

09315000 GREEN RIVER AT GREEN RIVER, UT

Lower Green Basin
Lower Green Subbasin

LOCATION.--Lat 38°59'10", long 110°09'02" referenced to North American Datum of 1927, in NW ¼ NW ¼ SW ¼ sec.15, T.21 S., R.16 E., Emery County, UT, Hydrologic Unit 14060008, on right bank 1,400 ft. upstream from a railroad bridge, 0.9 mi. southeast of town of Green River, UT, 22.7 mi. upstream from the San Rafael River, and at mile 117.6 upstream from mouth.

DRAINAGE AREA.--44,850 mi², of which about 4,260 mi² is noncontributing, including 3,959 mi² in Great Divide Basin in southern Wyoming.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1894 to October 1899, March 1905 to current year. Published as "at Blake" 1894-99, as "near Elgin" 1911, and as "at Little Valley, near Green River" 1910-23.

REVISED RECORDS.--WSP 918: 1895-1899. WDR UT-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,040.18 ft above NGVD of 1929. Prior to November 6, 1914, staff, wire-weight, or chain gages at several sites within 7 mi of present site at various datums. November 6, 1914 to June 20, 1924, water-stage recorder at site 7 mi downstream at different datum. June 21 to September 18, 1924, chain gage, and September 19, 1924 to May 7, 1947, water-stage recorder at site 100 ft downstream at present datum. May 8, 1947 to September 7, 1994, water-stage recorder at site 900 ft downstream at present datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation above station. Flow regulated by Flaming Gorge Reservoir (see station 09234400) since November 1, 1962.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,100 ft³/s, Jun 27, 1917, gage height, 14.53 ft, site and datum then in use; minimum, 255 ft³/s, Nov 26, 1931; minimum gage height, 4.08 ft, Aug 1, Dec 5, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 17,000 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jun 10	1130	*24,400	*12.08

Minimum daily discharge, 1,820 ft³/s, Dec 11, 12.

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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	2,910	3,300	3,020	e2,440	e2,440	e2,300	2,830	6,670	19,200	6,800	2,870	2,450
2	2,950	3,280	3,070	e2,430	e2,450	e2,500	2,690	6,660	20,900	6,470	3,060	2,640
3	2,980	3,210	e3,070	e2,420	e2,400	e2,700	2,590	7,680	21,300	6,040	3,010	2,630
4	3,180	3,230	e2,900	e2,430	e2,350	e2,900	2,590	7,390	20,100	5,680	2,960	2,470
5	3,260	3,300	e2,800	e2,440	e2,300	3,180	2,710	6,630	19,200	5,500	3,160	2,390
6	3,100	3,310	e2,350	e2,440	e2,300	3,150	2,830	6,020	18,800	5,310	2,930	2,320
7	3,070	3,290	e1,910	e2,430	e2,300	3,120	2,990	5,730	19,600	5,140	2,840	2,360
8	3,080	3,320	e1,880	e2,420	e2,280	3,180	3,000	5,530	21,200	4,980	2,740	2,350
9	3,090	3,330	e1,850	e2,430	e2,260	3,270	2,860	5,260	22,900	4,810	2,990	2,310
10	3,080	3,310	e1,830	e2,430	e2,250	3,280	2,730	5,110	24,200	4,560	3,230	2,260
11	3,070	3,300	e1,820	e2,430	e2,240	3,240	2,700	5,340	23,700	4,420	2,990	2,280
12	3,220	3,300	e1,820	e2,430	e2,220	3,260	2,810	5,980	23,800	4,210	3,020	2,290
13	3,200	3,290	e1,950	e2,440	e2,250	3,490	2,890	5,760	23,600	4,030	2,820	2,280
14	3,080	3,280	e2,150	e2,440	e2,240	3,820	2,790	6,060	22,100	3,990	2,680	2,280
15	e2,780	3,290	e2,300	e2,440	e2,220	3,930	2,910	7,310	20,200	3,860	2,630	2,280
16	e2,830	3,380	e2,500	e2,450	e2,200	4,330	3,250	7,540	19,500	3,700	2,600	2,260
17	2,970	3,380	e2,550	e2,450	e2,200	4,570	3,680	7,210	19,600	3,560	2,520	2,280
18	3,000	3,340	e2,550	e2,450	e2,180	4,400	4,260	6,940	17,200	3,450	2,480	2,300
19	3,090	3,280	e2,550	e2,450	e2,150	3,600	4,410	6,850	14,100	3,340	2,640	2,310
20	3,110	3,160	e2,500	e2,450	e2,130	3,430	4,150	7,970	12,700	3,200	2,530	2,310
21	3,140	3,090	e2,500	e2,450	e2,150	3,430	4,310	8,900	12,100	3,110	2,820	2,300
22	3,210	3,060	e2,600	e2,450	e2,130	3,320	5,010	10,400	11,300	3,260	2,690	2,740
23	3,340	3,110	e2,600	e2,440	e1,990	3,310	5,960	12,000	10,400	2,930	2,620	2,650
24	3,290	3,140	e2,500	e2,440	e1,980	3,200	7,180	14,300	9,950	2,990	2,600	2,390
25	3,240	3,220	e2,400	e2,430	e2,180	3,150	8,600	15,800	9,300	3,130	2,470	2,310
26	3,240	3,280	e2,400	e2,430	e2,060	3,270	9,880	16,200	8,650	2,960	2,380	2,330
27	3,240	3,240	e2,400	e2,430	e2,120	3,220	10,000	15,700	8,170	2,880	2,310	2,350
28	3,330	3,080	e2,350	e2,440	e2,190	3,060	8,750	16,100	7,700	2,700	2,310	2,350
29	3,330	3,000	e2,400	e2,440	---	3,080	7,620	15,800	7,340	2,690	2,370	2,370
30	3,250	3,010	e2,450	e2,450	---	3,000	7,070	15,700	7,050	2,670	2,330	2,340
31	3,240	---	e2,450	e2,450	---	2,940	---	17,200	---	2,690	2,340	---
Total	96,900	97,110	74,420	75,590	62,160	102,630	136,050	287,740	495,860	125,060	83,940	71,180
Mean	3,126	3,237	2,401	2,438	2,220	3,311	4,535	9,282	16,530	4,034	2,708	2,373
Max	3,340	3,380	3,070	2,450	2,450	4,570	10,000	17,200	24,200	6,800	3,230	2,740
Min	2,780	3,000	1,820	2,420	1,980	2,300	2,590	5,110	7,050	2,670	2,310	2,260
Ac-ft	192,200	192,600	147,600	149,900	123,300	203,600	269,900	570,700	983,500	248,100	166,500	141,200

