1.4	1.3	1.1	1.4	2.0	3.0	2.5	2.4	.82
12	1.2	2.4	1.8	1.4	1.2	1.1	1.5	2.5	2.5	2.5	2.3	1.7
13	1.2	2.2	1.8	1.4	1.2	1.1	1.5	2.4	2.5	2.5	2.3	1.2
14	1.9	2.2	1.7	1.3	1.2	1.1	1.8	2.4	2.7	2.5	2.1	1.3
15	1.9	2.2	1.6	1.3	1.2	1.1	2.7	2.3	13	2.5	2.1	1.1
16	1.9	2.3	1.7	1.3	1.1	1.1	3.6	2.4	32	2.6	2.3	1.0
17	2.4	2.0	1.6	1.3	1.2	1.1	3.3	2.7	61	2.6	2.3	.97
18	2.1	2.1	1.7	1.3	1.1	1.0	2.9	3.1	63	2.5	2.3	1.2
19	2.5	2.0	1.6	1.3	1.1	1.0	3.4	3.3	62	2.5	2.2	1.1
20	2.9	1.9	1.6	1.2	1.2	1.1	4.9	3.3	61	2.5	1.8	1.0
21	2.7	1.7	1.6	1.2	1.2	1.1	5.7	3.1	63	2.5	1.6	1.0
22	3.0	1.3	1.6	1.2	1.1	1.1	5.8	2.6	47	2.5	1.4	.95
23	3.4	1.7	1.5	1.2	1.1	1.0	7.0	2.3	31	2.4	1.4	.84
24	4.0	1.7	1.5	1.2	1.1	1.1	7.8	2.4	12	2.4	1.6	.81
25	4.4	1.5	1.5	1.2	1.1	1.1	6.6	2.4	14	2.4	1.4	.78
26	4.6	1.8	1.5	1.2	1.1	1.2	5.1	2.8	9.9	2.4	1.8	.74
27	4.8	1.9	1.5	1.2	1.3	1.3	4.0	3.1	27	2.4	1.4	.79
28	4.6	1.8	1.4	1.3	1.2	1.3	4.4	2.7	21	2.3	1.2	.79
29	4.3	1.8	1.4	1.2	1.1	1.3	4.8	2.5	6.9	2.4	1.1	.77
30	4.0	2.0	1.4	1.2	---	1.5	2.4	2.5	4.2	2.4	1.1	.72
31	3.9	---	1.4	1.3	---	1.5	---	2.6	---	2.3	1.1	---
TOTAL	81.3	67.3	53.3	40.8	34.8	35.8	95.4	95.8	707.7	78.5	60.1	28.81
MEAN	2.62	2.24	1.72	1.32	1.20	1.15	3.18	3.09	23.6	2.53	1.94	.96
AC-FT	161	133	106	81	69	71	189	190	1400	156	119	57
MAX	4.8	3.5	2.1	1.5	1.4	1.5	7.8	7.4	76	3.6	2.5	1.7
MIN	1.2	1.3	1.4	1.2	1.1	1.0	1.4	1.9	2.5	2.3	1.1	.72
CAL YR 2007	TOTAL	1068.82	MEAN	2.93	MAX	34	MIN	.48	AC-FT	2120		
WTR YR 2008	TOTAL	1379.61	MEAN	3.77	MAX	76	MIN	.72	AC-FT	2740		

MAX DISCH: 95.8 CFS AT 18:30 ON Jun. 20, 2008 GH 2.83 FT. SHIFT 0.01 FT.  
MAX GH: 2.83 FT. AT 18:30 ON Jun. 20, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09077610 IVANHOE CREEK NEAR NAST CO  
WY2008 HYDROGRAPH



ROARING FORK RIVER BASIN

09077800 SOUTH FORK FRYINGPAN RIVER AT UPPER STATION NEAR NORRIE, CO

**LOCATION.**--Lat 39°14'20", long 106°35'24", unsurveyed in Pitkin County, Hydrologic Unit 14010004. Located on right bank 300 ft downstream from diversion dam, 5.2 mi upstream from mouth, and 7.2 mi southeast of Norrie, CO.

**DRAINAGE AREA.**--11.5 mi<sup>2</sup>.

**GAGE.**--Sutron stage discharge recorder (SDR) on rectangular platform with removable steel cover on 12" diameter corrugated metal well located directly in stream. SDR is set by drop tape to a reference point (1/4 in brass bolt) on downstream side of graphic recorder shelter. A USBR shaft encoder in the shelter (connected to SDR wheel by a chain) is hard-wired to Chapman Control House for satellite transmission. Division of Water Resources SDR data was used for record development. No USBR data were available in WY 2008. Control is a 6.2-ft. wide concrete weir. Elevation of gage is 9,990 ft from topographic map.

**REMARKS.**--Record is complete and reliable, except for Nov. 8 through Nov. 10, 2007, when control was ice affected and Nov. 11, 2007 through Apr. 21, 2008, when well and control were frozen. Record is good, except for periods of ice-affected gage height which are fair, and no gage height record, which are poor. Station maintained and record developed by Craig Bruner.

**RATING TABLE.**--FRYSFU009 USED FROM 01-Oct-2007 TO 30-Sep-2008

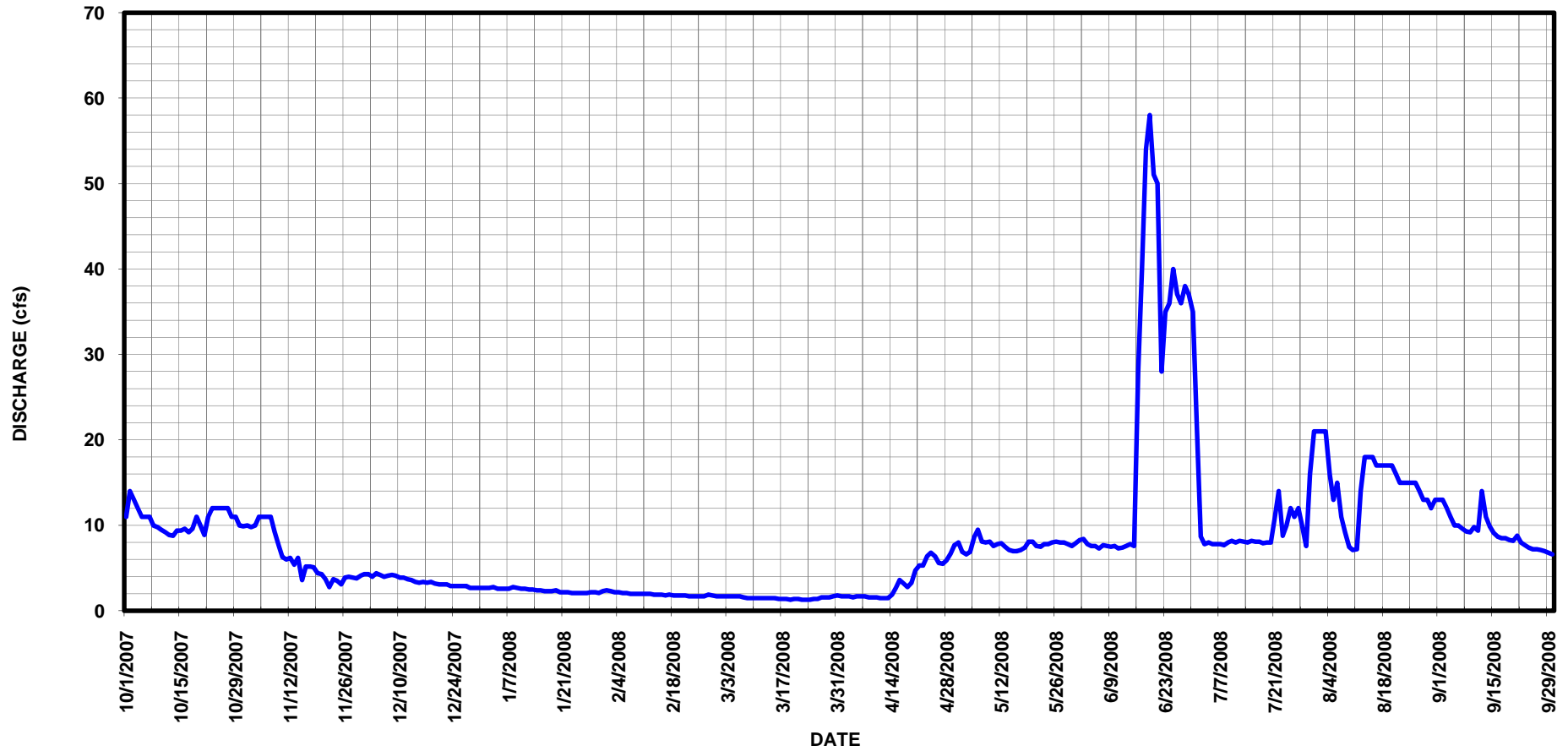
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	10	4.3	2.7	2.4	1.7	1.7	8.0	8.3	22	21	13
2	14	9.8	4.3	2.7	2.3	1.7	1.7	6.9	8.4	8.7	21	13
3	13	10	4.0	2.8	2.2	1.7	1.7	6.6	7.8	7.8	21	12
4	12	11	4.4	2.6	2.2	1.7	1.6	6.9	7.6	8.0	16	11
5	11	11	4.2	2.6	2.1	1.7	1.7	8.6	7.6	7.8	13	10
6	11	11	4.0	2.6	2.1	1.7	1.7	9.5	7.3	7.8	15	10
7	11	11	4.1	2.6	2.0	1.6	1.7	8.1	7.7	7.8	11	9.6
8	10	9.3	4.2	2.8	2.0	1.5	1.6	8.0	7.6	7.7	9.2	9.3
9	9.8	7.7	4.1	2.7	2.0	1.5	1.6	8.1	7.5	8.0	7.5	9.2
10	9.5	6.3	3.9	2.6	2.0	1.5	1.6	7.6	7.6	8.2	7.1	9.8
11	9.2	6.0	3.9	2.6	2.0	1.5	1.5	7.8	7.3	8.0	7.2	9.4
12	8.9	6.2	3.7	2.5	2.0	1.5	1.5	7.9	7.4	8.2	14	14
13	8.8	5.4	3.6	2.5	1.9	1.5	1.5	7.5	7.6	8.1	18	11
14	9.4	6.2	3.4	2.4	1.9	1.5	1.9	7.1	7.8	8.0	18	9.9
15	9.4	3.6	3.3	2.4	1.9	1.5	2.7	7.0	7.6	8.2	18	9.1
16	9.6	5.2	3.4	2.3	1.8	1.4	3.6	7.0	28	8.1	17	8.7
17	9.2	5.2	3.3	2.3	1.9	1.4	3.2	7.1	40	8.1	17	8.5
18	9.6	5.1	3.4	2.3	1.8	1.4	2.8	7.4	54	7.9	17	8.5
19	11	4.4	3.2	2.4	1.8	1.3	3.3	8.1	58	8.0	17	8.3
20	10	4.3	3.1	2.2	1.8	1.4	4.7	8.1	51	8.0	17	8.2
21	8.9	3.7	3.1	2.2	1.8	1.4	5.3	7.6	50	11	16	8.8
22	11	2.8	3.1	2.2	1.7	1.3	5.3	7.5	28	14	15	8.0
23	12	3.7	2.9	2.1	1.7	1.3	6.4	7.8	35	8.8	15	7.7
24	12	3.5	2.9	2.1	1.7	1.3	6.8	7.8	36	10	15	7.4
25	12	3.1	2.9	2.1	1.7	1.4	6.4	8.0	40	12	15	7.2
26	12	3.9	2.9	2.1	1.7	1.4	5.6	8.1	37	11	15	7.2
27	12	4.0	2.9	2.1	1.9	1.6	5.5	8.0	36	12	14	7.1
28	11	3.9	2.7	2.2	1.8	1.6	5.9	8.0	38	9.9	13	7.0
29	11	3.8	2.7	2.2	1.7	1.6	6.7	7.8	37	7.6	13	6.8
30	10	4.1	2.7	2.1	---	1.7	7.7	7.6	35	16	12	6.6
31	9.9	---	2.7	2.3	---	1.8	---	7.9	---	21	13	---
TOTAL	329.2	185.2	107.3	74.3	55.8	47.1	104.9	239.4	718.1	307.7	458.0	276.3
MEAN	10.6	6.17	3.46	2.40	1.92	1.52	3.50	7.72	23.9	9.93	14.8	9.21
AC-FT	653	367	213	147	111	93	208	475	1420	610	908	548
MAX	14	11	4.4	2.8	2.4	1.8	7.7	9.5	58	22	21	14
MIN	8.8	2.8	2.7	2.1	1.7	1.3	1.5	6.6	7.3	7.6	7.1	6.6
CAL YR 2007	TOTAL	4101.6	MEAN	11.2	MAX	69	MIN	0.87	AC-FT	8140		
WTR YR 2008	TOTAL	2903.3	MEAN	7.9	MAX	58	MIN	1.3	AC-FT	5760		

MAX DISCH: 127 CFS AT 20:30 ON Jun. 18, 2008 GH 4.34 FT. SHIFT 0.07 FT.  
MAX GH: 4.34 FT. AT 20:30 ON Jun. 18, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09077800 SOUTH FORK FRYINGPAN RIVER AT UPPER STATION NEAR NORRIE CO  
WY2008 HYDROGRAPH





ROARING FORK RIVER BASIN

09077945 CHAPMAN GULCH NEAR NAST, CO

**LOCATION.**--Lat 39°15'51", long 106°37'54", in NW1/4 SE1/4 Sec. 14, T8S, R83W in Pitkin County, Hydrologic Unit 14010004. Located on right bank 700 ft downstream from Chapman diversion tunnel, 3.3 mi upstream from mouth, and 4.3 mi south of Norrie, CO.

**DRAINAGE AREA.**--6 mi<sup>2</sup>.

**GAGE.**--Station is equipped with a Stevens A-35 graphic water-stage recorder and a Sutron stage discharge recorder (SDR) in 3'-0" square metal-clad shelter on a 24" diameter corrugated metal well located directly in stream. Recorder and SDR are equipped with separate floats and are set to an inside reference point with a drop tape. Primary record is SDR data and chart is used as backup. The USBR replaced the SDR with a new SDR-0001-4 on May 25, 2008 that is hard-wired to Chapman Control House. Control is a 120° v-notch sharp-crested weir (low flows) and channel (high flows). Elevation of gage is 9,982.76 ft.

**REMARKS.**--SDR data was used to develop a record that is complete and reliable for the entire WY2008. Record is good. Gaging station operated and record developed by James Kellogg.

**RATING TABLE.**--CHAGULCO06 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

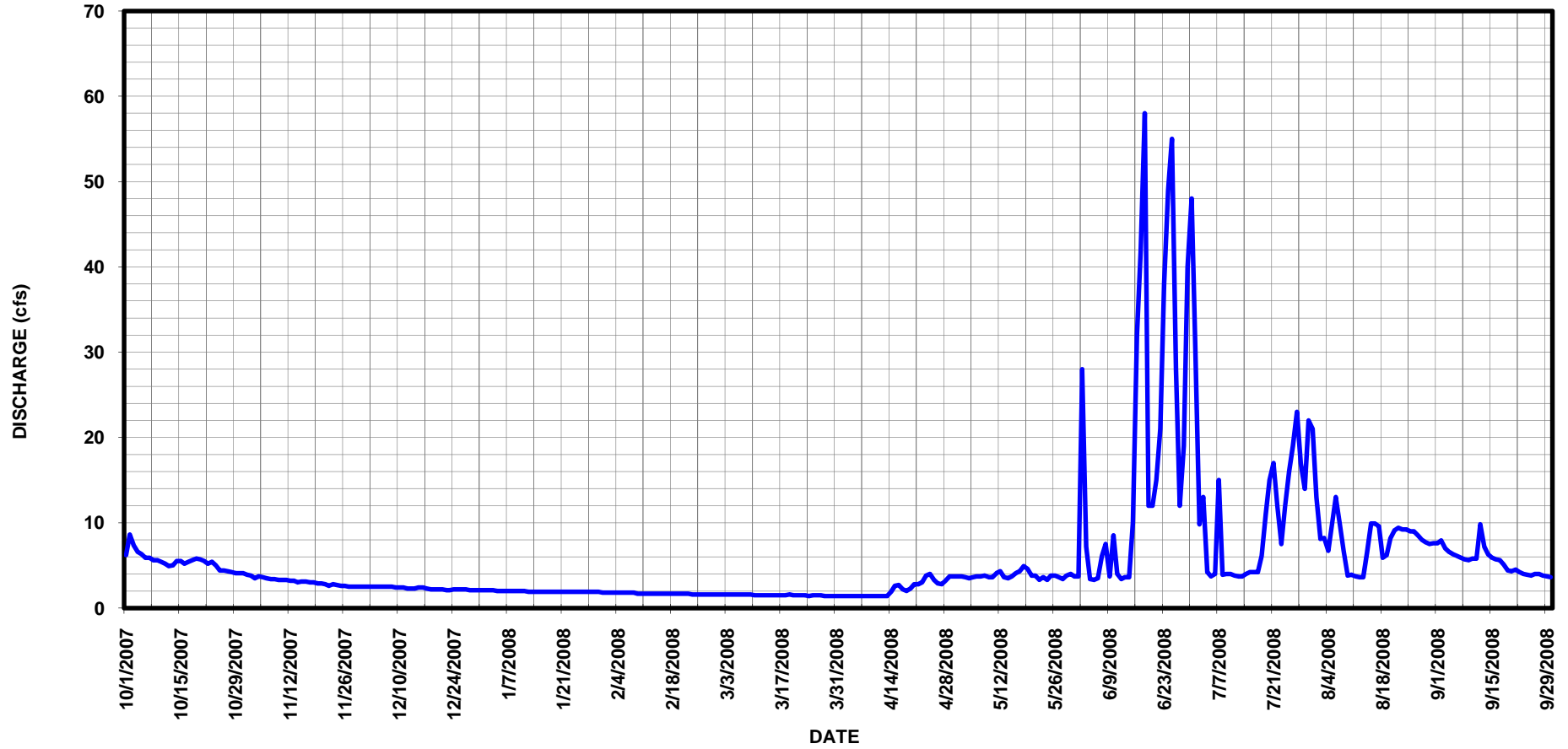
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	3.9	2.5	2.1	1.8	1.6	1.4	3.7	3.7	30	13	7.6
2	8.6	3.8	2.5	2.1	1.8	1.6	1.4	3.7	28	9.8	8.1	7.9
3	7.3	3.5	2.5	2.1	1.8	1.6	1.4	3.6	7.2	13	8.2	7.0
4	6.6	3.7	2.5	2.0	1.8	1.6	1.4	3.5	3.4	4.2	6.7	6.6
5	6.3	3.6	2.5	2.0	1.8	1.6	1.4	3.6	3.3	3.7	9.8	6.3
6	5.9	3.5	2.5	2.0	1.8	1.6	1.4	3.7	3.5	4.0	13	6.1
7	5.9	3.4	2.5	2.0	1.8	1.6	1.4	3.7	6.1	15	9.8	5.9
8	5.6	3.4	2.5	2.0	1.8	1.6	1.4	3.8	7.5	3.9	6.7	5.7
9	5.6	3.3	2.4	2.0	1.7	1.6	1.4	3.6	3.7	4.0	3.8	5.6
10	5.4	3.3	2.4	2.0	1.7	1.5	1.4	3.6	8.5	4.0	3.9	5.8
11	5.2	3.3	2.4	2.0	1.7	1.5	1.4	4.1	4.0	3.8	3.7	5.8
12	4.9	3.2	2.3	1.9	1.7	1.5	1.4	4.3	3.4	3.7	3.6	9.8
13	5.0	3.2	2.3	1.9	1.7	1.5	1.4	3.6	3.6	3.7	3.6	7.2
14	5.5	3.0	2.3	1.9	1.7	1.5	1.9	3.5	3.6	4.0	6.5	6.3
15	5.5	3.1	2.4	1.9	1.7	1.5	2.6	3.7	10	4.2	9.9	5.9
16	5.2	3.1	2.4	1.9	1.7	1.5	2.7	4.1	32	4.2	9.9	5.7
17	5.4	3.0	2.3	1.9	1.7	1.5	2.2	4.3	42	4.2	9.6	5.6
18	5.6	3.0	2.2	1.9	1.7	1.5	2.0	4.9	58	6.1	5.9	5.1
19	5.8	2.9	2.2	1.9	1.7	1.6	2.3	4.6	12	11	6.2	4.4
20	5.7	2.9	2.2	1.9	1.7	1.5	2.8	3.8	12	15	8.2	4.3
21	5.5	2.8	2.2	1.9	1.7	1.5	2.8	3.8	15	17	9.1	4.5
22	5.2	2.6	2.1	1.9	1.7	1.5	3.0	3.3	21	12	9.4	4.2
23	5.4	2.8	2.1	1.9	1.6	1.5	3.8	3.6	38	7.5	9.2	4.0
24	5.0	2.7	2.2	1.9	1.6	1.4	4.0	3.3	49	12	9.2	3.9
25	4.4	2.6	2.2	1.9	1.6	1.5	3.3	3.8	55	16	9.0	3.8
26	4.4	2.6	2.2	1.9	1.6	1.5	2.9	3.8	28	19	9.0	4.0
27	4.3	2.5	2.2	1.9	1.6	1.5	2.8	3.6	12	23	8.5	4.0
28	4.2	2.5	2.1	1.9	1.6	1.4	3.2	3.4	19	17	8.0	3.8
29	4.1	2.5	2.1	1.9	1.6	1.4	3.7	3.8	40	14	7.7	3.7
30	4.1	2.5	2.1	1.9	---	1.4	3.7	4.0	48	22	7.5	3.6
31	4.1	---	2.1	1.8	---	1.4	---	3.7	---	21	7.6	---
TOTAL	167.9	92.2	71.4	60.2	49.4	47.0	67.9	117.5	580.5	332.0	244.3	164.1
MEAN	5.42	3.07	2.30	1.94	1.70	1.52	2.26	3.79	19.4	10.7	7.88	5.47
AC-FT	333	183	142	119	98	93	135	233	1150	659	485	325
MAX	8.6	3.9	2.5	2.1	1.8	1.6	4.0	4.9	58	30	13	9.8
MIN	4.1	2.5	2.1	1.8	1.6	1.4	1.4	3.3	3.3	3.7	3.6	3.6

CAL YR	2007	TOTAL	2604.3	MEAN	7.14	MAX	63	MIN	1.2	AC-FT	5170
WTR YR	2008	TOTAL	1994.4	MEAN	5.45	MAX	58	MIN	1.4	AC-FT	3960

MAX DISCH: 134 CFS AT 18:15 ON Jun. 2, 2008 GH 3.99 FT. SHIFT -0.01 FT.  
MAX GH: 3.99 FT. AT 18:15 ON Jun. 2, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09077945 CHAPMAN GULCH NEAR NAST CO  
WY2008 HYDROGRAPH



ROARING FORK RIVER BASIN

09078500 NORTH FORK FRYINGPAN RIVER NEAR NORRIE, CO

**LOCATION.**--Lat 39°20'34", long 106°39'55", in SE¼ NW¼ Sec. 21, T8S, R83W in Pitkin County, Hydrologic Unit 14010004. Located on left bank, 800 ft upstream from bridge on county road, 0.4 mi upstream from mouth, 0.5 mi downstream from Last Chance Creek, and 1.3 mi northwest of Norrie, CO.

**DRAINAGE AREA.**--42 mi<sup>2</sup>.

**GAGE.**-- Sutron stage discharge recorder (SDR) and Synergetics DCP w/satellite monitoring and a shaft encoder operated and maintained by the National Weather Service in a 42" diameter corrugated metal well. Recorder and shaft encoder are referenced to inside drop tape. Primary record is SDR log. National Weather Service shaft encoder and data collection platform (DCP) were replaced with DWR Stage Discharge Recorder (SDR) and Satlink2 Data Collection Platform on May 21, 2008. The SDR is set by drop tape to an adjustable reference point on edge of recorder shelf. Control is natural channel at low flows and boulders at high flows. Elevation of gage is 8,330 ft from topographic map.

**REMARKS.**--The record was developed using SDR log data (SDR in place Oct. 1 to May 21). DCP log data were used from May 22 to August 30. Satellite transmitted data were used Aug. 31 through Sep. 30. The record is complete and reliable, except for the period of Nov. 22, 2007 through April 24, 2008 when the well was frozen, and May 21, when the station equipment was being upgraded. Record is good, except for periods of no gage height record which are poor. Station maintained and record developed by Craig Bruner.

**RATING TABLE.**--FRYFNCO10 USED FROM 01-Oct-2007 TO 14-Nov-2008

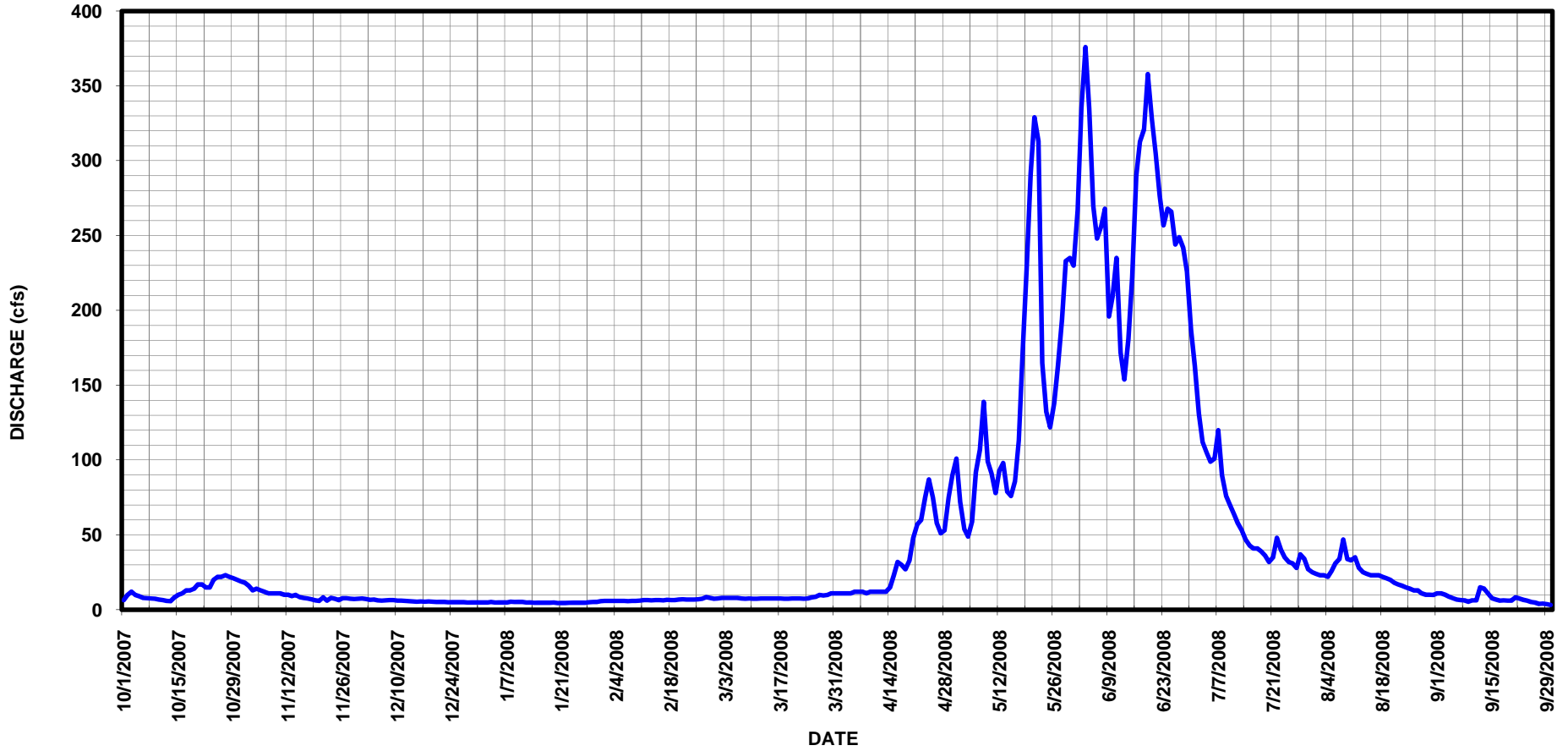
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	18	7.5	4.9	6.0	7.6	11	101	267	163	24	11
2	9.8	16	7.2	4.9	5.9	7.9	11	72	335	131	23	11
3	12	13	6.6	5.1	6.0	7.9	11	54	376	112	23	10
4	9.8	14	6.9	4.9	6.0	7.9	11	49	335	105	22	8.8
5	8.9	13	6.3	4.9	5.9	7.9	12	59	270	99	26	7.7
6	7.9	12	6.1	4.9	6.0	7.9	12	92	248	101	31	6.9
7	7.7	11	6.3	4.9	5.8	7.6	12	107	256	120	34	6.5
8	7.6	11	6.5	5.3	5.9	7.3	11	139	268	90	47	6.2
9	7.4	11	6.5	5.1	6.0	7.6	12	99	196	76	34	5.4
10	6.9	11	6.1	5.1	6.1	7.3	12	91	210	70	33	6.2
11	6.4	10	6.1	5.1	6.4	7.3	12	78	235	64	35	6.3
12	6.0	10	5.9	4.9	6.5	7.6	12	93	172	58	28	15
13	5.7	9.1	5.7	4.9	6.3	7.6	12	98	154	53	25	14
14	8.2	9.9	5.5	4.7	6.4	7.6	15	79	181	47	24	11
15	10	8.4	5.4	4.7	6.5	7.6	23	76	222	43	23	7.7
16	11	7.9	5.6	4.7	6.3	7.6	32	86	290	41	23	6.8
17	13	7.5	5.4	4.7	6.6	7.6	30	113	313	41	23	6.1
18	13	7.0	5.6	4.7	6.4	7.3	27	174	321	39	22	6.3
19	14	6.3	5.4	4.9	6.5	7.3	33	227	358	36	21	6.1
20	17	5.9	5.2	4.5	6.9	7.6	48	291	328	32	20	6.1
21	17	8.3	5.2	4.5	7.0	7.6	57	329	305	35	18	8.3
22	15	6.1	5.2	4.5	6.8	7.6	60	313	277	48	17	7.6
23	15	7.9	5.0	4.6	6.8	7.3	75	165	257	40	16	6.6
24	20	7.4	5.0	4.6	6.9	7.6	87	132	268	35	15	6.1
25	22	6.4	5.0	4.6	7.0	8.3	75	122	266	32	14	5.1
26	22	7.7	5.0	4.6	7.4	8.6	58	138	244	31	13	4.9
27	23	7.8	5.0	4.7	8.4	9.9	51	163	249	28	13	4.0
28	22	7.3	4.8	5.0	7.9	9.6	53	194	242	37	11	4.1
29	21	7.1	4.8	5.1	7.4	9.9	75	233	226	34	10	3.8
30	20	7.3	4.8	5.2	---	11	90	235	187	27	10	3.2
31	19	---	4.9	5.7	---	11	---	230	---	25	9.9	---
TOTAL	404.7	285.3	176.5	150.9	190.0	250.4	1040	4432	7856	1893	687.9	218.8
MEAN	13.1	9.51	5.69	4.87	6.55	8.08	34.7	143	262	61.1	22.2	7.29
AC-FT	803	566	350	299	377	497	2060	8790	15580	3750	1360	434
MAX	23	18	7.5	5.7	8.4	11	90	329	376	163	47	15
MIN	5.7	5.9	4.8	4.5	5.8	7.3	11	49	154	25	9.9	3.2
CAL YR 2007	TOTAL	10793.5	MEAN	29.5	MAX	150	MIN	3.6	AC-FT	21410		
WTR YR 2008	TOTAL	17585.5	MEAN	48	MAX	376	MIN	3.2	AC-FT	34880		

MAX DISCH: 498 CFS AT 01:15 ON Jun. 3, 2008 GH 4.77 FT. SHIFT -0.03 FT.  
MAX GH: 4.77 FT. AT 01:15 ON Jun. 3, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09078500 NORTH FORK FRYINGPAN RIVER NEAR NORRIE CO  
WY2008 HYDROGRAPH



ROARING FORK RIVER BASIN

09078600 FRYINGPAN RIVER NEAR THOMASVILLE, CO

**LOCATION.**--Lat 39°20'41", long 106°40'23", in NW¼ NW¼ Sec. 21, T8S, R83W in Pitkin County, Hydrologic Unit 14010004. Located on right bank 400 ft upstream from private bridge, 400 ft downstream from mouth of North Fork Fryingpan River, 1.6 mi southeast of Thomasville, CO, and 1.7 mi northwest of Norrie, CO.

**DRAINAGE AREA.**--134 mi².

**GAGE.**--Graphic water-stage recorder and shaft encoder in a standard 42" diameter corrugated metal well with Sutron SatLink high data rate DCP satellite equipment. Recorder and shaft encoder are set by drop tape from a reference point on the instrument shelf. Primary record is satellite data and chart record is used for backup. Control is a 103-ft. wide concrete weir 10 ft. below gage. Elevation of gage is 8,210 ft from topographic map.

**REMARKS.**--The record is complete and reliable for the year, except for brief periods on Oct 28 and Mar 9. Gage heights for these periods were obtained from adjacent satellite data and comparison with chart recorder data with no loss in accuracy. Record is good. Transmountain diversions above station occurred through Boustead Tunnel and Busk-Ivanhoe Tunnel. Station operated and record developed by James Kellogg.

**RATING TABLE.**--FRYTHOCO02 USED FROM 01-Oct-2007 TO 25-Oct-2007  
FRYTHOCO03 USED FROM 25-Oct-2007 TO 30-Sep-2008

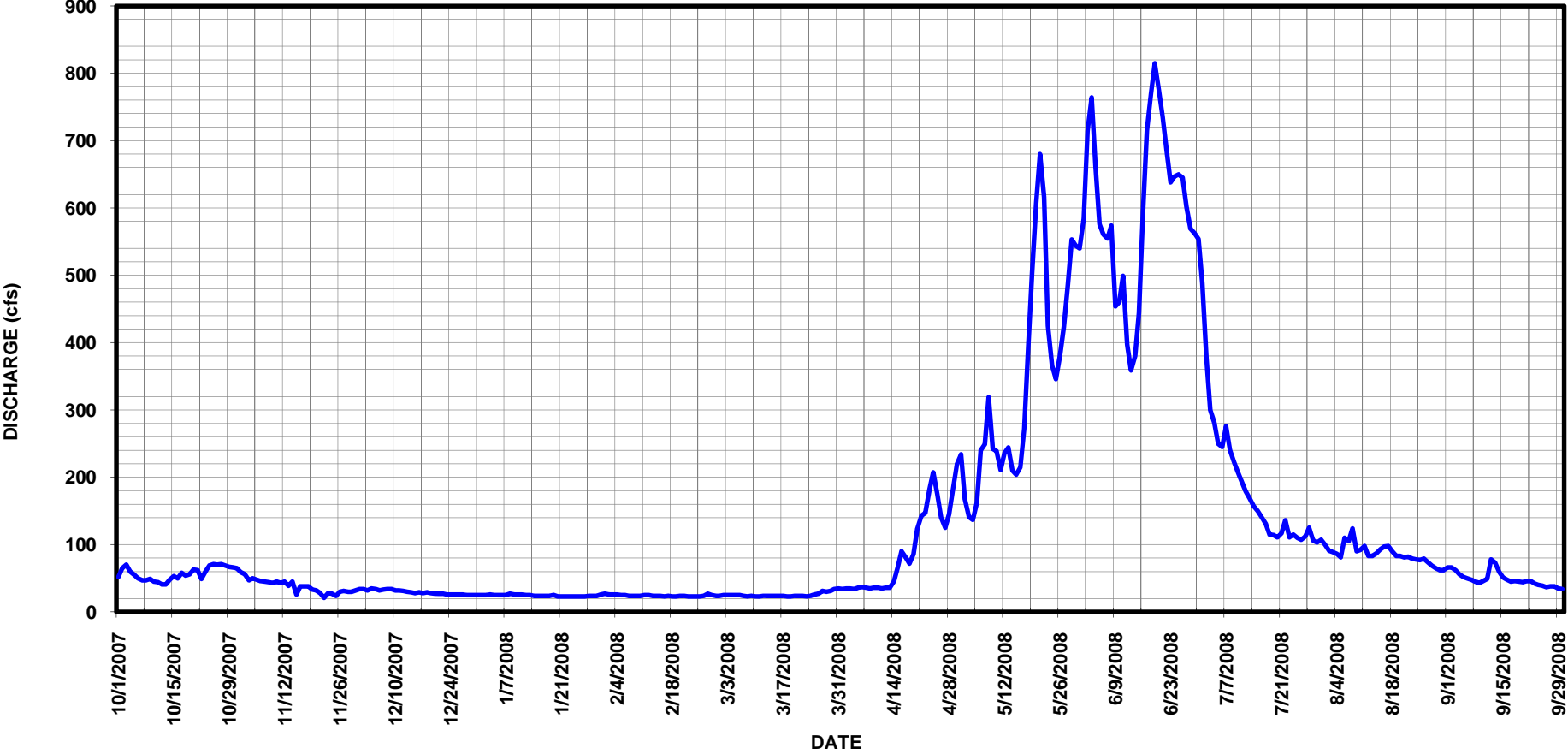
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	59	34	25	27	24	34	234	584	488	100	66
2	65	56	34	25	26	25	35	167	714	377	91	66
3	70	47	32	26	26	25	35	141	764	300	89	62
4	60	50	35	25	26	25	34	137	664	281	86	56
5	55	48	34	25	25	25	36	163	576	250	81	52
6	50	46	32	25	25	25	37	240	561	245	110	50
7	47	45	33	25	24	24	36	249	555	276	105	48
8	47	44	34	27	24	23	35	319	574	241	124	45
9	49	43	34	26	24	24	36	242	454	223	90	43
10	45	45	32	26	24	23	36	239	460	208	92	46
11	44	43	32	26	25	23	35	211	499	193	98	49
12	41	45	31	25	25	24	36	236	397	179	83	78
13	41	39	30	25	24	24	36	244	359	168	83	73
14	48	45	29	24	24	24	45	210	380	157	87	60
15	53	26	28	24	24	24	66	204	444	150	93	51
16	50	38	29	24	23	24	90	215	596	141	97	48
17	58	38	28	24	24	24	81	272	715	131	98	45
18	54	38	29	24	23	23	72	393	769	115	90	46
19	56	33	28	25	23	23	86	503	815	114	83	45
20	63	32	27	23	24	24	124	607	775	111	83	44
21	62	28	27	23	24	24	143	680	735	117	81	46
22	49	21	27	23	23	24	147	616	684	136	82	46
23	60	28	26	23	23	23	181	425	638	111	79	42
24	69	27	26	23	23	24	207	366	647	115	78	40
25	71	24	26	23	23	26	175	346	650	110	77	39
26	70	30	26	23	24	27	140	381	645	107	79	37
27	71	31	26	23	27	31	125	423	602	112	74	38
28	69	30	25	24	25	30	145	487	569	125	69	38
29	67	30	25	24	24	31	184	553	563	106	65	35
30	66	32	25	24	---	34	220	544	554	103	62	34
31	65	---	25	26	---	35	---	540	---	107	62	---
TOTAL	1767	1141	909	758	706	789	2692	10587	17942	5597	2671	1468
MEAN	57.0	38.0	29.3	24.5	24.3	25.5	89.7	342	598	181	86.2	48.9
AC-FT	3500	2260	1800	1500	1400	1560	5340	21000	35590	11100	5300	2910
MAX	71	59	35	27	27	35	220	680	815	488	124	78
MIN	41	21	25	23	23	23	34	137	359	103	62	34
CAL YR 2007	TOTAL	32559	MEAN	89	MAX	305	MIN	21	AC-FT	64580		
WTR YR 2008	TOTAL	47027	MEAN	128	MAX	815	MIN	21	AC-FT	93280		

MAX DISCH: 1040 CFS AT 00:15 ON Jun. 19, 2008 GH 3.99 FT. SHIFT 0.01 FT.  
MAX GH: 3.99 FT. AT 00:15 ON Jun. 19, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09078600 FRYINGPAN RIVER NEAR THOMASVILLE CO  
WY2008 HYDROGRAPH



ROARING FORK RIVER BASIN

09080100 FRYINGPAN RIVER AT MEREDITH, CO

**LOCATION.**--Lat 39°21'45", long 106°43'55", in SE¼ SE¼ Sec. 11, T8S, R84W in Eagle County, Hydrologic Unit 14010004. Located on left bank at Meredith, CO, 0.1 mi downstream from Waterbury Creek, 0.7 mi downstream from Jakeman Gulch.

**DRAINAGE AREA.**--191 mi<sup>2</sup>.

**GAGE.**--Station is equipped with a Stevens A-35 graphic water stage recorder, a Sutron SatLink2 data collection platform (DCP), and a Sutron SDI shaft encoder in a standard 42" corrugated metal shelter and well. The Sutron satellite monitoring equipment was installed on May 22, 2008 to replace malfunctioning Synergetics satellite monitoring equipment that was owned by the National Weather Service. Recorder and shaft encoder have separate floats and are set to an inside reference point with a drop tape. Primary record is satellite data and chart record us used for backup. Control is natural channel (rock and cobble) at low flows. Channel banks become part of the control at higher flows. Elevation of gage is 7,780 ft from topographic map.

**REMARKS.**--Record is complete and reliable, except for the following periods of no gage height: November 22, 2007 through May 9, 2008 (well frozen), May 22, 2008 (satellite monitoring equipment installed), and September 8,11,13,14,16,18,21, 2008 (equipment nonfunctional and chart record malfunctioning). Record is good except for period of no gage height, which is considered poor. Transmountain diversions above station occurred through Boustead Tunnel and Busk - Ivanhoe Tunnel. Station maintained and record developed by Craig Bruner.

**RATING TABLE.**--FRYMERCO04 USED FROM 01-Oct-2007 TO 30-Sep-2008

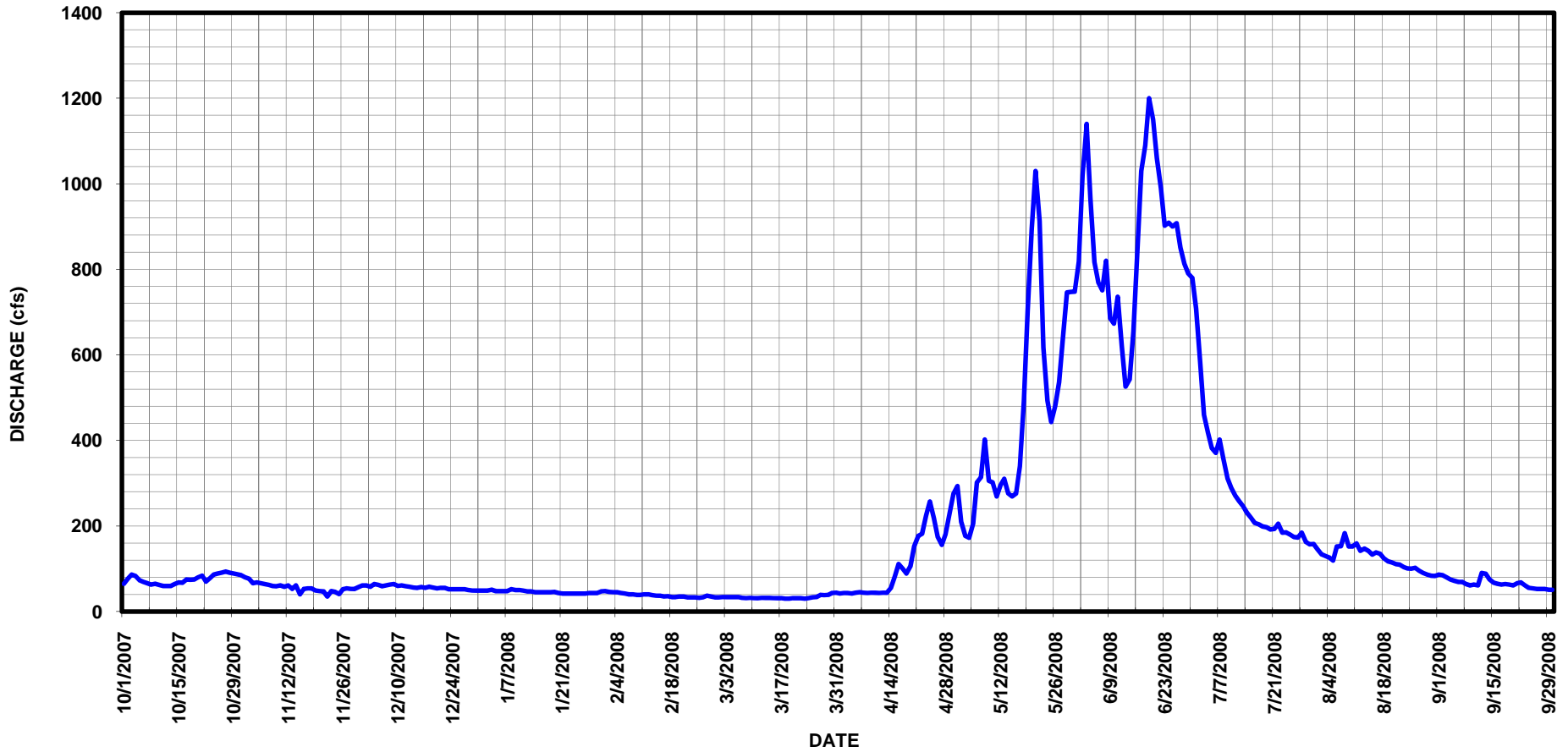
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	80	61	49	48	33	42	293	818	708	146	86
2	76	77	61	49	46	34	43	209	1020	583	134	85
3	86	66	58	51	45	34	43	177	1140	461	130	80
4	83	68	64	48	45	34	42	172	967	418	126	75
5	73	66	62	48	43	34	44	205	817	382	119	72
6	69	64	59	48	42	34	45	302	770	371	152	69
7	66	62	61	48	40	32	44	314	751	402	153	69
8	63	60	63	52	40	31	43	402	820	357	183	64
9	65	59	64	50	39	32	44	306	686	312	152	61
10	62	61	60	50	39	31	44	302	673	289	152	63
11	60	58	61	49	40	31	43	269	736	271	159	61
12	60	61	59	47	40	32	44	295	621	258	142	90
13	60	53	58	47	38	32	44	310	526	246	147	88
14	64	61	56	45	37	32	55	276	542	231	142	75
15	68	40	55	45	37	31	81	269	655	219	133	67
16	67	53	57	45	35	31	111	276	848	207	138	65
17	75	54	55	45	36	31	100	340	1030	204	135	63
18	74	54	58	45	34	30	89	492	1090	199	124	64
19	75	49	56	46	34	30	106	704	1200	197	117	63
20	80	48	54	43	35	31	153	895	1150	192	115	61
21	84	47	55	42	35	31	177	1030	1060	193	111	66
22	70	35	55	42	33	31	182	913	990	205	110	68
23	78	48	52	42	33	30	224	617	902	184	104	61
24	86	46	52	42	33	31	257	493	909	185	101	55
25	89	41	52	42	32	33	218	443	900	180	100	54
26	91	52	52	42	33	34	174	481	908	174	102	53
27	93	54	52	42	37	39	156	536	851	173	95	53
28	91	53	50	43	35	38	181	646	813	184	90	53
29	89	53	49	43	33	39	230	746	790	163	86	51
30	87	57	49	43	---	43	275	747	780	157	84	51
31	85	---	49	47	---	44	---	748	---	158	83	---
TOTAL	2334	1680	1749	1420	1097	1033	3334	14208	25763	8463	3865	1986
MEAN	75.3	56.0	56.4	45.8	37.8	33.3	111	458	859	273	125	66.2
AC-FT	4630	3330	3470	2820	2180	2050	6610	28180	51100	16790	7670	3940
MAX	93	80	64	52	48	44	275	1030	1200	708	183	90
MIN	60	35	49	42	32	30	42	172	526	157	83	51
CAL YR 2007	TOTAL	44713	MEAN	122	MAX	465	MIN	28	AC-FT	88690		
WTR YR 2008	TOTAL	66932	MEAN	183	MAX	1200	MIN	30	AC-FT	132800		

MAX DISCH: 1510 CFS AT 01:00 ON Jun. 19, 2008 GH 4.67 FT. GH CORR. -0.01 FT. SHIFT 0.18 FT.  
MAX GH: 4.66 FT. (GH CORR. -0.01 FT. APPLIED) AT 01:00 ON Jun. 19, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09080100 FRYINGPAN RIVER AT MEREDITH CO  
WY2008 HYDROGRAPH





ROARING FORK RIVER BASIN

09080300 ROCKY FORK CREEK NEAR MEREDITH, CO

**LOCATION.**--Lat 39°21'42", long 106°49'12", in NW¼ NW¼ Sec. 18, T8S, R84W in Pitkin County, Hydrologic Unit 14010004. Located on right bank at upstream end of flume constructed to carry Rocky Fork Creek across spillway to auxiliary outlet of Ruedi Dam on Fryingpan River and 4.6 mi west of Meredith, CO.

