

Water-Data Report 2010

10150500 SPANISH FORK AT CASTILLA, UT

Jordan Basin
Spanish Fork Subbasin

LOCATION.--Lat 40°02'59", long 111°32'50" referenced to North American Datum of 1927, in SE ¼ NE ¼ NW ¼ sec.12, T.9 S., R.3 E., Utah County, UT, Hydrologic Unit 16020202, on right bank 600 ft upstream from outlet of Cold Springs, 0.9 mi upstream from diversion dam of Bureau of Reclamation, 1.5 mi northwest of Castilla, and 2.8 mi downstream from Diamond Fork.

DRAINAGE AREA.--652 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--September 1889 to December 1890, April 1903 to November 1917, May 1919 to September 1925, January 1933 to current year. Monthly discharge only for some periods, published in WSP 1314. Published as "near Spanish Fork" 1889-90, 1903-08.

REVISED RECORDS.--WDR UT-77-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 4,870 ft above NGVD of 1929, from topographic map. Prior to May 3, 1919, nonrecording gages at various sites 1.5 mi to 2.5 mi downstream from present site at different datums below power canal, which began diverting late in 1908. May 3, 1919 to April 14, 1920, nonrecording gage; April 15, 1920 to September 30, 1925 and January 1, 1933 to April 16, 1940, water-stage recorder, at present site upstream from power canal at datum 2.00 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are poor. Several small diversions for irrigation above station. Flow since June 1915 includes water diverted from Strawberry Reservoir (capacity, 1,106,500 acre-ft) since June 30, 1973, in Colorado River Basin via Strawberry Tunnel for irrigation in vicinity of Spanish Fork. Flow affected by mudslide and draining of resultant lake about 5 mi upstream April 14 to September 30, 1983.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft³/s, May 15, 1984, gage height, 11.53 ft; minimum, 5.8 ft³/s, Dec 15, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 671 ft³/s, Aug 2, gage height, 5.75 ft; minimum discharge, 73 ft³/s, Dec 4, 26.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	160	135	121	119	121	128	150	173	290	608	470	322
2	143	132	123	119	118	130	145	173	323	604	506	316
3	137	128	107	113	121	131	145	172	334	599	428	315
4	138	129	98	111	122	134	147	196	319	580	412	299
5	133	130	103	116	122	137	150	200	295	575	430	293
6	114	130	115	118	123	132	157	199	303	513	388	291
7	94	130	116	115	121	135	152	199	315	468	366	294
8	96	130	119	102	121	134	150	206	305	476	344	348
9	138	129	97	114	117	135	150	e212	301	504	351	354
10	139	128	90	116	120	137	155	e215	304	516	379	330
11	139	128	93	111	123	133	158	213	299	472	414	331
12	137	129	124	111	119	133	162	214	314	466	429	350
13	138	131	132	116	119	137	170	272	293	440	459	349
14	149	132	135	113	120	138	161	273	273	435	442	371
15	152	131	121	110	120	137	163	273	241	449	436	378
16	144	124	124	113	121	139	177	272	212	478	445	361
17	141	128	121	115	122	137	188	298	219	478	446	355
18	139	130	120	114	123	139	203	350	248	460	466	358
19	140	128	115	118	125	144	216	382	267	458	479	360
20	140	126	116	122	124	139	226	381	251	449	478	360
21	140	129	117	123	122	140	232	366	268	454	430	359
22	141	126	120	123	119	144	219	362	360	488	399	364
23	141	130	118	123	116	151	189	323	410	499	390	365
24	143	120	118	121	128	145	168	328	442	473	371	362
25	143	123	101	116	131	146	158	302	490	444	356	346
26	140	126	97	120	126	146	164	284	515	441	337	341
27	147	127	99	122	126	142	175	277	518	454	341	340
28	146	130	98	122	127	141	183	286	568	444	339	345
29	141	125	120	120	---	144	189	300	589	459	323	346
30	133	121	126	117	---	147	181	302	604	470	349	338
31	134	---	121	125	---	156	---	292	---	472	338	---
Total	4,260	3,845	3,525	3,618	3,417	4,311	5,183	8,295	10,470	15,126	12,541	10,241
Mean	137	128	114	117	122	139	173	268	349	488	405	341
Max	160	135	135	125	131	156	232	382	604	608	506	378
Min	94	120	90	102	116	128	145	172	212	435	323	291
Ac-ft	8,450	7,630	6,990	7,180	6,780	8,550	10,280	16,450	20,770	30,000	24,880	20,310

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	110	93.1	86.5	88.0	99.7	137	265	534	459	406	339	208
Max	654	480	257	281	280	334	1,054	2,077	1,593	565	525	385
(WY)	(1984)	(1984)	(2005)	(2005)	(2005)	(1986)	(1952)	(1984)	(1983)	(1998)	(1985)	(1992)
Min	33.5	42.7	40.5	45.4	41.9	53.0	56.7	180	126	101	92.4	59.7
(WY)	(1935)	(1962)	(1961)	(1961)	(1964)	(1964)	(1961)	(1934)	(1934)	(1934)	(1934)	(1934)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1920 - 2010	
Annual total	96,340		84,832			
Annual mean	264		232		237	
Highest annual mean					569	1984
Lowest annual mean					86.2	1934
Highest daily mean	731	May 8	608	Jul 1	3,700	May 15, 1984
Lowest daily mean	90	Dec 10	90	Dec 10	20	Dec 9, 1951
Annual seven-day minimum	105	Dec 5	105	Dec 5	27	Oct 25, 1934
Annual runoff (ac-ft)	191,100		168,300		171,700	
10 percent exceeds	507		451		505	
50 percent exceeds	166		150		151	
90 percent exceeds	121		117		63	