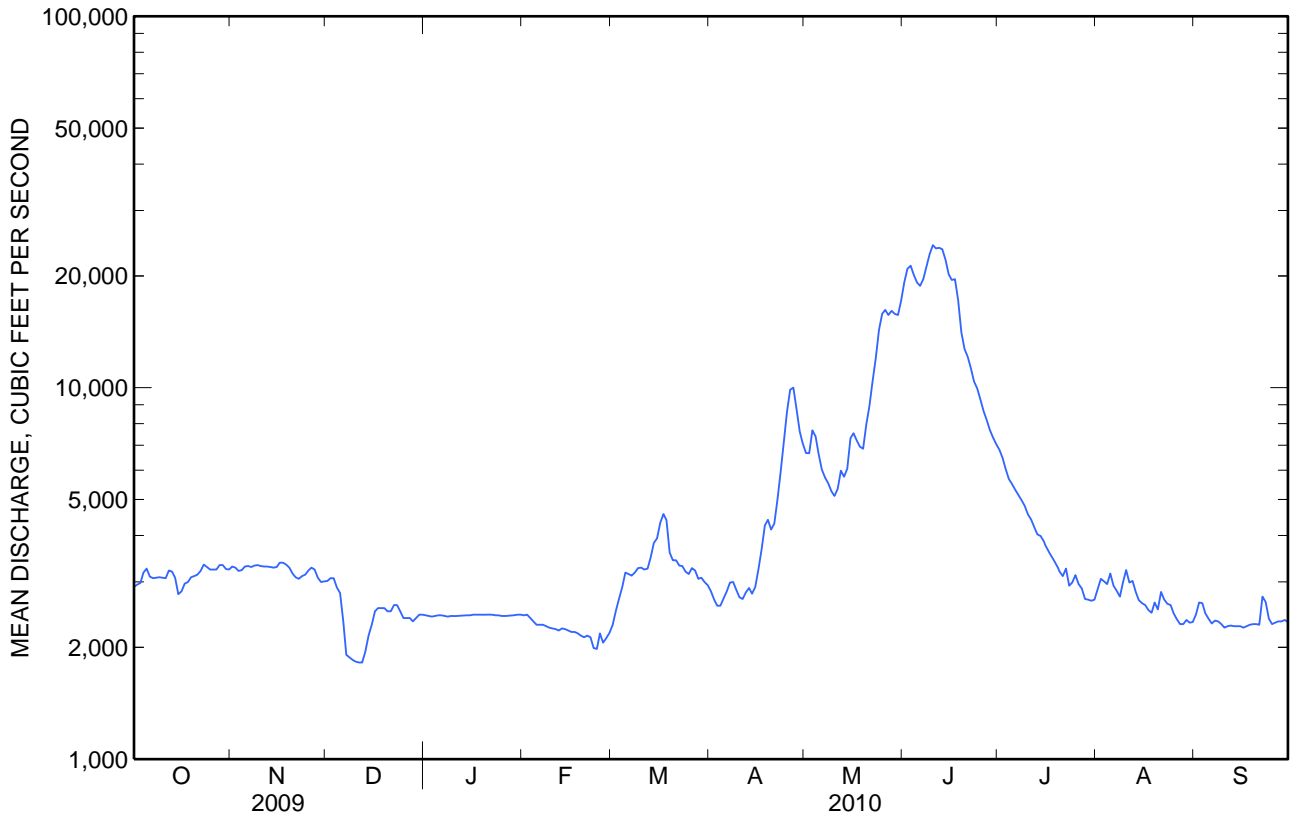
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895-99, 1906-2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	3,007	2,864	2,337	2,299	2,781	4,436	7,127	15,360	18,370	7,585	3,549	2,773
Max	7,701	6,490	5,894	5,739	7,258	11,430	18,370	40,990	46,650	31,630	11,220	9,960
(WY)	(1983)	(1987)	(1987)	(1985)	(1962)	(1910)	(1962)	(1897)	(1921)	(1907)	(1907)	(1909)
Min	718	935	801	961	1,050	1,617	2,591	4,212	2,128	645	712	603
(WY)	(1935)	(1935)	(1909)	(2008)	(1898)	(1963)	(1963)	(1990)	(1934)	(1934)	(1934)	(1934)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1895-99, 1906-2010	
Annual total	1,872,480		1,708,640			
Annual mean	5,130		4,681		6,048	
Highest annual mean					12,280	1907
Lowest annual mean					1,805	1934
Highest daily mean	21,500	May 25	24,200	Jun 10	66,700	Jun 27, 1917
Lowest daily mean	1,700	Jan 1	1,820	Dec 11	380	Dec 5, 1934
Annual seven-day minimum	1,870	Dec 7	1,870	Dec 7	419	Jul 30, 1934
Annual runoff (ac-ft)	3,714,000		3,389,000		4,381,000	
10 percent exceeds	13,400		9,530		14,800	
50 percent exceeds	3,010		3,020		3,370	
90 percent exceeds	2,130		2,290		1,500	