**DRAINAGE AREA.**--12.3 mi<sup>2</sup>.

**GAGE.**--Steven's A-35 graphic water-stage recorder and shaft encoder in standard 42" corrugated metal shelter and well in stream. Shaft encoder is hardwired to DCP in control house on Ruedi Dam, allowing satellite transmission. Satellite monitoring equipment owned and maintained by USBR. Recorder and shaft encoder are set by inside drop tape from an adjustable reference point on the instrument shelf. Primary record is satellite data and chart record is used for backup. Control is 38-ft. wide, v-notch, sharp crested weir. Elevation of gage is 7,494.50 ft.

**REMARKS.**--Record is complete and reliable, except for period when the well was frozen: Nov 22, 2007 through Mar 11, 2008. Record is good, except for the winter period when the well was frozen, which is considered poor. There are no diversions above the station. Station maintained and record developed by Craig Bruner.

**RATING TABLE.**--RFCMERC02 USED FROM 01-Oct-2007 TO 30-Sep-2008

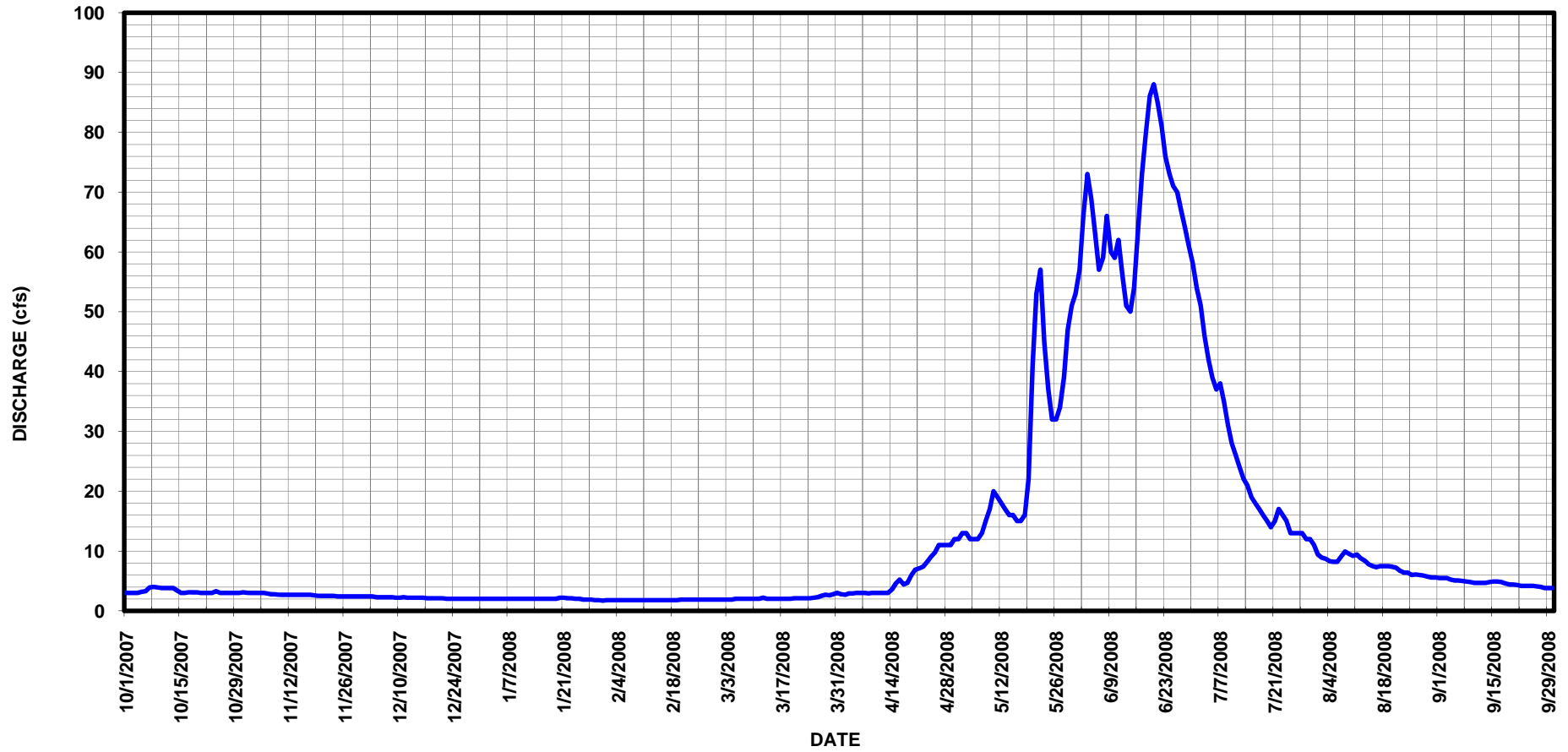
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	3.0	2.4	2.0	1.8	1.9	2.8	12	57	54	9.4	5.5
2	3.0	3.0	2.4	2.0	1.8	1.9	2.7	13	66	51	8.9	5.5
3	3.0	3.0	2.4	2.0	1.8	1.9	2.9	13	73	46	8.7	5.5
4	3.0	3.0	2.3	2.0	1.8	1.9	2.9	12	69	42	8.3	5.2
5	3.2	3.0	2.3	2.0	1.8	2.0	3.0	12	63	39	8.2	5.1
6	3.3	2.9	2.3	2.0	1.8	2.0	3.0	12	57	37	8.2	5.1
7	3.9	2.8	2.3	2.0	1.8	2.0	3.0	13	59	38	9.1	5.0
8	4.0	2.8	2.3	2.0	1.8	2.0	2.9	15	66	35	9.9	4.9
9	3.9	2.7	2.2	2.0	1.8	2.0	3.0	17	60	31	9.5	4.8
10	3.8	2.7	2.2	2.0	1.8	2.0	3.0	20	59	28	9.2	4.7
11	3.8	2.7	2.3	2.0	1.8	2.0	3.0	19	62	26	9.4	4.7
12	3.8	2.7	2.2	2.0	1.8	2.2	3.0	18	56	24	8.8	4.7
13	3.8	2.7	2.2	2.0	1.8	2.0	3.0	17	51	22	8.4	4.7
14	3.4	2.7	2.2	2.0	1.8	2.0	3.6	16	50	21	7.8	4.8
15	3.0	2.7	2.2	2.0	1.8	2.0	4.6	16	54	19	7.5	4.9
16	3.0	2.7	2.2	2.0	1.8	2.0	5.2	15	64	18	7.3	4.9
17	3.1	2.7	2.1	2.0	1.8	2.0	4.4	15	73	17	7.5	4.8
18	3.1	2.6	2.1	2.0	1.8	2.0	4.7	16	80	16	7.5	4.6
19	3.1	2.5	2.1	2.0	1.8	2.0	6.0	22	86	15	7.5	4.4
20	3.0	2.5	2.1	2.2	1.9	2.1	6.9	41	88	14	7.4	4.4
21	3.0	2.5	2.1	2.2	1.9	2.1	7.1	53	85	15	7.2	4.3
22	3.0	2.5	2.0	2.1	1.9	2.1	7.4	57	81	17	6.7	4.2
23	3.0	2.5	2.0	2.1	1.9	2.1	8.2	45	76	16	6.4	4.2
24	3.3	2.4	2.0	2.0	1.9	2.1	9.0	37	73	15	6.4	4.2
25	3.0	2.4	2.0	2.0	1.9	2.2	9.8	32	71	13	6.0	4.2
26	3.0	2.4	2.0	1.9	1.9	2.3	11	32	70	13	6.1	4.1
27	3.0	2.4	2.0	1.9	1.9	2.5	11	34	67	13	6.0	4.0
28	3.0	2.4	2.0	1.9	1.9	2.7	11	39	64	13	5.9	3.8
29	3.0	2.4	2.0	1.8	1.9	2.6	11	47	61	12	5.7	3.8
30	3.0	2.4	2.0	1.8	---	2.8	12	51	58	12	5.6	3.8
31	3.1	---	2.0	1.7	---	3.0	---	53	---	11	5.6	---
TOTAL	100.6	79.7	66.9	61.6	53.2	66.4	171.1	814	1999	743	236.1	138.8
MEAN	3.25	2.66	2.16	1.99	1.83	2.14	5.70	26.3	66.6	24.0	7.62	4.63
AC-FT	200	158	133	122	106	132	339	1610	3970	1470	468	275
MAX	4.0	3.0	2.4	2.2	1.9	3.0	12	57	88	54	9.9	5.5
MIN	3.0	2.4	2.0	1.7	1.8	1.9	2.7	12	50	11	5.6	3.8
CAL YR 2007	TOTAL	2728.4	MEAN	7.45	MAX	41	MIN	1.5	AC-FT	5410		
WTR YR 2008	TOTAL	4530.4	MEAN	12.4	MAX	88	MIN	1.7	AC-FT	8990		

MAX DISCH: 92.4 CFS AT 21:30 ON Jun. 19, 2008 GH 1.63 FT. SHIFT 0.05 FT.  
MAX GH: 1.63 FT. AT 21:30 ON Jun. 19, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

09080300 ROCKY FORK CREEK NEAR MEREDITH CO  
WY2008 HYDROGRAPH



ROARING FORK RIVER BASIN

CRYSTAL RIVER AT DOW FISH HATCHERY NEAR CARBONDALE, CO

**LOCATION.**--Lat 39° 22'38'', long 107° 12'17'' in SW1/4 NE1/4 Sec. 10, T8S, R88W in Garfield County. Located on right bank of Crystal River, at upstream side of County Road 118 bridge, and 0.75 mi. below confluence with Prince Creek.

**DRAINAGE AREA.**--N/A.

**GAGE.**--Sutron Model 5600 Accububble sensor and Sutron SatLink 2 data collection platform (DCP) housed in 2'-0" rectangular steel shelter. The AccuBubble orifice is below the upstream side of County Road 118 bridge. The muffler was removed from the orifice in May 2008 to reduce problems with clogging. Accububble sensor is referenced to a drop tape to water surface from outside reference points on county bridge railing. Primary record is satellite data, with the DCP log used as a backup.

**REMARKS.**--The gage is operated on a seasonal basis (Apr 1 - Oct 31 only). Fifteen minute satellite data were used to develop record. The record is complete for the period of operation. The record is reliable, except for Apr 21 - May 15, 2008, when the AccuBubble orifice was buried and plugged. Record is good, except for period when the orifice was plugged, which is poor. Gaging station operated and maintained by James Kellogg. Discharge record developed by James Kellogg.

**RATING TABLE.**--CRYDOWCO05 USED FROM 01-Apr-2008 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

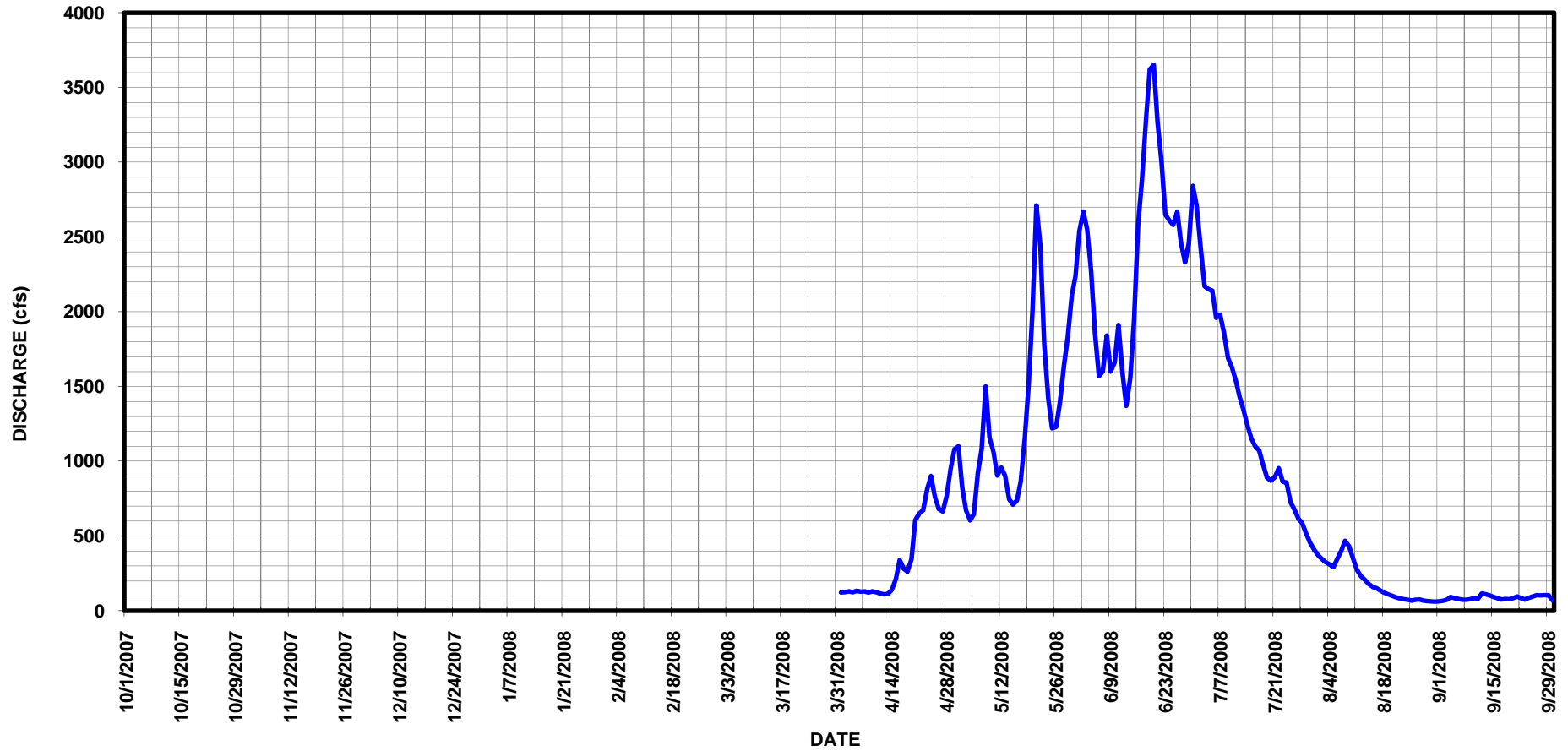
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	123	1100	2540	2710	373	63
2	---	---	---	---	---	---	125	826	2670	2440	348	66
3	---	---	---	---	---	---	129	671	2550	2170	324	74
4	---	---	---	---	---	---	124	605	2270	2150	311	91
5	---	---	---	---	---	---	133	644	1860	2140	293	85
6	---	---	---	---	---	---	127	920	1570	1960	347	79
7	---	---	---	---	---	---	129	1080	1600	1980	401	74
8	---	---	---	---	---	---	122	1500	1840	1860	468	74
9	---	---	---	---	---	---	129	1160	1600	1690	432	77
10	---	---	---	---	---	---	124	1060	1660	1630	354	84
11	---	---	---	---	---	---	116	905	1910	1540	275	80
12	---	---	---	---	---	---	109	957	1590	1430	233	115
13	---	---	---	---	---	---	113	902	1370	1340	207	110
14	---	---	---	---	---	---	140	745	1560	1240	180	103
15	---	---	---	---	---	---	212	710	1950	1150	160	91
16	---	---	---	---	---	---	339	739	2590	1100	151	85
17	---	---	---	---	---	---	282	866	2880	1070	135	76
18	---	---	---	---	---	---	262	1160	3280	979	120	79
19	---	---	---	---	---	---	345	1500	3620	888	109	78
20	---	---	---	---	---	---	607	2020	3650	870	101	85
21	---	---	---	---	---	---	652	2710	3270	893	89	96
22	---	---	---	---	---	---	672	2430	3000	953	83	84
23	---	---	---	---	---	---	813	1780	2650	863	78	75
24	---	---	---	---	---	---	900	1420	2610	858	73	86
25	---	---	---	---	---	---	760	1220	2580	726	69	95
26	---	---	---	---	---	---	681	1230	2670	678	74	105
27	---	---	---	---	---	---	664	1390	2460	616	76	102
28	---	---	---	---	---	---	765	1640	2330	586	69	104
29	---	---	---	---	---	---	949	1830	2460	517	65	105
30	---	---	---	---	---	---	1080	2110	2840	456	63	72
31	---	---	---	---	---	---	---	2240	---	410	61	---
TOTAL	---	---	---	---	---	---	11726	40070	71430	39893	6122	2593
MEAN	---	---	---	---	---	---	391	1293	2381	1287	197	86.4
AC-FT	---	---	---	---	---	---	23260	79480	141700	79130	12140	5140
MAX	---	---	---	---	---	---	1080	2710	3650	2710	468	115
MIN	---	---	---	---	---	---	109	605	1370	410	61	63

CAL YR 2007 TOTAL 95233 MEAN 520 MAX 1850 MIN 29 AC-FT 188900 (PARTIAL YEAR RECORD)  
WTR YR 2008 TOTAL 171834 MEAN 939 MAX 3650 MIN 61 AC-FT 340800 (PARTIAL YEAR RECORD)

MAX DISCH: 4390 CFS AT 01:30 ON JUN 20, 2008 GH 8.36 FT. GH CORR. -0.02 FT. SHIFT -0.07 FT.  
MAX GH: 8.34 FT. (GH CORR. -0.02 FT.APPLIED) AT 01:30 ON JUN 20, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

CRYSTAL RIVER AT DOW FISH HATCHERY NEAR CARBONDALE CO  
WY2008 HYDROGRAPH



ROARING FORK RIVER BASIN

WEST DIVIDE CREEK NEAR RAVEN, CO

**LOCATION.**--Lat 39° 19'52", long 107° 34'46" in NE1/4 SW1/4 Sec. 29, T8S, R91W, Hydrologic Unit 14010004 in Mesa County. Station is on left bank about 5 ft downstream of private road bridge, 0.8 mi upstream of Brook Creek, 8 mi south of Raven, and 16 mi south of Silt.

**DRAINAGE AREA.**-- 64.6 mi<sup>2</sup>. October 1955 to September 1999. Beginning October 1999, station operated seasonally by USGS. Seasonal operation of gage by Colorado Division of Water Resources began in November 2005. Gage at same site and datum since establishment.

**GAGE.**--Accububble sensor in corrugated metal shelter on 42" diameter stilling well and Sutron SatLink 2 data collection platform (DCP) in external enclosure. Well intake pipes are isolated from the stream during low stages. During WY 2008, the Accububble sensor was referenced by drop tape to outside reference point on adjacent bridge. A Sutron stage discharge recorder (SDR) was installed in the shelter on May 23, 2008 to provide data when the well intake pipes are not isolated from the stream during low stages. The SDR is set by drop tape from an inside reference point on the equipment shelf.

**REMARKS.**--The gage is operated seasonally and was operated from April 1 through September 30, 2008. The primary record is 15 minute data from the Accububble and the SDR. The record is complete for the period of operation. Accububble data were used from Apr 1 until May 17, 2008; the SDR data were used May 18 to Jul 22, 2008; and the Accububble data were used for the rest of the water year. The record is reliable, except for May 18-23, 2008, when high flows damaged the left bridge abutment, scoured the channel, and clogged the AccuBubble muffler in the stream. Record is good, except for periods of no gage height record, May 18-23, which are rated poor. Record includes trans-basin water diverted from Thompson Creek, Clear Fork, and Owens Creek. Station was maintained by James Kellogg and Craig Bruner and record was developed by James Kellogg and Craig Bruner.

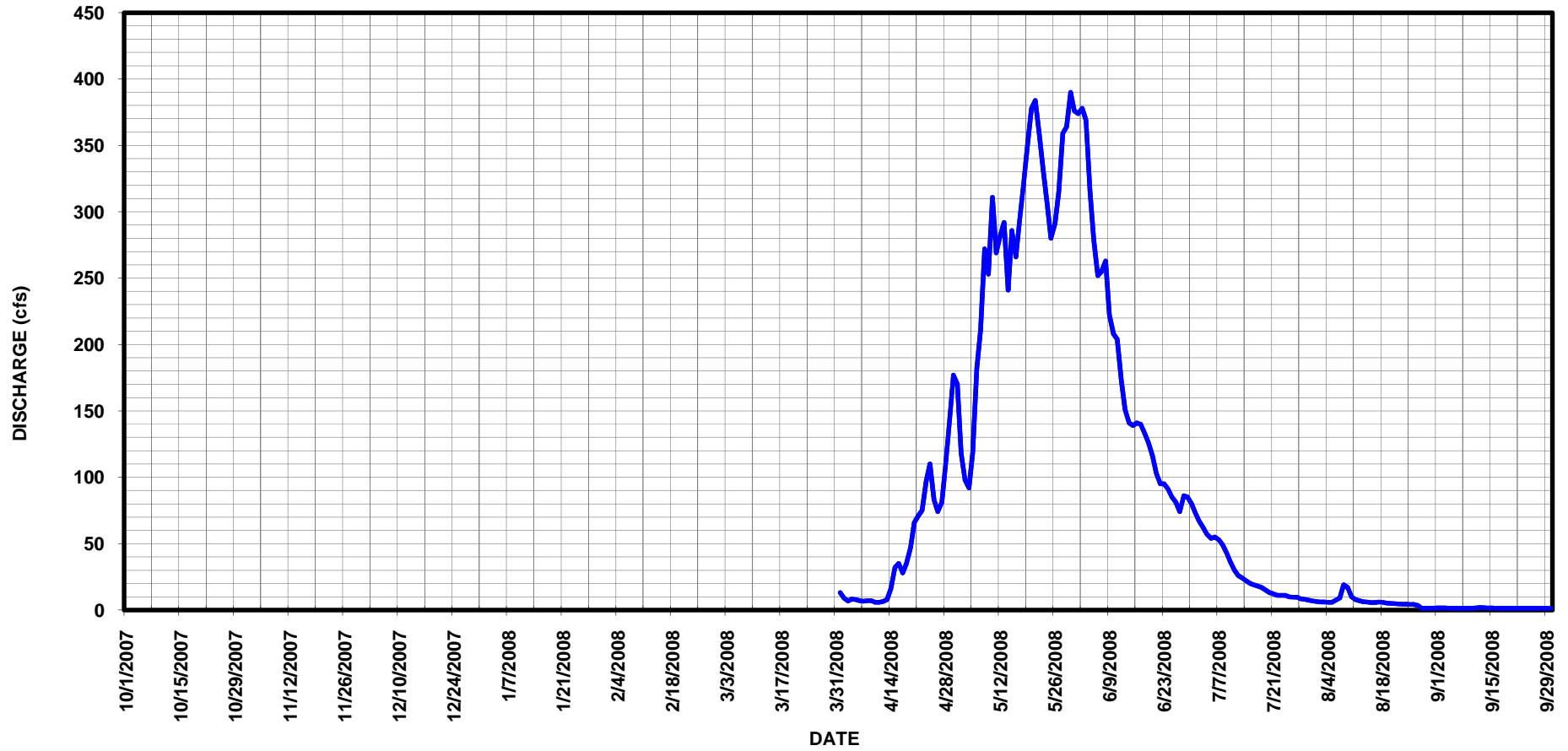
**RATING TABLE.**--WSDRAVCO14 USED FROM 01-Apr-2008 TO 17-May-2008  
WSDRAVCO15 USED FROM 18-May-2008 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	13	170	374	73	6.3	1.5
2	---	---	---	---	---	---	9.0	118	378	67	6.0	1.5
3	---	---	---	---	---	---	6.7	98	369	62	5.9	1.5
4	---	---	---	---	---	---	8.3	92	316	57	5.8	1.4
5	---	---	---	---	---	---	7.8	119	279	54	5.7	1.4
6	---	---	---	---	---	---	7.0	182	252	55	7.3	1.3
7	---	---	---	---	---	---	6.5	211	255	53	9.0	1.3
8	---	---	---	---	---	---	6.9	272	263	49	19	1.3
9	---	---	---	---	---	---	7.0	253	222	43	17	1.3
10	---	---	---	---	---	---	5.7	311	208	36	10	1.4
11	---	---	---	---	---	---	5.8	269	204	30	7.9	1.5
12	---	---	---	---	---	---	6.3	282	173	26	6.9	1.9
13	---	---	---	---	---	---	7.8	292	151	24	6.2	1.7
14	---	---	---	---	---	---	16	241	141	22	5.9	1.5
15	---	---	---	---	---	---	32	286	139	20	5.6	1.5
16	---	---	---	---	---	---	35	266	141	19	5.5	1.4
17	---	---	---	---	---	---	28	294	140	18	6.0	1.4
18	---	---	---	---	---	---	35	322	133	17	5.7	1.4
19	---	---	---	---	---	---	47	350	126	15	5.2	1.4
20	---	---	---	---	---	---	66	378	116	13	4.9	1.4
21	---	---	---	---	---	---	71	384	103	12	4.7	1.4
22	---	---	---	---	---	---	75	358	95	11	4.5	1.3
23	---	---	---	---	---	---	97	332	95	11	4.3	1.3
24	---	---	---	---	---	---	110	306	91	11	4.3	1.3
25	---	---	---	---	---	---	83	280	85	9.8	4.2	1.3
26	---	---	---	---	---	---	74	291	81	9.7	4.1	1.3
27	---	---	---	---	---	---	81	315	74	9.7	3.3	1.3
28	---	---	---	---	---	---	109	359	86	8.5	1.4	1.3
29	---	---	---	---	---	---	143	364	85	8.1	1.4	1.3
30	---	---	---	---	---	---	177	390	80	7.4	1.3	1.3
31	---	---	---	---	---	---	---	376	---	6.8	1.4	---
TOTAL	---	---	---	---	---	---	1376.8	8561	5255	858.0	186.7	42.1
MEAN	---	---	---	---	---	---	45.9	276	175	27.7	6.02	1.40
AC-FT	---	---	---	---	---	---	2730	16980	10420	1700	370	84
MAX	---	---	---	---	---	---	177	390	378	73	19	1.9
MIN	---	---	---	---	---	---	5.7	92	74	6.8	1.3	1.3

CAL YR 2007 TOTAL 9758.47 MEAN 53.3 MAX 407 MIN 0.23 AC-FT 19360 (PARTIAL YEAR RECORD)  
WTR YR 2008 TOTAL 16279.6 MEAN 89 MAX 390 MIN 1.3 AC-FT 32290 (PARTIAL YEAR RECORD)  
MAX DISCH: 458 CFS AT 00:15 ON May 30, 2008 GH 4.30 FT. SHIFT 0 FT.  
MAX GH: 4.30 FT. AT 00:15 ON May 30, 2008

### WEST DIVIDE CREEK NEAR RAVEN CO WY2008 HYDROGRAPH



YAMPA RIVER BASIN

YAMPA RIVER ABOVE LAKE CATAMOUNT, CO

**LOCATION.**--Lat. 40°20'27", long. 106°48'29", (Blacktail Mountain, Colorado Quadrangle), SE1/4,SE1/4 in Section 33, T5N, R84W of the Sixth Principal Meridian in Routt County, at County Road 18C bridge.

**DRAINAGE AREA.**--361 sq mi (from topographic maps).

**PERIOD OF RECORD.**--Spot records from staff gage installed at current site and datum kept from April 1989 to October 2003 with some record dating back to 1978. Continuous records kept from October 2003 to present.

**GAGE.**--High data rate Sutron Satlink logger with satellite telemetry and shaft encoder housed in a 42-inch diameter corrugated metal pipe shelter and stilling well. Stilling well equipped with two 1.5-inch intakes connected to risers. Shaft encoder referenced to inside staff gage (0.00 to 6.66 feet) located on the inside wall of the well. Approximate elevation of gage is 6880 ft (from topographic map).

**REMARKS.**--Primary record is hourly averages of the 15-minute satellite data with data from the DCP log used as backup. Continuous gage height records were kept from October 1, 2007 to September 30, 2008. The record is complete and reliable, except for the following days: November 22, 24, 25, 27, and 29; and, December 3, 4, 10-20, 22-24, and 26-31, 2007; and, January 1, 4-11, 15-25, 27, and 29-31; and February 2, 3, 5, 6, 10, 16, and 18-20, 2008 due to ice effect, and January 2-3, 2008 due to missing gage height data. The record is good, except for the periods of ice effect and missing gage height, during which flows were estimated. These data points are considered poor. Station maintained and record developed by Jean Ray.

**RATING TABLE.**--YAMABVC010 USED FROM 01-Oct-2007 TO 16-May-2008  
YAMABVC012 USED FROM 16-May-2008 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	91	59	67e	81	96	102	530	1540	460	116	109
2	93	71	59	75e	81e	68	100	368	1630	429	114	109
3	90	66	59e	75e	80e	91	101	321	1680	391	110	104
4	75	67	58e	68e	78	89	102	311	1580	356	113	102
5	67	67	58	61e	79e	73	103	356	1450	324	113	100
6	64	65	59	61e	85e	77	104	528	1510	318	114	98
7	62	63	59	67e	87	92	98	666	1440	295	124	98
8	62	63	59	74e	85	92	104	733	1330	272	132	98
9	62	63	59	74e	82	92	105	643	1190	246	151	97
10	61	65	59e	74e	84e	92	105	606	1190	224	149	99
11	61	64	59e	74e	85	85	104	509	1210	207	152	104
12	61	65	59e	78	92	84	104	565	1010	193	139	114
13	58	63	59e	75	92	85	105	541	933	181	121	118
14	61	66	59e	75	92	84	109	492	959	174	118	108
15	69	56	59e	75e	90	84	110	469	997	167	112	104
16	80	62	59e	72e	87e	84	93	491	991	160	112	103
17	82	66	59e	72e	87	84	102	549	1030	157	116	95
18	84	64	59e	72e	87e	84	135	710	1050	152	113	87
19	80	62	60e	71e	87e	83	181	906	1070	152	109	86
20	86	63	60e	71e	87e	84	219	1160	1010	144	107	83
21	86	60	60	71e	87	85	236	1460	917	138	105	83
22	83	61e	60e	69e	87	84	240	1610	868	140	104	80
23	84	61	60e	69e	87	84	290	1410	799	160	102	75
24	85	60e	60e	69e	88	88	344	1230	757	149	102	72
25	88	59e	60	65e	87	97	328	1070	712	141	102	70
26	89	58	60e	68	87	99	298	1020	678	136	102	70
27	89	59e	60e	68e	91	99	281	1080	624	135	103	70
28	88	59	60e	71	93	100	309	1150	587	135	106	70
29	86	65e	60e	77e	95	99	378	1300	540	130	106	70
30	86	80	60e	79e	---	103	469	1350	495	123	105	70
31	94	---	60e	81e	---	103	---	1410	---	119	105	---
TOTAL	2379	1934	1840	2218	2510	2744	5459	25544	31777	6508	3577	2746
MEAN	76.7	64.5	59.4	71.5	86.6	88.5	182	824	1059	210	115	91.5
AC-FT	4720	3840	3650	4400	4980	5440	10830	50670	63030	12910	7090	5450
MAX	94	91	60	81	95	103	469	1610	1680	460	152	118
MIN	58	56	58	61	78	68	93	311	495	119	102	70

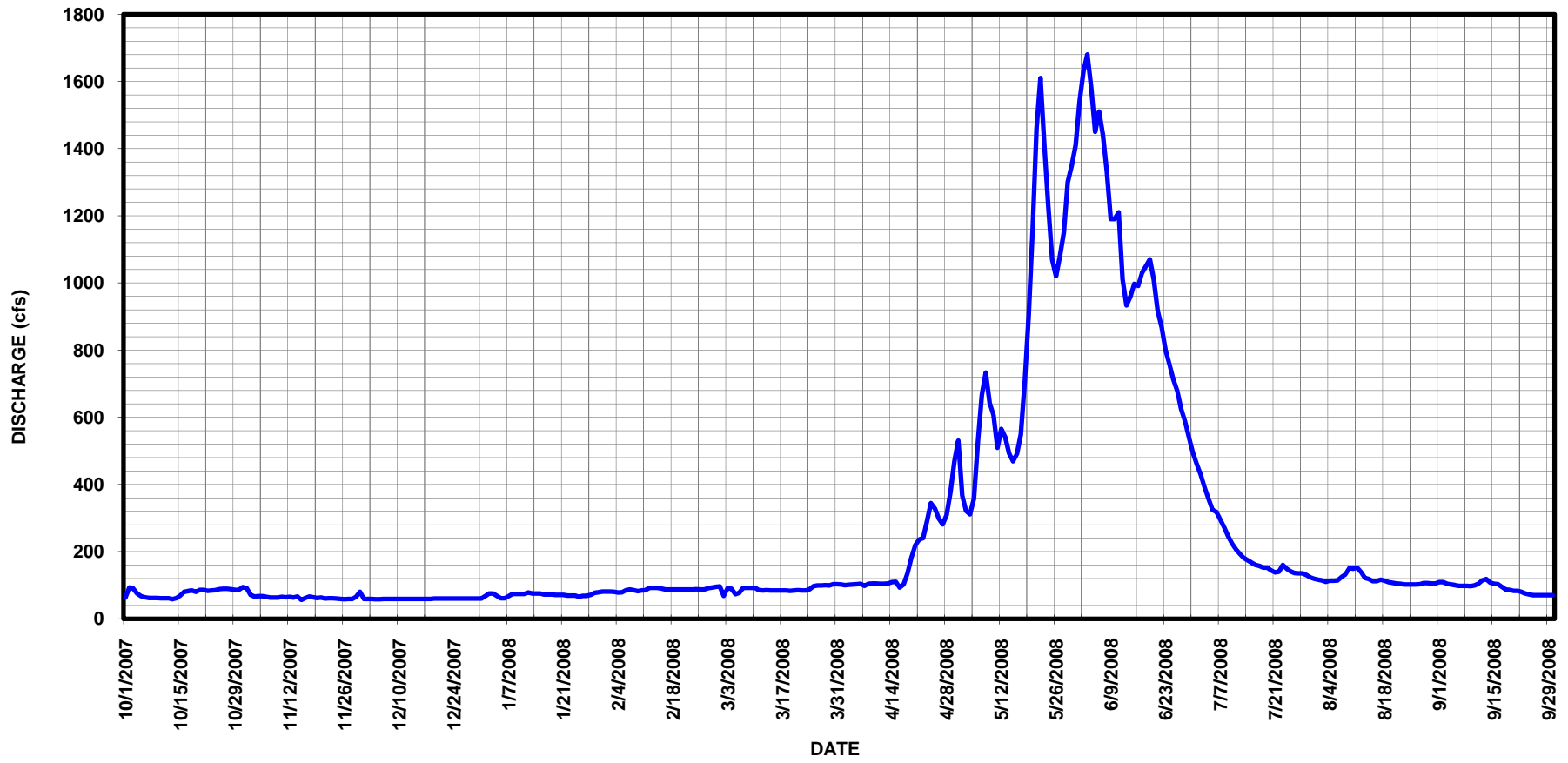
CAL YR 2007 TOTAL 53932 MEAN 148 MAX 907 MIN 45 AC-FT 107000  
WTR YR 2008 TOTAL 89236 MEAN 244 MAX 1680 MIN 56 AC-FT 177000

MAX DISCH: 1790 CFS AT 23:45 ON Jun. 2, 2008 GH 5.40 FT. SHIFT 0 FT.

MAX GH: 5.40 FT. AT 23:45 ON Jun. 2, 2008

e = Estimated.

YAMPA RIVER ABOVE LAKE CATAMOUNT CO  
WY2008 HYDROGRAPH





YAMPA RIVER BASIN

09238500 WALTON CREEK NEAR STEAMBOAT SPRINGS, CO

**LOCATION.**--Lat. 40°24'29", long. 106°47'11", (Steamboat Springs, Colorado, Quad., scale, 1:24,000), in SW1/4 of the NW1/4, in Section 11, T5N, R84W, (projected), Routt County, on left bank 0.4 miles downstream from Beaver Creek, 0.6 miles downstream from Storm King Creek, 4.5 miles upstream from its confluence with the Yampa River, and 6.0 miles southeast of Steamboat Springs.

**DRAINAGE AREA.**--42.4 sq mi (from topographic maps)

**PERIOD OF RECORD.**--1920 to 1922, State Engineer's Office; re-established 0.2 mile upstream 1965 to 1973, by USGS; re-established 1982 to 1987 by USGS at same datum; re-established by the State Engineer's Office in October of 1995, at the same datum as the USGS.

**GAGE.**--Stevens A-71 water stage recorder and Sutron 8200A data collection platform (DCP) with shaft encoder housed in a 6-ft by 42-inch corrugated metal shelter on a 6-ft by 42-inch metal well. Inside staff located in is the primary reference gage. Sutron high data rate DCP and SDI shaft encoder installed Aug. 14, 2008. Chart recorder replaced on April 28, 2008 and removed on Aug 14, 2008. Control is a concrete weir. Approximate elevation of gage is 7,050 ft (from topographic map).

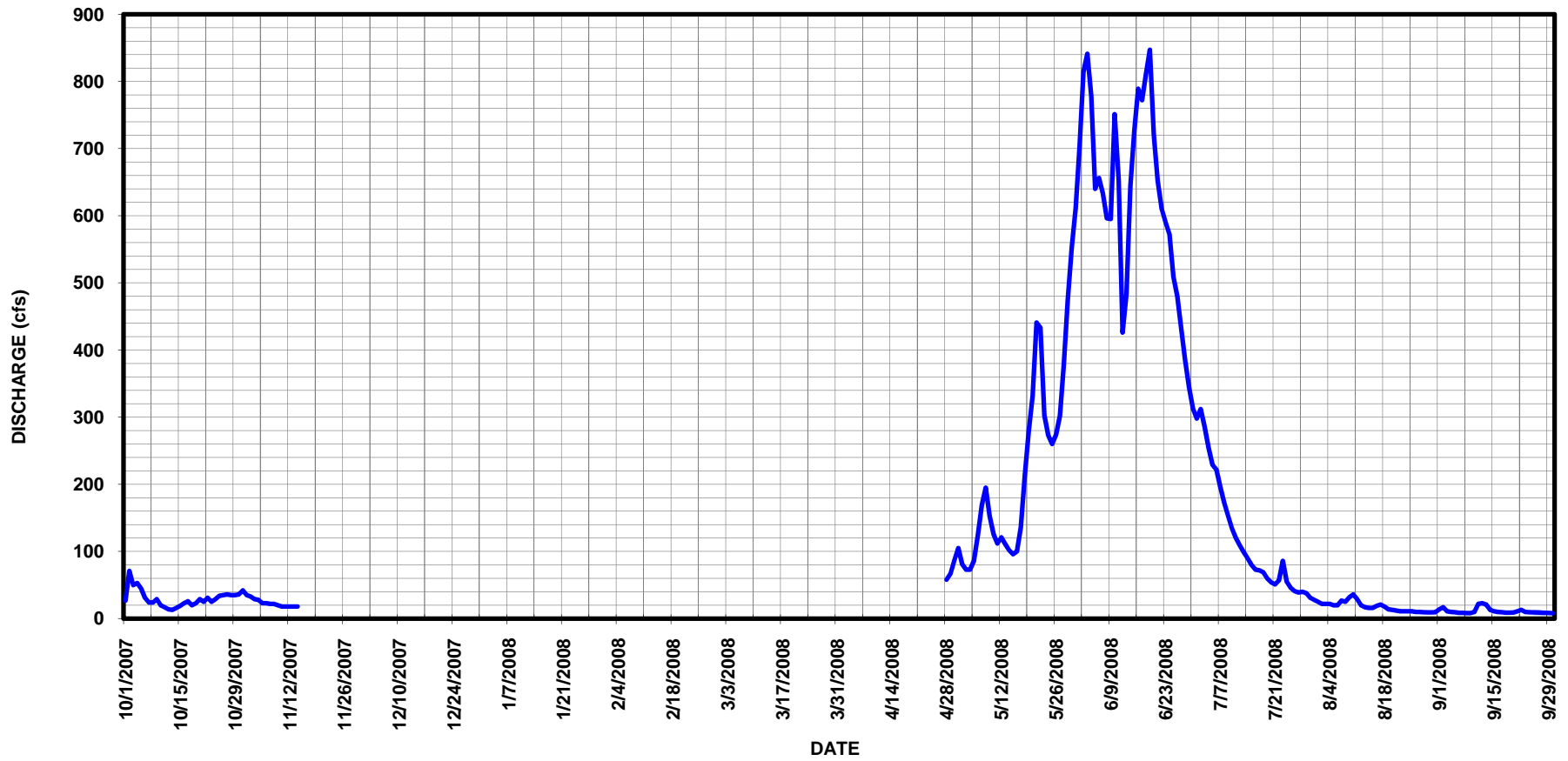
**REMARKS.**--Primary record is hourly averages of the 15-minute satellite data with DCP data log used as backup. Continuous gage height records were kept from Oct. 1 to Nov. 14, 2007 and Apr. 28 to Sept. 30, 2008. Gage shut down during the winter period (November 15, 2007 to April 27, 2008). The record is complete and reliable and good, except for: November 14, 2007 and April 28, 2008, which have only partial day gage height data and are estimated and fair; and May 6-10, 12,17-31; June 1-30; and July 1-11, 2008, when flows exceeded twice the highest measured flow this water year, should be considered fair to poor. This period also covers the time of occurrence of the peak discharge, which is considered poor. Station maintained and record developed by Jean Ray.