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1928 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1941 to September 1981, March 1982 to current year.

WATER TEMPERATURE: May 1949 to September 1959, October 1964 to September 1981, March 1982 to current year.

SUSPENDED-SEDIMENT DISCHARGE: May 1930 to September 1984.

INSTRUMENTATION.--Water-quality monitor April 1985 to September 1989.

REMARKS.--Unpublished daily records of specific conductance obtained before water year 1965 were included in the determination of extremes for period of daily record and are available at USGS Utah Water Science Center, Salt Lake City, Utah.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum observed, 3,250 microsiemens/cm, Dec 1, 1967; minimum observed, 255 microsiemens/cm, Jun 30, 1978.

WATER TEMPERATURE: Maximum observed, 30.0°C, Aug 13, 1958, Jul 5, 6, 8, 12, Aug 5, 2001, Jul 9, 14, 2002, Jul 21, 2003, Jul 22, 2007; minimum observed, 0.0°C, on many days during winter period each year.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 66,000 mg/L, Jul 11, 1936; minimum daily, 19 mg/L, Sep 30, 1974.

SEDIMENT LOADS: Maximum daily, 2,230,000 tons, Jul 11, 1936; minimum daily, 54 tons, Sep 27, 1956.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 987 microsiemens/cm, Aug 5; minimum daily, 268 microsiemens/cm, Jun 13.

WATER TEMPERATURE: Maximum daily, 28.0 °C, Jul 23, 30; minimum daily, 0.0°C, on many days.