**RATING TABLE.**--WLTNCKCO08 USED FROM 01-Oct-2007 TO 30-Sep-2008

DAY	DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	35	---	---	---	---	---	105	703	298	25	14
2	71	33	---	---	---	---	---	81	814	312	22	17
3	50	29	---	---	---	---	---	73	841	286	22	11
4	53	28	---	---	---	---	---	73	778	254	22	10
5	45	23	---	---	---	---	---	86	640	229	20	9.6
6	31	23	---	---	---	---	---	125	656	222	20	8.7
7	24	22	---	---	---	---	---	169	633	196	27	8.7
8	24	22	---	---	---	---	---	195	596	173	25	8.3
9	29	20	---	---	---	---	---	153	595	153	32	8.3
10	20	18	---	---	---	---	---	126	751	134	36	10
11	17	18	---	---	---	---	---	112	653	120	29	22
12	14	18	---	---	---	---	---	121	426	109	20	23
13	13	18	---	---	---	---	---	111	484	99	17	21
14	16	18e	---	---	---	---	---	102	644	90	16	13
15	19	---	---	---	---	---	---	96	726	80	16	11
16	23	---	---	---	---	---	---	100	789	73	19	10
17	26	---	---	---	---	---	---	136	772	72	21	9.5
18	20	---	---	---	---	---	---	214	811	69	18	9.0
19	23	---	---	---	---	---	---	279	847	60	14	8.9
20	29	---	---	---	---	---	---	332	721	54	13	9.2
21	25	---	---	---	---	---	---	441	652	51	12	11
22	31	---	---	---	---	---	---	433	610	57	11	13
23	25	---	---	---	---	---	---	303	590	86	11	10
24	29	---	---	---	---	---	---	273	572	55	11	9.5
25	34	---	---	---	---	---	---	260	509	46	11	9.3
26	35	---	---	---	---	---	---	274	480	41	10	9.2
27	36	---	---	---	---	---	---	302	432	39	10	8.9
28	35	---	---	---	---	---	58e	379	385	40	9.6	8.7
29	35	---	---	---	---	---	67	474	345	38	9.4	8.6
30	36	---	---	---	---	---	87	553	313	31	9.3	8.1
31	42	---	---	---	---	---	---	611	---	28	9.5	---
TOTAL	937	325	---	---	---	---	212	7092	18768	3595	547.8	338.5
MEAN	30.2	23.2	---	---	---	---	70.7	229	626	116	17.7	11.3
AC-FT	1860	645	---	---	---	---	421	14070	37230	7130	1090	671
MAX	71	35	---	---	---	---	87	611	847	312	36	23
MIN	13	18	---	---	---	---	58	73	313	28	9.3	8.1
CAL YR 2007	TOTAL	18489.5	MEAN	90.6	MAX	575	MIN	8.3	AC-FT	36670	(PARTIAL YR RECORD)	
WTR YR 2008	TOTAL	31815.3	MEAN	158	MAX	847	MIN	8.1	AC-FT	63110	(PARTIAL YR RECORD)	
MAX DISCH:	1320 CFS AT	17:45	ON	Jun. 18, 2008	GH	2.7 FT.	SHIFT	0.01 FT.				
MAX GH:	2.7 FT. AT	17:45	ON	Jun. 18, 2008								

e=estimated

09238500 WALTON CREEK NEAR STEAMBOAT SPRINGS CO  
WY2008 HYDROGRAPH



YAMPA RIVER BASIN

WILLOW CREEK BELOW STEAMBOAT LAKE, CO

**LOCATION.**--Lat. 40 47'28", Long. 106 56'40", (Hahns Peak Quadrangle), in Section 29, T10N, R85W in Routt County, on left bank 50-feet below the Steamboat Lake outlet.

**DRAINAGE AREA.**--Not applicable. Gage location is immediately downstream of reservoir outlet, thus flow is dictated by outlet opening position rather than drainage area runoff. The drainage area of Steamboat Lake is 35.5 square miles.

**PERIOD OF RECORD.**--Established by the State Engineer's Office. Original PVC stilling well installed at current location in May 1994 and new stilling well installed adjacent to the PVC well in September 2007. Records kept by State Engineer's Office and State Parks starting in 1979.

**GAGE.**--Sutron SDI shaft encoder in a small steel shelter over an 18-inch diameter corrugated metal pipe stilling well with two 2-inch intakes. The shaft encoder is connected via cable to a Sutron high data rate (HDR) data collection platform (DCP) located in a gray NEMA box several feet from the stilling well. Primary reference gage is a drop tape to water surface from a reference point on the equipment shelf. Approximate elevation of gage is 7,050 ft (from topographic map).

**REMARKS.**--Primary record is hourly averages of the 15-minute satellite data with DCP log data used as backup. Gage height record was kept from Oct. 1 to Oct. 26, 2007 (DCP shut-down for winter) and Apr. 19 (DCP start-up in spring) to Sept. 30, 2008. The reservoir outlet gate valve was closed on November 10, 2007. No water was released from the reservoir during the period Nov. 11, 2007 - Apr. 15, 2008. The reservoir outlet gate valve was opened on April 16, 2008. The record is complete, reliable, and good, except for the periods: Oct. 26 to Nov. 10, 2007 and Apr. 16-19, 2008, which are estimated and fair (reservoir releases were constant); and May 1 to June 14, 2008, which should be considered fair, because the flow exceeded twice the highest WY2008 measurement. Station maintained and record developed by Jean Ray.

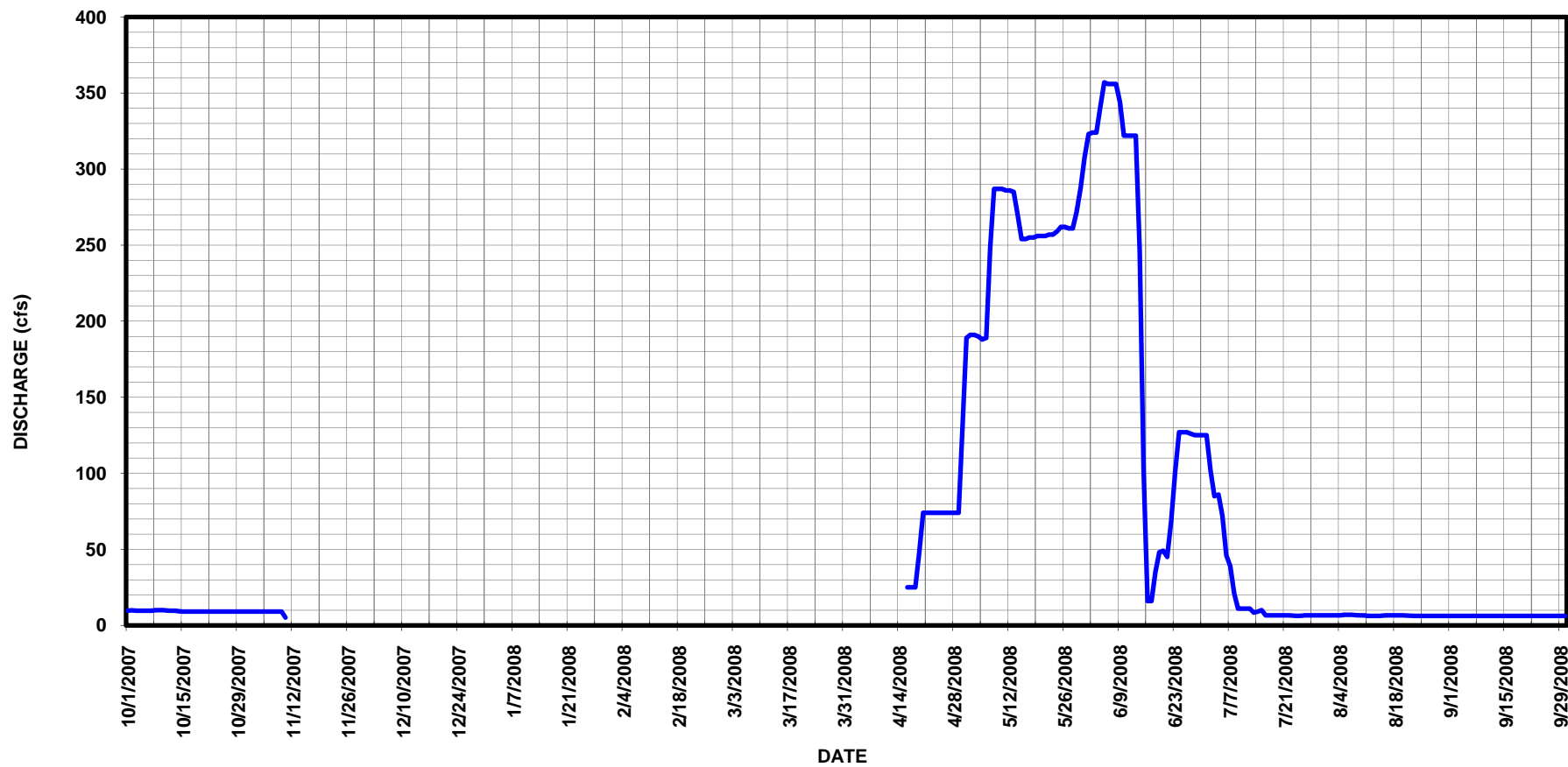
**RATING TABLE.**--WILBLSLCO11 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	9.1e	---	---	---	---	---	189	323	125	6.6	6.2
2	9.9	9.1e	---	---	---	---	---	191	324	102	6.6	6.2
3	9.6	9.1e	---	---	---	---	---	191	324	85	6.6	6.2
4	9.6	9.1e	---	---	---	---	---	190	341	86	6.6	6.2
5	9.6	9.1e	---	---	---	---	---	188	357	72	6.9	6.2
6	9.6	9.1e	---	---	---	---	---	189	356	46	6.9	6.2
7	9.6	9.1e	---	---	---	---	---	248	356	39	6.9	6.2
8	10	9.1e	---	---	---	---	---	287	356	21	6.7	6.2
9	10	9.1e	---	---	---	---	---	287	344	11	6.6	6.2
10	10	5.1e	---	---	---	---	---	287	322	11	6.6	6.2
11	9.7	---	---	---	---	---	---	286	322	11	6.2	6.2
12	9.6	---	---	---	---	---	---	286	322	11	6.2	6.2
13	9.6	---	---	---	---	---	---	285	322	8.3	6.2	6.2
14	9.2	---	---	---	---	---	---	270	246	9.0	6.2	6.2
15	9.1	---	---	---	---	---	---	254	101	10	6.5	6.2
16	9.1	---	---	---	---	---	25e	254	16	6.6	6.6	6.2
17	9.1	---	---	---	---	---	25e	255	16	6.6	6.6	6.2
18	9.1	---	---	---	---	---	25e	255	35	6.6	6.6	6.2
19	9.1	---	---	---	---	---	48e	256	48	6.6	6.6	6.2
20	9.1	---	---	---	---	---	74	256	49	6.6	6.6	6.2
21	9.1	---	---	---	---	---	74	256	45	6.6	6.4	6.2
22	9.1	---	---	---	---	---	74	257	69	6.6	6.3	6.2
23	9.1	---	---	---	---	---	74	257	101	6.4	6.2	6.2
24	9.1	---	---	---	---	---	74	259	127	6.2	6.2	6.2
25	9.1	---	---	---	---	---	74	262	127	6.3	6.2	6.2
26	9.1e	---	---	---	---	---	74	262	127	6.6	6.2	6.2
27	9.1e	---	---	---	---	---	74	261	126	6.6	6.2	6.2
28	9.1e	---	---	---	---	---	74	261	125	6.6	6.2	6.2
29	9.1e	---	---	---	---	---	74	272	125	6.6	6.2	6.2
30	9.1e	---	---	---	---	---	131	288	125	6.6	6.2	6.2
31	9.1e	---	---	---	---	---	---	308	---	6.6	6.2	---
TOTAL	290.4	87.0	---	---	---	---	994	7847	5977	752.0	199.8	186.0
MEAN	9.37	8.70	---	---	---	---	66.3	253	199	24.3	6.45	6.20
AC-FT	576	173	---	---	---	---	1970	15560	11860	1490	396	369
MAX	10	9.1	---	---	---	---	131	308	357	125	6.9	6.2
MIN	9.1	5.1	---	---	---	---	25	188	16	6.2	6.2	6.2

CAL YR 2007 TOTAL 7551.4 MEAN 33.0 MAX 188 MIN 0 AC-FT 14980 (PARTIAL YR RECORD)  
WTR YR 2008 TOTAL 16333.2 MEAN 78.1 MAX 357 MIN 5.1 AC-FT 32400 (PARTIAL YR RECORD)  
MAX DISCH: 364 CFS AT 16:30 ON Jun. 4, 2008 GH 3.34 FT. SHIFT -0.06 FT. DATUM +0.02 FT.  
MAX GH: 3.34 FT. AT 16:30 ON Jun. 4, 2008 DATUM +0.02 FT.  
e=estimated

### WILLOW CREEK BELOW STEAMBOAT LAKE CO WY2008 HYDROGRAPH



NORTH PLATTE RIVER BASIN

06616500 MICHIGAN RIVER NEAR MEADOW CREEK RESERVOIR

**LOCATION.**--Lat. 40°36'48", Long. 106°05'05", (Gould, Colorado Quadrangle, 1955), SE1/4 of the SE1/4 in Section 36 T8N, R78W in Jackson County. Under bridge on County Road 30 about 700 feet upstream of its confluence with Peterson Creek.

**DRAINAGE AREA.**--Approximately 99 sq. mi.

**PERIOD OF RECORD.**--Formerly known as the Michigan River near Gould station and was relocated due to removal of bridge location. Station has been in operation at present location since 1997.

**GAGE.**--Sutron SDI shaft encoder housed in 18-inch diameter corrugated metal pipe stilling well with two 2-inch intakes located on the right side at downstream side of bridge. The shaft encoder is connected via cable to a Sutron high data rate (HDR) data collection platform (DCP) with satellite telemetry located on the upstream side of the bridge several meters back from the channel bank in a NEMA enclosure. An outside staff gage ranging from 0.00 to 6.66 feet located just upstream of the well is primary reference gage. Approximate elevation gage is 8500 ft (from topographic map).

**REMARKS.**--Primary record is hourly averages of the 15-minute satellite data with DCP log data used as backup. Continuous gage height records were kept from October 1 to November 26, 2007 and April 3 to September 30, 2008. Record was not kept during the winter period. The record is complete and reliable, except for the following dates: November 26, 2007 (shut-down) and April 3, 2008 (start-up), which were estimated, based on partial day DCP data and November 22-25, 2007, which were affected by ice. The record is good, except for the periods November 22-26, 2007 and April 3, 2008, which were estimated and are considered poor. Station maintained and record developed by Jean Ray.

**RATING TABLE.**--MICMERC006 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	14	---	---	---	---	---	118	337	196	33	13
2	28	13	---	---	---	---	---	95	412	182	31	16
3	24	9.4	---	---	---	---	20e	84	473	178	32	15
4	17	11	---	---	---	---	15	84	429	160	32	13
5	16	11	---	---	---	---	16	107	452	174	30	12
6	15	9.9	---	---	---	---	17	169	437	152	29	12
7	19	8.3	---	---	---	---	17	261	332	134	30	12
8	18	12	---	---	---	---	17	273	347	121	31	11
9	15	22	---	---	---	---	17	218	280	106	31	10
10	16	23	---	---	---	---	18	181	227	91	35	12
11	15	22	---	---	---	---	17	169	279	82	38	20
12	15	23	---	---	---	---	20	201	206	72	31	34
13	14	21	---	---	---	---	18	191	163	65	26	20
14	16	22	---	---	---	---	21	155	161	58	25	8.0
15	17	22	---	---	---	---	26	138	199	58	27	8.4
16	11	23	---	---	---	---	28	134	212	55	34	11
17	8.9	21	---	---	---	---	28	152	214	51	39	9.0
18	8.5	22	---	---	---	---	25	232	275	65	35	8.1
19	7.5	20	---	---	---	---	31	335	325	58	30	8.4
20	7.6	20	---	---	---	---	39	380	350	57	26	7.3
21	9.4	21	---	---	---	---	42	445	323	66	24	7.8
22	8.4	21e	---	---	---	---	46	452	319	66	21	13
23	10	20e	---	---	---	---	59	361	279	70	20	8.7
24	12	19e	---	---	---	---	68	270	245	64	20	6.6
25	14	17e	---	---	---	---	67	227	252	53	20	5.7
26	15	16e	---	---	---	---	60	244	225	48	20	5.2
27	15	---	---	---	---	---	55	293	224	45	19	5.1
28	14	---	---	---	---	---	57	256	235	42	19	5.1
29	13	---	---	---	---	---	72	295	226	40	16	5.2
30	13	---	---	---	---	---	103	321	209	38	13	5.7
31	15	---	---	---	---	---	---	287	---	35	13	---
TOTAL	447.3	463.6	---	---	---	---	1019	7128	8647	2682	830	328.3
MEAN	14.4	17.8	---	---	---	---	36.4	230	288	86.5	26.8	10.9
AC-FT	887	920	---	---	---	---	2020	14140	17150	5320	1650	651
MAX	28	23	---	---	---	---	103	452	473	196	39	34
MIN	7.5	8.3	---	---	---	---	15	84	161	35	13	5.1

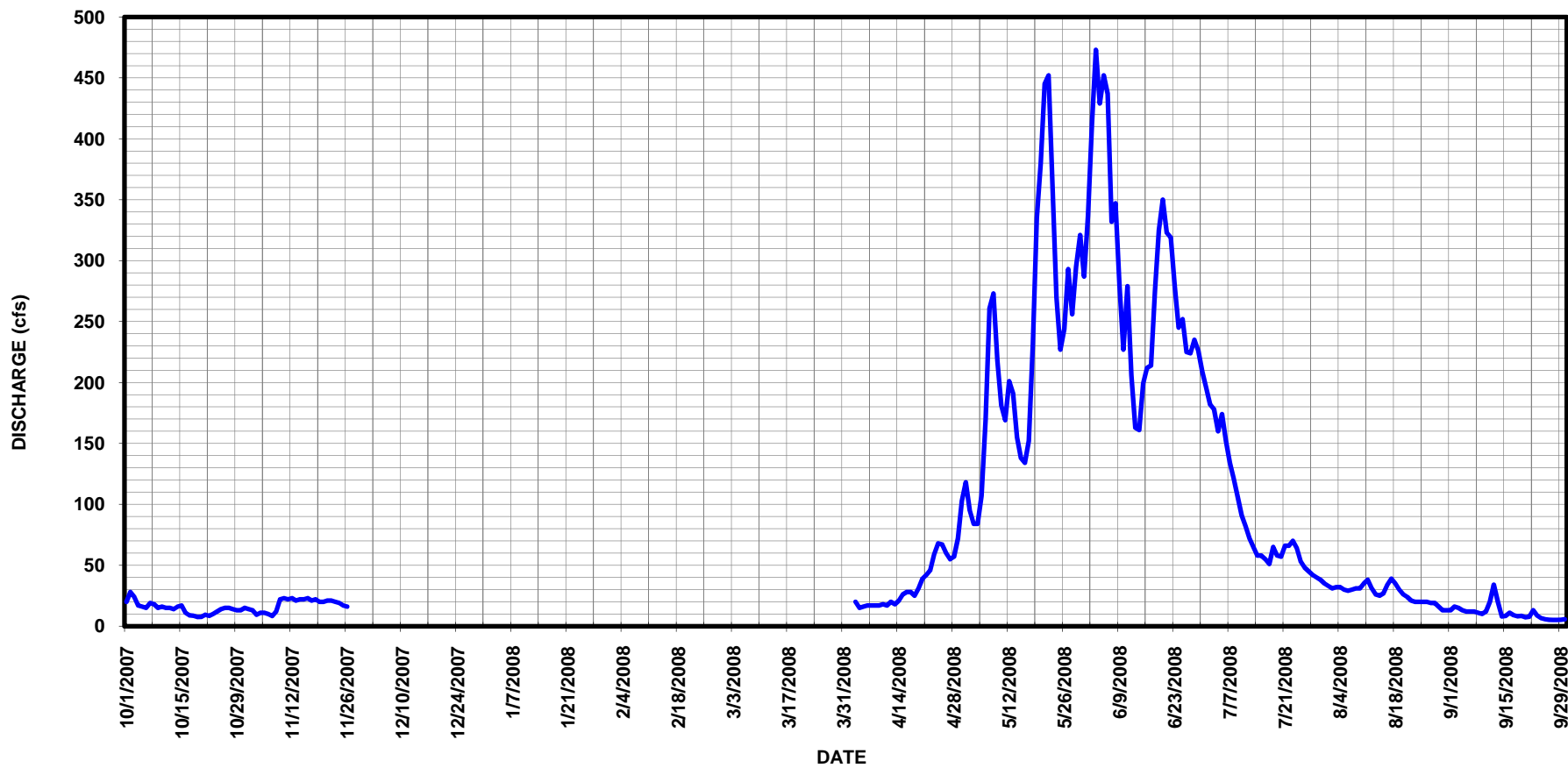
CAL YR 2007 TOTAL 16461.8 MEAN 66.6 MAX 370 MIN 6.8 AC-FT 32650 (PARTIAL YR DATA)  
WTR YR 2008 TOTAL 21545.2 MEAN 90.5 MAX 473 MIN 5.1 AC-FT 42730 (PARTIAL YR DATA)

MAX DISCH: 541 CFS AT 19:15 ON Jun. 5, 2008 GH 3.50 FT. SHIFT -0.03 FT.

MAX GH: 3.50 FT. AT 19:15 ON Jun. 5, 2008

e=Estimated.

06616500 MICHIGAN RIVER NEAR MEADOW CREEK RESERVOIR CO  
WY2008 HYDROGRAPH



NORTH PLATTE RIVER BASIN

06617100 MICHIGAN RIVER AT WALDEN, CO

**LOCATION.**--Lat. 40°44'27", Long. 106°16'54", (Walden, Colorado Quadrangle, 1955), NW1/4 NW1/4 in Section 21 T9N, R79W in Jackson County. Station was moved downstream approximately one-quarter of a mile to a location just upstream of the Highway 125 bridge in October 2004, on Jackson County property at Town of Walden Water Facility.

**DRAINAGE AREA.**--Approximately 182 sq. mi.

**PERIOD OF RECORD.**--Originally established by the USGS at a location believed to be just upstream of the present location in May 1904. Records kept by the USGS from May 1904 to October 1905 and May 1923 to October 1947. Re-established by the State Engineer's Office in May 2002. Records kept by the Town of Walden from 1916 to present. Records for WY02, WY05, WY06, and WY07 published as "06617100 Michigan River near Walden CO", but the gage location and site is the same as "06617100 Michigan River at Walden CO".

**GAGE.**--Sutron shaft encoder and high data rate 8210 data collection platform (DCP) with satellite telemetry housed in a steel shelter mounted on top of a 24-inch diameter corrugated metal pipe stilling well with two two-inch diameter inlet pipes. Electric drop tape is the primary reference gage.

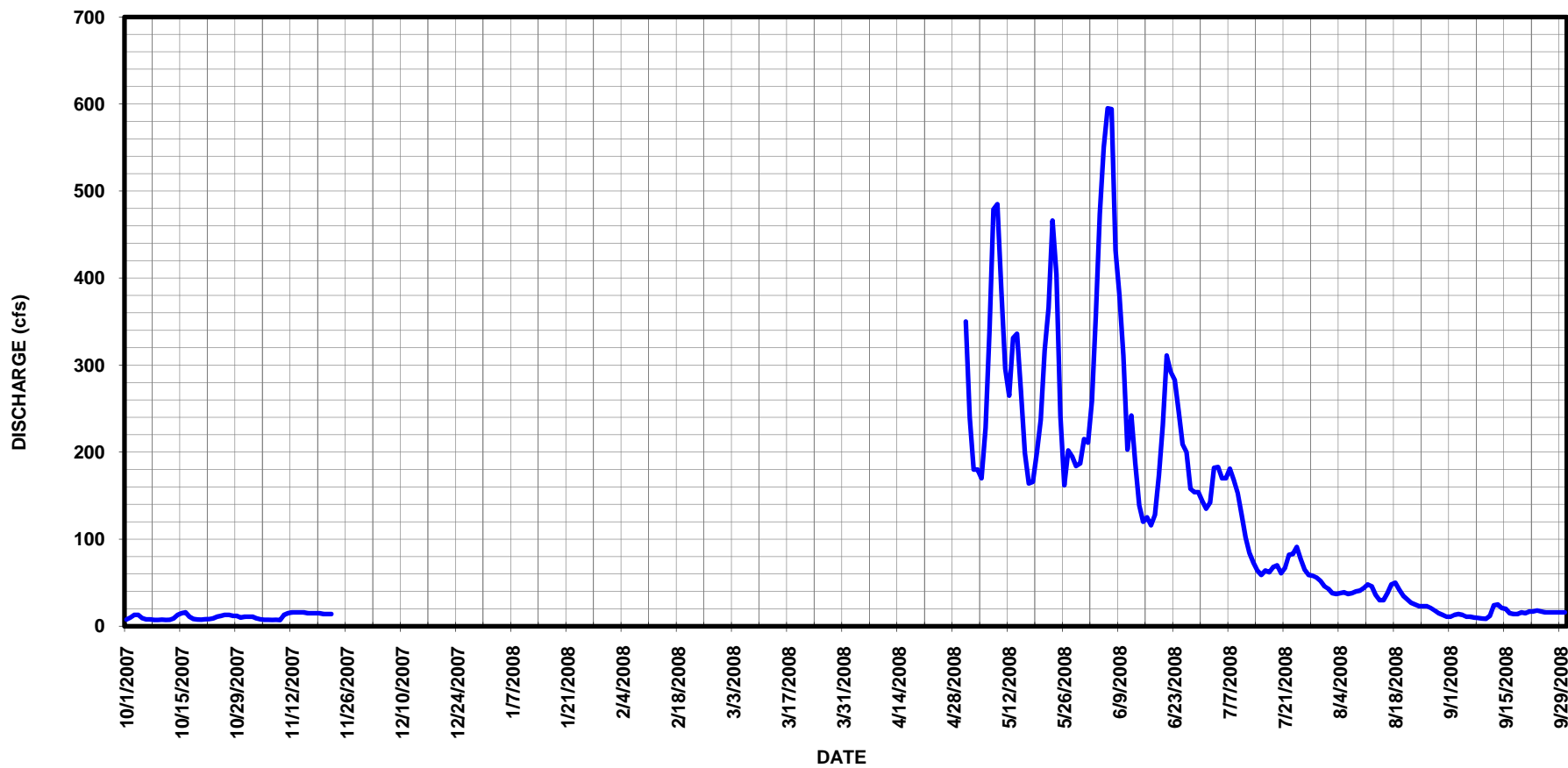
**REMARKS.**--Primary record is hourly averages of the 15-minute satellite data the DCP log data used as backup. Continuous gage height records were kept from Oct. 1 to Nov. 22, 2007 and May 1 to Sept. 30, 2008. Record was not kept during the winter period. The record is complete and reliable, except for: Nov. 22, 2007 (shut-down) and May 1, 2008 (start-up), which have partial day DCP data; May 1-5, 2008, due to encoder issues during spring gage start-up; and Nov. 15, 16, and 21, 2007 which were affected by ice. The record is good, except for Nov. 15-16 and 21-22, 2007 and May 1-5, 2008, which were estimated and are considered poor; and on days on which the flow exceeded 270 cfs (twice the highest measured WY2008 flow) May 1, 7-11, 13-14, and 21-24 and June 3-10 and 21-23, 2008, which are considered poor. Station maintained and record developed by Jean Ray.

**RATING TABLE.**--MICWLDCO12 USED FROM 01-OCT-2007 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	11	---	---	---	---	---	350e	211	135	43	11
2	10	11	---	---	---	---	---	240e	259	142	38	13
3	13	9.0	---	---	---	---	---	180e	358	182	37	14
4	13	7.9	---	---	---	---	---	180e	474	183	38	13
5	9.4	7.5	---	---	---	---	---	170e	550	170	39	11
6	7.9	7.4	---	---	---	---	---	228	595	170	37	11
7	7.9	7.2	---	---	---	---	---	340	594	181	38	10
8	7.3	7.4	---	---	---	---	---	479	432	168	40	9.5
9	7.3	7.1	---	---	---	---	---	485	380	153	41	8.8
10	7.6	13	---	---	---	---	---	387	311	128	44	8.5
11	7.2	15	---	---	---	---	---	296	203	102	48	12
12	7.4	16	---	---	---	---	---	265	242	84	46	24
13	9.0	16	---	---	---	---	---	331	187	73	36	25
14	13	16	---	---	---	---	---	336	139	64	30	21
15	15	16e	---	---	---	---	---	270	120	59	30	20
16	16	15e	---	---	---	---	---	199	125	64	38	15
17	11	15	---	---	---	---	---	164	116	62	48	14
18	8.4	15	---	---	---	---	---	166	128	68	50	14
19	7.7	15	---	---	---	---	---	199	173	70	42	16
20	7.6	14	---	---	---	---	---	237	231	61	35	15
21	8.1	14e	---	---	---	---	---	317	311	67	31	17
22	8.3	14e	---	---	---	---	---	366	292	82	27	17
23	9.0	---	---	---	---	---	---	466	283	83	25	18
24	11	---	---	---	---	---	---	404	247	91	23	17
25	12	---	---	---	---	---	---	242	209	77	23	16
26	13	---	---	---	---	---	---	162	200	65	23	16
27	13	---	---	---	---	---	---	202	158	59	21	16
28	12	---	---	---	---	---	---	195	154	58	18	16
29	12	---	---	---	---	---	---	184	154	56	15	16
30	10	---	---	---	---	---	---	187	144	52	13	16
31	11	---	---	---	---	---	---	215	---	46	11	---
TOTAL	312.8	269.5	---	---	---	---	---	8442	7980	3055	1028	450.8
MEAN	10.1	12.2	---	---	---	---	---	272	266	98.5	33.2	15.0
AC-FT	620	535	---	---	---	---	---	16740	15830	6060	2040	894
MAX	16	16	---	---	---	---	---	485	595	183	50	25
MIN	7.2	7.1	---	---	---	---	---	162	116	46	11	8.5
CAL YR 2007	TOTAL	10579.2	MEAN	45.0	MAX	329	MIN	4.5	AC-FT	20980 (PARTIAL YR RECORD)		
WTR YR 2008	TOTAL	21538.1	MEAN	105	MAX	595	MIN	7.1	AC-FT	42720 (PARTIAL YR RECORD)		
MAX DISCH:	648 CFS AT	3:30 ON	Jun. 7, 2008	GH	3.63 FT.	SHIFT	0.06 FT.					
MAX GH:	3.63 FT. AT	3:30 ON	Jun. 7, 2008									
e=Estimated.												

06617100 MICHIGAN RIVER AT WALDEN CO  
WY2008 HYDROGRAPH





NORTH PLATTE RIVER BASIN

06617500 ILLINOIS RIVER NEAR RAND, CO

**LOCATION.**--Lat. 40°27'45", Long. 106°10'30", (Rand Quadrangle, 1956), in SW1/4 of the NE1/4 of Section 29, T6N, R78W in Jackson County, on right upstream bridge abutment on Jackson County Road 27.

**DRAINAGE AREA.**--Approximately 70.6 sq. mi. (from topographic maps).

**PERIOD OF RECORD.**--Established by the State Engineer's Office. Formerly published as Illinois Creek near Rand (1931-1940) at similar location. Hydrographic measurements taken in 1981 and 1985, but no records were kept. Records kept from 1987 to present. Records published in 1995 and 2002 through the present.

**GAGE.**--Sutron shaft encoder (SDI12) housed in a small steel shelter on an 18-inch diameter corrugated metal pipe stilling well with two 2-inch intakes. The shaft encoder is connected via cable to a Sutron high data rate (HDR) data collection platform (DCP) with satellite telemetry. The DCP is located several meters back from the channel bank in a NEMA enclosure. The outside staff, with a range of 0.00 to 3.33 feet, is located on the bridge abutment just to the left of the well. Approx. elevation of gage is 8550 feet.

**REMARKS.**--Primary record is hourly averages of the 15-minute satellite data with DCP log data used as backup. Continuous gage height records were kept from October 1 to November 26 (14:00), 2007 and April 18 (13:00) to September 30, 2008. Record was not kept during the winter. The record is complete and reliable except for: November 26, 2007 and April 18, 2008 which are days with partial gage height record; October 22-23, November 15-16 and 20, 2007 which were affected by ice; and November 21-26, 2007, when the float was frozen in the stilling well and accurate gage height data were not available. The record is good, except for the periods October 22-23, November 15-16, 20-26, 2007 and April 18, 2008, which were estimated and are considered poor. The station was closed during the winter period: November 27, 2007 through April 17, 2008. Station maintained and record developed by Jean Ray.

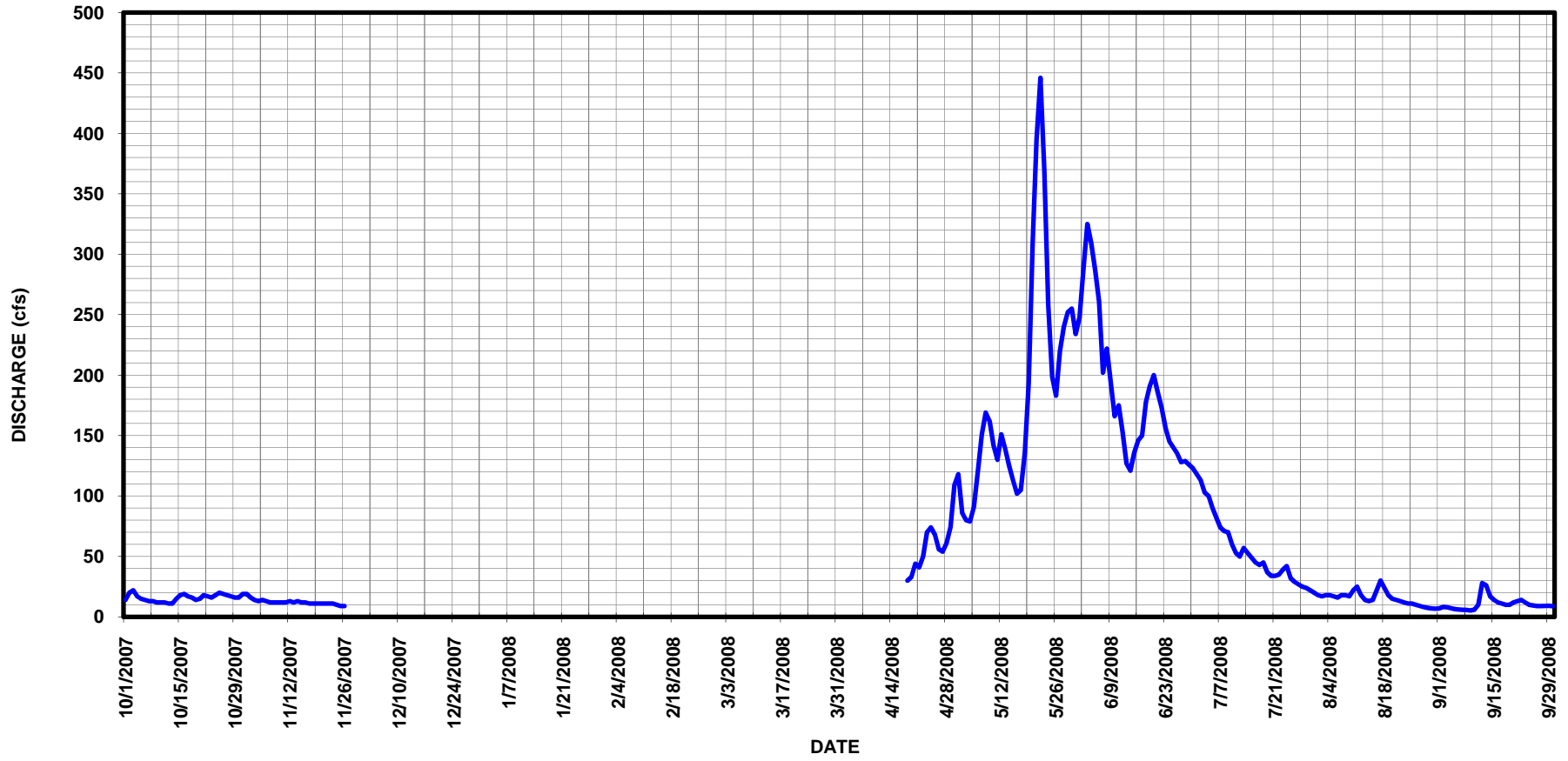
**RATING TABLE.**--ILLRANCO05 USED FROM 01-OCT-2007 TO 03-JUN-2008  
ILLRANCO06 USED FROM 03-JUN-2008 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	19	---	---	---	---	---	118	248	118	18	7.0
2	20	16	---	---	---	---	---	86	288	113	17	8.3
3	22	14	---	---	---	---	---	80	325	103	18	8.0
4	17	13	---	---	---	---	---	79	309	100	18	7.1
5	15	14	---	---	---	---	---	91	287	90	17	6.4
6	14	13	---	---	---	---	---	121	261	82	16	6.1
7	13	12	---	---	---	---	---	151	202	74	18	5.9
8	13	12	---	---	---	---	---	169	222	71	18	5.8
9	12	12	---	---	---	---	---	162	194	70	17	5.3
10	12	12	---	---	---	---	---	142	166	60	22	6.0
11	12	12	---	---	---	---	---	130	175	53	25	10
12	11	13	---	---	---	---	---	151	153	50	18	28
13	11	12	---	---	---	---	---	139	127	57	14	26
14	15	13	---	---	---	---	---	125	121	53	13	17
15	18	12e	---	---	---	---	---	113	136	49	14	14
16	19	12e	---	---	---	---	---	102	146	45	22	12
17	17	11	---	---	---	---	---	105	150	43	30	11
18	16	11	---	---	---	---	30e	136	178	45	24	10
19	14	11	---	---	---	---	33	194	191	37	18	10
20	15	11e	---	---	---	---	44	309	200	34	15	12
21	18	11e	---	---	---	---	41	395	186	34	14	13
22	17e	11e	---	---	---	---	50	446	173	35	13	14
23	16e	11e	---	---	---	---	70	369	156	39	12	12
24	18	10e	---	---	---	---	74	258	145	42	11	10
25	20	9.0e	---	---	---	---	68	199	140	32	11	9.5
26	19	9.0e	---	---	---	---	56	183	135	29	10	9.0
27	18	---	---	---	---	---	54	220	128	27	9.1	9.0
28	17	---	---	---	---	---	61	240	129	25	8.2	9.1
29	16	---	---	---	---	---	74	252	126	24	7.5	9.2
30	16	---	---	---	---	---	109	255	123	22	7.0	8.9
31	19	---	---	---	---	---	---	234	---	20	6.8	---

TOTAL	494	316.0	---	---	---	---	764	5754	5520	1676	481.6	319.6
MEAN	15.9	12.2	---	---	---	---	58.8	186	184	54.1	15.5	10.7
AC-FT	980	627	---	---	---	---	1520	11410	10950	3320	955	634
MAX	22	19	---	---	---	---	109	446	325	118	30	28
MIN	11	9.0	---	---	---	---	30	79	121	20	6.8	5.3
CAL YR 2007	TOTAL	9721.1	MEAN	39.7	MAX	202	MIN	4.2	AC-FT	19280	(PARTIAL YR RECORD)	
WTR YR 2008	TOTAL	15325.2	MEAN	68.7	MAX	446	MIN	5.3	AC-FT	30400	(PARTIAL YR RECORD)	
MAX DISCH:	472 CFS AT 12:30 ON May, 22, 2008	GH	3.70 FT.	SHIFT	0.10 FT.							
MAX GH:	3.7 FT. AT 12:30 ON May, 22, 2008											
e=Estimated.												

06617500 ILLINOIS RIVER NEAR RAND CO  
WY2008 HYDROGRAPH



YAMPA RIVER BASIN

09249750 WILLIAMS FORK AT MOUTH NEAR HAMILTON, CO

**LOCATION.**--Lat. 40°26'14", long. 107°38'50", in SE1/4 of the NW1/4 of Section 31, T6N, R91W, Moffat County, Hydrologic Unit 14050001, on left bank at coal mine service road crossing, 2,300 ft upstream from confluence with Yampa River, 6.1 mi north-northeast of Hamilton, and 8 mi south-southwest of Craig, CO.

**DRAINAGE AREA.**--419 sq mi.

**PERIOD OF RECORD.**--Gage established and operated by USGS February 1,1984 to September 30, 2001. Gage re-established by State Engineer's Office April 26, 2005.

**GAGE.**--High data rate Sutron SatLink Logger with satellite telemetry and Sutron Accubar in a 6-foot square shelter over a 4-foot culvert well (no longer in use). Outside gage is a wire weight gage mounted on the upstream side of the bridge almost directly above the orifice. The accubar was replaced with a Sutron constant flow bubbler and the muffler on the end of the orifice line was refurbished in August 2008. Approx. elevation of gage is 6170 ft (from topographic map).

**REMARKS.**--Primary record is hourly averages of the 15-minute satellite data with DCP log data used as backup. Continuous gage height records were kept from Oct. 1 through Sept. 30, 2008. The record is complete and reliable, except for: Nov. 16-17, 2007, Apr. 6-9, 15-19, May 10-18, Aug. 3-4 and 6-8, 2008, due to unstable gage height readings (extreme noise/chatter); and Dec. 12, 2007 through Feb. 27, 2008 due to ice conditions. The record is good, except for November 16-17, 2007, April 6-9, 15-19, May 10-18, August 3-4 and 6-8, 2008, due to unstable gage height readings; and December 12, 2007 through February 27, 2008 due to ice conditions. Discharge values were estimated during these periods and the record is considered fair to poor for these dates. Station maintained and record developed by Jean Ray.

**RATING TABLE.**--WMFKMHCO07 USED FROM 01-Oct-2007 TO 30-Sep-2008

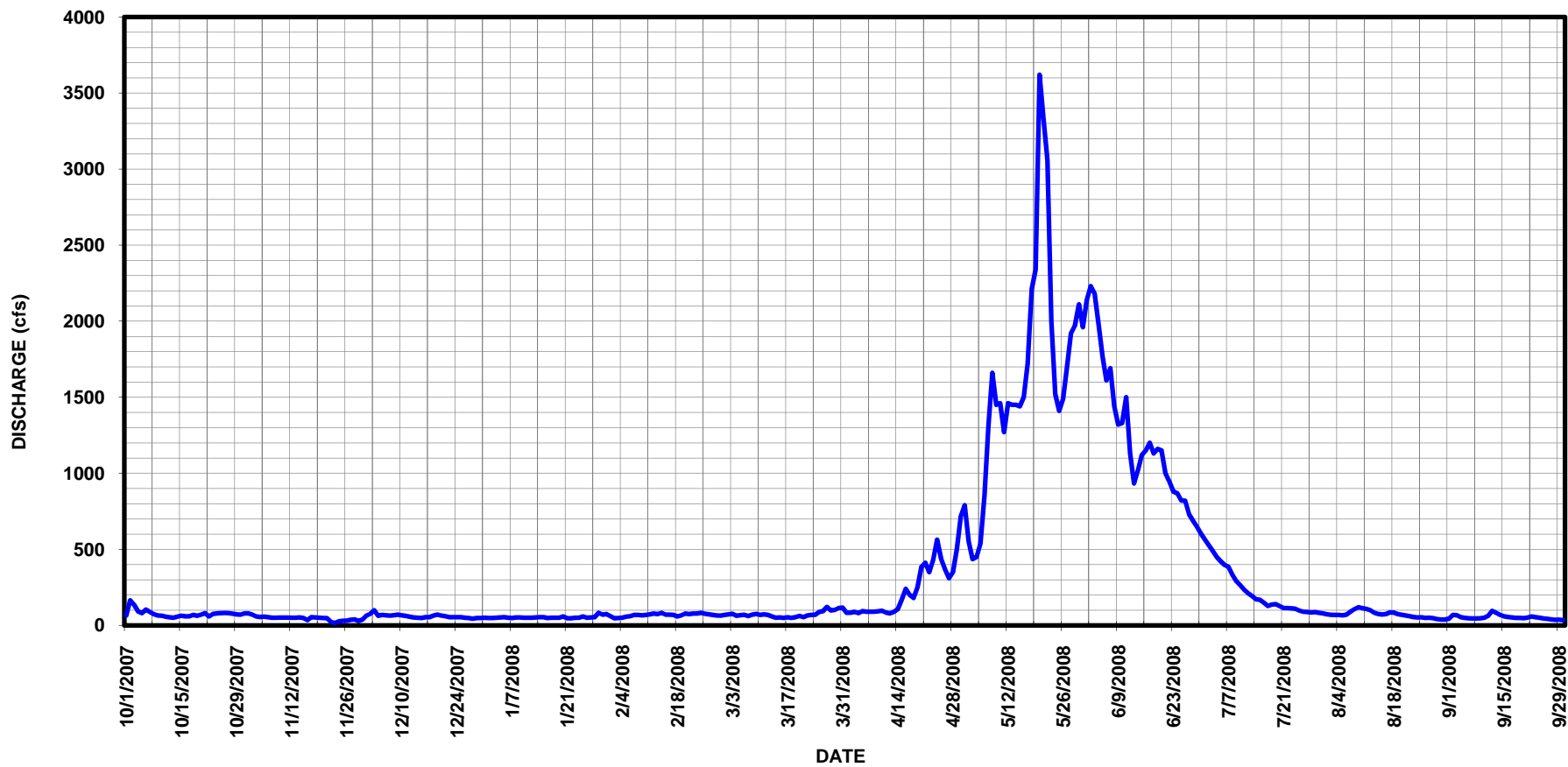
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	79	64	48e	60e	68	82	790	2140	565	72	44
2	164	70	76	48e	46e	72	83	552	2230	527	69	68
3	135	58	99	50e	48e	76	89	435	2180	490	68e	67
4	91	55	63	52e	50e	63	80	449	1980	450	68e	54
5	80	57	68	54e	56e	67	93	536	1770	421	66	49
6	103	54	66	50e	60e	69	90e	853	1610	397	70e	46
7	87	50	64	48e	68e	61	90e	1310	1690	384	90e	45
8	73	50	67	52e	68e	70	90e	1660	1440	332	106e	45
9	65	51	70	52e	66e	75	92e	1450	1320	290	119	46
10	63	51	66	50e	68e	68	96	1460e	1330	264	113	50
11	56	51	62	50e	72e	72	84	1270e	1500	234	108	63
12	53	50	56e	50e	78e	68	79	1460e	1130	211	100	95
13	50	50	52e	52e	74e	58	89	1450e	933	193	83	82
14	56	52	50e	54e	82e	50	107	1450e	1020	172	75	68
15	63	48	48e	54e	70e	52	170e	1440e	1120	168	71	59
16	59	34e	54e	48e	70e	49	240e	1500e	1150	149	74	55
17	59	54e	54e	50e	68e	53	200e	1720e	1200	127	85	52
18	68	52	64e	50e	58e	49	180e	2210e	1130	137	84	49
19	63	50	70e	50e	66e	54	250e	2340	1160	139	74	49
20	70	48	64e	58e	78e	62	384	3620	1150	126	69	47
21	80	47	60e	46e	74e	54	411	3330	1000	114	65	51
22	58	22	54e	46e	78e	65	349	3060	943	114	60	58
23	75	15	54e	50e	78e	68	430	2000	879	112	55	54
24	79	26	54e	50e	82e	69	563	1520	868	109	52	50
25	80	30	54e	58e	76e	88	436	1410	821	97	53	45
26	81	31	50e	50e	72e	93	367	1490	819	90	49	43
27	80	36	48e	52e	68e	121	310	1700	730	88	50	39
28	77	39	44e	54e	65	98	349	1920	687	85	47	36
29	72	28	48e	82e	64	102	502	1970	648	87	41	37
30	70	38	48e	70e	---	114	717	2110	604	82	38	34
31	79	---	50e	74e	---	116	---	1960	---	79	38	---
TOTAL	2354	1376	1841	1652	1963	2244	7102	50425	37182	6833	2212	1580
MEAN	75.9	45.9	59.4	53.3	67.7	72.4	237	1627	1239	220	71.4	52.7
AC-FT	4670	2730	3650	3280	3890	4450	14090	100000	73750	13550	4390	3130
MAX	164	79	99	82	82	121	717	3620	2230	565	119	95
MIN	50	15	44	46	46	49	79	435	604	79	38	34

CAL YR 2007 TOTAL 63223 MEAN 173 MAX 1240 MIN 15 AC-FT 125400  
WTR YR 2008 TOTAL 116764 MEAN 319 MAX 3620 MIN 15 AC-FT 231600

MAX DISCH: 4590 CFS AT 10:00 ON May. 20, 2008 GH 9.82 FT. SHIFT 0 FT. DATUM -0.16 FT.  
MAX GH: 9.82 FT. (9.66 FT. WHEN -0.16 DATUM APPLIED) AT 10:00 ON May. 20, 2008  
e=Estimated.

09249750 WILLIAMS FORK AT MOUTH NEAR HAMILTON CO  
WY2008 HYDROGRAPH



GREEN RIVER BASIN

POT CREEK AT UTAH-COLORADO STATELINE NEAR VERNAL, UT

**LOCATION.**--Lat. 40°40'25", long. 109°03'03", (Hoy Mountain, Utah-Colorado Quadrangle), in Section 1, T2S, R25E Salt Lake Meridian in Daggett County, Utah, on left bank approximately 0.2 miles upstream from the Utah-Colorado state line.

**DRAINAGE AREA.**--107sq mi (from topographic maps)

**PERIOD OF RECORD.**--Established September 1, 1957 by the USGS; USGS discontinued site September 30, 1982; re-established Summer 1983 by the State Engineer's Office. Staff gage installed inside well by USGS. Two outside staff gages, one on each bank, installed by State Engineer's Office.

**GAGE.**--Stevens A-71 chart recorder and shaft encoder connected to a high data rate Sutron Satlink data logger with satellite telemetry in a 42-inch diameter corrugated metal well on left bank. Well is equipped with two 2-inch intakes with standard inside flushing devices. SatLink data logger is housed in a gray housing box attached to the side of the stilling well. Outside staff gages located on right and left banks with range of 0.00 to 3.33 ft and third staff mounted on inside of well.

**REMARKS.**--Primary record is hourly averages developed from the DCP data log of 15-minute observations. Continuous gage height records were kept from October 1, 2007 through September 30, 2008. The record is complete. Due to weather constraints, the site is inaccessible during most of the year, including the late fall, winter, and early spring months. The record is considered good/fair throughout the record period, because only one flow measurement could be made during WY2008. Station maintained and record developed by Jean Ray.

**RATING TABLE.**--PTCKSLCO06 USED FROM 01-OCT-2007 TO 30-SEP-2008

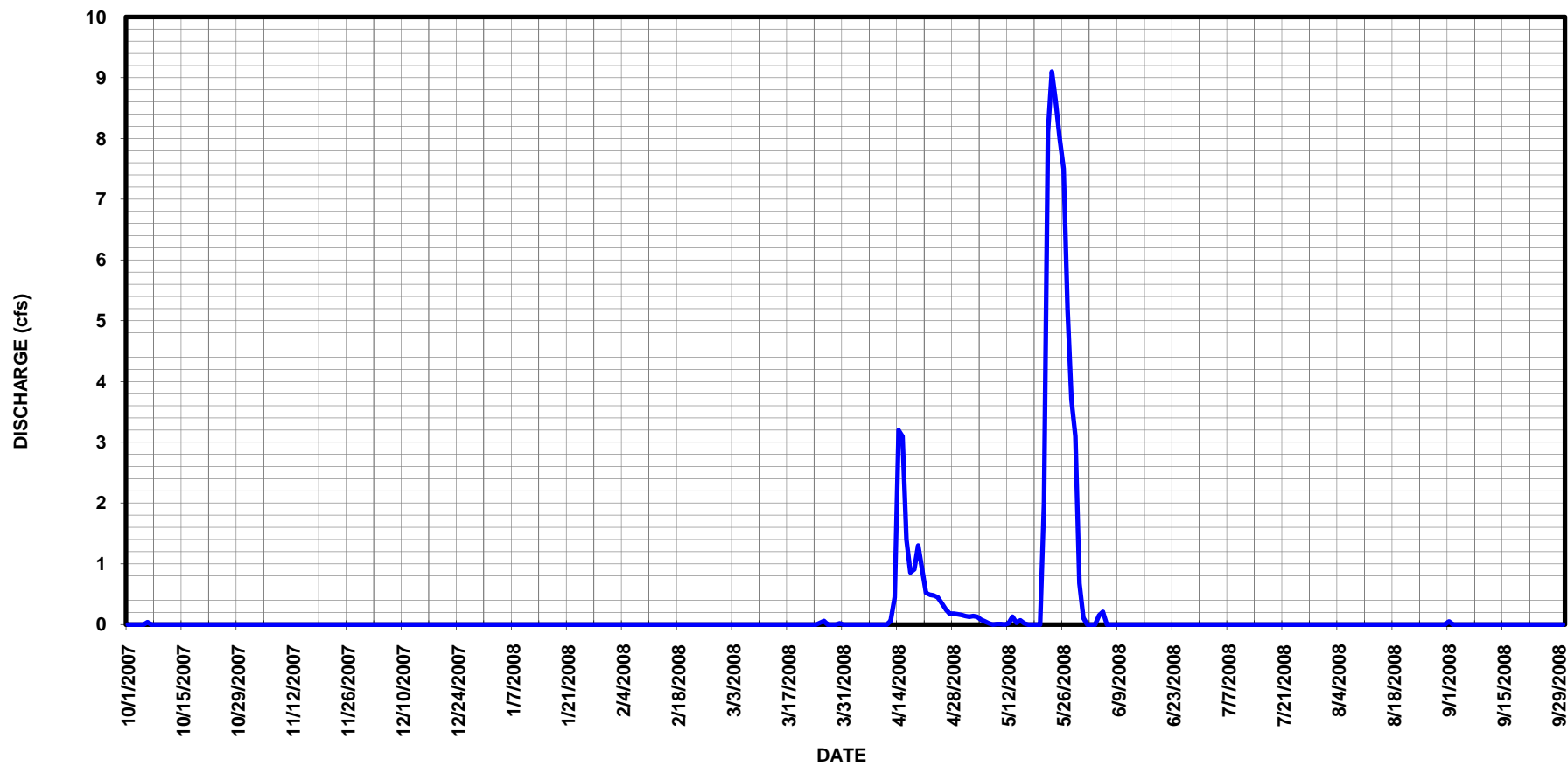
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	.14	0	0	0	.05
2	0	0	0	0	0	0	0	.13	0	0	0	0
3	0	0	0	0	0	0	0	.14	0	0	0	0
4	0	0	0	0	0	0	0	.13	.15	0	0	0
5	0	0	0	0	0	0	0	.08	.21	0	0	0
6	.04	0	0	0	0	0	0	.05	0	0	0	0
7	0	0	0	0	0	0	0	.02	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	.01	0	0	0	0
10	0	0	0	0	0	0	0	.01	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	.06	.02	0	0	0	0
13	0	0	0	0	0	0	.45	.13	0	0	0	0
14	0	0	0	0	0	0	3.2	.03	0	0	0	0
15	0	0	0	0	0	0	3.1	.07	0	0	0	0
16	0	0	0	0	0	0	1.4	.02	0	0	0	0
17	0	0	0	0	0	0	.86	0	0	0	0	0
18	0	0	0	0	0	0	.91	0	0	0	0	0
19	0	0	0	0	0	0	1.3	0	0	0	0	0
20	0	0	0	0	0	0	.91	0	0	0	0	0
21	0	0	0	0	0	0	.52	2.0	0	0	0	0
22	0	0	0	0	0	0	.49	8.1	0	0	0	0
23	0	0	0	0	0	0	.48	9.1	0	0	0	0
24	0	0	0	0	0	0	.45	8.6	0	0	0	0
25	0	0	0	0	0	.03	.35	8.0	0	0	0	0
26	0	0	0	0	0	.06	.25	7.5	0	0	0	0
27	0	0	0	0	0	0	.18	5.2	0	0	0	0
28	0	0	0	0	0	0	.18	3.7	0	0	0	0
29	0	0	0	0	0	0	.17	3.1	0	0	0	0
30	0	0	0	0	---	.02	.16	.68	0	0	0	0
31	0	---	0	0	---	0	---	.11	---	0	0	---
TOTAL	.04	0	0	0	0	.11	15.42	57.07	.36	0	0	.05
MEAN	.001	0	0	0	0	.004	.51	1.84	.012	0	0	.002
AC-FT	.08	0	0	0	0	.2	31	113	.7	0	0	.1
MAX	.04	0	0	0	0	.06	3.2	9.1	.21	0	0	.05
MIN	0	0	0	0	0	0	0	0	0	0	0	0
CAL YR 2007	TOTAL	29.29	MEAN	.080	MAX	8.5	MIN	0	AC-FT	58		
WTR YR 2008	TOTAL	73.05	MEAN	.2	MAX	9.1	MIN	0	AC-FT	145		

MAX DISCH: 10.6 CFS AT 17:15 ON Apr. 14, 2008 GH 1.18 FT. SHIFT 0 FT.  
MAX GH: 1.18 FT. AT 17:15 ON Apr. 14, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

### POT CREEK AT UTAH-COLORADO STATELINE NEAR VERNAL UT WY2008 HYDROGRAPH



SAN JUAN RIVER BASIN

DOLORES TUNNEL OUTLET NEAR DOLORES, CO

LOCATION.--Lat 37°28'00", long 108°32'30", in SW<sup>4</sup>SE<sup>4</sup> sec. 18, T. 37 N., R.15 W., NMPM, Montezuma County.

DRAINAGE AREA AND PERIOD OF RECORD.--N/A

GAGE.--A Sutron Satlink 2 high data rate DCP with a shaft encoder in a concrete shelter and well. The DCP record is the primary record with satellite data used for backup purposes. An electric tape is the primary reference.

REMARKS.--Record is complete and reliable. Record good. Station maintained by the Dolores Conservancy District and record developed by Jason Morrow.

RATING TABLE.--DOLTUNCO02 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

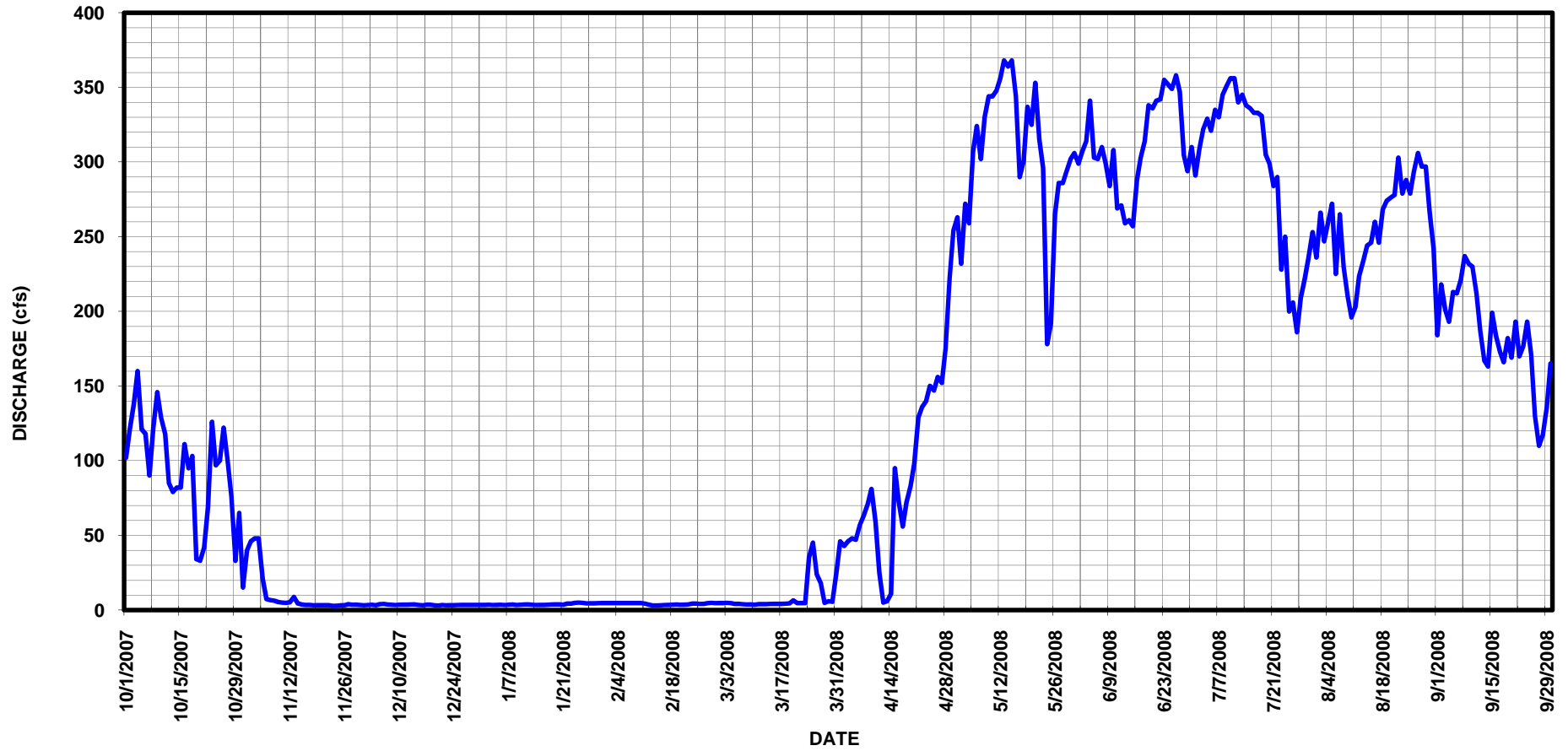
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	40	3.1	3.4	4.6	4.6	46	263	299	291	236	184
2	121	46	3.3	3.5	4.6	4.6	43	232	307	309	266	218
3	138	48	3.6	3.4	4.6	4.8	46	272	314	322	247	201
4	160	48	3.1	3.4	4.6	4.6	48	259	341	329	260	193
5	121	21	3.8	3.5	4.6	4.1	47	307	303	321	272	213
6	118	7.4	4.0	3.4	4.6	4.0	57	324	302	335	225	212
7	90	6.6	3.7	3.6	4.6	3.8	63	302	310	330	265	221
8	122	6.2	3.6	3.7	4.6	3.7	71	330	299	345	230	237
9	146	5.3	3.4	3.4	4.6	3.7	81	344	284	351	210	232
10	129	4.9	3.6	3.5	4.6	3.5	59	344	308	356	196	230
11	118	4.7	3.6	3.7	4.3	3.8	25	348	269	356	203	212
12	85	5.1	3.5	3.7	3.5	3.8	5.0	356	271	340	224	187
13	79	8.8	3.7	3.6	3.0	3.8	5.8	368	259	345	234	167
14	82	4.4	3.7	3.4	3.0	4.0	11	364	261	338	244	163
15	82	3.7	3.4	3.4	3.1	4.0	95	368	257	336	246	199
16	111	3.4	3.1	3.3	3.3	4.0	73	344	288	333	260	184
17	95	3.3	3.6	3.5	3.4	4.1	56	290	303	333	246	173
18	103	3.1	3.5	3.7	3.5	4.2	72	301	314	331	268	166
19	34	3.1	3.1	3.7	3.7	4.5	83	337	338	305	274	182
20	33	3.1	3.0	3.7	3.5	6.4	98	325	336	299	276	169
21	42	3.1	3.3	3.6	3.5	4.6	129	353	341	284	278	193
22	69	3.1	3.1	4.2	3.7	4.6	136	315	342	290	303	170
23	126	2.8	3.1	4.3	4.2	4.6	140	296	355	228	279	177
24	97	2.8	3.2	4.7	4.3	35	150	178	352	250	288	193
25	100	3.1	3.4	4.9	4.0	45	147	192	349	200	279	171
26	122	3.2	3.3	4.7	4.1	24	156	265	358	206	294	130
27	100	3.9	3.4	4.4	4.6	18	152	286	347	186	306	110
28	76	3.5	3.4	4.5	4.8	4.7	175	286	305	209	297	117
29	33	3.5	3.4	4.5	4.6	5.9	222	294	294	222	297	136
30	65	3.4	3.4	4.6	---	5.5	254	302	310	236	267	165
31	15	---	3.4	4.6	---	25	---	306	---	253	242	---
TOTAL	2914	308.5	105.8	119.5	118.1	260.9	2745.8	9451	9316	9169	8012	5505
MEAN	94.0	10.3	3.41	3.85	4.07	8.42	91.5	305	311	296	258	184
AC-FT	5780	612	210	237	234	517	5450	18750	18480	18190	15890	10920
MAX	160	48	4.0	4.9	4.8	45	254	368	358	356	306	237
MIN	15	2.8	3.0	3.3	3.0	3.5	5.0	178	257	186	196	110

CAL YR	2007	TOTAL	44246.5	MEAN	121	MAX	374	MIN	2.8	AC-FT	87760
WTR YR	2008	TOTAL	48025.6	MEAN	131	MAX	368	MIN	2.8	AC-FT	95260

MAX DISCH: 399 CFS AT 11:45 ON Jul. 10, 2008 GH 3.16 FT. SHIFT 0.1 FT.  
MAX GH: 3.16 FT. AT 11:45 ON Jul. 10, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

### DOLORES TUNNEL OUTLET NEAR DOLORES CO WY2008 HYDROGRAPH





SAN JUAN RIVER BASIN

LONE PINE CANAL BELOW GREAT CUT DIKE NEAR DOLORES, CO

LOCATION.--Lat 37°30'24", long 108°35'28", in NW¼SW¼ sec. 35, T.38 N., R.16 W., NMPM, Montezuma County.

DRAINAGE AREA AND PERIOD OF RECORD.--N/A

GAGE.--Sutron 8210 high data rate DCP and shaft encoder in a concrete shelter and well at a 12-foot Parshall Flume. The primary record is hourly averages of 15 minute satellite data. Shaft encoder is set to outside staff gage.

REMARKS.--Record is complete, reliable, and good for the entire water year. Station maintained by the Dolores Conservancy District and record developed by Jason Morrow.

RATING TABLE.--MVIDIVCO01 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

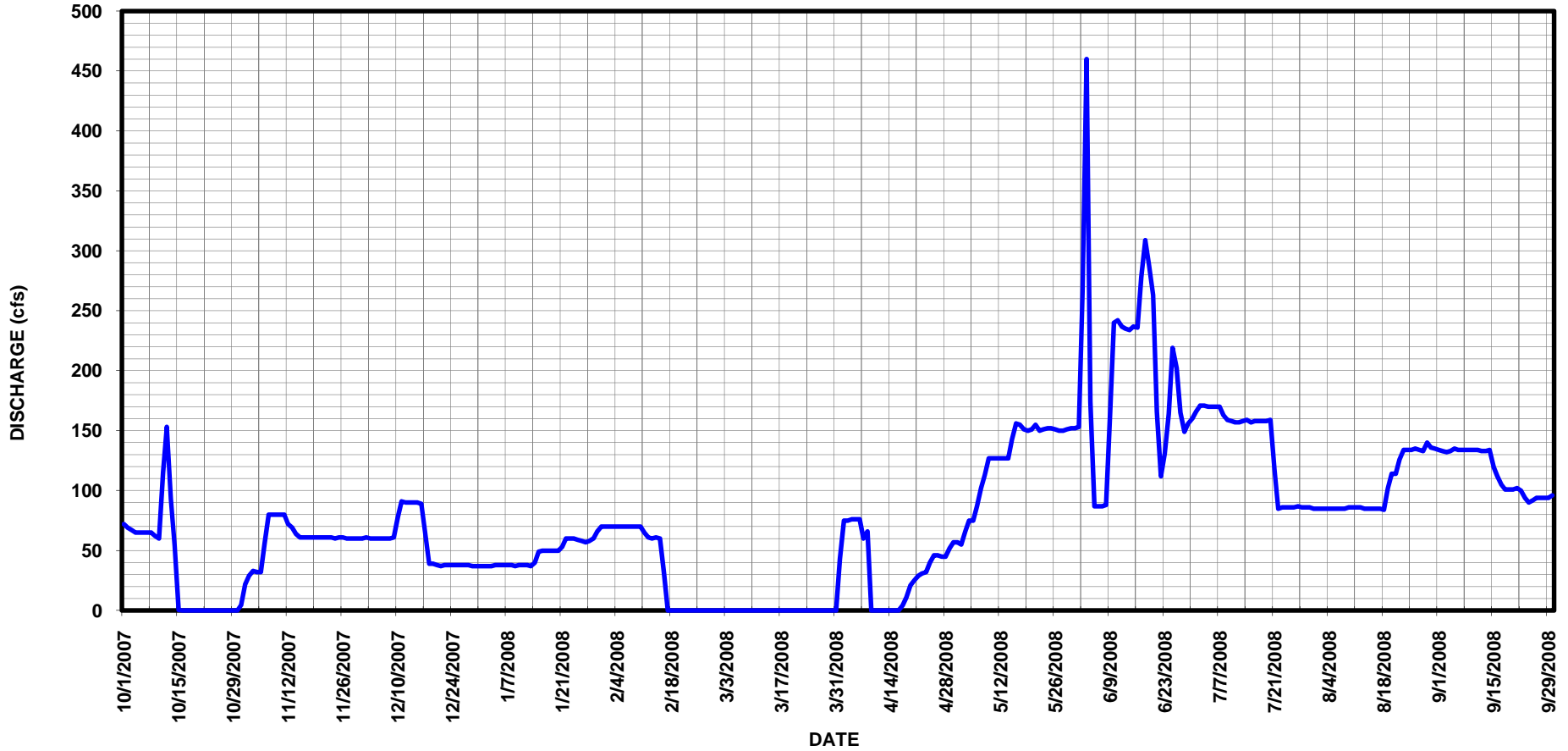
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	22	60	37	70	0	43	57	153	166	85	134
2	69	29	61	37	70	0	75	55	266	171	85	133
3	67	33	60	37	70	0	75	66	460	171	85	132
4	65	32	60	38	70	0	76	75	174	170	85	133
5	65	32	60	38	70	0	76	75	87	170	85	135
6	65	56	60	38	70	0	76	87	87	170	85	134
7	65	80	60	38	70	0	60	102	87	170	85	134
8	65	80	60	38	70	0	66	113	88	163	85	134
9	62	80	61	37	70	0	0	127	165	159	86	134
10	60	80	78	38	70	0	0	127	240	158	86	134
11	115	80	91	38	65	0	0	127	242	157	86	134
12	153	72	90	38	61	0	0	127	237	157	86	133
13	93	69	90	37	60	0	0	127	235	158	85	133
14	54	64	90	40	61	0	0	127	234	159	85	134
15	.50	61	90	49	60	0	0	143	237	157	85	120
16	0	61	89	50	31	0	0	156	236	158	85	112
17	0	61	65	50	0	0	4.3	155	278	158	85	105
18	0	61	39	50	0	0	11	151	309	158	84	101
19	0	61	39	50	0	0	21	150	288	158	102	101
20	0	61	38	50	0	0	25	151	263	159	114	101
21	0	61	37	53	0	0	29	155	166	118	114	102
22	0	61	38	60	0	0	31	150	112	85	126	100
23	0	61	38	60	0	0	32	151	131	86	134	94
24	0	60	38	60	0	0	40	152	164	86	134	90
25	0	61	38	59	0	0	46	152	219	86	134	92
26	0	61	38	58	0	0	46	151	202	86	135	94
27	0	60	38	57	0	0	45	150	165	87	134	94
28	0	60	38	58	0	0	45	150	149	86	133	94
29	0	60	37	60	0	0	52	151	156	86	140	94
30	0	60	37	66	---	0	57	152	160	86	136	96
31	4.6	---	37	70	---	0	---	152	---	85	135	---
TOTAL	1075.1	1780	1755	1489	1038	0	1031.3	3964	5990	4224	3204	3461
MEAN	34.7	59.3	56.6	48.0	35.8	0	34.4	128	200	136	103	115
AC-FT	2130	3530	3480	2950	2060	0	2050	7860	11880	8380	6360	6860
MAX	153	80	91	70	70	0	76	156	460	171	140	135
MIN	0	22	37	37	0	0	0	55	87	85	84	90

CAL YR	2007	TOTAL	27357.1	MEAN	75.0	MAX	475	MIN	0	AC-FT	54260
WTR YR	2008	TOTAL	29011.4	MEAN	79.3	MAX	460	MIN	0	AC-FT	57540

MAX DISCH: 471 CFS AT 15:45 ON Jun. 2, 2008 GH 3.98 FT. SHIFT 0.26 FT.  
MAX GH: 3.98 FT. AT 15:45 ON Jun. 2, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

LONE PINE CANAL BELOW GREAT CUT DIKE NEAR DOLORES CO  
WY2008 HYDROGRAPH



DOLORES RIVER BASIN

DOLORES RIVER BELOW MCPHEE RESERVOIR NEAR DOLORES, CO

LOCATION.--Lat 37°34'33", long 108°34'33", in SE¼SE¼ sec. 2, T.38 N., R.16 W., NMPM, Montezuma County.

DRAINAGE AREA AND PERIOD OF RECORD.--550 mi<sup>2</sup>.

GAGE.--Graphic water-stage recorder and a Sutron Satlink HDR DCP on separate floats in a concrete shelter and well. Control is an 15-ft. Parshall Flume set in a flat concrete structure that acts as a weir at high flows. Electric tape gage is primary reference gage with supplemental outside staff gage in the flume. The primary record is hourly averages of 15 minute satellite data. Datum of gage is 6,630 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Record is complete and reliable; any data missing from the initial satellite transmissions were filled in from the DCP's logger files. Record good. Diversions for irrigation of up to 47,000 acres upstream of gage in the Dolores River basin and diversions for irrigation of up to 4700 acres in the San Juan River Basin. Flow regulated by McPhee Reservoir, capacity 381,000 acre-feet. Station maintained and record developed by Brian Boughton.

RATING TABLE.--DOLBMCCO04A USED FROM 01-OCT-2007 TO 30-SEP-2008

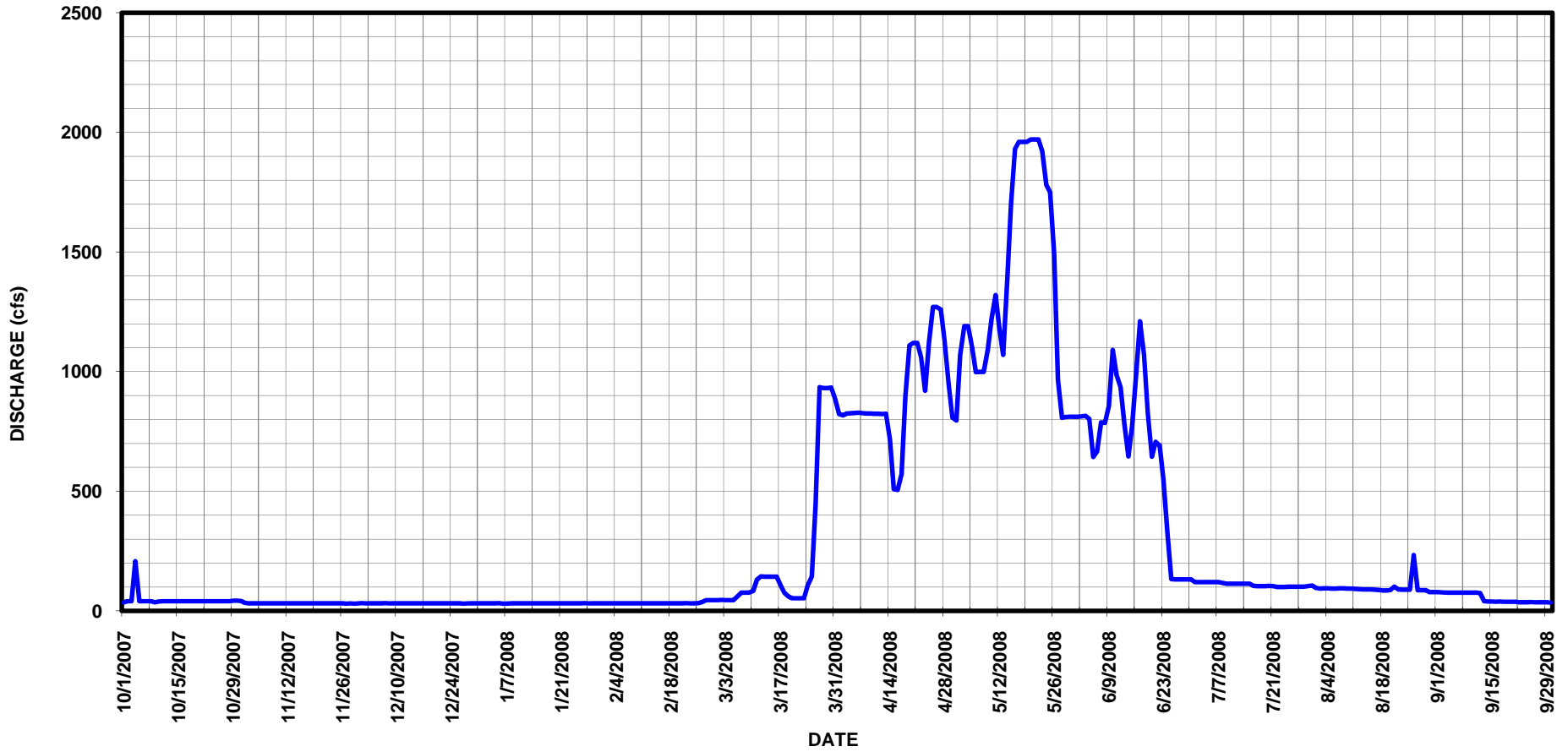
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	33	32	31	31	45	823	796	811	120	95	78
2	40	31	31	31	31	46	817	1070	813	120	93	77
3	40	31	31	31	31	45	825	1190	815	120	94	76
4	207	31	31	31	31	45	826	1190	802	120	94	76
5	40	31	31	32	31	45	827	1100	643	120	93	76
6	40	31	31	30	31	61	828	998	666	120	93	76
7	40	31	32	30	31	76	826	999	788	120	94	76
8	40	31	31	31	31	76	825	999	785	117	94	76
9	36	31	31	31	31	76	825	1090	859	113	93	76
10	39	31	31	31	31	83	824	1220	1090	113	93	76
11	40	31	31	31	31	130	824	1320	987	113	92	76
12	40	31	31	31	31	144	823	1180	935	113	91	74
13	40	31	31	31	31	143	824	1070	782	113	90	40
14	40	31	31	31	31	143	713	1380	645	113	90	39
15	40	31	31	31	31	143	509	1700	775	113	90	39
16	40	31	31	31	31	143	505	1930	995	104	89	38
17	40	31	31	31	31	108	573	1960	1210	103	88	39
18	40	31	31	31	31	76	897	1960	1070	103	85	38
19	40	31	31	31	31	61	1110	1960	825	103	85	38
20	40	31	31	31	31	53	1120	1970	644	104	86	38
21	40	31	31	31	31	53	1120	1970	706	103	101	38
22	40	31	31	31	32	53	1060	1970	692	100	90	36
23	40	31	31	31	31	53	920	1920	547	100	89	36
24	40	31	31	31	31	106	1120	1780	323	100	89	36
25	40	31	31	31	32	143	1270	1750	133	101	89	37
26	40	31	31	31	37	443	1270	1490	132	101	233	36
27	40	30	30	32	45	935	1260	965	132	101	86	36
28	40	31	31	31	45	931	1130	807	132	101	87	36
29	42	30	31	31	45	931	949	810	132	101	87	36
30	42	31	31	31	---	933	808	811	132	103	79	35
31	41	---	31	31	---	885	---	811	---	106	78	---
TOTAL	1403	930	962	961	949	7208	27051	42166	20001	3382	2930	1584
MEAN	45.3	31.0	31.0	31.0	32.7	233	902	1360	667	109	94.5	52.8
AC-FT	2780	1840	1910	1910	1880	14300	53660	83640	39670	6710	5810	3140
MAX	207	33	32	32	45	935	1270	1970	1210	120	233	78
MIN	36	30	30	30	31	45	505	796	132	100	78	35
CAL YR 2007	TOTAL	32596	MEAN	89.3	MAX	1880	MIN	22	AC-FT	64650		
WTR YR 2008	TOTAL	109527	MEAN	299	MAX	1970	MIN	30	AC-FT	217200		

MAX DISCH: 2000 CFS AT 15:15 ON May. 22, 2008 GH 5.32 FT. SHIFT 0.08 FT.  
MAX GH: 5.32 FT. AT 15:15 ON May. 22, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

**DOLORES RIVER BELOW MCPHEE RESERVOIR NEAR DOLORES CO  
WY2008 HYDROGRAPH**



SAN JUAN RIVER BASIN

BLANCO DIVERSION NEAR PAGOSA SPRINGS, CO

LOCATION.--Lat 37°12'13", long 106°48'35", in NW~~4~~NE~~4~~ sec. 11, T.34 N., R.1 E., NMPM, Archuleta County.

DRAINAGE AREA AND PERIOD OF RECORD.--N/A

GAGE.--Graphic water-stage recorder with a Sutron Satlink 2 HDR DCP on separate floats in a concrete shelter and well at a 12-foot Parshall Flume. The primary record is hourly averages of 15 minute satellite data.

REMARKS.--Records are complete and reliable. Record good. Station maintained by the USBR and record developed by Brian Boughton.

RATING TABLE.--BLADIVCO01 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

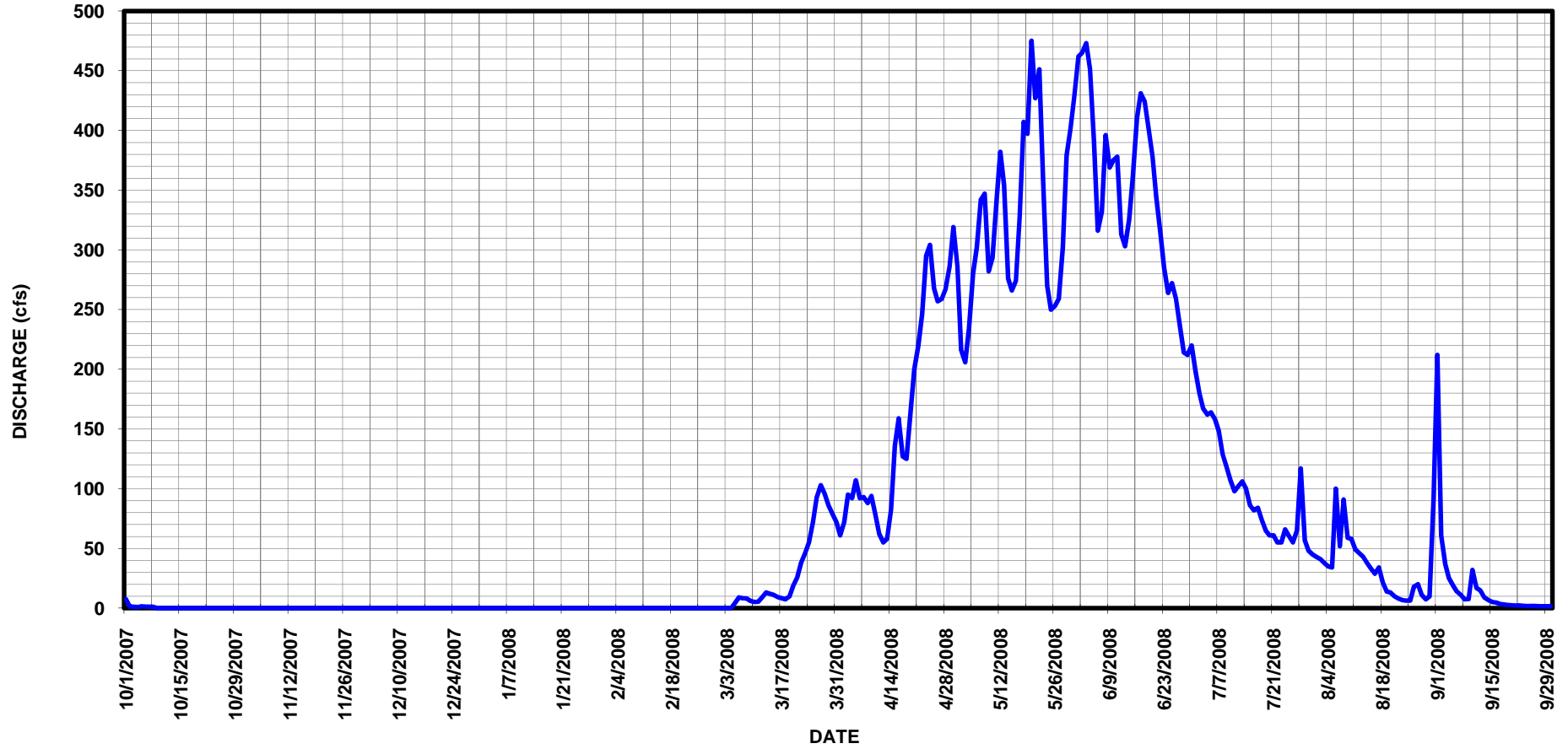
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	0	0	0	0	0	61	286	462	199	43	212
2	1.4	0	0	0	0	0	72	216	465	180	41	61
3	1.2	0	0	0	0	0	95	206	473	167	38	37
4	1.0	0	0	0	0	0	92	234	451	162	35	25
5	1.5	0	0	0	0	4.1	107	280	390	164	34	19
6	1.4	0	0	0	0	9.1	92	302	316	158	100	14
7	1.2	0	0	0	0	8.3	93	342	332	148	52	11
8	1.1	0	0	0	0	8.1	88	347	396	129	91	7.4
9	0	0	0	0	0	6.0	94	282	369	118	59	7.7
10	0	0	0	0	0	5.1	78	293	375	107	58	32
11	0	0	0	0	0	5.5	62	341	378	98	49	17
12	0	0	0	0	0	9.3	55	382	313	102	46	15
13	0	0	0	0	0	13	58	354	303	106	43	9.1
14	0	0	0	0	0	12	83	276	325	100	38	6.9
15	0	0	0	0	0	11	136	266	362	86	33	5.2
16	0	0	0	0	0	9.3	159	274	410	82	29	4.7
17	0	0	0	0	0	8.3	127	328	431	84	34	3.7
18	0	0	0	0	0	7.4	125	407	424	74	22	3.1
19	0	0	0	0	0	10	164	397	402	65	14	2.6
20	0	0	0	0	0	19	200	475	378	61	13	2.4
21	0	0	0	0	0	26	220	427	344	61	10	2.2
22	0	0	0	0	0	38	246	451	315	55	8.1	2.2
23	0	0	0	0	0	46	295	358	285	55	6.8	2.0
24	0	0	0	0	0	55	304	270	264	66	6.4	1.9
25	0	0	0	0	0	72	268	250	272	60	6.3	1.8
26	0	0	0	0	0	93	257	253	259	55	18	1.7
27	0	0	0	0	0	103	259	259	237	65	20	1.6
28	0	0	0	0	0	96	267	302	214	117	11	1.6
29	0	0	0	0	0	86	286	379	212	57	7.5	1.6
30	0	0	0	0	---	79	319	402	220	48	9.9	1.6
31	0	---	0	0	---	72	---	429	---	45	92	---
TOTAL	16.3	0	0	0	0	911.5	4762	10068	10377	3074	1068.0	514.0
MEAN	.53	0	0	0	0	29.4	159	325	346	99.2	34.5	17.1
AC-FT	32	0	0	0	0	1810	9450	19970	20580	6100	2120	1020
MAX	7.5	0	0	0	0	103	319	475	473	199	100	212
MIN	0	0	0	0	0	0	55	206	212	45	6.3	1.6

CAL YR	2007	TOTAL	25347.66	MEAN	69.4	MAX	440	MIN	0	AC-FT	50240
WTR YR	2008	TOTAL	30790.8	MEAN	84.1	MAX	475	MIN	0	AC-FT	61070

MAX DISCH: 628 CFS AT 22:00 ON Aug. 31, 2008 GH 5.07 FT. SHIFT 0 FT.  
MAX GH: 5.07 FT. AT 22:00 ON Aug. 31, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

### BLANCO DIVERSION NEAR PAGOSA SPRINGS CO WY2008 HYDROGRAPH



SAN JUAN RIVER BASIN

09343300 RIO BLANCO BELOW BLANCO DIVERSION DAM, NEAR PAGOSA SPRINGS, CO

**LOCATION.**--Lat 37°12'13", long 106°48'42", in NW¼ sec. 11, T.34 N., R.1 E., NMPM, Archuleta County, Hydrologic Unit 14080101, on left bank 250 ft downstream from Blanco Diversion Dam, 1.1 mi downstream from Leche Creek, and 12 mi southeast of Pagosa Springs.

**DRAINAGE AREA AND PERIOD OF RECORD.**--69.1 mi<sup>2</sup>. March 1971 to current year.

**GAGE.**--Graphic water-stage recorder with a Sutron Satlink 2 HDR DCP and shaft encoder on separate floats in a concrete shelter and well. Control is an 4-ft. Parshall flume set in a flat wide concrete structure that acts as a weir at high flows. Electric drop tape is the primary reference gage with a supplemental outside staff gage. The primary record is hourly averages of 15 minute satellite data. Datum of gage is 7,858.04 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Bureau of Reclamation).

**REMARKS.**--Record is complete. Any data missing from the initial satellite transmissions were filled in from the DCP's logger files. Movement of the shaft encoder float is restricted above 3.80 ft. Chart record data are used when gage height exceeds 3.80 ft without loss of accuracy. The record is reliable, except for the following periods when the stage-discharge relationship was affected by ice: Dec. 16-31, 2007; Jan. 1-4, 7-31; Feb. 1-20, 2008. Record good, except for periods of ice affected record, which are poor. Oct. 5, 2007; May 19-21; Jun. 1, 2008 and the instantaneous peak flow should be considered poor as well since the average daily flows and the peak exceeded the highest measured flow this year by 200%. Station maintained by Cheston Hart and record developed by Brian Boughton.