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**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY INSTANTANEOUS VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	745	708	758	772	757	753	859	---	366	375	623	684
2	741	717	764	778	760	766	889	481	341	371	701	682
3	---	726	---	744	753	762	901	491	329	371	782	699
4	754	732	760	792	749	766	919	475	327	384	741	689
5	---	729	784	782	---	738	907	459	326	403	987	691
6	749	721	767	782	744	748	893	449	335	429	746	689
7	755	725	839	794	748	738	882	464	345	442	679	711
8	737	726	814	---	745	737	872	497	348	464	720	689
9	757	792	889	764	748	771	889	537	317	463	654	---
10	---	728	845	758	756	777	912	546	298	457	718	709
11	760	727	897	771	771	792	---	574	288	466	664	703
12	742	741	882	---	756	767	926	554	275	476	647	704
13	741	729	---	---	744	805	933	525	268	492	665	710
14	736	738	---	785	740	817	929	523	274	512	714	718
15	736	739	---	775	744	873	907	---	288	542	691	712
16	739	725	884	779	756	849	910	498	295	555	655	705
17	755	736	---	773	766	858	883	469	272	547	664	709
18	787	726	868	770	755	855	879	454	341	554	672	717
19	771	733	866	767	744	860	927	441	318	556	661	711
20	779	721	827	756	742	---	893	448	348	567	695	707
21	765	716	---	753	735	927	870	437	359	575	685	736
22	756	785	---	752	744	921	815	432	338	579	668	723
23	742	761	---	---	741	914	702	398	328	587	673	973
24	740	745	---	741	739	900	663	350	328	594	675	727
25	741	746	---	746	734	888	567	324	354	603	710	722
26	736	---	---	747	724	878	519	339	340	598	704	721
27	740	735	---	741	---	877	447	307	350	627	708	715
28	737	744	---	741	738	879	418	308	353	682	716	716
29	732	801	---	738	---	897	418	323	375	642	695	722
30	707	765	---	747	---	889	427	357	362	615	689	717
31	702	---	763	757	---	877	---	388	---	---	683	---
Mean	---	---	---	---	---	---	---	---	326	---	700	---
Max	---	---	---	---	---	---	---	---	375	---	987	---
Min	---	---	---	---	---	---	---	---	268	---	623	---

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY INSTANTANEOUS VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	15.0	8.0	1.0	0.0	4.0	3.5	9.0	---	18.0	23.0	25.0	19.0
2	14.0	5.0	1.0	0.0	3.0	3.0	9.0	10.0	16.0	25.0	27.0	23.0
3	---	7.0	---	0.0	1.0	4.0	10.0	11.0	19.0	23.0	24.0	24.0
4	14.0	8.0	0.0	0.0	0.0	4.0	10.0	12.0	18.0	24.0	25.0	23.0
5	---	8.0	0.0	0.0	---	5.0	11.0	15.0	20.0	23.5	25.0	23.0
6	12.0	8.0	1.0	0.0	1.0	4.0	10.0	14.0	20.0	21.0	27.0	21.0
7	10.0	8.0	0.0	0.0	1.0	3.0	9.0	13.0	21.0	22.0	24.0	18.5
8	11.0	10.0	0.0	---	1.0	5.0	7.0	15.0	21.5	22.5	23.0	19.0
9	10.0	8.0	0.0	0.0	1.0	4.0	10.0	16.0	20.0	23.0	24.0	---
10	---	8.5	0.0	0.0	2.0	3.0	10.0	14.0	21.5	23.0	25.0	19.0
11	13.0	9.5	0.0	0.0	1.0	4.0	---	14.0	20.0	25.0	24.0	19.0
12	11.0	9.5	0.0	---	1.0	3.5	14.0	15.0	19.0	22.0	23.0	21.0
13	12.0	9.0	---	---	1.0	4.0	10.5	15.0	17.0	25.0	25.0	20.0
14	13.0	8.0	---	0.0	1.0	3.5	10.0	15.0	17.0	24.0	25.0	18.0
15	11.0	8.0	---	0.0	0.0	5.0	11.0	---	16.0	23.0	25.0	18.0
16	15.0	4.0	0.0	0.0	1.0	6.0	13.0	17.0	19.0	24.0	25.0	22.0
17	13.0	4.0	---	0.0	1.0	5.0	17.0	18.0	18.0	24.0	25.5	21.0
18	14.0	4.0	0.0	0.0	1.0	5.0	17.0	17.0	17.0	24.5	24.5	22.0
19	12.0	4.0	0.0	0.0	1.0	5.0	16.5	16.0	17.0	25.0	23.0	21.0
20	14.0	3.0	0.0	0.0	1.0	---	17.0	19.0	20.0	26.5	24.0	22.0
21	14.0	3.0	---	0.0	1.0	6.0	16.0	18.0	21.0	25.5	25.0	20.5
22	12.0	5.0	---	0.0	2.0	10.0	15.0	17.0	20.0	25.5	23.0	20.0
23	14.0	4.0	---	---	1.0	8.0	15.0	17.0	21.0	28.0	24.0	19.5
24	14.0	2.0	---	0.0	0.0	9.0	14.0	14.0	23.0	26.0	24.5	19.0
25	13.0	2.0	---	0.0	2.0	10.0	16.0	14.0	22.0	25.0	25.0	20.5
26	10.0	---	---	3.0	1.0	10.0	14.0	14.0	22.0	26.0	25.0	20.5
27	9.0	3.5	---	2.0	---	9.0	15.0	17.0	23.0	25.0	23.0	22.0
28	8.0	2.0	---	4.0	2.0	11.0	15.0	17.0	22.0	25.5	24.0	20.0
29	7.0	4.0	---	3.0	---	11.0	12.0	17.0	25.0	27.0	22.0	20.5
30	7.0	3.0	---	2.0	---	9.0	13.0	17.0	24.0	28.0	22.0	20.0
31	5.0	---	0.0	3.0	---	10.0	---	17.0	---	---	21.0	---
Total	---	---	---	---	---	---	---	---	598.0	---	751.5	---
Mean	---	---	---	---	---	---	---	---	19.9	---	24.2	---
Max	---	---	---	---	---	---	---	---	25.0	---	27.0	---
Min	---	---	---	---	---	---	---	---	16.0	---	21.0	---