**RATING TABLE.**--RIOBLACO06 USED FROM 01-Oct-2007 TO 30-Sep-2008

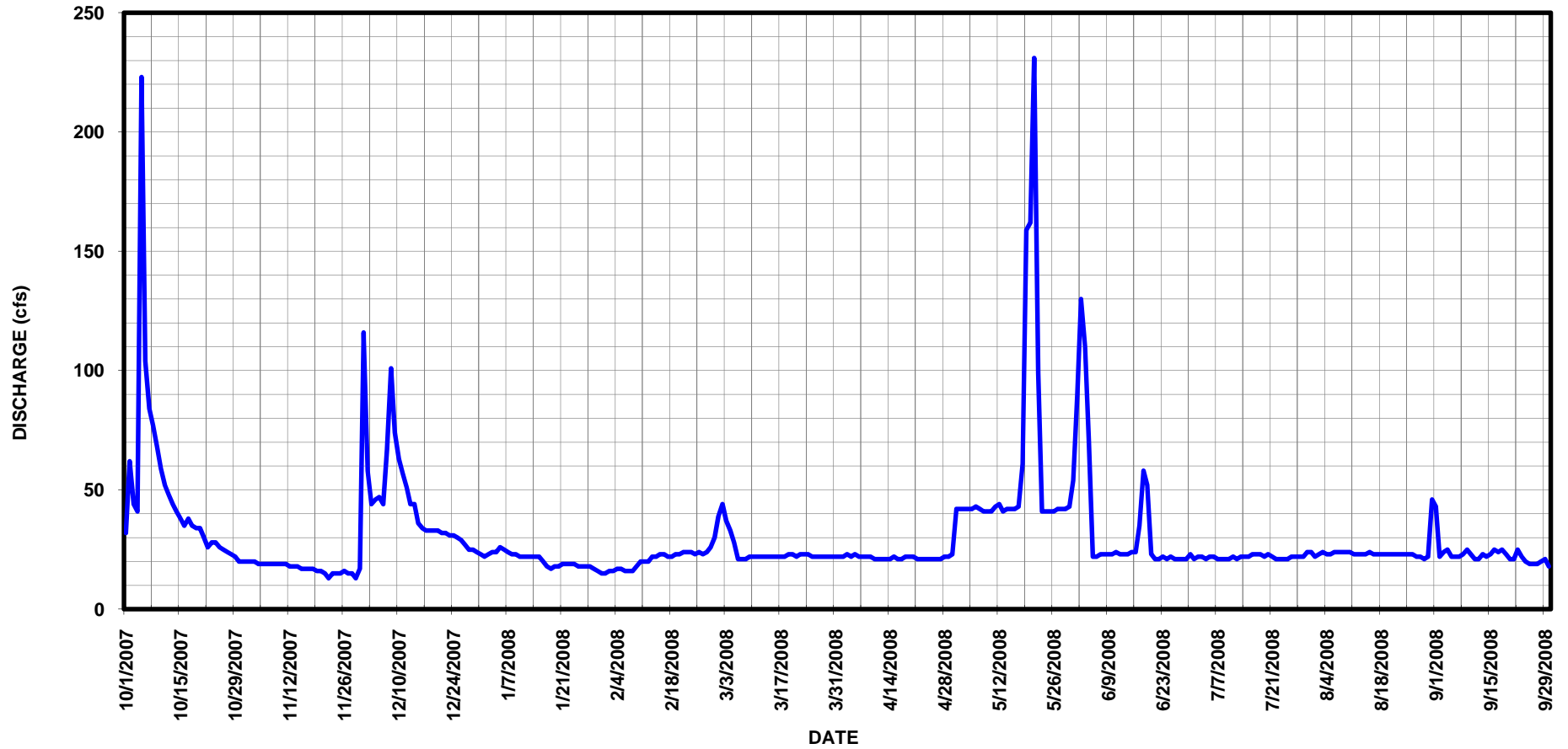
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	20	116	22e	15e	39	22	42	90	21	22	43
2	62	20	58	23e	16e	44	22	42	130	22	23	22
3	44	20	44	24e	16e	37	23	42	110	22	24	24
4	41	19	46	24e	17e	33	22	42	71	21	23	25
5	223	19	47	26	17e	28	23	42	22	22	23	22
6	104	19	44	25	16e	21	22	43	22	22	24	22
7	84	19	67	24e	16e	21	22	42	23	21	24	22
8	77	19	101	23e	16e	21	22	41	23	21	24	23
9	68	19	74	23e	18e	22	22	41	23	21	24	25
10	59	19	63	22e	20e	22	21	41	23	21	24	23
11	52	19	57	22e	20e	22	21	43	24	22	23	21
12	48	18	51	22e	20e	22	21	44	23	21	23	21
13	44	18	44	22e	22e	22	21	41	23	22	23	23
14	41	18	44	22e	22e	22	21	42	23	22	23	22
15	38	17	36	22e	23e	22	22	42	24	22	24	23
16	35	17	34e	20e	23e	22	21	42	24	23	23	25
17	38	17	33e	18e	22e	22	21	43	35	23	23	24
18	35	17	33e	17e	22e	22	22	61	58	23	23	25
19	34	16	33e	18e	23e	23	22	159	52	22	23	23
20	34	16	33e	18e	23e	23	22	162	23	23	23	21
21	30	15	32e	19e	24	22	21	231	21	22	23	21
22	26	13	32e	19e	24	23	21	99	21	21	23	25
23	28	15	31e	19e	24	23	21	41	22	21	23	22
24	28	15	31e	19e	23	23	21	41	21	21	23	20
25	26	15	30e	18e	24	22	21	41	22	21	23	19
26	25	16	29e	18e	23	22	21	41	21	22	23	19
27	24	15	27e	18e	24	22	21	42	21	22	22	19
28	23	15	25e	18e	26	22	22	42	21	22	22	20
29	22	13	25e	17e	30	22	22	42	21	22	21	21
30	20	17	24e	16e	---	22	23	43	23	24	22	18
31	20	---	23e	15e	---	22	---	54	---	24	46	---
TOTAL	1465	515	1367	633	609	755	649	1814	1060	679	737	683
MEAN	47.3	17.2	44.1	20.4	21.0	24.4	21.6	58.5	35.3	21.9	23.8	22.8
AC-FT	2910	1020	2710	1260	1210	1500	1290	3600	2100	1350	1460	1350
MAX	223	20	116	26	30	44	23	231	130	24	46	43
MIN	20	13	23	15	15	21	21	41	21	21	21	18
CAL YR 2007	TOTAL	10647	MEAN	29.2	MAX	423	MIN	13	AC-FT	21120		
WTR YR 2008	TOTAL	10966	MEAN	30.0	MAX	231	MIN	13	AC-FT	21750		

MAX DISCH: 900 CFS AT 14:00 ON Oct. 5, 2007 GH 4.30 FT. SHIFT 0 FT.  
MAX GH: 4.30 FT. AT 14:00 ON Oct. 5, 2007

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.  
e-Estimated.

09343300 RIO BLANCO BELOW BLANCO DIVERSION DAM NEAR PAGOSA SPRINGS CO  
WY2008 HYDROGRAPH





SAN JUAN RIVER BASIN

RIO BLANCO AT MOUTH NEAR TRUJILLO, CO

**LOCATION.**--Lat 37°07'40", long 107°02'03", in SW<sup>4</sup>SE<sup>4</sup> sec. 2, T.33 N., R.2 W., NMPM, Archuleta County.

**DRAINAGE AREA AND PERIOD OF RECORD.**--170 mi<sup>2</sup>.

**GAGE.**--Graphic water-stage recorder and a Sutron SatLink 2 HDR DCP with shaft encoder on separate floats in a 42 inch CMP shelter and well. The primary reference gage is a steel drop tape referenced to an adjustable reference point on the instrument shelf. A new 48" corrugated well was installed on September 18, 2007 approximately 40-ft. downstream of the existing gage. A new wooden shelter was installed in October 2007. Equipment was moved to the new shelter and the gage operated in the new location starting on July 16, 2008. The primary record is hourly averages of 15 minute satellite data. Datum of gage is 6640 ft above National Geodetic Vertical Datum of 1929, from topographic map.

**REMARKS.**--Record is complete and reliable, except for Dec. 16-20, 23-31, 2007; Jan. 1-16; Feb. 16-29; Mar. 1-18, 2008 when the stage-discharge relationship was affected by ice; and, Jan. 17-31; Feb. 1-15, 2008, when the inlets were plugged with ice. Record fair, except for those periods of ice affect and plugged inlets, which should be considered poor. Flows above 172 cfs should be considered poor as well since the rating has not been defined with the new boulder weir control. The instantaneous peak flow should be considered poor as well. Station maintained by Cheston Hart. Record developed by Brian Boughton.

**RATING TABLE.**--RIOMOUCO03 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	23	196	26e	18e	26e	201	237	183	34	22	175
2	64	22	85	28e	18e	24e	229	189	290	32	18	39
3	55	21	52	28e	18e	24e	281	164	248	33	24	31
4	45	21	55	26e	18e	24e	223	163	224	31	19	33
5	378	20	62	26e	18e	24e	237	177	111	30	22	28
6	238	20	55	26e	18e	22e	200	193	90	31	43	26
7	127	20	89	24e	18e	22e	217	209	79	29	26	24
8	97	20	229	24e	20e	24e	203	220	90	28	33	22
9	87	21	107	24e	20e	24e	200	188	89	25	28	25
10	80	21	83	24e	22e	26e	154	184	78	24	27	29
11	74	20	74	24e	24e	28e	120	191	80	21	26	25
12	67	20	65	24e	24e	33e	100	212	72	21	26	21
13	61	22	55	24e	22e	35e	107	205	68	22	23	24
14	57	22	54	24e	24e	40e	135	169	68	21	22	24
15	54	20	46	24e	26e	45e	210	157	66	21	23	23
16	51	18	37e	22e	26e	50e	267	155	71	25	22	26
17	48	18	40e	18e	24e	55e	214	152	83	26	23	25
18	47	18	42e	18e	22e	62e	168	173	115	21	26	25
19	43	18	44e	20e	22e	78	199	321	127	21	20	23
20	42	17	45e	20e	22e	106	233	462	75	20	20	22
21	39	17	52e	20e	22e	132	248	681	59	23	21	22
22	36	20	45e	20e	22e	151	246	371	55	22	18	24
23	34	14	28e	20e	22e	154	264	186	51	23	18	24
24	32	21	34e	22e	22e	161	287	153	46	22	18	19
25	30	37	32e	20e	22e	189	243	121	42	20	18	18
26	29	35	30e	20e	24e	227	208	108	40	22	19	17
27	28	37	28e	22e	24e	270	192	102	36	29	21	19
28	28	23	24e	22e	24e	257	187	108	35	28	20	18
29	27	38	24e	20e	26e	207	189	120	33	23	17	21
30	24	24	26e	18e	---	218	206	128	35	22	18	16
31	24	---	26e	18e	---	245	---	137	---	25	27	---
TOTAL	2073	668	1864	696	632	2983	6168	6336	2739	775	708	868
MEAN	66.9	22.3	60.1	22.5	21.8	96.2	206	204	91.3	25.0	22.8	28.9
AC-FT	4110	1320	3700	1380	1250	5920	12230	12570	5430	1540	1400	1720
MAX	378	38	229	28	26	270	287	681	290	34	43	175
MIN	24	14	24	18	18	22	100	102	33	20	17	16

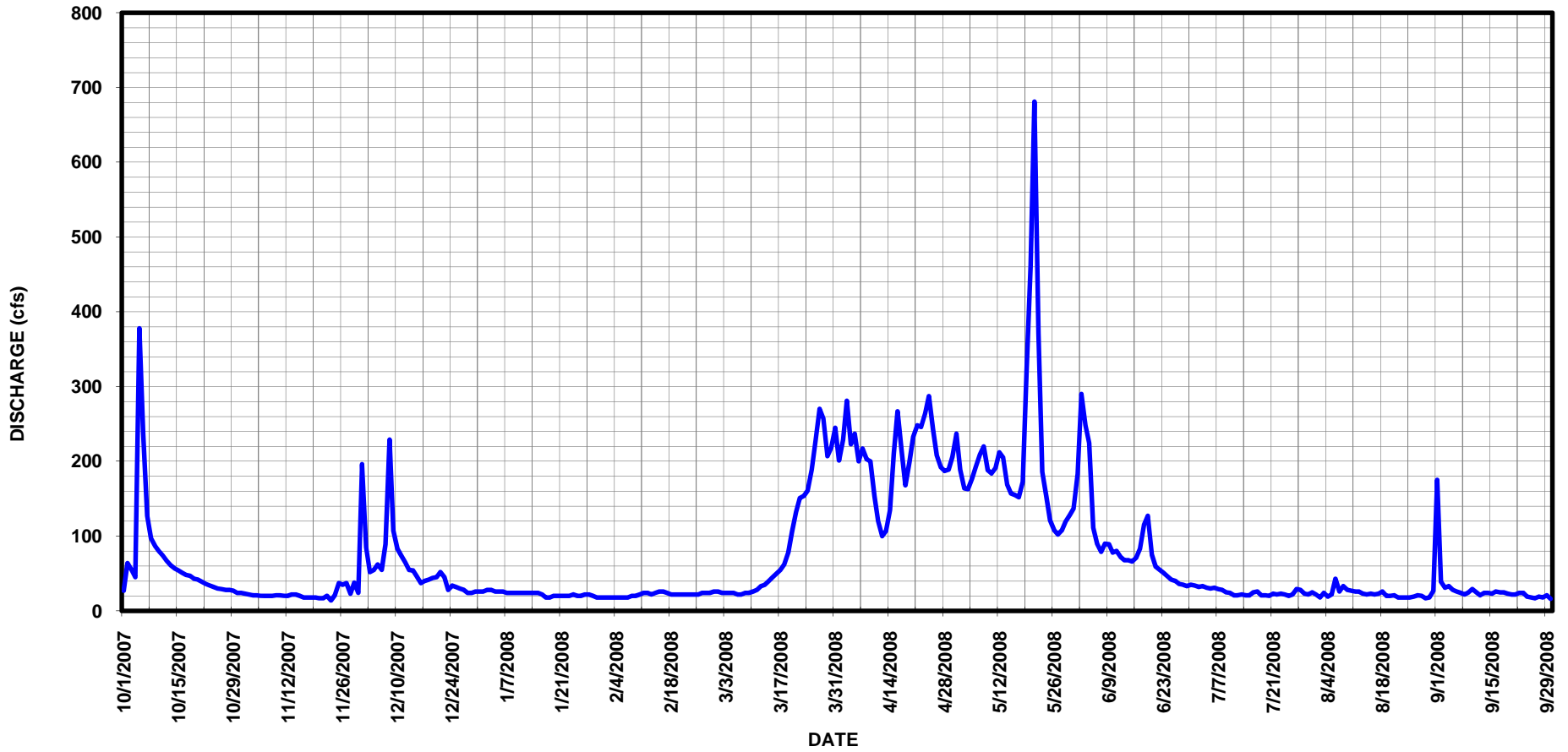
CAL YR	2007	TOTAL	23044	MEAN	63.1	MAX	634	MIN	14	AC-FT	45710
WTR YR	2008	TOTAL	26510	MEAN	72.4	MAX	681	MIN	14	AC-FT	52580

MAX DISCH: 1380 CFS AT 17:30 ON Oct. 5, 2007 GH 4.35 FT. SHIFT 0 FT.  
MAX GH: 4.35 FT. AT 17:30 ON Oct. 5, 2007

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

e-Estimated.

RIO BLANCO AT MOUTH NEAR TRUJILLO CO  
WY2008 HYDROGRAPH



SAN JUAN RIVER BASIN

09344000 NAVAJO RIVER AT BANDED PEAK RANCH, NEAR CHROMO, CO

**LOCATION.**--Lat 37°05'07", long 106°41'20", in SE¼NW¼ sec. 24, T.33 N., R.2 E., NMPM, Archuleta County, Hydrologic Unit 14080101, on right bank at downstream side of private bridge on Banded Peak Ranch, 0.5 mi downstream from Cutthroat Creek, 2.8 mi downstream from East Fork of the Navajo River, and 11.2 mi northeast of Chromo, Co.

**DRAINAGE AREA AND PERIOD OF RECORD.**--69.8 mi<sup>2</sup>.

**GAGE.**--Graphic water stage-recorder and a Sutron Satlink 2 DCP in a 48-inch X 48-inch redwood shelter and well. The primary record is hourly averages of 15 minute satellite data. Chart record is used for backup purposes. The primary reference gage is a drop tape in the well. An air temperature sensor and Sutron AccuBubbler are used for supplemental reference purposes. Datum of gage is 7,939.3 ft above National Geodetic Vertical Datum of 1929 (river-profile survey).

**REMARKS.**--Record is complete. It is reliable, except for the following periods: Jan. 21-31; Feb. 1-29; Mar. 1-18, 2008, when the floats were free but the inlets were frozen; Dec. 13-19, 22-31, 2007; Jan. 1-4, 8-20; Mar. 19-21, 2008, when the stage-discharge relationship was affected by ice. Record fair, except for the days on which ice affected the stage-discharge relationship and the inlets were frozen, which should be considered poor. Station maintained by Cheston Hart and record developed by Brian Boughton.

**RATING TABLE.**--NAVBANCO23 USED FROM 01-Oct-2007 TO 30-Sep-2008

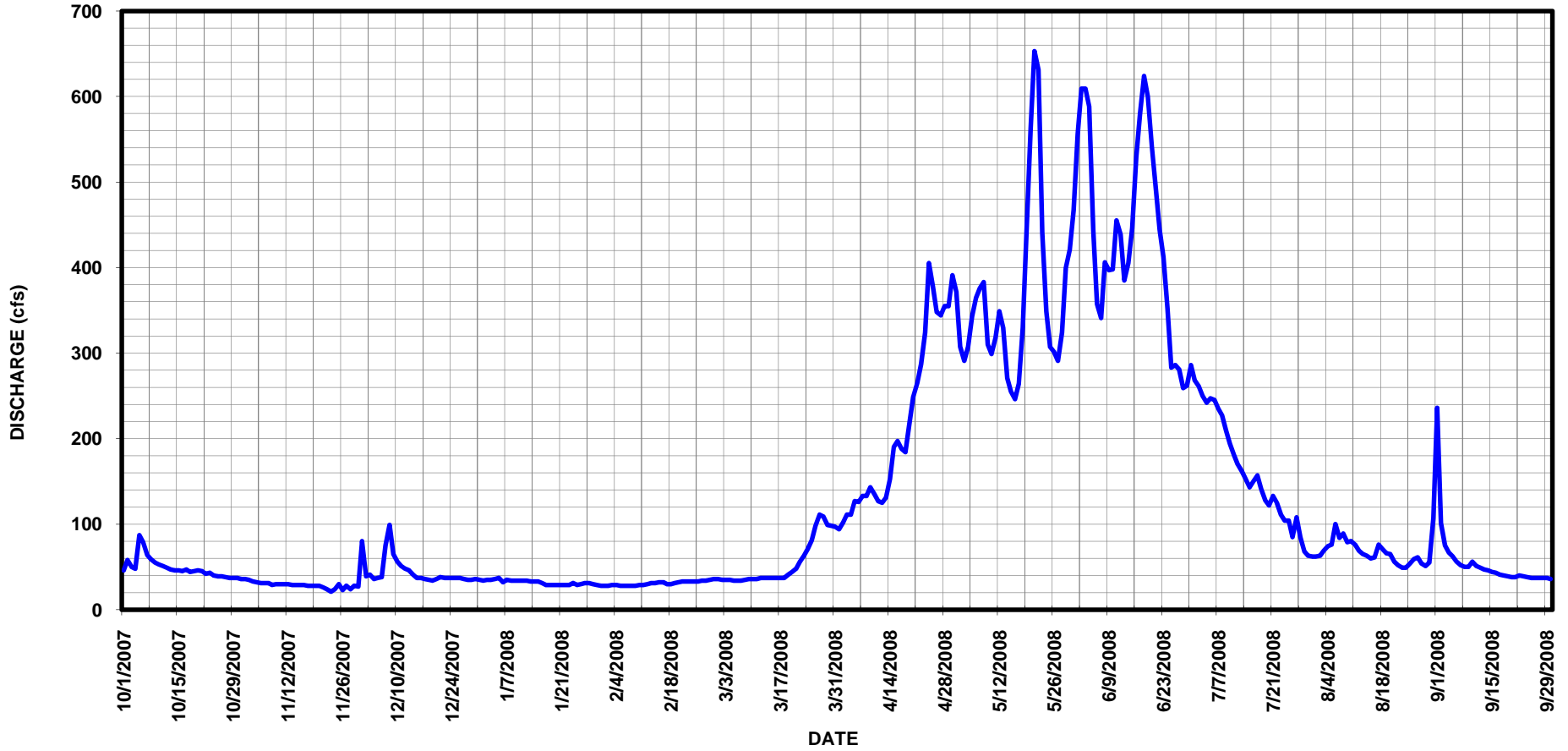
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	36	80	34e	28e	36e	94	371	556	268	62	236
2	58	35	39	35e	28e	35e	102	307	609	261	63	101
3	50	33	41	35e	29e	35e	111	291	609	250	69	75
4	48	32	36	36e	29e	35e	111	307	588	242	74	67
5	87	31	37	37	28e	34e	127	343	444	247	76	62
6	79	31	38	32	28e	34e	126	364	357	245	100	56
7	64	31	75	35	28e	34e	133	376	341	235	84	52
8	59	29	99	34e	28e	35e	133	383	406	227	89	50
9	55	30	65	34e	28e	36e	143	310	397	209	79	50
10	53	30	56	34e	29e	36e	135	299	398	194	80	56
11	51	30	51	34e	29e	36e	127	318	455	181	76	51
12	49	30	48	34e	30e	37e	125	349	439	170	69	49
13	47	29	46e	33e	31e	37e	131	330	385	162	65	47
14	46	29	41e	33e	31e	37e	153	271	405	153	63	46
15	46	29	37e	33e	32e	37e	190	255	446	143	60	44
16	45	29	37e	31e	32e	37e	197	246	529	150	61	43
17	47	28	36e	29e	30e	37e	188	264	580	157	76	41
18	44	28	35e	29e	30e	37e	184	330	624	141	71	40
19	45	28	34e	29e	31e	41e	218	443	600	128	66	39
20	46	28	36	29e	32e	44e	249	562	541	122	65	38
21	45	26	38	29e	33e	48e	265	653	495	133	56	38
22	42	24	37e	29e	33e	56	287	631	444	125	52	40
23	43	21	37e	29e	33e	63	324	441	412	111	49	39
24	40	24	37e	31e	33e	71	405	349	352	104	49	38
25	39	30	37e	29e	33e	81	377	307	283	104	54	37
26	39	23	37e	30e	34e	98	348	301	286	85	59	37
27	38	28	36e	31e	34e	111	344	291	281	108	61	37
28	37	24	35e	31e	35e	109	355	324	259	85	54	37
29	37	28	35e	30e	36e	99	355	399	262	68	51	37
30	37	27	36e	29e	---	98	391	421	286	63	55	36
31	36	---	35e	28e	---	97	---	467	---	62	107	---
TOTAL	1498	861	1367	986	895	1661	6428	11303	13069	4933	2095	1619
MEAN	48.3	28.7	44.1	31.8	30.9	53.6	214	365	436	159	67.6	54.0
AC-FT	2970	1710	2710	1960	1780	3290	12750	22420	25920	9780	4160	3210
MAX	87	36	99	37	36	111	405	653	624	268	107	236
MIN	36	21	34	28	28	34	94	246	259	62	49	36
CAL YR 2007	TOTAL	37032	MEAN	101	MAX	408	MIN	20	AC-FT	73450		
WTR YR 2008	TOTAL	46715	MEAN	128	MAX	653	MIN	21	AC-FT	92660		

MAX DISCH: 826 CFS AT 20:00 ON May. 20, 2008 GH 3.88 FT. FLUSH CORR -0.10 FT. SHIFT -0.09 FT.  
MAX GH: 3.78 FT. (FLUSH CORR -0.10 FT.APPLIED) AT 20:00 ON May. 20, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.  
e - Estimated

09344000 NAVAJO RIVER AT BANDED PEAK RANCH NEAR CHROMO CO  
WY2008 HYDROGRAPH



SAN JUAN RIVER BASIN

OSO DIVERSION NEAR CHROMO, CO

LOCATION.--Lat 37°01'49", long 106°44'14", in NE¼NE¼ sec. 9, T.32 N., R.2 E., NMPM, Archuleta County.

DRAINAGE AREA AND PERIOD OF RECORD.--N/A

GAGE.--Graphic water-stage recorder and a Sutron Satlink 2 HDR DCP on separate floats in a concrete shelter and well at a 15-foot Parshall Flume. The primary record is hourly averages of 15 minute satellite data.

REMARKS.--Record is complete and reliable. Record good. Station maintained by the USBR and record developed by Brian Boughton.

RATING TABLE.--OSODIVCO01 USED FROM 01-OCT-2007 TO 30-SEP-2008

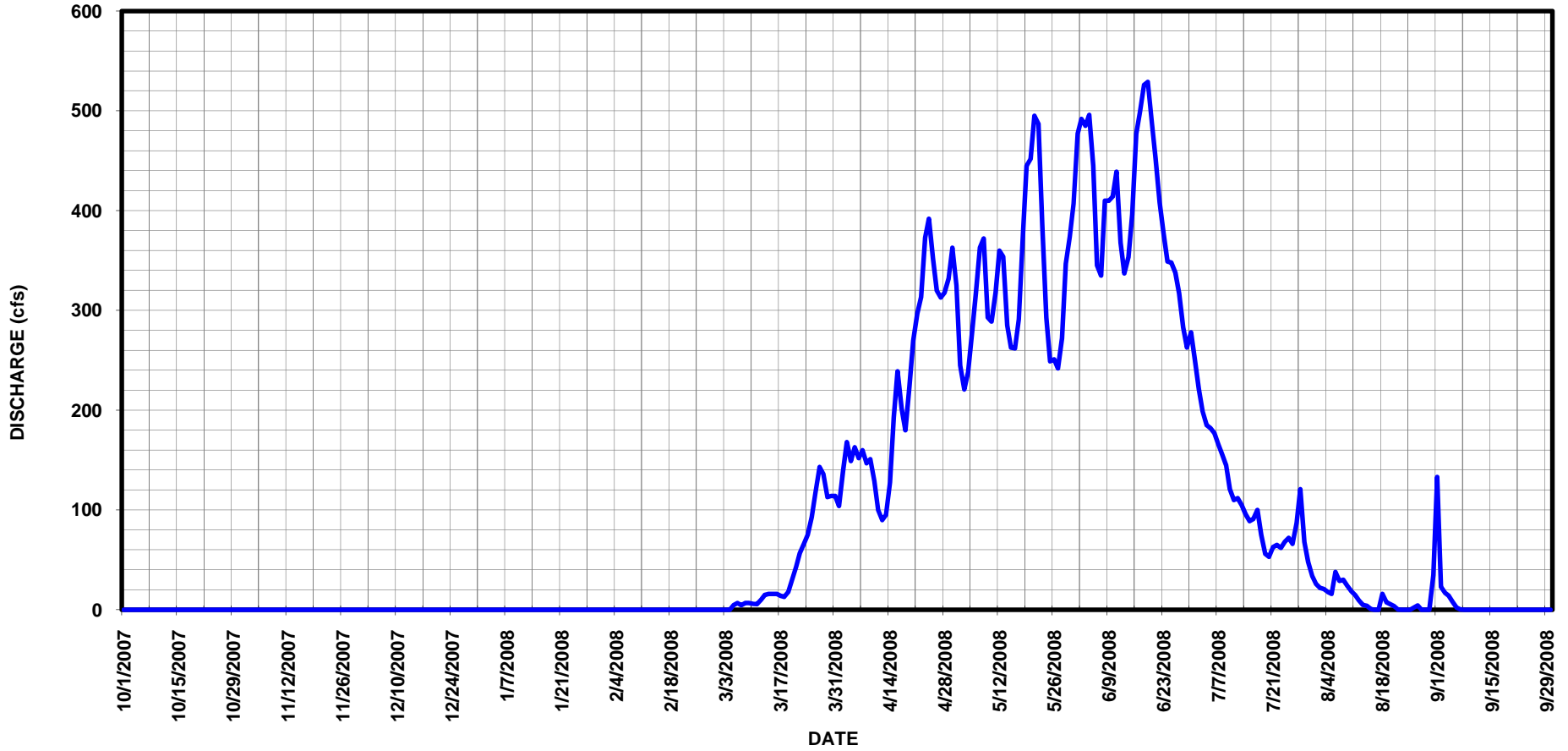
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	104	325	477	251	26	133
2	0	0	0	0	0	0	139	245	492	221	22	23
3	0	0	0	0	0	0	168	221	485	199	21	17
4	0	0	0	0	0	0	149	238	496	185	18	14
5	0	0	0	0	0	4.5	163	278	445	182	16	7.6
6	0	0	0	0	0	6.8	152	317	345	177	38	2.3
7	0	0	0	0	0	4.5	160	363	335	166	29	.19
8	0	0	0	0	0	6.7	147	372	410	156	30	0
9	0	0	0	0	0	6.9	151	293	410	145	24	0
10	0	0	0	0	0	5.9	129	289	414	121	19	0
11	0	0	0	0	0	5.6	100	318	439	110	15	0
12	0	0	0	0	0	10	90	360	368	112	9.5	0
13	0	0	0	0	0	15	95	354	337	105	5.0	0
14	0	0	0	0	0	16	128	285	353	96	4.0	0
15	0	0	0	0	0	16	193	263	396	89	.84	0
16	0	0	0	0	0	16	239	262	477	91	0	0
17	0	0	0	0	0	14	202	291	499	100	0	0
18	0	0	0	0	0	13	180	373	526	75	16	0
19	0	0	0	0	0	18	224	445	529	56	7.7	0
20	0	0	0	0	0	30	270	452	488	53	5.8	0
21	0	0	0	0	0	43	297	495	452	63	3.5	0
22	0	0	0	0	0	57	313	487	408	65	.31	0
23	0	0	0	0	0	66	373	386	378	62	0	0
24	0	0	0	0	0	75	392	293	349	68	0	0
25	0	0	0	0	0	93	352	249	348	72	0	0
26	0	0	0	0	0	118	320	251	338	66	2.2	0
27	0	0	0	0	0	143	313	242	317	87	4.4	0
28	0	0	0	0	0	136	318	272	283	121	0	0
29	0	0	0	0	0	113	332	347	263	68	0	0
30	0	0	0	0	---	114	363	374	278	48	0	0
31	0	---	0	0	---	114	---	407	---	34	35	---
TOTAL	0	0	0	0	0	1260.9	6556	10147	12135	3444	352.25	197.09
MEAN	0	0	0	0	0	40.7	219	327	405	111	11.4	6.57
AC-FT	0	0	0	0	0	2500	13000	20130	24070	6830	699	391
MAX	0	0	0	0	0	143	392	495	529	251	38	133
MIN	0	0	0	0	0	0	90	221	263	34	0	0
CAL YR 2007	TOTAL	23445.81	MEAN	64.2	MAX	357	MIN	0	AC-FT	46500		
WTR YR 2008	TOTAL	34092.24	MEAN	93.1	MAX	529	MIN	0	AC-FT	67620		

MAX DISCH: 589 CFS AT 05:00 ON May. 21, 2008 GH 4.27 FT. SHIFT 0 FT.  
MAX GH: 4.27 FT. AT 05:00 ON May. 21, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

OSO DIVERSION NEAR CHROMO CO  
WY2008 HYDROGRAPH



SAN JUAN RIVER BASIN

09344400 NAVAJO RIVER BELOW OSO DIVERSION DAM, NEAR CHROMO, CO

**LOCATION.**--Lat 37°01'49", long 106°44'14", in NE¼NW¼ sec. 9, T.32 N., R.2 E., NMPM, Archuleta County, Hydrologic Unit 14080101, on left bank 600 ft downstream from Oso Diversion Dam, 5.8 mi east of Chromo, and 6.1 mi upstream from Little Navajo River.

**DRAINAGE AREA AND PERIOD OF RECORD.**--100.5 mi<sup>2</sup>. March 1971 to current year.

**GAGE.**--Graphic water-stage recorder with a Sutron SatLink 2 HDR DCP and shaft encoder on separate floats in a concrete shelter and well. Control is an 8-ft. Parshall flume set in a flat wide concrete structure that acts as a weir at high flows. The primary reference gage is an electric drop tape in the gage shelter. The Parshall flume is equipped with a supplemental outside gage. The primary record is hourly averages of 15 minute satellite data. Datum of gage is 7,665.30 ft above mean sea level.

**REMARKS.**--Record is complete, any data missing from the initial satellite transmissions were filled in from the DCP's logger files. The record is reliable, except for the following periods: Dec. 17 - 20, Dec. 25 - 31, 2007, Jan. 1 - 4, Jan. 9 - 31, Feb. 1 - 20, 2008, when the stage-discharge relationship was affected by ice. Record good, except for those periods when ice affected the record, which are poor. Station maintained by Cheston Hart and record developed by Jason Morrow.

**RATING TABLE.**--NAVOSOCO04 USED FROM 01-Oct-2007 TO 30-Sep-2008

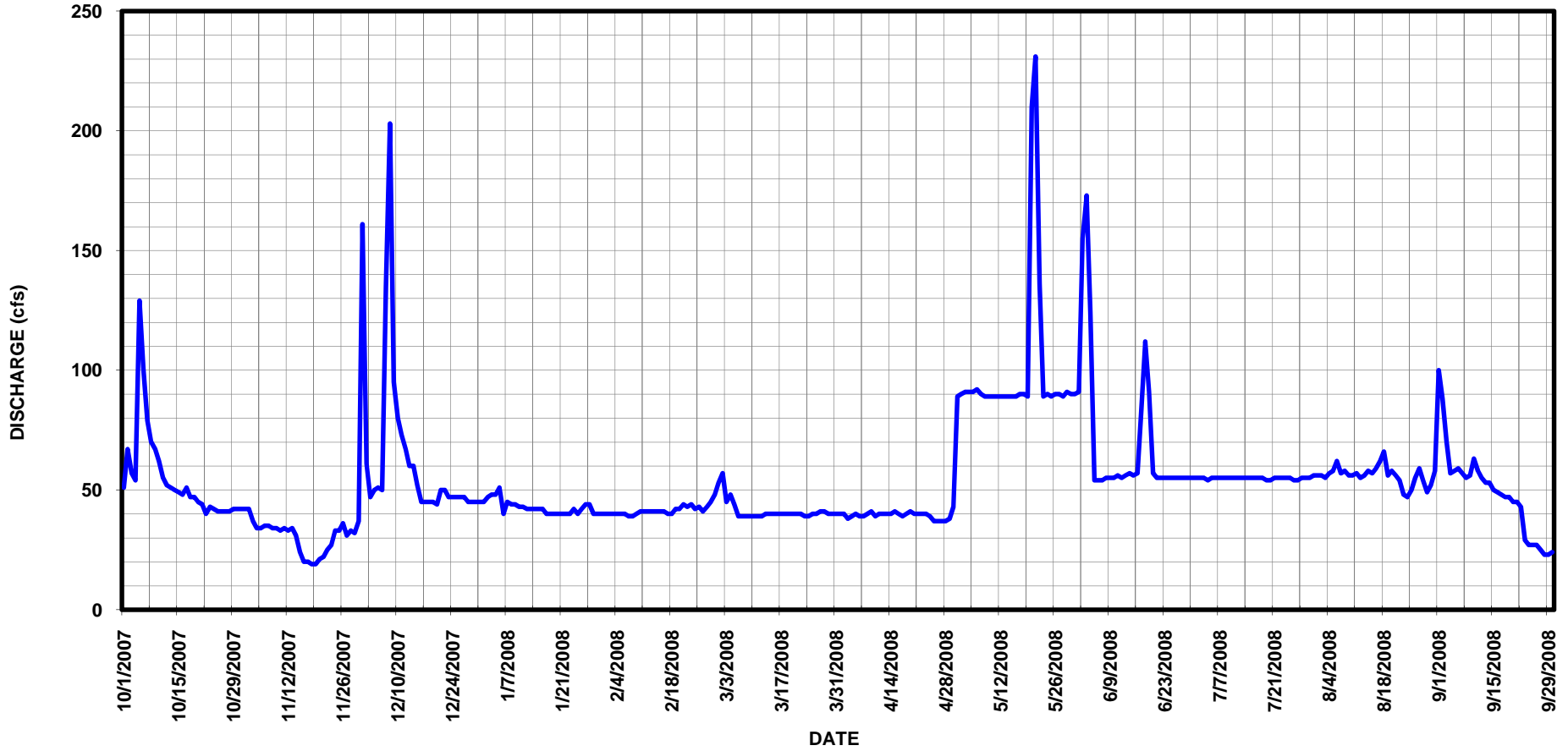
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	42	161	45e	40e	53	40	89	91	55	56	100
2	67	42	61	47e	40e	57	40	90	155	55	56	88
3	57	37	47	48e	40e	45	38	91	173	55	55	70
4	54	34	50	48e	40e	48	39	91	124	54	57	57
5	129	34	51	51	40e	44	40	91	54	55	58	58
6	101	35	50	40	40e	39	39	92	54	55	62	59
7	79	35	135	45	39e	39	39	90	54	55	57	57
8	70	34	203	44	39e	39	40	89	55	55	58	55
9	67	34	95	44e	40e	39	41	89	55	55	56	56
10	62	33	80	43e	41e	39	39	89	55	55	56	63
11	55	34	73	43e	41e	39	40	89	56	55	57	58
12	52	33	67	42e	41e	39	40	89	55	55	55	55
13	51	34	60	42e	41e	40	40	89	56	55	56	53
14	50	31	60	42e	41e	40	40	89	57	55	58	53
15	49	24	52	42e	41e	40	41	89	56	55	57	50
16	48	20	45	42e	41e	40	40	89	57	55	59	49
17	51	20	45e	40e	40e	40	39	90	83	55	62	48
18	47	19	45e	40e	40e	40	40	90	112	55	66	47
19	47	19	45e	40e	42e	40	41	89	91	54	56	47
20	45	21	44e	40e	42e	40	40	210	57	54	58	45
21	44	22	50	40e	44	40	40	231	55	55	56	45
22	40	25	50	40e	43	40	40	136	55	55	54	43
23	43	27	47	40e	44	39	40	89	55	55	48	29
24	42	33	47	42e	42	39	39	90	55	55	47	27
25	41	33	47e	40e	43	40	37	89	55	55	50	27
26	41	36	47e	42e	41	40	37	90	55	54	55	27
27	41	31	47e	44e	43	41	37	90	55	54	59	25
28	41	33	45e	44e	45	41	37	89	55	55	54	23
29	42	32	45e	40e	48	40	38	91	55	55	49	23
30	42	37	45e	40e	---	40	43	90	55	55	52	24
31	42	---	45e	40e	---	40	---	90	---	56	58	---
TOTAL	1691	924	1984	1320	1202	1280	1184	3089	2100	1701	1737	1461
MEAN	54.5	30.8	64.0	42.6	41.4	41.3	39.5	99.6	70.0	54.9	56.0	48.7
AC-FT	3350	1830	3940	2620	2380	2540	2350	6130	4170	3370	3450	2900
MAX	129	42	203	51	48	57	43	231	173	56	66	100
MIN	40	19	44	40	39	39	37	89	54	54	47	23
CAL YR 2007	TOTAL	19365	MEAN	53.1	MAX	203	MIN	19	AC-FT	38410		
WTR YR 2008	TOTAL	19673	MEAN	53.8	MAX	231	MIN	19	AC-FT	39020		

MAX DISCH: 485 CFS AT 13:00 ON May 21, 2008 GH 3.78 FT. SHIFT 0.01 FT.  
MAX GH: 4.32 FT. (ICE AFFECTED) AT 15:30 ON Jan. 23, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.  
e-Estimated.

09344400 NAVAJO RIVER BELOW OSO DIVERSION DAM NEAR CHROMO CO  
WY2008 HYDROGRAPH





SAN JUAN RIVER BASIN

LITTLE OSO DIVERSION NEAR CHROMO, CO

**LOCATION.**--Lat 37°04'32", long 106°48'38", in SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec. 23, T.33 N., R.1 E., NMPM, Archuleta County.

**DRAINAGE AREA AND PERIOD OF RECORD.**--N/A. March 1971 to current year.

**GAGE.**--Graphic water-stage recorder with Sutron Satlink 2 HDR DCP on separate floats in a concrete shelter at a 6-foot Parshall Flume. The primary record is hourly averages of 15 minute satellite data.

**REMARKS.**--Record is complete and reliable. Record good. Station maintained by the USBR and record developed by Brian Boughton.

**RATING TABLE.**--LOSODVCO01 USED FROM 01-OCT-2007 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

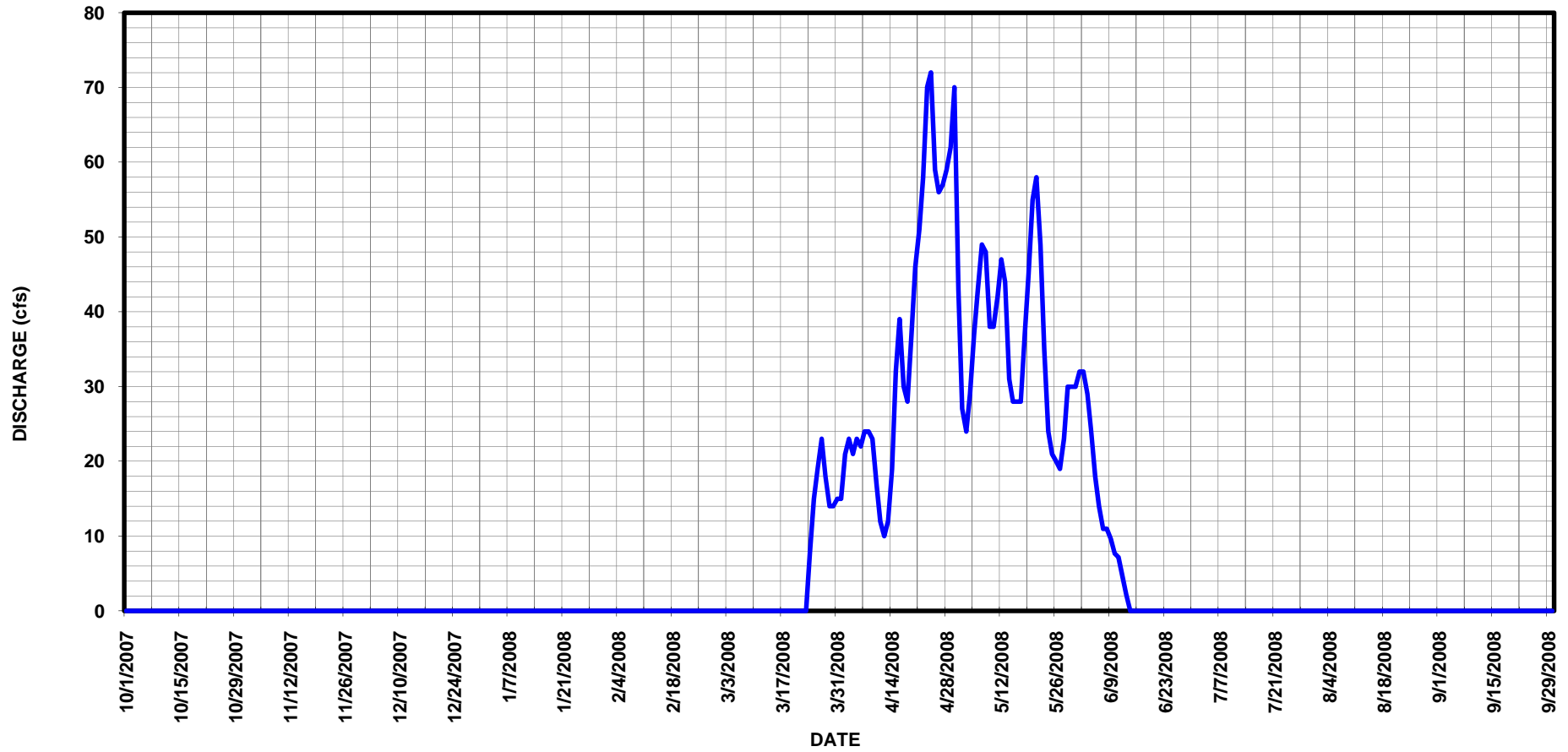
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	15	43	32	0	0	0
2	0	0	0	0	0	0	21	27	32	0	0	0
3	0	0	0	0	0	0	23	24	29	0	0	0
4	0	0	0	0	0	0	21	29	24	0	0	0
5	0	0	0	0	0	0	23	37	18	0	0	0
6	0	0	0	0	0	0	22	43	14	0	0	0
7	0	0	0	0	0	0	24	49	11	0	0	0
8	0	0	0	0	0	0	24	48	11	0	0	0
9	0	0	0	0	0	0	23	38	9.6	0	0	0
10	0	0	0	0	0	0	17	38	7.7	0	0	0
11	0	0	0	0	0	0	12	42	7.2	0	0	0
12	0	0	0	0	0	0	10	47	4.6	0	0	0
13	0	0	0	0	0	0	12	44	2.2	0	0	0
14	0	0	0	0	0	0	19	31	0	0	0	0
15	0	0	0	0	0	0	32	28	0	0	0	0
16	0	0	0	0	0	0	39	28	0	0	0	0
17	0	0	0	0	0	0	30	28	0	0	0	0
18	0	0	0	0	0	0	28	37	0	0	0	0
19	0	0	0	0	0	0	37	45	0	0	0	0
20	0	0	0	0	0	0	46	55	0	0	0	0
21	0	0	0	0	0	0	51	58	0	0	0	0
22	0	0	0	0	0	0	58	49	0	0	0	0
23	0	0	0	0	0	0	70	35	0	0	0	0
24	0	0	0	0	0	7.7	72	24	0	0	0	0
25	0	0	0	0	0	15	59	21	0	0	0	0
26	0	0	0	0	0	19	56	20	0	0	0	0
27	0	0	0	0	0	23	57	19	0	0	0	0
28	0	0	0	0	0	18	59	23	0	0	0	0
29	0	0	0	0	0	14	62	30	0	0	0	0
30	0	0	0	0	---	14	70	30	0	0	0	0
31	0	---	0	0	---	15	---	30	---	0	0	---
TOTAL	0	0	0	0	0	125.7	1092	1100	202.3	0	0	0
MEAN	0	0	0	0	0	4.05	36.4	35.5	6.74	0	0	0
AC-FT	0	0	0	0	0	249	2170	2180	401	0	0	0
MAX	0	0	0	0	0	23	72	58	32	0	0	0
MIN	0	0	0	0	0	0	10	19	0	0	0	0

CAL YR 2007	TOTAL	1591.42	MEAN	4.36	MAX	57	MIN	0	AC-FT	3160
WTR YR 2008	TOTAL	2520	MEAN	6.89	MAX	72	MIN	0	AC-FT	5000

MAX DISCH: 94.4 CFS AT 20:00 ON Apr. 23, 2008 GH 2.36 FT. SHIFT 0 FT.  
MAX GH: 2.36 FT. AT 20:00 ON Apr. 23, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

### LITTLE OSO DIVERSION NEAR CHROMO CO WY2008 HYDROGRAPH



SAN JUAN RIVER BASIN

09345200 LITTLE NAVAJO RIVER BELOW LITTLE OSO DIVERSION DAM NEAR CHROMO, CO

**LOCATION.**--Lat 37°04'32", long 106°48'38", in SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 23, T.33 N., R.1 E., NMPM, Archuleta County, on right bank downstream from Little Oso Diversion Dam.

**DRAINAGE AREA AND PERIOD OF RECORD.**--N/A, December 5, 1996 to current year.

**GAGE.**--Graphic water-stage recorder and a Sutron SatLink 2 HDR DCP and shaft encoder on separate floats in a wooden shelter and concrete well. The primary reference gage is a drop tape in the gage. Supplemental outside staff gage. Control is a 5-foot Parshall flume set in concrete. The primary record is hourly averages of 15 minute satellite data, with chart record used as backup.

**REMARKS.**--The record is complete. Record is reliable, except for the following periods: Jan. 17-21, 2008, when the stage-discharge relationship was affected by ice; and, Apr. 11-12, 2008, when the culvert downstream of the flume became plugged and submerged the Parshall flume. Record fair, except for those periods of ice affected record and when the culvert plugged and caused the flume to submerge, which are poor. Station maintained by Sherry Schutz and record developed by Brian Boughton.

**RATING TABLE.**--LITOSOCO1 USED FROM 01-OCT-2007 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

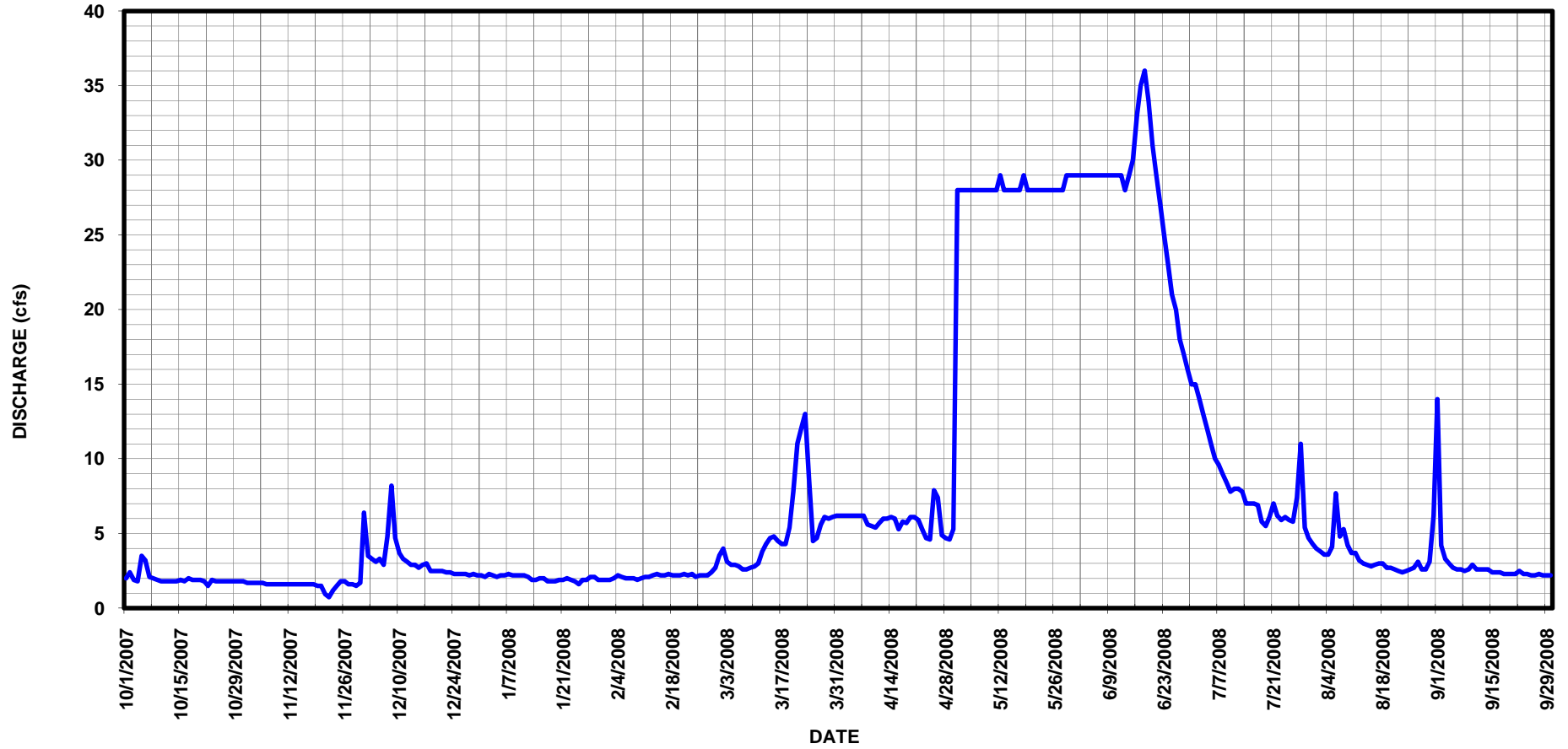
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	1.7	6.4	2.1	1.9	3.5	6.2	28	29	15	4.0	14
2	2.4	1.7	3.5	2.3	1.9	4.0	6.2	28	29	14	3.8	4.2
3	1.9	1.7	3.3	2.2	2.0	3.1	6.2	28	29	13	3.6	3.3
4	1.8	1.7	3.1	2.1	2.2	2.9	6.2	28	29	12	3.6	3.0
5	3.5	1.7	3.3	2.2	2.1	2.9	6.2	28	29	11	4.1	2.7
6	3.2	1.6	2.9	2.2	2.0	2.8	6.2	28	29	10	7.7	2.6
7	2.1	1.6	4.8	2.3	2.0	2.6	6.2	28	29	9.6	4.8	2.6
8	2.0	1.6	8.2	2.2	2.0	2.6	5.6	28	29	9.0	5.3	2.5
9	1.9	1.6	4.7	2.2	1.9	2.7	5.5	28	29	8.4	4.2	2.6
10	1.8	1.6	3.7	2.2	2.0	2.8	5.4	28	29	7.8	3.7	2.9
11	1.8	1.6	3.3	2.2	2.1	3.0	5.7e	28	29	8.0	3.7	2.6
12	1.8	1.6	3.1	2.1	2.1	3.8	6.0e	29	29	8.0	3.2	2.6
13	1.8	1.6	2.9	1.9	2.2	4.3	6.0	28	28	7.8	3.0	2.6
14	1.8	1.6	2.9	1.9	2.3	4.7	6.1	28	29	7.0	2.9	2.6
15	1.9	1.6	2.7	2.0	2.2	4.8	6.0	28	30	7.0	2.8	2.4
16	1.8	1.6	2.9	2.0	2.2	4.5	5.3	28	33	7.0	2.9	2.4
17	2.0	1.6	3.0	1.8e	2.3	4.3	5.8	28	35	6.9	3.0	2.4
18	1.9	1.6	2.5	1.8e	2.2	4.3	5.7	29	36	5.8	3.0	2.3
19	1.9	1.5	2.5	1.8e	2.2	5.4	6.1	28	34	5.5	2.7	2.3
20	1.9	1.5	2.5	1.9e	2.2	7.8	6.1	28	31	6.1	2.7	2.3
21	1.8	.93	2.5	1.9e	2.3	11	5.9	28	29	7.0	2.6	2.3
22	1.5	.74	2.4	2.0	2.2	12	5.3	28	27	6.2	2.5	2.5
23	1.9	1.2	2.4	1.9	2.3	13	4.7	28	25	5.9	2.4	2.3
24	1.8	1.5	2.3	1.8	2.1	8.7	4.6	28	23	6.1	2.5	2.3
25	1.8	1.8	2.3	1.6	2.2	4.5	7.9	28	21	5.9	2.6	2.2
26	1.8	1.8	2.3	1.9	2.2	4.7	7.4	28	20	5.8	2.7	2.2
27	1.8	1.6	2.3	1.9	2.2	5.6	4.9	28	18	7.4	3.1	2.3
28	1.8	1.6	2.2	2.1	2.4	6.1	4.7	28	17	11	2.6	2.2
29	1.8	1.5	2.3	2.1	2.7	6.0	4.6	29	16	5.4	2.6	2.2
30	1.8	1.7	2.2	1.9	---	6.1	5.3	29	15	4.7	3.1	2.2
31	1.8	---	2.2	1.9	---	6.2	---	29	---	4.3	6.2	---
TOTAL	60.8	46.67	97.6	62.4	62.6	160.7	174.0	873	815	248.6	107.6	87.6
MEAN	1.96	1.56	3.15	2.01	2.16	5.18	5.80	28.2	27.2	8.02	3.47	2.92
AC-FT	121	93	194	124	124	319	345	1730	1620	493	213	174
MAX	3.5	1.8	8.2	2.3	2.7	13	7.9	29	36	15	7.7	14
MIN	1.5	.74	2.2	1.6	1.9	2.6	4.6	28	15	4.3	2.4	2.2

CAL YR	2007	TOTAL	2251.37	MEAN	6.17	MAX	29	MIN	1.9	AC-FT	4470
WTR YR	2008	TOTAL	2796.57	MEAN	7.64	MAX	36	MIN	0.74	AC-FT	5550

MAX DISCH: 41.4 CFS AT 22:45 ON Aug. 31, 2008 GH 1.61 FT. SHIFT -0.03 FT.  
MAX GH: 1.61 FT. AT 22:45 ON Aug. 31, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.  
e-Estimated.

09345200 LITTLE NAVAJO RIVER BELOW LITTLE OSO DIVERSION DAM NEAR CHROMO CO  
WY2008 HYDROGRAPH



SAN JUAN RIVER BASIN

09362750 FLORIDA RIVER ABOVE LEMON RESERVOIR NEAR DURANGO, CO

LOCATION.--Lat 37°25'36", long 107°40'28", in SW<sup>4</sup>NE<sup>4</sup> sec. 31, T.37 N., R.7 W., NMPM, La Plata County.

DRAINAGE AREA AND PERIOD OF RECORD.--50.9 mi<sup>2</sup>, July 1972 to current year.

GAGE.--Graphic water stage-recorder and a Sutron Satlink 2 HDR DCP with a shaft encoder on a separate float in a 72-inch by 72-inch exposed aggregate concrete shelter and a 42" corrugated metal pipe well. The floats are located inside a 14 inch PVC oil cylinder. The primary record is hourly averages of 15 minute satellite data, with chart record used as backup. The station is also equipped with a Sutron air temperature sensor. The primary reference gage is an electric drop tape with a separate steel drop tape used when the well is frozen around the oil cylinder. Datum of gage is 8,160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--The record is complete and reliable, except for the following periods: Dec. 15 - 31, 2007, Jan. 1 - 31, Feb. 1 - 13, 2008, when ice on the control affected the gage height. Record good, except for periods of ice affected record, which are poor. Station maintained and record developed by Jason Morrow.

RATING TABLE.--FLOALECO07 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

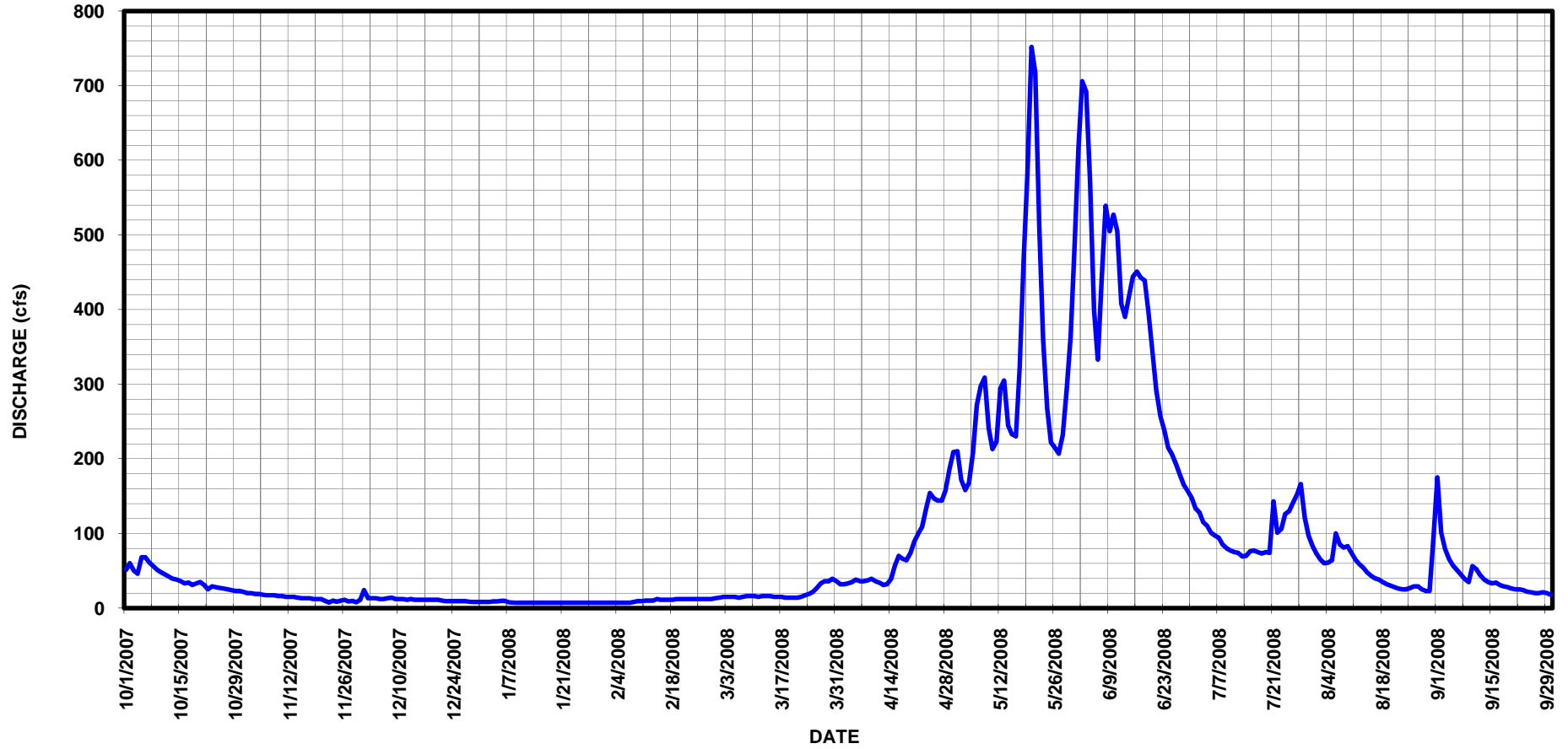
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	20	24	8.0e	7.0e	14	32	210	617	134	73	175
2	60	20	13	8.0e	7.0e	15	32	172	706	128	65	101
3	50	19	13	8.9e	7.0e	15	33	158	692	115	60	79
4	46	19	13	8.9e	7.0e	15	35	168	575	110	61	66
5	68	18	12	9.7e	7.0e	15	38	209	400	101	64	57
6	68	17	12	9.4e	7.0e	14	36	272	333	97	100	51
7	61	17	13	7.9e	7.0e	15	36	298	445	94	85	45
8	56	17	14	7.5e	8.0e	16	37	309	539	85	81	39
9	51	16	12	7.0e	9.0e	16	39	241	505	80	83	35
10	48	16	12	7.0e	9.0e	16	36	213	527	77	74	56
11	45	15	12	7.0e	10e	15	34	223	506	75	65	52
12	42	15	11	7.0e	10e	16	31	294	408	74	59	44
13	39	15	12	7.0e	10e	16	32	305	390	69	54	38
14	38	14	11	7.0e	12	16	39	245	418	70	48	35
15	36	13	11e	7.0e	11	15	57	233	444	76	43	33
16	33	13	11e	7.0e	11	15	70	230	451	77	40	34
17	34	13	11e	7.0e	11	15	66	323	443	75	38	31
18	31	12	11e	7.0e	11	14	64	467	439	73	35	29
19	33	12	11e	7.0e	12	14	74	583	396	75	32	28
20	35	12	11e	7.0e	12	14	89	752	342	74	30	26
21	31	9.6	10e	7.0e	12	14	100	717	292	143	28	25
22	25	7.4	9.0e	7.0e	12	15	109	509	257	101	26	25
23	29	10	9.0e	7.0e	12	17	133	360	239	106	25	24
24	28	8.4	9.0e	7.0e	12	19	154	268	215	126	25	22
25	27	10	9.0e	7.0e	12	22	147	222	206	130	27	21
26	26	11	9.0e	7.0e	12	27	144	215	193	141	29	20
27	25	8.9	9.0e	7.0e	12	33	144	207	179	152	29	20
28	24	9.5	8.5e	7.0e	12	36	158	232	165	166	25	21
29	23	7.8	8.0e	7.0e	13	36	187	291	157	121	23	20
30	23	11	8.0e	7.0e	---	39	209	364	148	97	23	18
31	22	---	8.0e	7.0e	---	36	---	481	---	83	97	---
TOTAL	1208	406.6	346.5	229.3	294.0	595	2395	9771	11627	3125	1547	1270
MEAN	39.0	13.6	11.2	7.40	10.1	19.2	79.8	315	388	101	49.9	42.3
AC-FT	2400	806	687	455	583	1180	4750	19380	23060	6200	3070	2520
MAX	68	20	24	9.7	13	39	209	752	706	166	100	175
MIN	22	7.4	8.0	7.0	7.0	14	31	158	148	69	23	18

CAL YR	2007	TOTAL	30684.1	MEAN	84.1	MAX	558	MIN	7.4	AC-FT	60860
WTR YR	2008	TOTAL	32814.4	MEAN	89.7	MAX	752	MIN	7.0	AC-FT	65090

MAX DISCH: 924 CFS AT 23:00 ON May. 20, 2008 GH 3.79 FT. SHIFT 0.01 FT.  
MAX GH: 3.79 FT. AT 23:00 ON May. 20, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.  
e-Estimated

09362750 FLORIDA RIVER ABOVE LEMON RESERVOIR NEAR DURANGO CO  
WY2008 HYDROGRAPH



SAN JUAN RIVER BASIN

FLORIDA RIVER BELOW LEMON RESERVOIR NEAR DURANGO, CO

**LOCATION.**--Lat 37°22'50", long 107°39'43", in NE¼NW¼ sec. 20, T.36 N., R.7 W., NMPM, La Plata County.

**DRAINAGE AREA AND PERIOD OF RECORD.**--69.1 mi<sup>2</sup>.

**GAGE.**--Water-stage recorder with a Sutron Satlink 2 HDR DCP with a shaft encoder on a separate float in a 42" corrugated metal shelter and well and a concrete control. The primary reference gage is a steel drop tape in the gage shelter with an electric tape for backup. The primary record is hourly averages of 15 minute satellite data, with chart record used as backup. Datum of gage is 7,960 ft above National Geodetic Vertical Datum of 1929, from topographic map.

**REMARKS.**--Record is complete and reliable. Record good. Diversions for irrigation of up to 80 acres upstream of gage. Flow regulated by Lemon Reservoir, capacity 40,100 acre feet. Station maintained and record developed by Jason Morrow.

**RATING TABLE.**--FLOBLECO02 USED FROM 01-Oct-2007 TO 30-Sep-2008

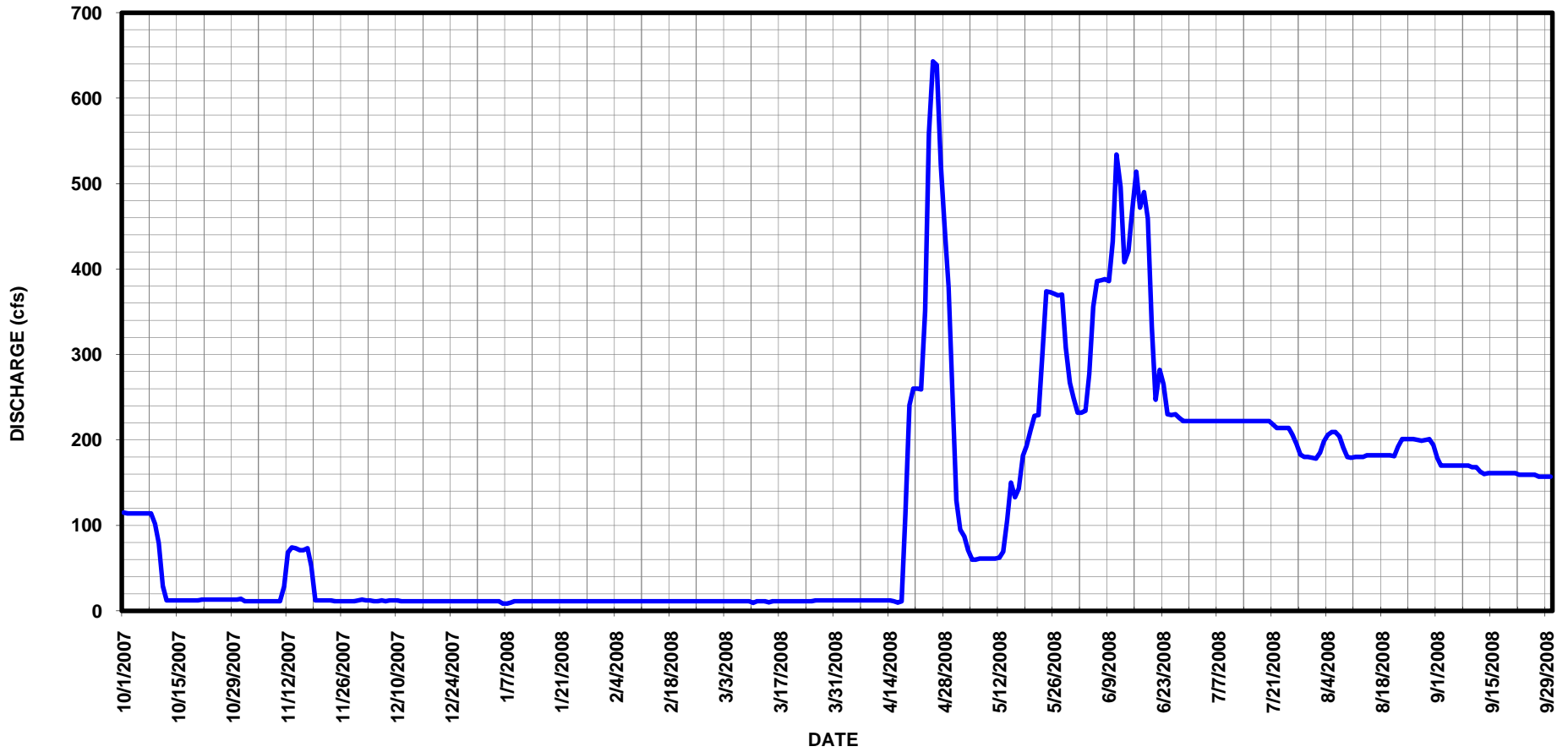
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115	11	13	11	11	11	12	129	232	222	178	179
2	114	11	12	11	11	11	12	95	232	222	185	170
3	114	11	12	11	11	11	12	87	234	222	198	170
4	114	11	11	11	11	11	12	71	277	222	206	170
5	114	11	11	11	11	11	12	60	356	222	209	170
6	114	11	12	8.3	11	11	12	60	386	222	209	170
7	114	11	11	8.3	11	11	12	61	387	222	204	170
8	114	11	12	9.5	11	11	12	61	388	222	191	170
9	102	11	12	11	11	11	12	61	386	222	180	170
10	79	11	12	11	11	9.3	12	61	432	222	179	168
11	29	28	11	11	11	11	12	61	534	222	180	168
12	12	68	11	11	11	11	12	62	496	222	180	163
13	12	74	11	11	11	11	12	69	408	222	180	160
14	12	73	11	11	11	10	12	106	421	222	182	161
15	12	71	11	11	11	11	11	150	468	222	182	161
16	12	71	11	11	11	11	9.6	133	514	222	182	161
17	12	73	11	11	11	11	11	143	472	222	182	161
18	12	52	11	11	11	11	113	181	490	222	182	161
19	12	12	11	11	11	11	241	193	459	222	182	161
20	12	12	11	11	11	11	260	212	332	222	182	161
21	13	12	11	11	11	11	260	228	247	218	181	161
22	13	12	11	11	11	11	259	229	282	214	192	159
23	13	12	11	11	11	11	351	298	265	214	201	159
24	13	11	11	11	11	11	559	374	230	214	201	159
25	13	11	11	11	11	11	643	373	229	214	201	159
26	13	11	11	11	11	12	639	371	230	206	201	159
27	13	11	11	11	11	12	522	369	226	195	200	157
28	13	11	11	11	11	12	449	370	222	183	199	157
29	13	11	11	11	11	12	379	308	222	180	200	157
30	13	12	11	11	---	12	257	267	222	180	201	157
31	14	---	11	11	---	12	---	249	---	179	194	---
TOTAL	1375	758	349	334.1	319	344.3	5131.6	5492	10279	6637	5924	4909
MEAN	44.4	25.3	11.3	10.8	11.0	11.1	171	177	343	214	191	164
AC-FT	2730	1500	692	663	633	683	10180	10890	20390	13160	11750	9740
MAX	115	74	13	11	11	12	643	374	534	222	209	179
MIN	12	11	11	8.3	11	9.3	9.6	60	222	179	178	157
CAL YR 2007	TOTAL	40309	MEAN	110	MAX	575	MIN	11	AC-FT	79950		
WTR YR 2008	TOTAL	41852	MEAN	114	MAX	643	MIN	8.3	AC-FT	83010		

MAX DISCH: 653 CFS AT 04:15 ON Apr. 25, 2008 GH 4.31 FT. SHIFT 0.03 FT.  
MAX GH: 4.31 FT. AT 04:15 ON Apr. 25, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

### FLORIDA RIVER BELOW LEMON RESERVOIR NEAR DURANGO CO WY2008 HYDROGRAPH





SAN JUAN RIVER BASIN

09357500 ANIMAS RIVER AT HOWARDSVILLE, CO

LOCATION.--Lat 37°49'59", long 107°35'56", in SE¼SE¼ sec. 2, T.41 N., R.7 W., NMPM, San Juan County.

DRAINAGE AREA AND PERIOD OF RECORD.--55.9 mi<sup>2</sup>, May 1936 to current year.

GAGE.-- Graphic water-stage recorder and a Sutron Satlink 2 DCP with a shaft encoder on a separate float in a 36"x 36" wooden shelter and well. The primary reference gage is a steel drop tape referenced to an adjustable reference point on the instrument shelf. An air temperature sensor is also installed at the gage. The primary record is hourly averages of 15 minute satellite data, with chart record used as backup. Datum of gage is 9,616.98 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 18, 1939, at datum 1.00 ft. higher.

REMARKS.--The record is complete. Record is reliable, except for the following periods when the stage-discharge relationship was affected by ice: Nov. 24, 27, 29, Dec. 12-18, 22-24, 26, 28, 30-31, 2007, Jan. 1, 8, 10, 13-20, 23, 26-27, 29, 31 Feb. 5-9, 18-19, 25, 27, 29, Mar. 3-8, 11, 15-16, 19, 22-24, 2008. Record good, except for periods of ice affected record, which are poor. Station maintained by Cheston Hart and record developed by Jason Morrow.

RATING TABLE.--ANIHOWCO08 USED FROM 01-Oct-2007 TO 30-Sep-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

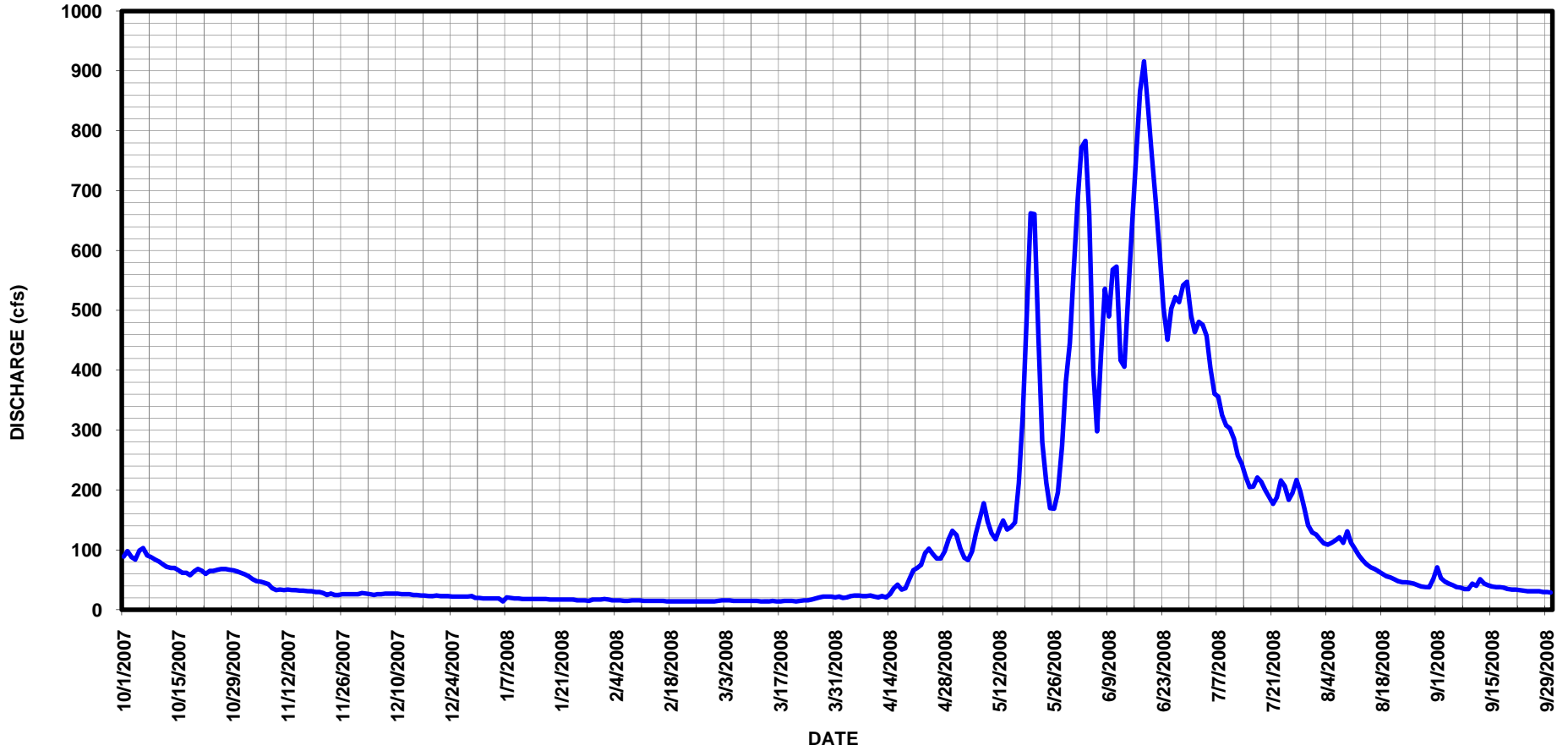
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	59	28	19e	18	15	22	125	685	464	126	71
2	98	56	27	19	17	16	20	103	772	481	118	53
3	88	51	26	19	16	16e	21	87	783	476	111	47
4	84	48	25	19	16	16e	23	83	662	457	109	44
5	99	47	26	19	16e	15e	24	98	401	404	112	41
6	103	45	26	14	15e	15e	24	128	298	361	116	38
7	91	43	27	21	15e	15e	23	153	429	356	121	37
8	88	36	27	20e	16e	15e	23	178	536	325	112	35
9	84	33	27	19	16e	15	24	147	490	308	131	35
10	81	34	27	19e	16	15	22	128	568	303	112	44
11	76	33	26	18	15	15e	21	118	573	286	101	40
12	72	34	26e	18	15	14	23	135	417	258	91	51
13	70	33	26e	18e	15	14	21	149	406	244	82	44
14	70	33	25e	18e	15	14	26	134	532	223	76	41
15	66	32	25e	18e	15	15e	36	138	646	205	71	39
16	62	32	24e	18e	15	14e	42	146	761	206	68	38
17	62	31	24e	18e	14	14	34	212	866	221	64	38
18	58	31	23e	17e	14e	15	36	325	916	214	60	37
19	64	30	23	17e	14e	15e	52	484	843	200	56	35
20	68	30	24	17e	14	15	66	662	758	189	54	34
21	65	28	23	17	14	14	70	661	685	177	51	34
22	60	25	23e	17	14	15e	75	454	597	188	48	33
23	65	27	23e	17e	14	16e	95	280	505	216	46	32
24	65	25e	22e	17	14	16e	102	212	451	207	46	31
25	67	25	22	16	14e	17	93	170	503	184	45	31
26	68	26	22e	16e	14	19	86	169	522	195	44	31
27	68	26e	22	16e	14e	21	86	196	514	217	41	31
28	67	26	22e	15	14	22	97	273	542	198	39	30
29	66	26e	23	17e	14e	22	118	380	548	169	38	30
30	64	26	20e	17	---	22	132	446	492	141	38	29
31	62	---	20e	17e	---	21	---	564	---	129	52	---
TOTAL	2290	1031	754	547	433	503	1537	7538	17701	8202	2379	1154
MEAN	73.9	34.4	24.3	17.6	14.9	16.2	51.2	243	590	265	76.7	38.5
AC-FT	4540	2040	1500	1080	859	998	3050	14950	35110	16270	4720	2290
MAX	103	59	28	21	18	22	132	662	916	481	131	71
MIN	58	25	20	14	14	14	20	83	298	129	38	29

CAL YR	2007	TOTAL	41830	MEAN	115	MAX	651	MIN	14	AC-FT	82970
WTR YR	2008	TOTAL	44069	MEAN	120	MAX	916	MIN	14	AC-FT	87410

MAX DISCH: 1260 CFS AT 20:45 ON Jun. 18, 2008 GH 3.59 FT. SHIFT -0.05 FT.  
MAX GH: 3.59 FT. AT 20:45 ON Jun. 18, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.  
e = Estimated.

09357500 ANIMAS RIVER AT HOWARDSVILLE CO  
WY2008 HYDROGRAPH



SAN JUAN RIVER BASIN

LA PLATA AND CHERRY CREEK DITCH NEAR HESPERUS, CO

LOCATION.--Lat 37°19'26", long 108°03'41", in SE¼NW¼ sec. 3, T.35 N., R.11 W., NMPM, La Plata County.

DRAINAGE AREA AND PERIOD OF RECORD.--N/A

GAGE.--Sutron Satlink DCP with a shaft encoder in a wood shelter and corrugated metal well at a a 5-foot concrete Parshall Flume. The primary record is hourly averages of 15 minute DCP log data with satellite data used for backup purposes. Primary reference gage is a staff gage installed inside the stilling well.

REMARKS.--Record is complete and reliable. Record good. Station maintained by Matthew A. Schmitt. Record developed by Brian Boughton.

RATING TABLE.--LPCDITCO1 USED FROM 01-OCT-2007 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

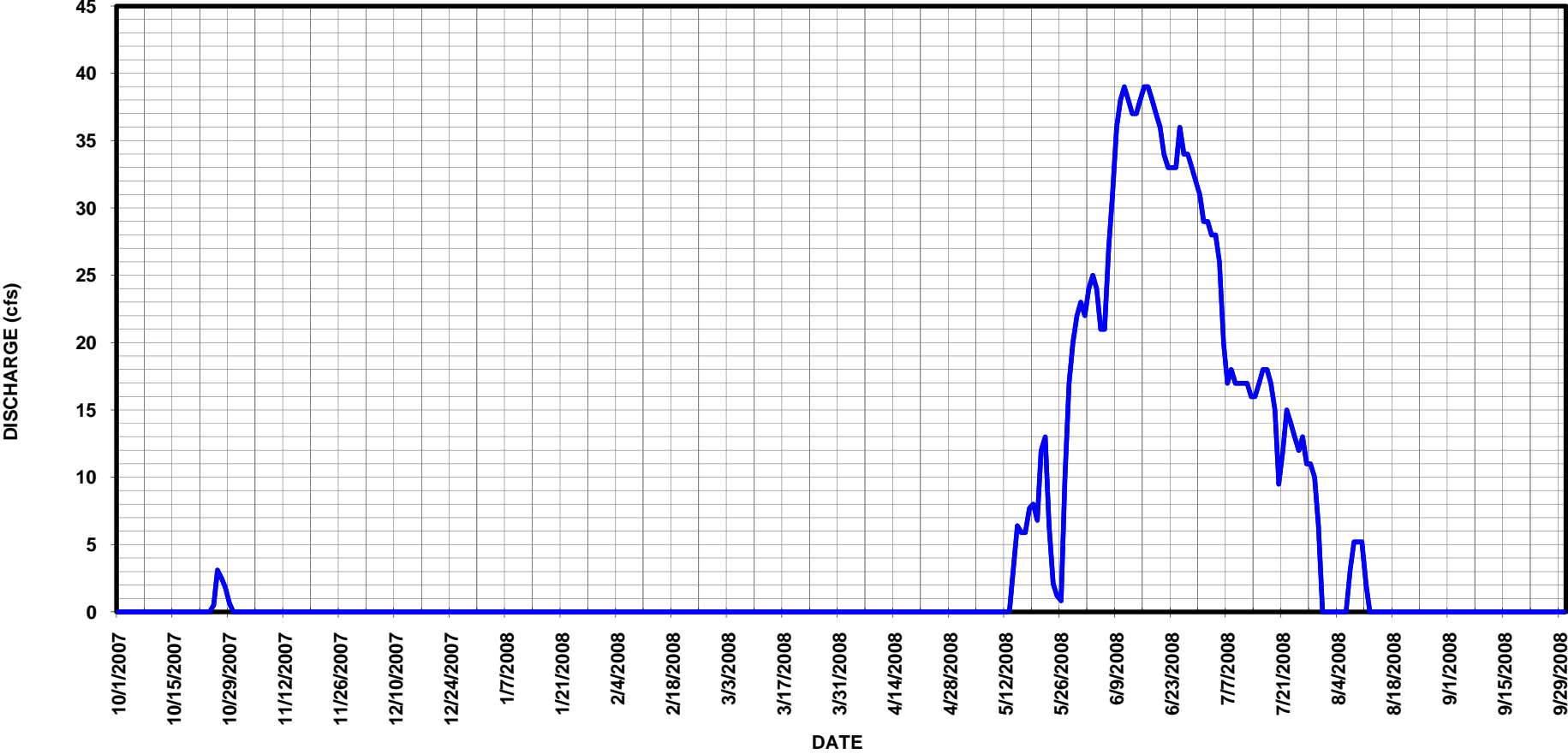
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	22	29	0	0
2	0	0	0	0	0	0	0	0	24	29	0	0
3	0	0	0	0	0	0	0	0	25	28	0	0
4	0	0	0	0	0	0	0	0	24	28	0	0
5	0	0	0	0	0	0	0	0	21	26	0	0
6	0	0	0	0	0	0	0	0	21	20	0	0
7	0	0	0	0	0	0	0	0	27	17	3.1	0
8	0	0	0	0	0	0	0	0	31	18	5.2	0
9	0	0	0	0	0	0	0	0	36	17	5.2	0
10	0	0	0	0	0	0	0	0	38	17	5.2	0
11	0	0	0	0	0	0	0	0	39	17	2.1	0
12	0	0	0	0	0	0	0	0	38	17	0	0
13	0	0	0	0	0	0	0	.06	37	16	0	0
14	0	0	0	0	0	0	0	3.4	37	16	0	0
15	0	0	0	0	0	0	0	6.4	38	17	0	0
16	0	0	0	0	0	0	0	5.9	39	18	0	0
17	0	0	0	0	0	0	0	5.9	39	18	0	0
18	0	0	0	0	0	0	0	7.7	38	17	0	0
19	0	0	0	0	0	0	0	8.0	37	15	0	0
20	0	0	0	0	0	0	0	6.8	36	9.5	0	0
21	0	0	0	0	0	0	0	12	34	12	0	0
22	0	0	0	0	0	0	0	13	33	15	0	0
23	0	0	0	0	0	0	0	6.4	33	14	0	0
24	0	0	0	0	0	0	0	2.1	33	13	0	0
25	.49	0	0	0	0	0	0	1.2	36	12	0	0
26	3.1	0	0	0	0	0	0	.84	34	13	0	0
27	2.5	0	0	0	0	0	0	10	34	11	0	0
28	1.8	0	0	0	0	0	0	17	33	11	0	0
29	.62	0	0	0	0	0	0	20	32	10	0	0
30	0	0	0	0	---	0	0	22	31	6.4	0	0
31	0	---	0	0	---	0	---	23	---	0	0	---
TOTAL	8.51	0	0	0	0	0	0	171.70	980	506.9	20.8	0
MEAN	.27	0	0	0	0	0	0	5.54	32.7	16.4	.67	0
AC-FT	17	0	0	0	0	0	0	341	1940	1010	41	0
MAX	3.1	0	0	0	0	0	0	23	39	29	5.2	0
MIN	0	0	0	0	0	0	0	0	21	0	0	0

CAL YR	2007	TOTAL	1126.91	MEAN	3.09	MAX	25	MIN	0	AC-FT	2240
WTR YR	2008	TOTAL	1687.91	MEAN	4.61	MAX	39	MIN	0	AC-FT	3350

MAX DISCH: 40.6 CFS AT 23:45 ON Jun. 16, 2008 GH 1.45 FT. SHIFT 0.11 FT.  
MAX GH: 1.45 FT. AT 23:45 ON Jun. 16, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.

LA PLATA AND CHERRY CREEK DITCH NEAR HESPERUS CO  
WY2008 HYDROGRAPH



SAN JUAN RIVER BASIN

PINE RIDGE DITCH NEAR HESPERUS, CO

LOCATION.--Lat 37°17'31", long 108°02'07", in SW<sup>4</sup>NE<sup>4</sup> sec. 14, T.35 N., R.11 W., NMPM, La Plata County.

DRAINAGE AREA AND PERIOD OF RECORD.--N/A

GAGE.--Sutron Stage Discharge Recorder (SDR) and a Sutron Satlink 2 DCP with a shaft encoder on a separate float in a 30" diameter corrugated metal well and a 42" diameter corrugated metal shelter. Hourly averages of 15-minute DCP log data is the primary record with the SDR and satellite data used for backup purposes. Primary reference gage is outside staff gage installed in flume. Control is a 3-foot steel Parshall flume. On March 30, 2008 a circular corrugated metal pipe was installed in the ditch approximately 200-ft below the gage. The size of the pipe was unknown but was too small and caused the control to become submerged. On April 22, 2008 the undersized culvert was removed.

REMARKS.--Record is complete and reliable, except for February 23-29, March 1-2, 2008, due to ice affecting the stage-discharge relationship; March 3-29, 2008, when the floats were frozen in the well; March 30-31, April 1, 2008, when floats were partially frozen in the well and the undersized culvert downstream caused the flume to submerge; and, April 2-22, 2008, when the undersized culvert downstream caused the flume to submerge. Record good, except for days on which ice affected the stage-discharge relationship and the flume was submerged by the culvert that was installed downstream. Record during this period should be considered poor. Station maintained by Matthew A. Schmitt. Record developed by Brian Boughton.