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 1 of 2

[CaCO₃, calcium carbonate; SiO₂, silicon dioxide; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; °C, degrees Celsius; μS/cm, microsiemens per centimeter]

Date	Discharge, instantaneous, ft ³ /s (00061)	pH, water, unfiltered, field, standard units (00400)	Specific conduc- tance, water, unfiltered, μS/cm at 25 °C (00095)	Tempera- ture, water, °C (00010)	Gage height, ft (00065)	Dissolved solids dried at 180 °C, water, filtered, mg/L (70300)	Dissolved solids, water, filtered, sum of constituen ts, milligrams per liter (70301)	Calcium, water, filtered, mg/L (00915)	Magne- sium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)
11-20-2009	3,140	8.6	738	4.8	6.56	461	457	62.1	26.1	2.36
03-04-2010	2,890	--	762	2.0	6.46	494	473	58.9	26.6	2.53
04-07-2010	3,020	--	899	9.9	6.45	574	527	61.6	31.9	2.92
05-18-2010	6,910	--	428	17.1	7.86	286	260	37.8	14.5	1.70
06-28-2010	7,720	--	352	23.6	8.14	221	207	32.9	10.5	1.60
08-13-2010	2,860	--	668	21.8	6.38	449	414	53.4	20.0	3.11
09-10-2010	2,270	--	710	17.1	6.11	464	447	56.6	22.9	2.81
09-28-2010	2,330	8.6	704	18.9	6.14	459	450	55.9	22.8	2.77

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 2 of 2

[CaCO₃, calcium carbonate; SiO₂, silicon dioxide; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; °C, degrees Celsius; μS/cm, microsiemens per centimeter]

Date	Alkalinity, water, filtered, fixed endpoint (pH 4.5) titration, laboratory, mg/L as CaCO ₃ (29801)	Sodium, water, filtered, mg/L (00930)	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Silica, water, filtered, mg/L as SiO ₂ (00955)	Sulfate, water, filtered, mg/L (00945)
11-20-2009	58.5	173	21.1	.29	4.17	179
03-04-2010	59.9	181	22.6	.29	4.83	189
04-07-2010	77.0	125	28.1	.34	6.78	243
05-18-2010	29.4	116	10.2	.22	9.28	87.9
06-28-2010	24.2	95	8.44	.18	7.81	64.6
08-13-2010	56.2	163	21.2	.28	5.27	157
09-10-2010	60.3	176	22.7	.33	3.08	173
09-28-2010	59.9	180	21.9	.34	2.34	175