RATING TABLE.--PINDITCO01 USED FROM 01-OCT-2007 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

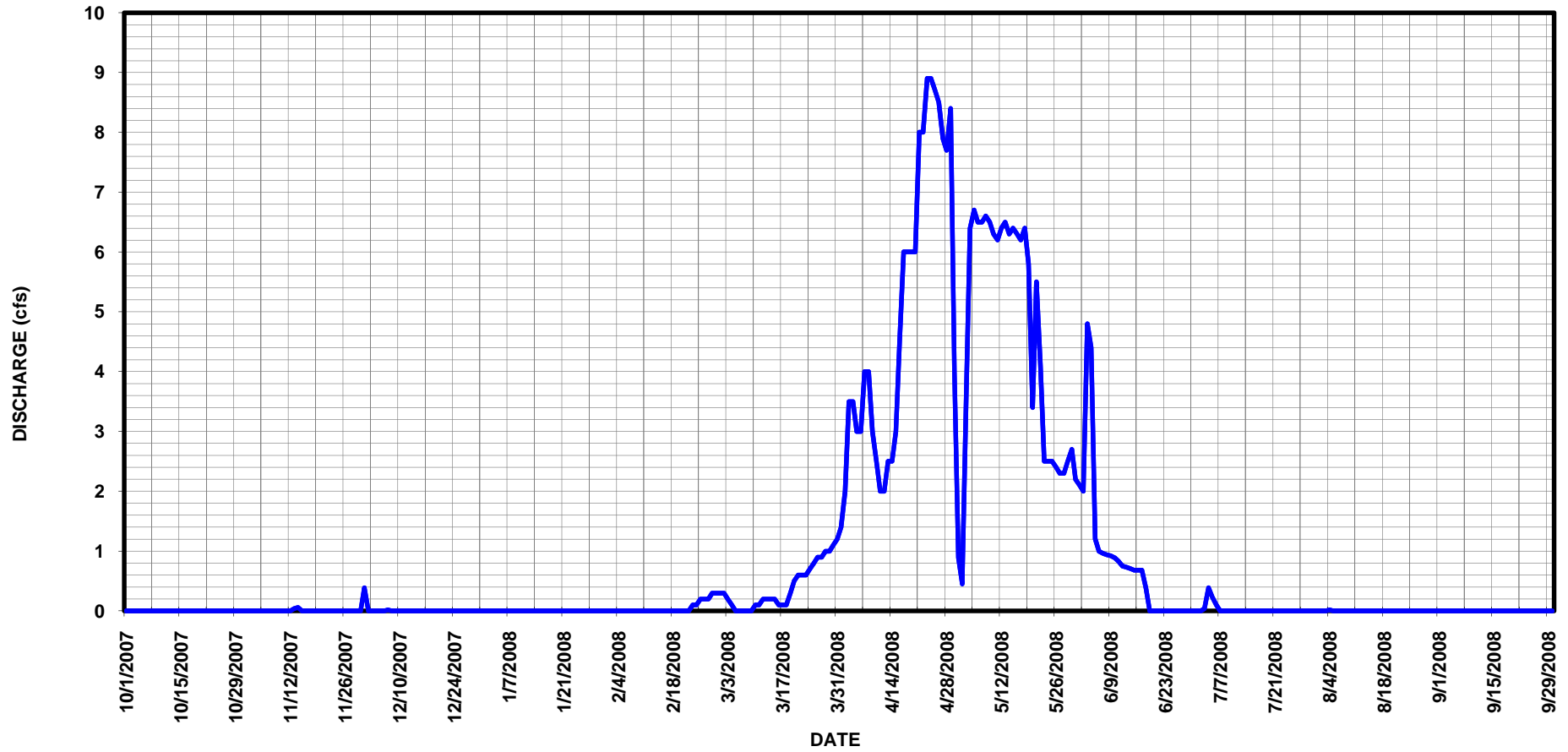
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.39	0	0	.30e	1.4e	.89	2.1	0	0	0
2	0	0	0	0	0	.30e	2.0e	.45	2.0	0	0	0
3	0	0	0	0	0	.20e	3.5e	3.6	4.8	.04	0	0
4	0	0	0	0	0	.10e	3.5e	6.4	4.4	.39	.02	0
5	0	0	0	0	0	0e	3.0e	6.7	1.2	.23	0	0
6	0	0	0	0	0	0e	3.0e	6.5	1.0	.10	0	0
7	0	0	.02	0	0	0e	4.0e	6.5	.96	0	0	0
8	0	0	0	0	0	0e	4.0e	6.6	.94	0	0	0
9	0	0	0	0	0	0e	3.0e	6.5	.92	0	0	0
10	0	0	0	0	0	.10e	2.5e	6.3	.89	0	0	0
11	0	0	0	0	0	.10e	2.0e	6.2	.83	0	0	0
12	0	0	0	0	0	.20e	2.0e	6.4	.75	0	0	0
13	0	.04	0	0	0	.20e	2.5e	6.5	.73	0	0	0
14	0	.06	0	0	0	.20e	2.5e	6.3	.71	0	0	0
15	0	0	0	0	0	.20e	3.0e	6.4	.68	0	0	0
16	0	0	0	0	0	.10e	4.5e	6.3	.68	0	0	0
17	0	0	0	0	0	.10e	6.0e	6.2	.68	0	0	0
18	0	0	0	0	0	.10e	6.0e	6.4	.38	0	0	0
19	0	0	0	0	0	.30e	6.0e	5.8	0	0	0	0
20	0	0	0	0	0	.50e	6.0e	3.4	0	0	0	0
21	0	0	0	0	0	.60e	8.0e	5.5	0	0	0	0
22	0	0	0	0	0	.60e	8.0e	4.1	0	0	0	0
23	0	0	0	0	.10e	.60e	8.9	2.5	0	0	0	0
24	0	0	0	0	.10e	.70e	8.9	2.5	0	0	0	0
25	0	0	0	0	.20e	.80e	8.7	2.5	0	0	0	0
26	0	0	0	0	.20e	.90e	8.5	2.4	0	0	0	0
27	0	0	0	0	.20e	.90e	7.9	2.3	0	0	0	0
28	0	0	0	0	.30e	1.0e	7.7	2.3	0	0	0	0
29	0	0	0	0	.30e	1.0e	8.4	2.5	0	0	0	0
30	0	0	0	0	---	1.1e	4.0	2.7	0	0	0	0
31	0	---	0	0	---	1.2e	---	2.2	---	0	0	---
TOTAL	0	.10	.41	0	1.40	12.40	149.4	141.84	24.65	.76	.02	0
MEAN	0	.003	.013	0	.048	.40	4.98	4.58	.82	.025	.001	0
AC-FT	0	.2	.8	0	2.8	25	296	281	49	1.5	.04	0
MAX	0	.06	.39	0	.30	1.2	8.9	6.7	4.8	.39	.02	0
MIN	0	0	0	0	0	0	1.4	.45	0	0	0	0

CAL YR	2007	TOTAL	0	MEAN	0	MAX	0	MIN	0	AC-FT	0
WTR YR	2008	TOTAL	330.98	MEAN	.9	MAX	8.9	MIN	0	AC-FT	656

MAX DISCH: 10.4 CFS AT 19:00 ON Apr. 21, 2008 GH 1.07 FT. SHIFT -0.16 FT. (Estimated - flume submerged)  
MAX GH: 1.89 FT. AT 11:15 ON Apr. 1, 2008 (Estimated - flume submerged)

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.  
e-Estimated.

PINE RIDGE DITCH NEAR HESPERUS CO  
WY2008 HYDROGRAPH



SAN JUAN RIVER BASIN

09365500 LA PLATA RIVER AT HESPERUS, CO

**LOCATION.**--Lat 37°17'23", long 108°02'24", in NE¼SW¼ sec. 14, T.35 N., R.11 W., NMPM La Plata County, Hydrologic Unit 14080105, on right bank at Hesperus 700 ft downstream from U.S. Highway 160.

**DRAINAGE AREA AND PERIOD OF RECORD.**--37 mi<sup>2</sup>, approximately. Periodic data June 1904 to Nov. 1910. Continuous from June 1917 to current year, with some periods of monthly data only.

**GAGE.**--Graphic water-stage recorder and a Sutron Satlink 2 HDR DCP with a shaft encoder on a separate float in a 64"x 64" concrete block shelter and a 42" concrete well. The primary record is hourly averages of 15 minute satellite data, with chart record used as backup. Primary reference gage is an electric tape in the well. The station is also equipped with a Sutron air temperature sensor and an electric heater which is used to keep the well from freezing in the winter. Control is man-made concrete ramp flume located approximately 15 feet downstream. A steel foot bridge is located 60 feet below the gage house. Datum of gage is 8,104.71 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Record from the DCP is complete, any data missing from the initial satellite transmissions were filled in from the DCP logger files. Record is reliable, except for Nov. 24-25, 27, 29, Dec. 3, 13-18, 20, 22-31, 2007, Jan. 1-3, 8, 10-31, Feb 1-5, 12-13, 16-19, 26-27, Mar 3-7, 18, 2008, when ice on the control affected the gage height; Feb. 6-11, 2008, when the floats were frozen in the well; and, Dec. 13-20, 2007, when a log was lodged in the control low flow notch. Record good, except for periods of ice affected record and when a log was lodged in the control low flow notch, which should be considered poor. Station maintained and record developed by Brian Boughton.

**RATING TABLE.**--LAPHESCO37 USED FROM 01-OCT-2007 TO 30-SEP-2008

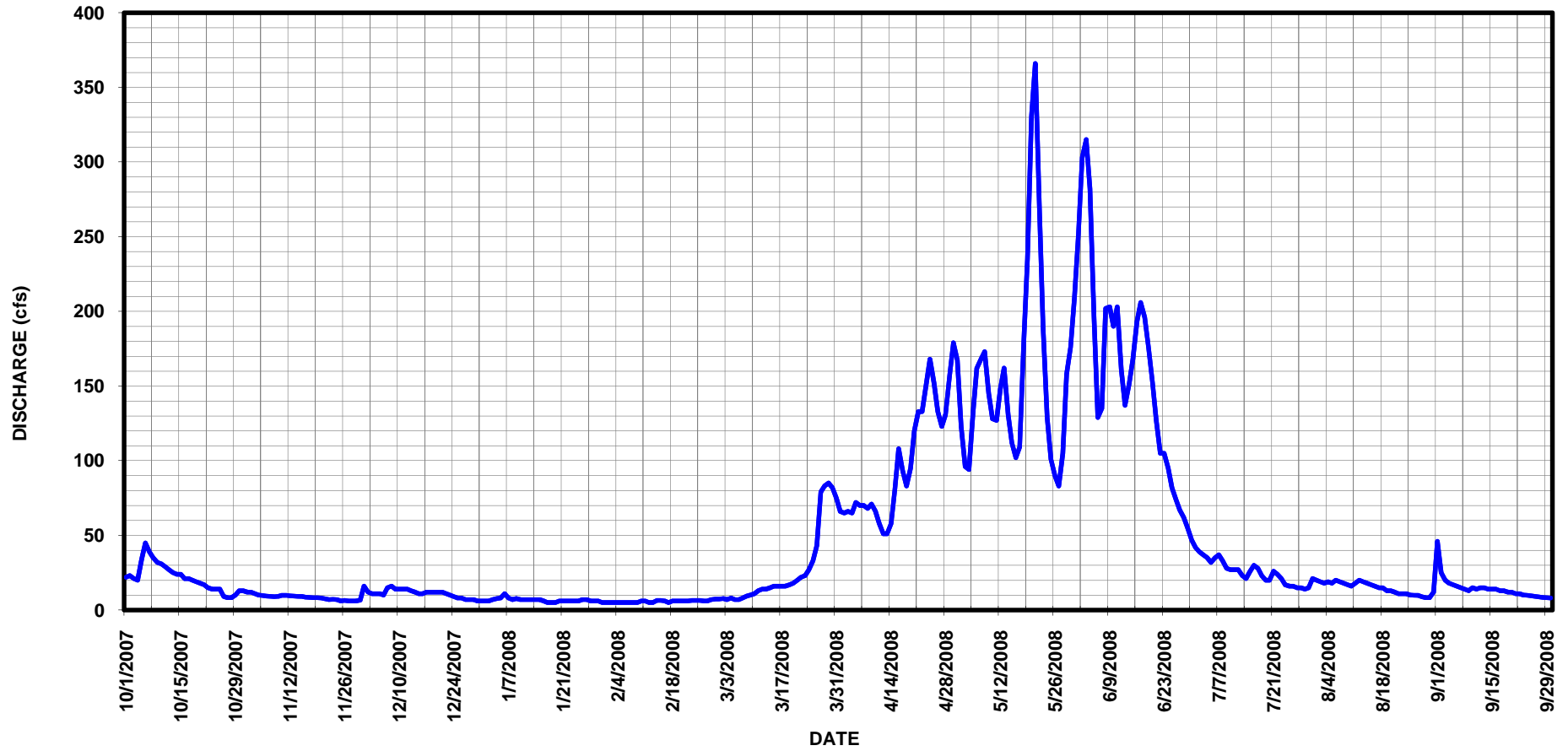
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	12	16	6.0e	5.0e	7.3	66	167	252	42	20	46
2	23	12	12	6.0e	5.0e	7.8	65	123	303	39	19	25
3	21	11	11e	7.0e	5.0e	7.0e	66	96	315	37	18	20
4	20	10	11	7.7	5.0e	8.0e	65	94	282	35	19	18
5	34	9.7	11	8.0	5.0e	7.0e	72	132	196	32	18	17
6	45	9.4	10	11	5.0e	7.0e	70	162	129	35	20	16
7	39	9.2	15	8.1	5.0e	8.0e	70	168	135	37	19	15
8	35	8.9	16	7.0e	5.0e	9.4	68	173	202	33	18	14
9	32	9.2	14	7.8	5.0e	10	71	145	203	28	17	13
10	31	9.8	14	7.0e	6.0e	11	66	128	190	27	16	15
11	29	9.8	14	7.0e	6.0e	13	58	127	203	27	18	14
12	27	9.5	14	7.0e	5.0e	14	51	148	161	27	20	15
13	25	9.4	13e	7.0e	5.0e	14	51	162	137	23	19	15
14	24	9.2	12e	7.0e	6.4	15	58	131	151	21	18	14
15	24	9.2	11e	7.0e	6.4	16	81	112	168	26	17	14
16	21	8.7	11e	6.0e	6.0e	16	108	102	193	30	16	14
17	21	8.5	12e	5.0e	5.0e	16	93	109	206	28	15	13
18	20	8.2	12e	5.0e	6.0e	16e	83	178	196	23	15	13
19	19	8.2	12e	5.0e	6.0e	17	95	235	176	20	13	12
20	18	8.0	12e	6.0e	6.0	18	120	331	152	20	13	12
21	17	7.5	12	6.0e	6.0	20	133	366	127	26	12	11
22	15	7.0	11e	6.0e	6.0	22	133	271	105	24	11	11
23	14	7.1	10e	6.0e	6.4	23	151	189	105	21	11	10
24	14	7.0e	9.0e	6.0e	6.4	27	168	129	95	17	11	9.9
25	14	6.0e	8.0e	6.0e	6.4	33	152	101	82	16	10	9.5
26	9.2	6.4	8.0e	7.0e	6.0e	43	133	90	74	16	9.9	9.1
27	8.2	6.0e	7.0e	7.0e	6.0e	79	123	83	67	15	9.8	8.8
28	8.3	6.0	7.0e	6.0e	6.9	83	131	105	62	15	9.0	8.5
29	10	6.0e	7.0e	6.0e	7.3	85	157	158	55	14	8.3	8.3
30	13	6.6	6.0e	6.0e	---	82	179	176	47	15	8.2	8.0
31	13	---	6.0e	5.0e	---	75	---	209	---	21	12	---
TOTAL	665.7	255.5	344.0	204.6	166.2	809.5	2937	4900	4769	790	460.2	429.1
MEAN	21.5	8.52	11.1	6.60	5.73	26.1	97.9	158	159	25.5	14.8	14.3
AC-FT	1320	507	682	406	330	1610	5830	9720	9460	1570	913	851
MAX	45	12	16	11	7.3	85	179	366	315	42	20	46
MIN	8.2	6.0	6.0	5.0	5.0	7.0	51	83	47	14	8.2	8.0
CAL YR 2007	TOTAL	12182.4	MEAN	33.4	MAX	205	MIN	6.0	AC-FT	24160		
WTR YR 2008	TOTAL	16730.8	MEAN	45.7	MAX	366	MIN	5.0	AC-FT	33190		

MAX DISCH: 389 CFS AT 05:15 ON May. 21, 2008 GH 4.83 FT. SHIFT 0.13 FT.  
MAX GH: 4.83 FT. AT 05:15 ON May. 21, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.  
e-Estimated.

09365500 LA PLATA RIVER AT HESPERUS CO  
WY2008 HYDROGRAPH





SAN JUAN RIVER BASIN

CHERRY CREEK AT THE MOUTH NEAR RED MESA, CO

LOCATION.--Lat 37°07'03", long 108°11'53", in NW¼SW¼ sec. 7, T.33 N., R.12 W., NMPM, La Plata County.

DRAINAGE AREA AND PERIOD OF RECORD.--66 mi².

GAGE.--Graphic water-stage recorder and a Sutron SatLink 2 HDR DCP with shaft encoder on separate floats in a concrete block shelter and 42-inch diameter corrugated metal well. The primary reference gage is a steel drop tape referenced to a reference point (RP) on the wooden instrument shelf. The primary record is hourly averages of 15 minute satellite data, with chart record used as backup. Datum of gage is 6,450 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Record is complete and reliable, except for the following periods: Dec. 3, 14-31, 2007, Jan. 1-28, 2008, Mar. 8-18, 2008, when the stage-discharge relationship affected by ice; and, Jan. 28-31, Feb. 1-29, Mar. 1-7, 2008, when the floats frozen in the well. Record fair, except for days on which ice affected the stage-discharge relationship and the floats were frozen in the well. Record during these periods should be considered poor. Record developed by Brian Boughton.

RATING TABLE.--CHEREDCO3A USED FROM 01-Oct-2007 TO 30-Sep-2008

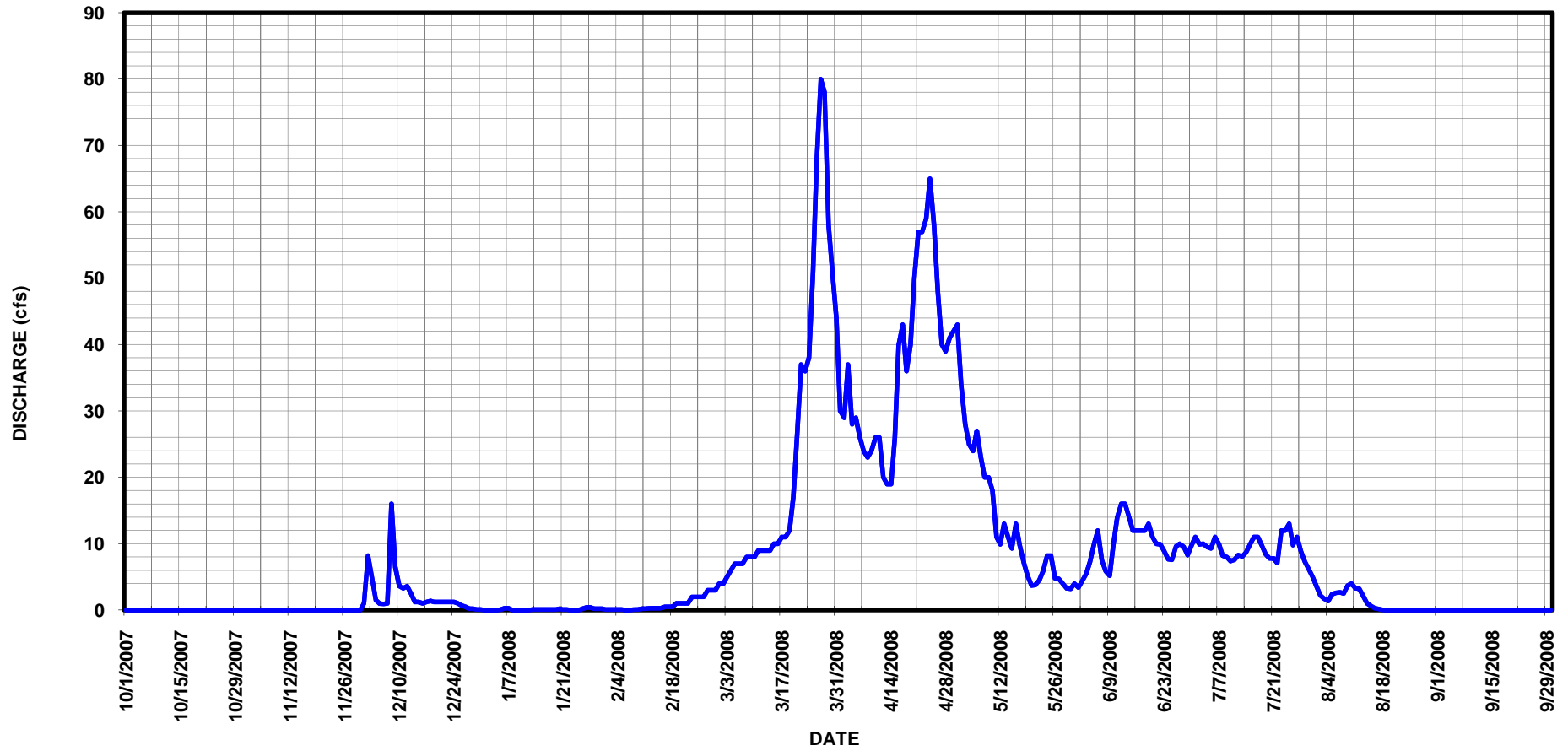
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	1.0	0e	.10e	4.0e	30	43	3.4	11	3.6	0
2	0	0	8.2	0e	.10e	4.0e	29	34	4.4	9.9	2.2	0
3	0	0	5.0e	0e	.10e	5.0e	37	28	5.5	10	1.7	0
4	0	0	1.5	0e	.10e	6.0e	28	25	7.3	9.5	1.4	0
5	0	0	.99	.10e	.10e	7.0e	29	24	10	9.3	2.4	0
6	0	0	.92	.30e	0e	7.0e	26	27	12	11	2.6	0
7	0	0	1.0	.30e	0e	7.0e	24	23	7.5	10	2.7	0
8	0	0	16	0e	.10e	8.0e	23	20	5.9	8.2	2.5	0
9	0	0	6.5	0e	.10e	8.0e	24	20	5.2	8.0	3.7	0
10	0	0	3.6	0e	.20e	8.0e	26	18	10	7.4	4.0	0
11	0	0	3.3	0e	.20e	9.0e	26	11	14	7.6	3.3	0
12	0	0	3.6	0e	.30e	9.0e	20	9.9	16	8.3	3.2	0
13	0	0	2.5	.10e	.30e	9.0e	19	13	16	8.1	2.1	0
14	0	0	1.2e	.10e	.30e	9.0e	19	11	14	8.7	1.0	0
15	0	0	1.2e	.10e	.30e	10e	26	9.3	12	9.9	.62	0
16	0	0	1.0e	.10e	.50e	10e	40	13	12	11	.27	0
17	0	0	1.2e	.10e	.50e	11e	43	9.8	12	11	.15	0
18	0	0	1.4e	.10e	.50e	11e	36	7.2	12	9.8	.04	0
19	0	0	1.2e	.10e	1.0e	12	40	5.2	13	8.4	0	0
20	0	0	1.2e	.20e	1.0e	17	50	3.7	11	7.8	0	0
21	0	0	1.2e	.10e	1.0e	27	57	3.8	10	7.8	0	0
22	0	0	1.2e	.10e	1.0e	37	57	4.5	9.9	7.1	0	0
23	0	0	1.2e	0e	2.0e	36	59	5.9	8.9	12	0	0
24	0	0	1.2e	0e	2.0e	38	65	8.2	7.7	12	0	0
25	0	0	1.0e	0e	2.0e	51	58	8.2	7.6	13	0	0
26	0	0	.70e	.20e	2.0e	68	48	4.8	9.6	9.8	0	0
27	0	0	.50e	.40e	3.0e	80	40	4.7	10	11	0	0
28	0	0	.20e	.40e	3.0e	78	39	4.0	9.5	8.9	0	0
29	0	0	.20e	.20e	3.0e	58	41	3.2	8.3	7.3	0	0
30	0	0	.10e	.20e	---	51	42	3.2	9.8	6.2	0	0
31	0	---	.10e	.20e	---	44	---	4.0	---	5.0	0	---
TOTAL	0	0	70.11	3.40	24.80	739.0	1101	409.6	294.5	285.0	37.48	0
MEAN	0	0	2.26	.11	.86	23.8	36.7	13.2	9.82	9.19	1.21	0
AC-FT	0	0	139	6.7	49	1470	2180	812	584	565	74	0
MAX	0	0	16	.40	3.0	80	65	43	16	13	4.0	0
MIN	0	0	.10	0	0	4.0	19	3.2	3.4	5.0	0	0
CAL YR 2007	TOTAL	1281.57	MEAN	3.5	MAX	31	MIN	0	AC-FT	2540		
WTR YR 2008	TOTAL	2964.89	MEAN	8.1	MAX	80	MIN	0	AC-FT	5880		

MAX DISCH: 127 CFS AT 08:30 ON Mar. 27, 2008 GH 3.39 FT. SHIFT -0.02 FT.  
MAX GH: 3.39 FT. AT 08:30 ON Mar. 27, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.  
e - Estimated.

### CHERRY CREEK AT THE MOUTH NEAR RED MESA CO WY2008 HYDROGRAPH



SAN JUAN RIVER BASIN

LONG HOLLOW AT THE MOUTH NEAR RED MESA, CO

LOCATION.--Lat 37°03'02", long 108°10'23", in SE¼SW¼ sec. 32, T.33 N., R.12 W., NMPM, La Plata County.

DRAINAGE AREA AND PERIOD OF RECORD.--46.5 mi<sup>2</sup>, October 1988 to current year.

GAGE.--Graphic water-stage recorder with a Sutron Satlink 2 HDR DCP and shaft encoder on separate floats in a 3' by 3' wooden shelter and well at a 4-foot Parshall Flume. Primary reference gage is outside staff gage installed in flume. The primary record is hourly averages of 15 minute satellite data, with chart record used as backup. Datum of gage is 6,190 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Record is complete, any data missing from the initial satellite transmissions were filled in from the DCP logger files or from the chart record. Record is reliable, except for Dec. 15, 16, 25-31, 2007, Jan. 1-31, Feb 1, 2008, when the stage-discharge relationship was affected by ice; Feb. 2- 11, 2008, when the wall of the stilling well collapsed and filled the well with mud, chart data were adequate and filled in the missing shaft encoder data during this period; and, Feb. 12-27, 2008, when both the chart and DCP record were bad due to the wall collapse. Record is good, except for the following days between Feb. 2 and Feb. 27, when mud began filling the stilling well after the walls began to collapse: chart data used from Feb. 2 until Feb. 11 and record should be considered fair; Feb. 12 to Feb. 27 excessive mud in the stilling well prevented the floats of the shaft encoder and chart recorder from working properly and record should be considered poor. Periods of ice affected record should be considered poor. Station maintained and record developed by Brian Boughton.

RATING TABLE.--LONREDCO01A USED FROM 01-Oct-2007 TO 30-Sep-2008

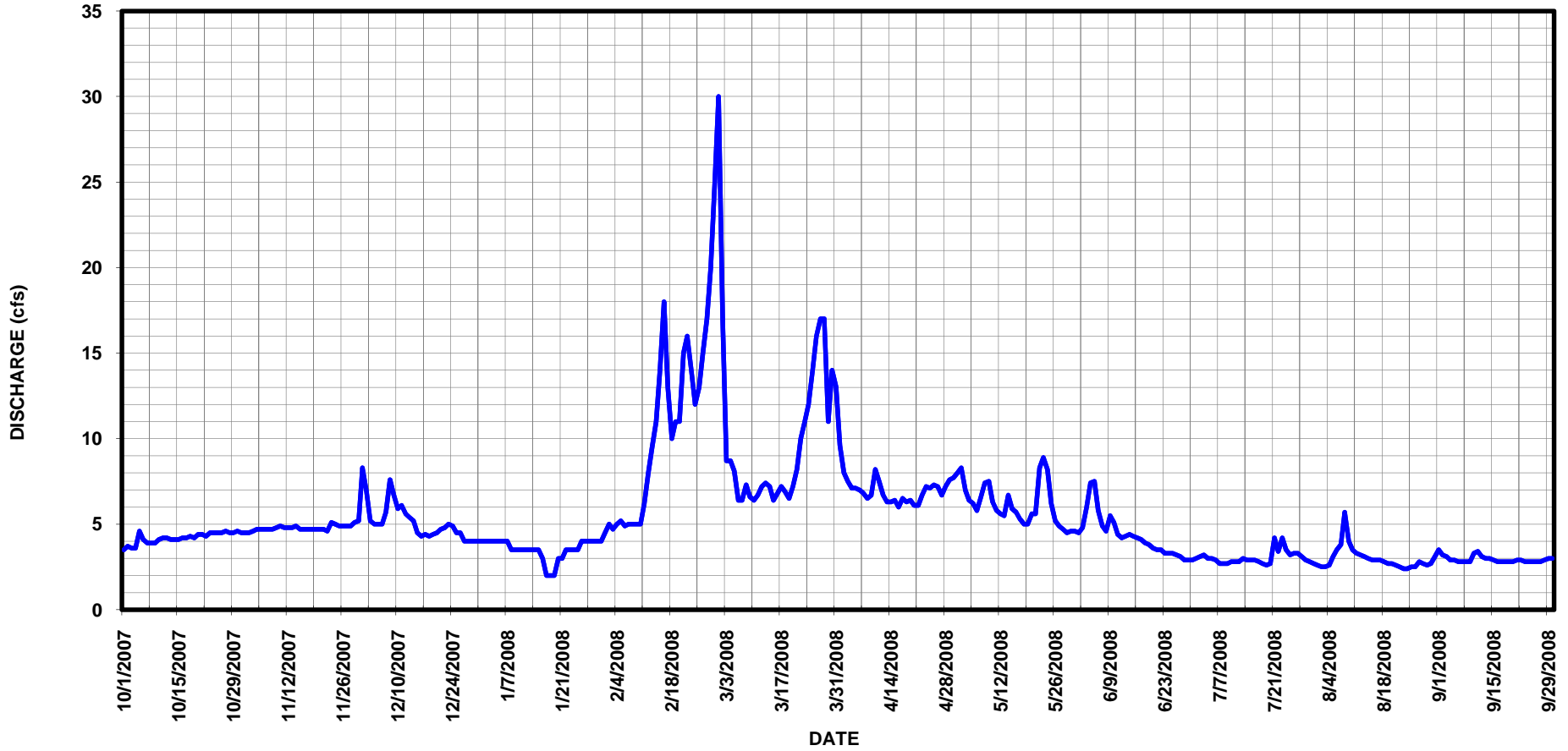
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	4.5	8.3	4.0e	4.5e	30	9.6	8.0	4.5	3.0	2.6	3.5
2	3.7	4.5	6.9	4.0e	5.0	17	8.0	8.3	4.8	3.1	2.5	3.2
3	3.6	4.6	5.2	4.0e	4.7	8.7	7.5	7.0	6.0	3.2	2.5	3.1
4	3.6	4.7	5.0	4.0e	5.0	8.7	7.1	6.4	7.4	3.0	2.6	2.9
5	4.6	4.7	5.0	4.0e	5.2	8.1	7.1	6.2	7.5	3.0	3.1	2.9
6	4.1	4.7	5.0	4.0e	4.9	6.4	7.0	5.8	5.8	2.9	3.5	2.8
7	3.9	4.7	5.7	4.0e	5.0	6.4	6.8	6.6	4.9	2.7	3.8	2.8
8	3.9	4.7	7.6	3.5e	5.0	7.3	6.5	7.4	4.6	2.7	5.7	2.8
9	3.9	4.8	6.7	3.5e	5.0	6.6	6.7	7.5	5.5	2.7	4.0	2.8
10	4.1	4.9	5.9	3.5e	5.0	6.4	8.2	6.3	5.1	2.8	3.5	3.3
11	4.2	4.8	6.1	3.5e	6.2	6.7	7.5	5.8	4.4	2.8	3.3	3.4
12	4.2	4.8	5.6	3.5e	8.0e	7.2	6.7	5.6	4.2	2.8	3.2	3.1
13	4.1	4.8	5.4	3.5e	9.5e	7.4	6.3	5.5	4.3	3.0	3.1	3.0
14	4.1	4.9	5.2	3.5e	11e	7.2	6.3	6.7	4.4	2.9	3.0	3.0
15	4.1	4.7	4.5e	3.5e	14e	6.4	6.4	5.9	4.3	2.9	2.9	2.9
16	4.2	4.7	4.3e	3.0e	18e	6.8	6.0	5.7	4.2	2.9	2.9	2.8
17	4.2	4.7	4.4	2.0e	13e	7.2	6.5	5.3	4.1	2.8	2.9	2.8
18	4.3	4.7	4.3	2.0e	10e	6.9	6.3	5.0	3.9	2.7	2.8	2.8
19	4.2	4.7	4.4	2.0e	11e	6.5	6.4	5.0	3.8	2.6	2.7	2.8
20	4.4	4.7	4.5	3.0e	11e	7.2	6.1	5.6	3.6	2.7	2.7	2.8
21	4.4	4.7	4.7	3.0e	15e	8.2	6.1	5.6	3.5	4.2	2.6	2.9
22	4.3	4.6	4.8	3.5e	16e	10	6.7	8.3	3.5	3.4	2.5	2.9
23	4.5	5.1	5.0	3.5e	14e	11	7.2	8.9	3.3	4.2	2.4	2.8
24	4.5	5.0	4.9	3.5e	12e	12	7.1	8.2	3.3	3.5	2.4	2.8
25	4.5	4.9	4.5e	3.5e	13e	14	7.3	6.2	3.3	3.2	2.5	2.8
26	4.5	4.9	4.5e	4.0e	15e	16	7.2	5.2	3.2	3.3	2.5	2.8
27	4.6	4.9	4.0e	4.0e	17e	17	6.7	4.9	3.1	3.3	2.8	2.8
28	4.5	4.9	4.0e	4.0e	20	17	7.2	4.7	2.9	3.1	2.7	2.9
29	4.5	5.1	4.0e	4.0e	25	11	7.6	4.5	2.9	2.9	2.6	3.0
30	4.6	5.2	4.0e	4.0e	---	14	7.7	4.6	2.9	2.8	2.7	3.0
31	4.5	---	4.0e	4.0e	---	13	---	4.6	---	2.7	3.1	---
TOTAL	130.3	143.6	158.4	109.0	308.0	318.3	209.8	191.3	129.2	93.8	92.1	88.2
MEAN	4.20	4.79	5.11	3.52	10.6	10.3	6.99	6.17	4.31	3.03	2.97	2.94
AC-FT	258	285	314	216	611	631	416	379	256	186	183	175
MAX	4.6	5.2	8.3	4.0	25	30	9.6	8.9	7.5	4.2	5.7	3.5
MIN	3.5	4.5	4.0	2.0	4.5	6.4	6.0	4.5	2.9	2.6	2.4	2.8
CAL YR 2007	TOTAL	1597	MEAN	4.38	MAX	9.0	MIN	1.8	AC-FT	3170		
WTR YR 2008	TOTAL	1972	MEAN	5.39	MAX	30	MIN	2.0	AC-FT	3910		

MAX DISCH: 65.9 CFS AT 18:45 ON Mar. 1, 2008 GH 2.33 FT. SHIFT 0.11 FT.  
MAX GH: 2.33 FT. AT 18:45 ON Mar. 1, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.  
e - Estimated

LONG HOLLOW AT THE MOUTH NEAR RED MESA CO  
WY2008 HYDROGRAPH



SAN JUAN RIVER BASIN

PIONEER DITCH AT THE COLORADO-NEW MEXICO STATELINE

LOCATION.--Lat 36°59'58", long 108°11'09", in NW~~4~~SE~~4~~ sec. 10, T.32 N., R.13 W., NMPM, La Plata County.

DRAINAGE AREA AND PERIOD OF RECORD.--N/A

GAGE.--Sutron high data rate Satlink 2 DCP with a shaft encoder in a 30-inch diameter corrugated metal pipe shelter and a 20-inch x 20-inch concrete well at a 1-foot concrete Parshall Flume. Hourly averages of 15-minute satellite data is the primary record with DCP data used for backup purposes. Primary reference gage is outside staff gage installed in flume.

REMARKS.--Record from the DCP is complete, any data missing from the initial satellite transmissions were filled in from the DCP's logger files. Record is reliable, except for December 16-19, 2007, when ice affected the stage-discharge relationship; and, December 20-31, 2007, Jan. 1-31, Feb. 1-29, Mar. 1-5, 2008, when the floats were frozen in the well. Record good, except for periods of ice affected and no gage height record, which are poor. The floats were frozen in the well during the period December 20, 2007 until March 5, 2008, but there was no flow. Station maintained and record developed by Brian Boughton.

RATING TABLE.--PIODITCO1 USED FROM 01-OCT-2007 TO 30-SEP-2008

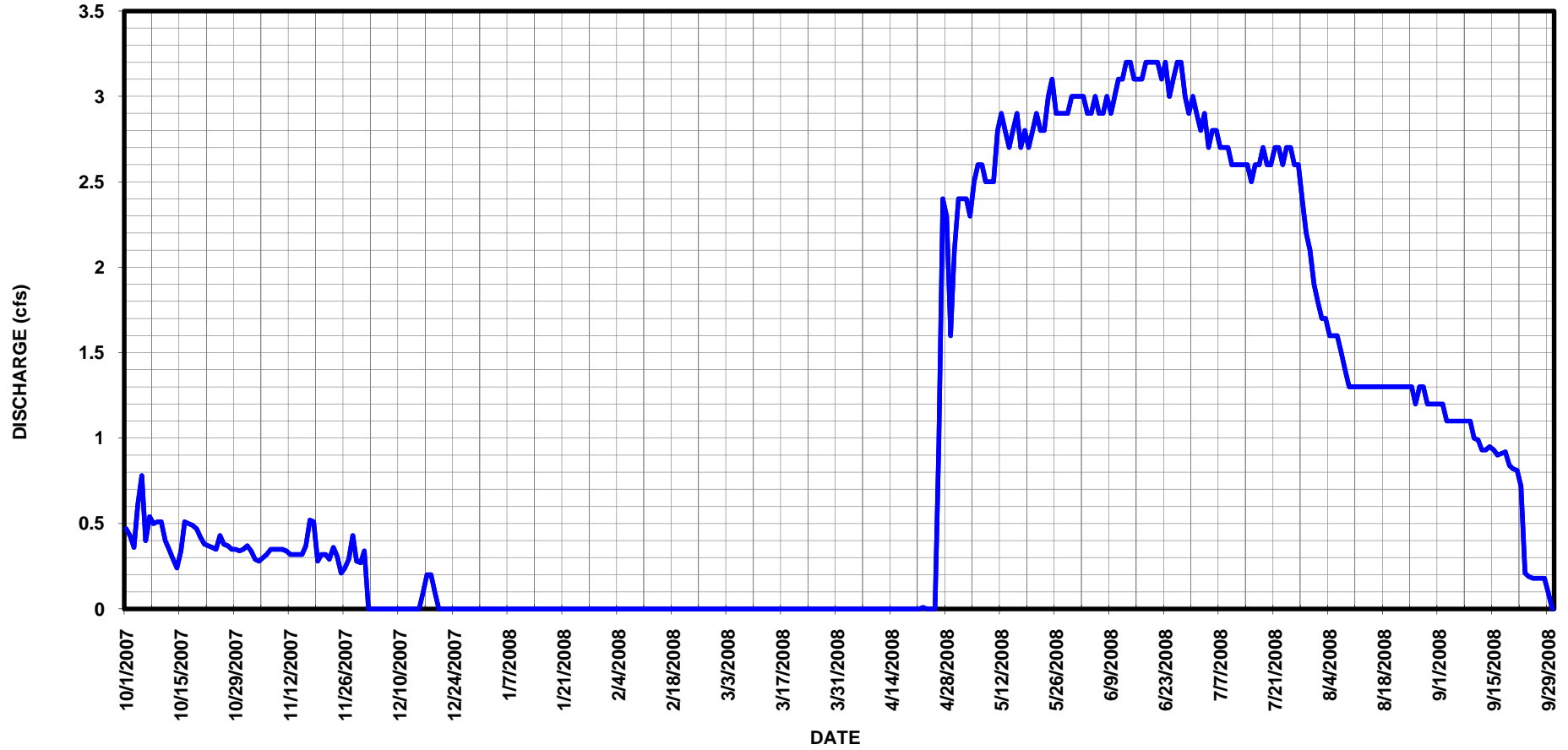
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.47	.37	.34	0	0	0	0	2.4	3.0	2.9	1.8	1.2
2	.43	.34	0	0	0	0	0	2.4	3.0	2.8	1.7	1.2
3	.36	.29	0	0	0	0	0	2.4	2.9	2.9	1.7	1.1
4	.61	.28	0	0	0	0	0	2.3	2.9	2.7	1.6	1.1
5	.78	.30	0	0	0	0	0	2.5	3.0	2.8	1.6	1.1
6	.40	.32	0	0	0	0	0	2.6	2.9	2.8	1.6	1.1
7	.54	.35	0	0	0	0	0	2.6	2.9	2.7	1.5	1.1
8	.50	.35	0	0	0	0	0	2.5	3.0	2.7	1.4	1.1
9	.51	.35	0	0	0	0	0	2.5	2.9	2.7	1.3	1.1
10	.51	.35	0	0	0	0	0	2.5	3.0	2.6	1.3	1.0
11	.40	.34	0	0	0	0	0	2.8	3.1	2.6	1.3	.99
12	.35	.32	0	0	0	0	0	2.9	3.1	2.6	1.3	.93
13	.29	.32	0	0	0	0	0	2.8	3.2	2.6	1.3	.93
14	.24	.32	0	0	0	0	0	2.7	3.2	2.6	1.3	.95
15	.34	.32	0	0	0	0	0	2.8	3.1	2.5	1.3	.93
16	.51	.37	.10e	0	0	0	0	2.9	3.1	2.6	1.3	.90
17	.50	.52	.20e	0	0	0	0	2.7	3.1	2.6	1.3	.91
18	.49	.51	.20e	0	0	0	0	2.8	3.2	2.7	1.3	.92
19	.47	.28	.10e	0	0	0	0	2.7	3.2	2.6	1.3	.84
20	.42	.32	0	0	0	0	0	2.8	3.2	2.6	1.3	.82
21	.38	.32	0	0	0	0	0	2.9	3.2	2.7	1.3	.81
22	.37	.29	0	0	0	0	.01	2.8	3.1	2.7	1.3	.72
23	.36	.36	0	0	0	0	0	2.8	3.2	2.6	1.3	.21
24	.35	.31	0	0	0	0	0	3.0	3.0	2.7	1.3	.19
25	.43	.21	0	0	0	0	0	3.1	3.1	2.7	1.3	.18
26	.38	.24	0	0	0	0	.96	2.9	3.2	2.6	1.2	.18
27	.37	.29	0	0	0	0	2.4	2.9	3.2	2.6	1.3	.18
28	.35	.43	0	0	0	0	2.3	2.9	3.0	2.4	1.3	.18
29	.35	.28	0	0	0	0	1.6	2.9	2.9	2.2	1.2	.09
30	.34	.27	0	0	---	0	2.1	3.0	3.0	2.1	1.2	0
31	.35	---	0	0	---	0	---	3.0	---	1.9	1.2	---
TOTAL	13.15	9.92	.94	0	0	0	9.37	84.8	91.9	80.8	42.4	22.96
MEAN	.42	.33	.030	0	0	0	.31	2.74	3.06	2.61	1.37	.77
AC-FT	26	20	1.9	0	0	0	19	168	182	160	84	46
MAX	.78	.52	.34	0	0	0	2.4	3.1	3.2	2.9	1.8	1.2
MIN	.24	.21	0	0	0	0	0	2.3	2.9	1.9	1.2	0
CAL YR 2007	TOTAL	427.85	MEAN	1.17	MAX	3.6	MIN	0	AC-FT	849		
WTR YR 2008	TOTAL	356.24	MEAN	0.97	MAX	3.2	MIN	0	AC-FT	707		

MAX DISCH: 4.5 CFS AT 08:30 ON Oct. 5, 2007 GH 1.13 FT. SHIFT -0.05 FT.  
MAX GH: 1.13 FT. AT 08:30 ON Oct. 5, 2007

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.  
e-Estimated

PIONEER DITCH AT THE COLORADO-NEW MEXICO STATELINE  
WY2008 HYDROGRAPH



SAN JUAN RIVER BASIN

ENTERPRISE DITCH AT THE COLORADO-NEW MEXICO STATELINE

LOCATION.--Lat 37°00'50", long 108°11'18", in SW<sup>4</sup>SE<sup>4</sup> sec. 3, T.32 N., R.13 W., NMPM, La Plata County.

DRAINAGE AREA AND PERIOD OF RECORD.--N/A

GAGE.--Sutron Satlink 2 high data rate DCP with a shaft encoder in a 30-inch diameter corrugated metal pipe shelter and well at a 2-foot Parshall Flume. Primary reference gage is outside staff gage installed in flume. Hourly averages of 15-minute satellite data is the primary record with DCP data used for backup purposes.

REMARKS.--Record is complete and reliable, except for the following periods: Nov. 22-29, Dec. 13-14, 2007, when ice on the control affected the gage height; and, Dec. 15-31, 2007, Jan. 1-31, Feb. 1-29, Mar. 1-6, 2008, when the floats were frozen in the stilling well. Record is good, except for periods of ice affected and no gage height record, which should be considered poor. Station maintained and record developed by Brian Boughton.

RATING TABLE.--ENTDITCO01 USED FROM 01-OCT-2007 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

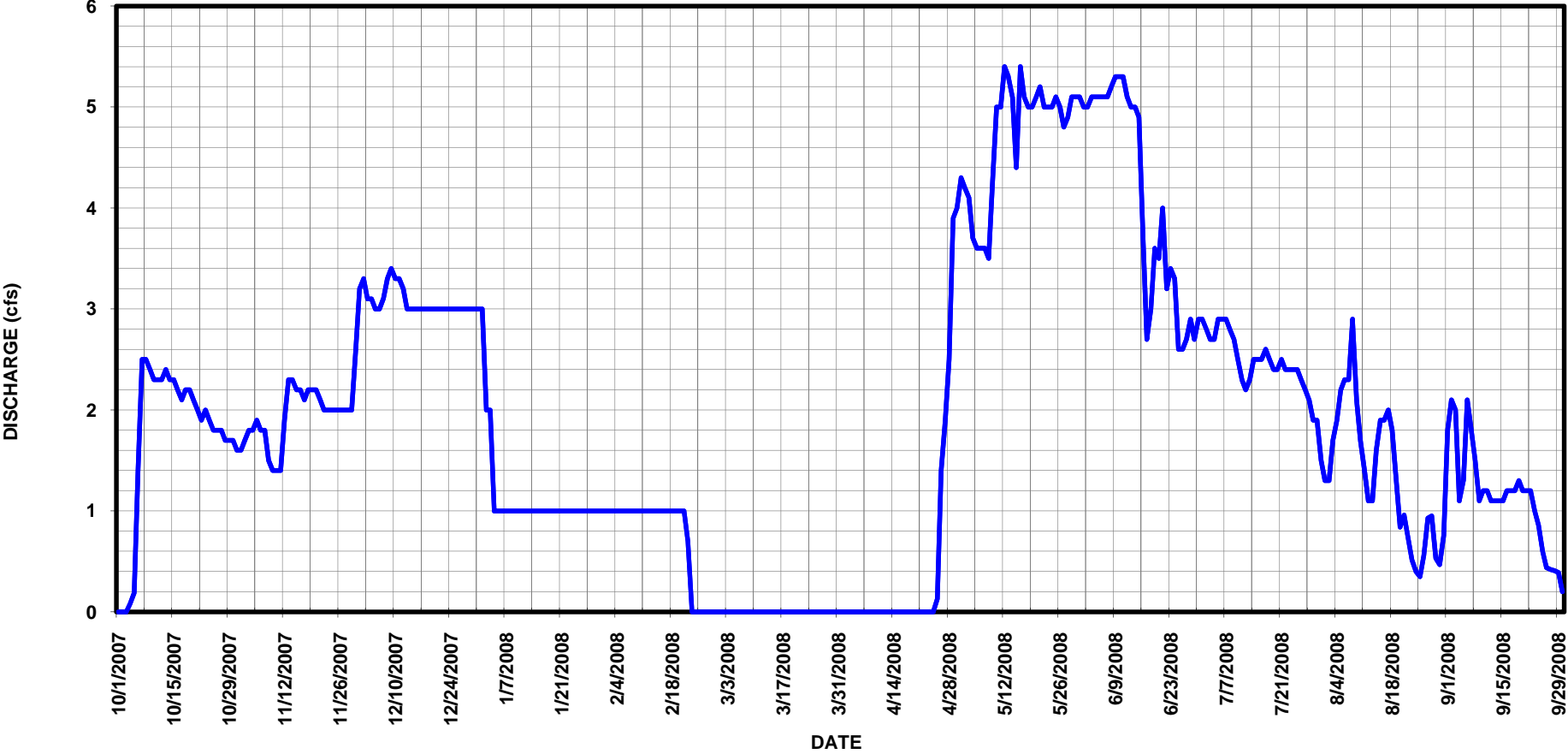
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	1.6	3.2	3.0e	1.0e	0e	0	4.3	5.0	2.9	1.3	1.8
2	0	1.7	3.3	2.0e	1.0e	0e	0	4.2	5.0	2.8	1.3	2.1
3	0	1.8	3.1	2.0e	1.0e	0e	0	4.1	5.1	2.7	1.7	2.0
4	.08	1.8	3.1	1.0e	1.0e	0e	0	3.7	5.1	2.7	1.9	1.1
5	.19	1.9	3.0	1.0e	1.0e	0e	0	3.6	5.1	2.9	2.2	1.3
6	1.4	1.8	3.0	1.0e	1.0e	0e	0	3.6	5.1	2.9	2.3	2.1
7	2.5	1.8	3.1	1.0e	1.0e	0	0	3.6	5.1	2.9	2.3	1.8
8	2.5	1.5	3.3	1.0e	1.0e	0	0	3.5	5.2	2.8	2.9	1.5
9	2.4	1.4	3.4	1.0e	1.0e	0	0	4.3	5.3	2.7	2.1	1.1
10	2.3	1.4	3.3	1.0e	1.0e	0	0	5.0	5.3	2.5	1.7	1.2
11	2.3	1.4	3.3	1.0e	1.0e	0	0	5.0	5.3	2.3	1.4	1.2
12	2.3	1.9	3.2	1.0e	1.0e	0	0	5.4	5.1	2.2	1.1	1.1
13	2.4	2.3	3.0e	1.0e	1.0e	0	0	5.3	5.0	2.3	1.1	1.1
14	2.3	2.3	3.0e	1.0e	1.0e	0	0	5.1	5.0	2.5	1.6	1.1
15	2.3	2.2	3.0e	1.0e	1.0e	0	0	4.4	4.9	2.5	1.9	1.1
16	2.2	2.2	3.0e	1.0e	1.0e	0	0	5.4	3.7	2.5	1.9	1.2
17	2.1	2.1	3.0e	1.0e	1.0e	0	0	5.1	2.7	2.6	2.0	1.2
18	2.2	2.2	3.0e	1.0e	1.0e	0	0	5.0	3.0	2.5	1.8	1.2
19	2.2	2.2	3.0e	1.0e	1.0e	0	0	5.0	3.6	2.4	1.3	1.3
20	2.1	2.2	3.0e	1.0e	1.0e	0	0	5.1	3.5	2.4	.84	1.2
21	2.0	2.1	3.0e	1.0e	1.0e	0	0	5.2	4.0	2.5	.96	1.2
22	1.9	2.0e	3.0e	1.0e	.70e	0	0	5.0	3.2	2.4	.74	1.2
23	2.0	2.0e	3.0e	1.0e	0e	0	0	5.0	3.4	2.4	.51	1.0
24	1.9	2.0e	3.0e	1.0e	0e	0	0	5.0	3.3	2.4	.40	.86
25	1.8	2.0e	3.0e	1.0e	0e	0	.13	5.1	2.6	2.4	.35	.60
26	1.8	2.0e	3.0e	1.0e	0e	0	1.4	5.0	2.6	2.3	.56	.44
27	1.8	2.0e	3.0e	1.0e	0e	0	1.9	4.8	2.7	2.2	.93	.42
28	1.7	2.0e	3.0e	1.0e	0e	0	2.5	4.9	2.9	2.1	.95	.41
29	1.7	2.0e	3.0e	1.0e	0e	0	3.9	5.1	2.7	1.9	.53	.39
30	1.7	2.6	3.0e	1.0e	---	0	4.0	5.1	2.9	1.9	.47	.20
31	1.6	---	3.0e	1.0e	---	0	---	5.1	---	1.5	.76	---
TOTAL	53.67	58.4	95.3	35.0	21.7	0	13.83	146.0	123.4	76.0	41.80	34.42
MEAN	1.73	1.95	3.07	1.13	.75	0	.46	4.71	4.11	2.45	1.35	1.15
AC-FT	106	116	189	69	43	0	27	290	245	151	83	68
MAX	2.5	2.6	3.4	3.0	1.0	0	4.0	5.4	5.3	2.9	2.9	2.1
MIN	0	1.4	3.0	1.0	0	0	0	3.5	2.6	1.5	.35	.20

CAL YR	2007	TOTAL	784.24	MEAN	2.15	MAX	5.1	MIN	0	AC-FT	1560
WTR YR	2008	TOTAL	699.52	MEAN	1.91	MAX	5.4	MIN	0	AC-FT	1390

MAX DISCH: 5.66 CFS AT 10:00 ON May. 12, 2008 GH 0.81 FT. SHIFT -0.01 FT.  
MAX GH: 0.81 FT. AT 10:00 ON May. 12, 2008

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.  
e-Estimated

ENTERPRISE DITCH AT THE COLORADO-NEW MEXICO STATELINE  
WY2008 HYDROGRAPH





SAN JUAN RIVER BASIN

09366500 LA PLATA RIVER AT COLORADO-NEW MEXICO STATE LINE

**LOCATION.**--Lat 36°59'59", long 108°11'17", in NW¼SE¼ sec. 10, T.32 N., R.13 W., NMPM, La Plata County, CO, Hydrologic Unit 14080105, on right bank at Colorado-New Mexico State line, 0.5 mi downstream of Johnny Pond Arroyo, and 4.9 mi north of La Plata, NM.

**DRAINAGE AREA AND PERIOD OF RECORD.**--331 mi<sup>2</sup>. Jan. 1920 to current year. Monthly data only for some periods.

**GAGE.**--Stevens A-71 graphic water stage-recorder and Sutron Satlink 2 HDR DCP and shaft encoder on separate floats in a 42-inch diameter concrete well and a 64-inch by 64-inch cement block shelter. The floats are located inside of a 14-inch PVC oil cylinder. The primary reference gage is a drop tape in the gage used to reference the gage when the well is frozen around the oil cylinder and an electric drop tape for all other times. Also equipped with an air temperature sensor. The primary record is hourly averages of 15 minute satellite data, with chart record used as backup. Datum of gage is 5,975.15 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Record is complete. Record is reliable, except for the following periods: Nov. 25-27, 29, Dec. 13-31, 2007, Jan. 1-31, Feb. 1-8, 12-14, 2008, when ice on the control affected the stage-discharge relationship; and, Feb. 9-11, 2008, when the shaft encoder weight was stuck under an ice disk and the chart recorder would not record gage heights above 6.50 feet. Record good, except for periods of ice affected and no gage height record, which should be considered poor. Station maintained and record developed by Brian Boughton.

**RATING TABLE.**--LAPMEXCO32 USED FROM 01-OCT-2007 TO 30-SEP-2008

DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

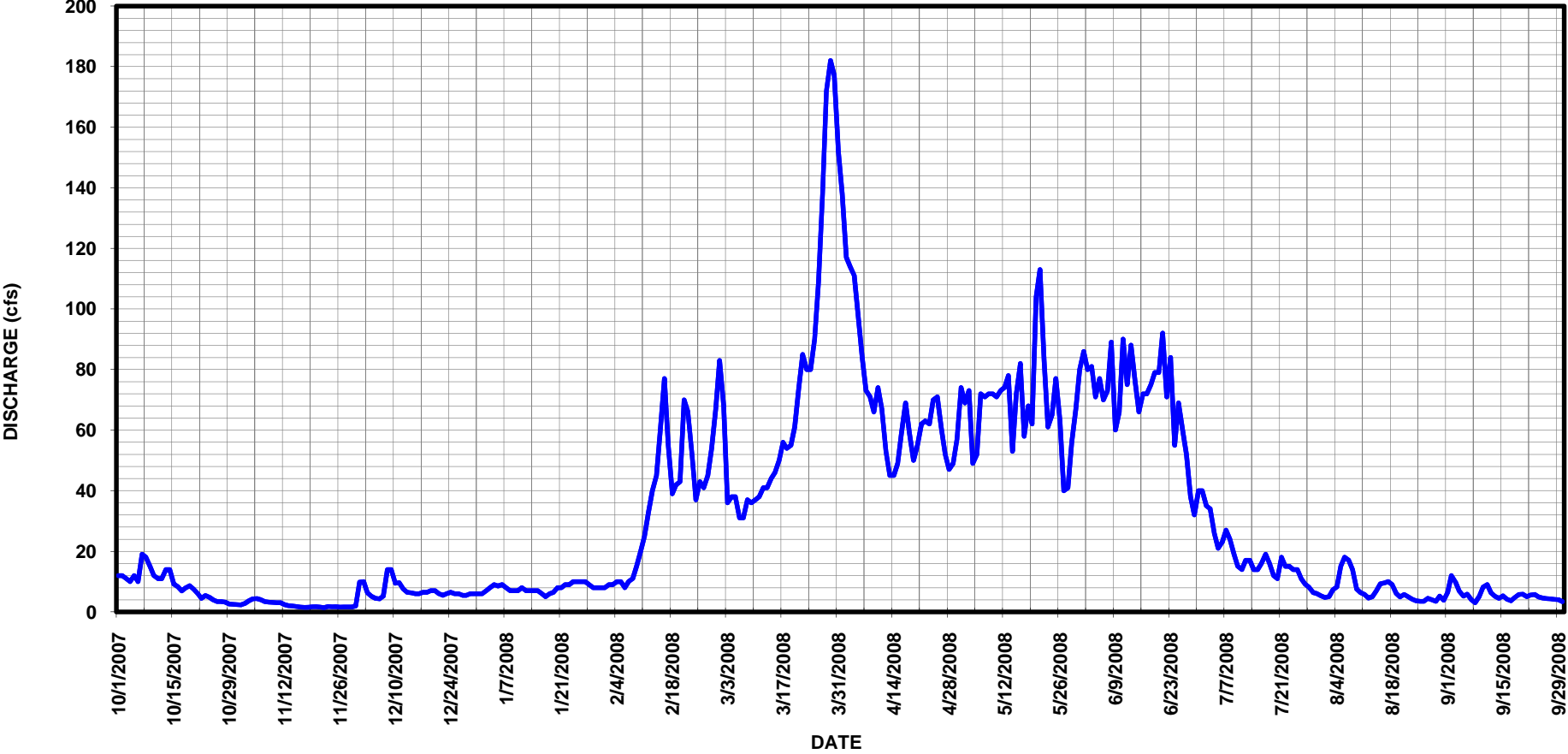
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	2.3	9.8	6.0e	8.0e	83	138	74	86	40	4.7	6.4
2	12	2.8	10	7.0e	9.0e	68	117	69	80	35	5.0	12
3	11	3.7	6.3	8.0e	9.0e	36	114	73	81	34	7.3	9.8
4	10	4.3	5.1	9.0e	10e	38	111	49	71	26	8.3	6.8
5	12	4.4	4.5	8.5e	10e	38	98	52	77	21	15	5.2
6	10	4.0	4.3	9.0e	8.0e	31	84	72	70	23	18	5.8
7	19	3.4	5.2	8.0e	10e	31	73	71	73	27	17	4.0
8	18	3.2	14	7.0e	11e	37	71	72	89	24	14	3.0
9	15	3.1	14	7.0e	15e	36	66	72	60	19	7.5	5.1
10	12	3.0	9.4	7.0e	20e	37	74	71	66	15	6.4	8.2
11	11	3.0	9.6	8.0e	25e	38	67	73	90	14	5.7	9.0
12	11	2.4	7.5	7.0e	33e	41	53	74	75	17	4.6	6.3
13	14	2.0	6.5e	7.0e	40e	41	45	78	88	17	5.0	5.1
14	14	1.9	6.3e	7.0e	45e	44	45	53	76	14	6.9	4.5
15	9.2	1.8	6.0e	7.0e	60	46	49	72	66	14	9.3	5.3
16	8.4	1.6	6.0e	6.0e	77	50	59	82	72	16	9.5	4.2
17	6.9	1.5	6.5e	5.0e	55	56	69	58	72	19	10	3.7
18	7.9	1.5	6.5e	6.0e	39	54	59	68	75	16	9.0	4.7
19	8.6	1.7	7.0e	6.5e	42	55	50	62	79	12	6.1	5.7
20	7.5	1.7	7.0e	8.0e	43	61	55	104	79	11	4.9	5.8
21	6.1	1.6	6.0e	8.0e	70	74	62	113	92	18	5.7	5.0
22	4.5	1.4	5.5e	9.0e	66	85	63	83	71	15	5.0	5.6
23	5.4	1.8	6.0e	9.0e	52	80	62	61	84	15	4.2	5.7
24	4.8	1.7	6.5e	10e	37	80	70	65	55	14	3.7	4.9
25	3.9	1.7e	6.0e	10e	43	90	71	77	69	14	3.5	4.6
26	3.4	1.6e	6.0e	10e	41	109	61	63	60	11	3.5	4.4
27	3.4	1.6e	5.5e	10e	45	138	52	40	52	9.1	4.5	4.3
28	3.2	1.6	5.5e	9.0e	54	172	47	41	38	8.1	4.0	4.1
29	2.6	1.6e	6.0e	8.0e	67	182	49	56	32	6.4	3.5	4.0
30	2.5	1.9	6.0e	8.0e	---	177	57	67	40	6.0	5.2	3.4
31	2.4	---	6.0e	8.0e	---	152	---	80	---	5.3	3.8	---
TOTAL	271.7	69.8	216.5	243.0	1044.0	2260	2091	2145	2118	535.9	220.8	166.6
MEAN	8.76	2.33	6.98	7.84	36.0	72.9	69.7	69.2	70.6	17.3	7.12	5.55
AC-FT	539	138	429	482	2070	4480	4150	4250	4200	1060	438	330
MAX	19	4.4	14	10	77	182	138	113	92	40	18	12
MIN	2.4	1.4	4.3	5.0	8.0	31	45	40	32	5.3	3.5	3.0

CAL YR	2007	TOTAL	6174.1	MEAN	16.9	MAX	106	MIN	1.4	AC-FT	12250
WTR YR	2008	TOTAL	11382.3	MEAN	31.1	MAX	182	MIN	1.4	AC-FT	22580

MAX DISCH: 192 CFS AT 12:45 ON Mar. 28, 2008 GH 4.91 FT. SHIFT 0.05 FT.  
MAX GH: 7.38 FT. AT 18:15 ON Feb. 13, 2008 (ice affected)

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.  
e-Estimated

09366500 LA PLATA RIVER AT COLORADO-NEW MEXICO STATE LINE  
WY2008 HYDROGRAPH



SAN JUAN RIVER BASIN

09370000 MANCOS RIVER NEAR MANCOS, CO

LOCATION.--Lat 37°21'13", long 108°15'41", in NE¼NE¼ sec. 27, T.36 N., R.13 W., NMPM, Montezuma County.

DRAINAGE AREA AND PERIOD OF RECORD.--72.6 mi<sup>2</sup>.

GAGE.--Graphic water-stage recorder and a Sutron SatLink 2 HDR DCP and shaft encoder on separate floats in a 42" concrete well and 64"x64" cement block shelter. The primary reference gage is a steel drop tape referenced to an adjustable reference point on the instrument shelf. The primary record is hourly averages of 15 minute satellite data, with chart record used as backup. Datum of gage is 7,190 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Record is complete. Record is reliable, except for Nov. 24 - 29, Dec. 3, 4, 9, 12-17, 21-26, 2007, Jan. 3, 4, 7-16, Feb. 4-13, 16-19, 25-29, March 1-20, 2008, when the stage-discharge relationship was affected by ice; and, Dec. 27-31, 2007, Jan. 1, 2, 17-31, Feb. 1-3, 2008, when the intakes or well were frozen. Record good, except for periods of ice affected and no gage height record, which are poor. Station maintained and record developed by Jason Morrow.

RATING TABLE.--MANMANCO09 USED FROM 01-Oct-2007 TO 30-Sep-2008

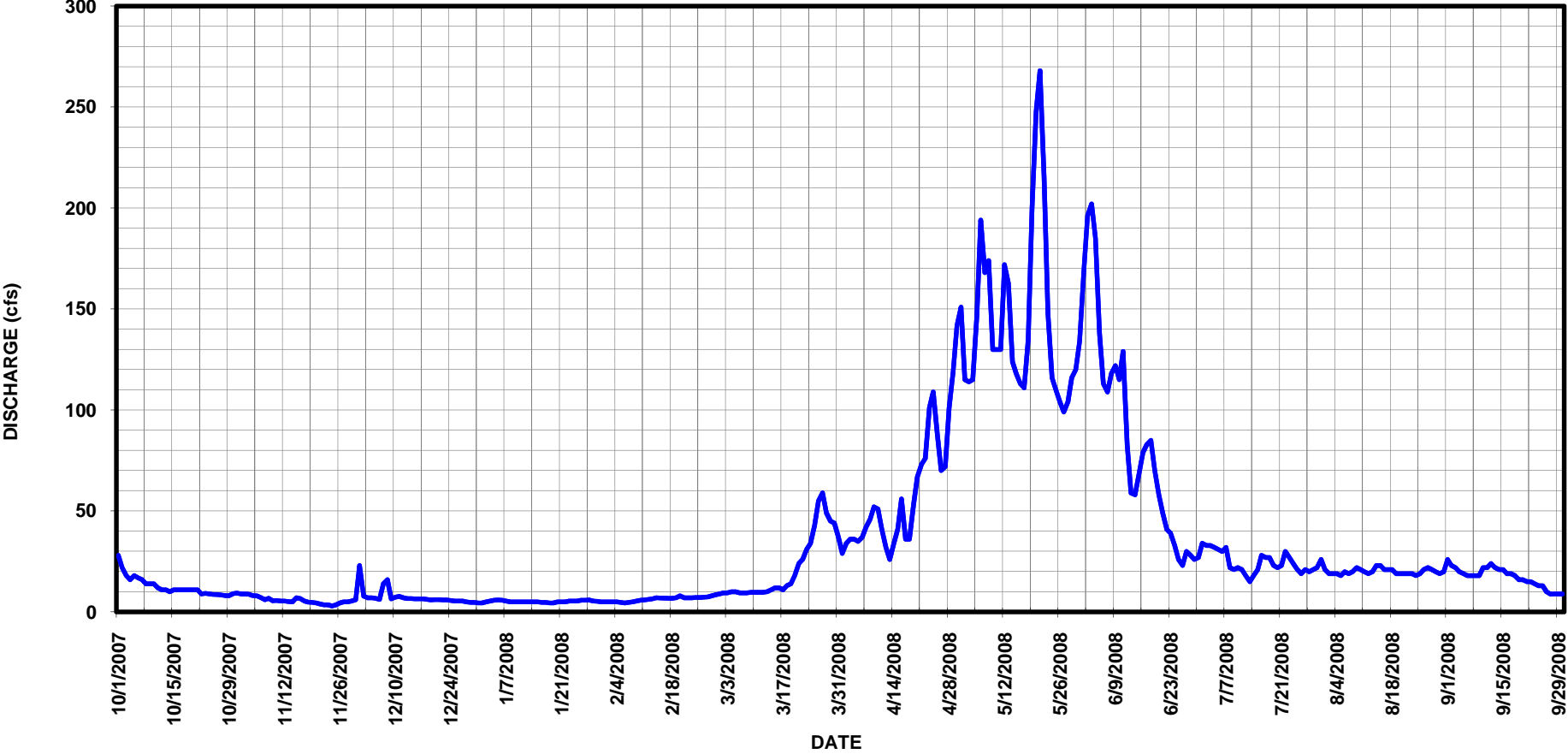
DISCHARGE, IN CFS, WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	8.9	23	4.5e	5.0e	9.0e	29	151	168	34	21	26
2	22	8.9	7.9	5.0e	5.0e	9.5e	34	115	196	33	19	23
3	18	8.8	7.0e	5.5e	5.0e	9.5e	36	114	202	33	19	22
4	16	8.1	7.0e	5.8e	5.0e	10e	36	115	185	32	19	20
5	18	8.0	6.8	6.0	4.8e	10e	35	147	138	31	18	19
6	17	7.2	6.3	5.8	4.5e	9.5e	37	194	113	30	20	18
7	16	6.1	14	5.5e	4.8e	9.5e	42	168	109	32	19	18
8	14	6.8	16	5.0e	5.0e	9.5e	46	174	118	22	20	18
9	14	5.6	6.5e	5.0e	5.5e	9.8e	52	130	122	21	22	18
10	14	5.7	7.4	5.0e	5.8e	9.8e	51	130	115	22	21	22
11	12	5.4	7.7	5.0e	6.0e	9.8e	41	130	129	21	20	22
12	11	5.4	7.0e	5.0e	6.3e	9.8e	32	172	83	18	19	24
13	11	5.1	6.7e	5.0e	6.5e	10e	26	163	59	15	20	22
14	10	5.0	6.7e	5.0e	7.0	11e	34	124	58	18	23	21
15	11	7.0	6.5e	5.0e	6.9	12e	41	118	68	21	23	21
16	11	6.6	6.5e	4.8e	6.9e	12e	56	113	79	28	21	19
17	11	5.4	6.5e	4.8e	6.8e	11e	36	111	83	27	21	19
18	11	4.9	6.3	4.5e	6.8e	13e	36	135	85	27	21	18
19	11	4.7	6.0	4.5e	7.0e	14e	53	200	70	23	19	16
20	11	4.5	6.1	5.0e	8.0	18e	67	248	58	22	19	16
21	11	3.9	6.1e	5.0e	7.1	24	73	268	49	23	19	15
22	8.9	3.5	6.0e	5.0e	7.1	26	76	215	41	30	19	15
23	9.2	3.6	6.0e	5.5e	7.1	31	101	148	39	27	19	14
24	9.0	3.0e	5.7e	5.5e	7.2	34	109	116	33	24	18	13
25	8.7	3.5e	5.5e	5.5e	7.2e	43	88	110	26	21	19	13
26	8.7	4.5e	5.5e	5.8e	7.3e	55	70	104	23	19	21	10
27	8.4	5.0e	5.5e	5.8e	7.5e	59	72	99	30	21	22	8.8
28	8.2	5.0e	5.0e	6.0e	8.0e	49	101	104	28	20	21	9.0
29	8.1	5.5e	4.8e	5.5e	8.5e	45	119	116	26	21	20	8.9
30	9.1	6.1	4.8e	5.3e	---	44	142	120	27	22	19	9.0
31	9.3	---	4.5e	5.0e	---	37	---	134	---	26	20	---
TOTAL	385.6	171.7	227.3	161.6	185.6	663.7	1771	4486	2560	764	621	517.7
MEAN	12.4	5.72	7.33	5.21	6.40	21.4	59.0	145	85.3	24.6	20.0	17.3
AC-FT	765	341	451	321	368	1320	3510	8900	5080	1520	1230	1030
MAX	28	8.9	23	6.0	8.5	59	142	268	202	34	23	26
MIN	8.1	3.0	4.5	4.5	4.5	9.0	26	99	23	15	18	8.8
CAL YR 2007	TOTAL	8828.8	MEAN	24.2	MAX	169	MIN	3	AC-FT	17510		
WTR YR 2008	TOTAL	12515.2	MEAN	34.2	MAX	268	MIN	3	AC-FT	24820		

MAX DISCH: 291 CFS AT 23:30 ON May 19, 2008 GH 4.69 FT. SHIFT -0.11 FT.  
MAX GH: 4.82 FT. AT 09:15 ON Feb. 6, 2008 (ice affected)

FOR MORE COMPLETE OR DETAILED INFORMATION SEE DAILY OR MONTHLY RECORD.  
e = Estimated

09370000 MANCOS RIVER NEAR MANCOS CO  
WY2008 HYDROGRAPH



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Station Identification Codes

DIV I

CODE	NAME
ADATUNCO	ALVA B. ADAMS TUNNEL AT EAST PORTAL, NEAR ESTES PARK
ADANETCO	ALVA B. ADAMS TUNNEL AT EAST PORTAL (NET), NEAR ESTES PARK
BCRMORCO	BEAR CREEK AT MORRISON
BCRSHECO	BEAR CREEK AT SHERIDAN
BERDITCO	BERTHOUD PASS DITCH AT BERTHOUD PASS
BFCLYOCO	BOULDER CREEK FEEDER CANAL NEAR LYONS
BIGLASCO	BIG THOMPSON AT MOUTH, NEAR LA SALLE
BOBGLNCO	BOB CREEK DITCH NEAR GLENDEVEY
BOCBGRCO	SOUTH BOULDER CREEK BELOW GROSS RESERVOIR
BOCELSCO	SOUTH BOULDER CREEK NEAR ELDERADO SPRINGS
BOCMIDCO	MIDDLE BOULDER CREEK AT NEDERLAND
BOCOBOCO	BOULDER CREEK AT BOULDER
BOCOROCO	BOULDER CREEK NEAR ORODELL
BORDITCO	BOREAS PASS DITCH AT BOREAS PASS
BOSDELCO	SOUTH BOULDER CREEK, DIVERSION NR ELDERADO SPRINGS
BTABESCO	BIG THOMPSON RIVER ABOVE LAKE ESTES
BTBLESCO	BIG THOMPSON RIVER BELOW LAKE ESTES
BTCANYCO	BIG THOMPSON RIVER AT MOUTH OF CANYON, NEAR DRAKE
BTPEMCCO	CHARLES HANSEN FEEDER CANAL POWER PLANT TO BIG THOMPSON
BUCRMVCO	BUCKHORN CREEK NEAR MASONVILLE
BTNFDRCO	NORTH FORK BIG THOMPSON RIVER AT DRAKE
CAPDCPCO	CAMERON PASS DITCH NEAR CAMERON PASS
CLAFITCO	CACHE LA POUDRE AT CANYON MOUTH, NEAR FORT COLLINS
CLAGRECO	CACHE LA POUDRE NEAR GREELEY
CLAWASCO	CACHE LA POUDRE AT GREELEY WASTEWATER TREATMENT PLANT
CLEDERCO	CLEAR CREEK AT DERBY
COCREPCCO	COAL CREEK NEAR PLAINVIEW
DEADDPCCO	DEADMAN DITCH NEAR DEADMAN PARK
DILTUNCO	DILLE TUNNEL NEAR DRAKE
FALIDACO	FALL RIVER AT MOUTH NEAR IDAHO SPRINGS
FISHESCO	FISH CREEK NEAR ESTES PARK
GRNDRDCO	GRAND RIVER DITCH AT LA POUDRE PASS
GUMCLRCCO	A.P. GUMGLICK TUNNEL RELEASE TO CLEAR CREEK AT JONES PASS
HFCBBSCO	CHARLES HANSEN FEEDER CANAL BELOW BIG THOMPSON SIPHON
HFCWASCO	CHARLES HANSEN FEEDER CANAL WASTEWAY TO BIG THOMPSON
HOMSPICO	AURORA HOMESTAKE PIPELINE
HSPTUNCO	HOOSIER PASS TUNNEL AT MONTGOMERY RES., NEAR ALMA
LAPTUNCO	LARAMIE POUDRE TUNNEL
LEFTHDCO	LEFTHAND DIVERSION S. ST. VRAIN CREEK NEAR WARD
LTCANYCO	LITTLE THOMPSON RIVER AT CANYON MOUTH, NEAR BERTHOUD
MICDCPCO	MICHIGAN DITCH AT CAMERON PASS
MIDSTECO	MIDDLE ST. VRAIN CREEK NR. PEACEFUL VALLEY
MOFTUNCO	MOFFAT WATER TUNNEL, GILPIN COUNTY
OLYTUNCO	OLYMPUS TUNNEL (ESTES FOOTHILLS CANAL) AT LAKE ESTES
ONEJURCO	SOUTH PLATTE RIVER AT JULESBURG CHANNEL #1
PIOHDGCO	PIONEER DITCH AT HEADGATE
PIOSTLCO	PIONEER DITCH AT CO/NE STATE LINE
PLAANTCO	SOUTH PLATTE RIVE BELOW ANTERO RESERVOIR
PLABALCO	SOUTH PLATTE RIVER AT COOPER BRIDGE, NEAR BALZAC
PLACHACO	SOUTH PLATTE RIVER BELOW CHATFIELD RESERVOIR
PLACHECO	SOUTH PLATTE RIVER BL. CHEESMAN RESERVOIR
PLADENCO	SOUTH PLATTE RIVER AT DENVER
PLAGEOCO	SOUTH PLATTE RIVER NEAR LAKE GEORGE
PLAGRACO	NORTH FORK SOUTH PLATTE RIVER AT GRANT
PLAHARCO	SOUTH PLATTE RIVER ABOVE ELEVENMILE RESERVOIR
PLAHENCO	SOUTH PLATTE RIVER AT HENDERSON
PLAJUCCO	SOUTH PLATTE RIVER AT JULESBURG COMBINED
PLAJULCO	SOUTH PLATTE RIVER AT JULESBURG LEFT CHAN. #4
PLAJURCO	SOUTH PLATTE RIVER AT JULESBURG RIGHT CHAN. #2
PLAKERCO	SOUTH PLATTE RIVER NEAR KERSEY
PLASPICO	SOUTH PLATTE RIVER ABOVE SPINNEY RESERVOIR
PLASPLCO	SOUTH PLATTE RIVER AT SOUTH PLATTE
PLASTRCCO	SOUTH PLATTE RIVER BELOW STRONTIA SPRINGS
PLAWATCO	SOUTH PLATTE RIVER AT WATERTON
PLAWELCO	SOUTH PLATTE RIVER NEAR WELDONA
ROBTUNCO	ROBERTS TUNNEL AT EAST PORTAL NEAR GRANT
SKYDCLCO	SKYLINE DITCH AT CHAMBERS LAKE
SSVWARCO	SOUTH ST. VRAIN NEAR WARD
STCTUNCO	STRAIGHT CREEK TUNNEL AT EISENHOWER TUNNEL
STLINECO	STATELINE DITCH RETURN NEAR JULESBURG

SVCLYOCO	SAINT VRAIN CREEK AT LYONS
SVCPLACO	ST. VRAIN CREEK AT MOUTH, NEAR PLATTEVILLE
SVSLYOCO	ST. VRAIN SUPPLY CANAL NEAR LYONS
TARBORCO	TARRYALL CREEK AT BORDEN DITCH NEAR JEFFERSON
TARTARCO	TARRYALL CREEK BELOW TARRYALL RESERVOIR
VIDTUNCO	VIDLER TUNNEL NEAR ARGENTINE PASS
WINDESCO	WIND RIVER NEAR ESTES PARK
WINBYPCO	WIND RIVER BY-PASS NEAR ESTES PARK
WSDEARCO	WILSON SUPPLY DITCH NEAR EATON RESERVOIR

DIV II

CODE	NAME
ARKCACCO	ARKANSAS RIVER AND CATLIN CANAL COMBINED
ARKCANCO	ARKANSAS RIVER AT CANYON CITY
ARKCARCO	ARKANSAS RIVER BELOW X-Y DITCH DAM NEAR CARLTON
ARKCATCO	ARKANSAS RIVER BELOW CATLIN DAM NEAR FOWLER
ARKGRNCO	ARKANSAS RIVER AT GRANITE
ARKLAJCO	ARKANSAS RIVER AT LA JUNTA
ARKNEPCO	ARKANSAS RIVER NEAR NEPESTA
ARKNECCO	ARKANSAS RIVER AT NEPESTA ROAD BRIDGE COMBINED
ARKPORCO	ARKANSAS RIVER AT PORTLAND
ARKPUECO	ARKANSAS RIVER ABOVE PUEBLO
ARKROCCO	ARKANSAS RIVER AT ROCKY FORD
ARKSALCO	ARKANSAS RIVER AT SALIDA
ARKWELCO	ARKANSAS RIVER NEAR WELLSVILLE
BOUTUNCO	CHARLES H. BOUSTEAD TUNNEL
BUSTUNCO	BUSK-IVANHOE TUNNEL
CATCANCO	CATLIN CANAL AT CATLIN DAM, NEAR FOWLER
CANSWKCO	CROOKED ARROYO NEAR SWINK
CCACCRCO	CLEAR CREEK ABOVE CLEAR CREEK RESERVOIR
CCBCCRCO	CLEAR CREEK BELOW CLEAR CREEK RESERVOIR
CHCRNACO	CHALK CREEK AT NATHROP
COLDITCO	COLUMBINE DITCH
COCRBVCO	COTTONWOOD CREEK NEAR BUENA VISTA
CRBRLVCO	CUCHARAS RIVER AT BOYD RANCH NEAR LA VETA
CRHBLVCO	CUCHARAS RIVER AT HARRISON BRIDGE NEAR LA VETA
EWIDITCO	EWING DITCH
GRAWESCO	GRAPE CREEK NEAR WESTCLIFFE
HILCANCO	HIGHLAND CANAL BELOW HIGHLAND DAM NEAR LAS ANIMAS
HOMTUNCO	HOMESTAKE TUNNEL
HRC194CO	HORSE CREEK AT HIGHWAY 194
HURREDCO	HUERFANO RIVER NEAR REDWING
LAKATLCO	LAKE CREEK ABOVE TWIN LAKES RESERVOIR
LAKBTLCO	LAKE CREEK BELOW TWIN LAKES RESERVOIR
LARDITCO	LARKSPUR DITCH AT MARSHALL PASS
LCBBSLCO	LAKE FORK CREEK BELOW SUGAR LOAF DAM NR. LEADVILLE
MUDTOOCO	MUDDY CREEK NEAR TOONERVILLE
NMCHIGCO	NINEMILE CANAL AT NINEMILE DAM NEAR HIGBEE
OXFDITCO	OXFORD FARMERS DITCH NEAR NEPESTA
PURHILCO	PURGATOIRE RIVER BELOW HIGHLAND DAM NEAR LAS ANIMAS
PURHICCO	PURGATOIRE RIVER BELOW HIGHLAND DAM NEAR LAS ANIMAS (COMBINED)
PURNICCO	PURGATOIRE R AT NINEMILE DAM, NR HIGBEE COMBINED
PURNINCO	PURGATOIRE RIVER AT NINEMILE DAM, NEAR HIGBEE
PURTRICO	PURGATOIRE RIVER AT TRINIDAD
RACRSTCO	RATON CREEK ABOVE STARKVILLE
RULTOOCO	RULE CREEK NEAR TOONERVILLE
TWITUNCO	TWIN LAKES TUNNEL
WURDITCO	WURTZ DITCH NEAR TENNESSEE PASS
WUREXTCO	WURTZ EXTENSION DITCH NEAR TENNESSEE PASS

DIV III

CODE	NAME
ALABELCO	ALAMOSAS CREEK BELOW TERRACE RESERVOIR
ALARANCO	ALAMOSAS RIVER BELOW RANGER CREEK
ALATERCO	ALAMOSAS CREEK ABOVE TERRACE RESERVOIR
ALAWIGCO	ALAMOSAS RIVER ABOVE WIGHTMAN FORK NEAR JASPER

BIGSPGCO	BIG SPRING CREEK AT MEDANO RANCH NEAR MOSCA
CARLAGCO	CARNERO CREEK NEAR LA GARITA
CBPALACO	CLOSED BASIN PROJECT CANAL NEAR ALAMOSA
CHECRECO	CHERRY CREEK NEAR CRESTONE
COCRMICO	COTTON CREEK NEAR MINERAL HOT SPRINGS
COCRESO	COTTONWOOD CREEK NEAR CRESTONE
CONLASCO	COMBINED CONEJOS RIVER (NORLASCO SOULASCO)
CONMOGCO	CONEJOS RIVER NEAR MOGOTE
CONPLACO	CONEJOS RIVER BELOW PLATORO RESERVOIR
CULSANCO	CULEBRA CREEK AT SAN LUIS
DEDCRECO	DEADMAN CREEK NEAR CRESTONE
DLFDT0CO	DON LA FONT DITCH, COMBINED, AT PIEDRA PASS
DLFDT1CO	DON LA FONT DITCH NO. 1 AT PIEDRA PASS
DLFDT2CO	DON LA FONT DITCH NO. 2 AT PIEDRA PASS
GARVILCO	GARNER CREEK NEAR VILLA GROVE
GOOWAGCO	GOOSE CREEK AT WAGONWHEEL GAP
KERVILCO	KERBER CREEK NEAR VILLA GROVE
LAGLAGCO	LA GARITA CREEK NEAR LA GARITA
LAJCAPCO	LAJARA CREEK AT GALLEGOS RANCH NEAR CAPULIN
LITSPGCO	LITTLE SPRING CREEK AT MEDANO RANCH NEAR MOSCA
LOSORTCO	LOS PINOS RIVER NEAR ORTIZ
MAJVILCO	MAJOR CREEK NEAR VILLA GROVE
NCLCONCO	NORTH CLEAR CREEK BELOW CONTINENTAL RESERVOIR
NOCRESO	CRESTONE CREEK, NORTH NEAR CRESTONE
NORDLSCO	NORTON DRAIN NEAR LA SAUSES
NORDSCCO	SOUTH CHANNEL NORTON DRAIN DITCH NEAR LA SAUSES
NORLASCO	NORTH CHANNEL CONEJOS RIVER NEAR LASAUSES
PINDELCO	PINOS CREEK NEAR DEL NORTE
PRWDITCO	PINE RIVER WEMINUCHE PASS DITCH AT WEMINUCHE PASS
RIOALACO	RIO GRANDE RIVER AT ALAMOSA
RIODELCO	RIO GRANDE NEAR DEL NORTE
RIOLINCO	RIO GRANDE AT RIO GRANDE-ALAMOSA COUNTY LINE
RIOLOBCO	RIO GRANDE NEAR LOBATOS
RIOMILCO	RIO GRANDE AT THIRTY MILE BRIDGE
RIOMONCO	RIO GRANDE AT MONTE VISTA
RIOSFKCO	SOUTH FORK RIO GRANDE RIVER AT SOUTH FORK
RIOTRICO	RIO GRANDE RIVER ABOVE THE MOUTH OF TRINCHERA CREEK
RIOWAGCO	RIO GRANDE RIVER AT WAGONWHEEL GAP
RITCRECO	RITO ALTO CREEK NEAR CRESTONE
SAGSAGCO	SAGUACHE CREEK NEAR SAGUACHE
SANCRECO	SAN ISABEL CREEK NEAR CRESTONE
SANFTGCO	SANGRE DE CRISTO CREEK NEAR FT. GARLAND
SANMANCO	SAN ANTONIO RIVER NEAR MANASSA
SANORTCO	SAN ANTONIO RIVER AT ORTIZ
SOUCRECO	SOUTH CRESTONE CREEK NEAR CRESTONE
SOULASCO	SOUTH CHANNEL CONEJOS RIVER NEAR LASAUSES
SPACRECO	SPANISH CREEK NEAR CRESTONE
TABDITCO	TABOR DITCH AT SPRING CREEK PASS
TARBELCO	TARBELL DITCH NEAR COCHETOPA PASS
TREDITCO	TREASURE PASS DITCH AT WOLF CREEK PASS
TRIMTNCO	TRINCHERA CREEK ABOVE MOUNTAIN HOME RESERVOIR
TRISMICO	TRINCHERA CREEK BELOW SMITH RESERVOIR
TRITURCO	TRINCHERA CREEK AB. TURNER'S RANCH
UTEFTGCO	UTE CREEK NEAR FORT GARLAND
WCSBITCO	WILLIAM'S CREEK-SQUAW PASS DITCH AT SQUAW PASS
WEMDITCO	WEMINUCHE PASS DITCH AT WEMINUCHE PASS
WFRMOUCO	WIGHTMAN FORK AT MOUTH AT ALAMOSA RIVER
WFKCROCO	WIGHTMAN FORK BELOW CROPSY CREEK NEAR SUMMITVILLE
WILCRECO	WILLOW CREEK NEAR CRESTONE

DIV IV

CODE	NAME
ABCLATCO	ABC LATERAL
GUNREDCO	GUNNISON RIVER BELOW REDLANDS DIVERSION DAM
MUDAPRCO	MUDDY CREEK ABOVE PAONIA RESERVOIR
MUDBPRCO	MUDDY CREEK BELOW PAONIA RESERVOIR
RLCGRJCO	REDLANDS CANAL NR GRAND JUNCTION
SOUCANCO	SOUTH CANAL NR MONTROSE
UNCOLACO	UNCOMPAHGRE RIVER NEAR OLATHE

DIV V

CODE	NAME
BLUNINCO	BLUE RIVER AT HIGHWAY 9 BRIDGE
CHAGULCO	CHAPMAN GULCH NEAR NAST
CRYDOWCO	CRYSTAL RIVER AT DOW FISH HATCHERY NEAR CARBONDALE
FRYIVLCO	FRYINGPAN RIVER NEAR IVANHOE LAKE
FRYMERCO	FRYINGPAN RIVER AT MEREDITH
FRYNFNCO	NORTH FORK FRYINGPAN RIVER NEAR NORRIE
FRYSFUCO	SOUTH FORK FRYINGPAN RIVER AT UPPER STATION
FRYTHOCO	FRYINGPAN RIVER NEAR THOMASVILLE
IVCRNACO	IVANHOE CREEK NEAR NAST
ROABMCCO	ROARING FORK RIVER BELOW MAROON CREEK NEAR ASPEN
ROAFRYCO	ROARING FORK RIVER ABOVE MOUTH OF FRYINGPAN RIVER NEAR BASALT
RFCMERCO	ROCKY FORK CREEK NEAR MEREDITH
SNAKEYCO	SNAKE RIVER AT KEYSTONE
WSDRAVCO	WEST DIVIDE CREEK NEAR RAVEN

DIV VI

CODE	NAME
ILLRANCO	ILLINOIS RIVER NEAR RAND
MICMERCO	MICHIGAN RIVER NEAR MEADOW CREEK RESERVOIR
MICWLDCCO	MICHIGAN RIVER AT WALDEN
PTCKSLCO	POT CREEK AT UTAH-COLORADO STATELINE NEAR VERNAL
WILBSLCO	WILLOW CREEK BELOW STEAMBOAT LAKE
WLTNCKCO	WALTON CREEK NEAR STEAMBOAT SPRINGS
WMFKHMCO	WILLIAMS FORK AT MOUTH NEAR HAMILTON
YAMABVCO	YAMPA RIVER ABOVE LAKE CATAMOUNT

DIV VII

CODE	NAME
ANIHOWCO	ANIMAS RIVER NEAR HOWARDSVILLE
BLADIVCO	BLANCO DIVERSION NEAR PAGOSA SPRINGS
CHEREDCO	CHERRY CREEK AT THE MOUTH NEAR RED MESA
DOLBMCCO	DOLORES RIVER BELOW MCPHEE RESERVOIR
DOLTUNCO	DOLORES TUNNEL OUTLET NEAR DOLORES
ENTDITCO	ENTERPRISE DITCH AT THE COLO-NEW MEXICO STATELINE
FLOALECO	FLORIDA RIVER ABOVE LEMON RESERVOIR NEAR DURANGO
FLOBLECO	FLORIDA RIVER BELOW LEMON RESERVOIR
LAPHESCO	LA PLATA RIVER AT HESPERUS
LAPMEXCO	LA PLATA RIVER AT THE COLORADO/NEW MEXICO LINE
LITOSOCO	LITTLE NAVAJO RIVER BELOW LITTLE OSO DIVERSION DAM NEAR CHROMO
LONREDCO	LONG HOLLOW AT THE MOUTH NEAR RED MESA
LOSODVCO	LITTLE OSO DIVERSION NEAR CHROMO
LPCDITCO	LA PLATA AND CHERRY CREEK DITCH NEAR HESPERUS
MANMANCO	MANCOS RIVER NEAR MANCOS
MVIDIVCO	LONE PINE CANAL BELOW GREAT CUT DIKE NEAR DOLORES
NAVBANCO	NAVAJO RIVER AT BANDED PEAKS RANCH NEAR CHROMO
NAVOSOCO	NAVAJO RIVER BELOW OSO DIVERSION DAM NEAR CHROMO
OSODIVDO	OSO DIVERSION NEAR CHROMO
PINDITCO	PINE RIDGE DITCH NEAR HESPERUS
PIODITCO	PIONEER DITCH AT THE COLORADO-NEW MEXICO STATELINE
RIOBLACO	RIO BLANCO BELOW BLANCO DIVERSION DAM NEAR PAGOSA
RIOMOUCO	RIO BLANCO AT THE MOUTH NEAR TRUJILLO