



Water-Data Report 2009

**09306500 WHITE RIVER NEAR WATSON, UTAH**

White-Yampa Basin  
Lower White Subbasin

LOCATION.--Lat 39°58'44", long 109°10'41" referenced to North American Datum of 1927, in SE ¼ SW ¼ NE ¼ sec.2, T.10 S., R.24 E., Uintah County, UT, Hydrologic Unit 14050007, on left bank 350 ft downstream from bridge on State Highway 45, 1 mi downstream from Evacuation Creek, and 7 mi north of Watson.

DRAINAGE AREA.--4,020 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--April 1904 to October 1906 (no winter records), May to November 1918, April 1923 to September 1979, October 1985 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "near Dragon" 1906 and "near Rangely, Colo." 1904-1905, 1918.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 4,946.78 ft above NGVD of 1929. See WSP 1733 for history of changes prior to October 27, 1959.

REMARKS.--Records good except for estimated daily discharges, which are fair to poor. Diversions for irrigation of about 31,900 acres above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 8,160 ft<sup>3</sup>/s, Jul 15, 1929; maximum gage height, 13.1 ft, Feb 11, 1962, from floodmark in well (backwater from ice); minimum, 11 ft<sup>3</sup>/s, Dec 6, 1972, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,900 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 26	2330	*3,300	*5.86

Minimum daily discharge, 154 ft<sup>3</sup>/s, Sep 13.

## 09306500 WHITE RIVER NEAR WATSON, UTAH—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**  
**DAILY MEAN VALUES**

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	432	415	438	e257	e378	564	464	1,200	2,100	1,240	403	180
2	410	419	440	e260	e365	489	459	1,400	2,180	1,150	406	192
3	405	439	426	e243	e358	480	469	1,430	2,250	1,130	389	194
4	413	440	421	e207	e381	536	490	1,620	2,240	1,130	377	198
5	446	448	e414	e195	e397	555	504	1,550	2,200	1,150	395	198
6	466	455	e416	e197	e405	520	465	1,460	2,130	1,110	362	202
7	479	434	e412	e203	e432	462	438	1,510	2,110	1,070	351	214
8	466	391	e422	e212	e452	437	446	1,810	2,110	990	333	230
9	445	395	e419	e256	e443	433	482	2,030	1,980	877	315	230
10	433	441	e416	e248	e458	420	519	2,040	1,750	767	297	219
11	428	435	e420	e260	e449	426	532	2,010	1,710	723	271	173
12	429	446	e398	e251	e437	416	530	2,030	1,970	688	243	159
13	439	444	e378	e257	e416	391	544	2,210	2,010	708	221	154
14	444	432	e382	e242	e354	408	e558	2,390	1,690	709	219	316
15	443	421	e355	e251	e393	401	e565	2,310	1,570	643	210	288
16	439	409	e271	e239	e390	392	e555	2,180	1,590	607	231	295
17	437	380	e268	e236	e362	400	e550	2,210	1,650	573	272	421
18	444	410	e321	e243	e365	395	e540	2,280	1,620	550	237	444
19	444	424	e335	e258	e419	408	e515	2,390	1,660	540	232	364
20	443	428	e318	e259	e429	418	e500	2,510	1,820	516	225	351
21	461	421	e307	e279	e436	427	484	2,600	1,730	478	214	347
22	455	420	e283	e297	e399	437	536	2,580	1,750	474	211	389
23	453	415	e233	e318	e344	451	573	2,540	1,640	446	207	414
24	446	400	e278	e326	e362	490	695	2,570	1,550	431	194	419
25	419	404	e315	e349	e483	530	905	2,760	1,490	419	189	425
26	431	374	e308	e333	e581	515	1,040	3,200	1,450	420	199	414
27	432	396	e267	e343	689	513	1,210	3,210	1,620	442	205	408
28	428	420	e275	e352	688	482	1,100	2,860	1,760	446	206	393
29	423	460	e280	e369	---	458	947	2,420	1,500	446	197	381
30	423	444	e278	e347	---	465	967	2,200	1,340	415	188	388
31	417	---	e267	e361	---	499	---	2,040	---	395	184	---
<b>Total</b>	13,573	12,660	10,761	8,448	12,065	14,218	18,582	67,550	54,170	21,683	8,183	9,000
<b>Mean</b>	438	422	347	273	431	459	619	2,179	1,806	699	264	300
<b>Max</b>	479	460	440	369	689	564	1,210	3,210	2,250	1,240	406	444
<b>Min</b>	405	374	233	195	344	391	438	1,200	1,340	395	184	154
<b>Ac-ft</b>	26,920	25,110	21,340	16,760	23,930	28,200	36,860	134,000	107,400	43,010	16,230	17,850

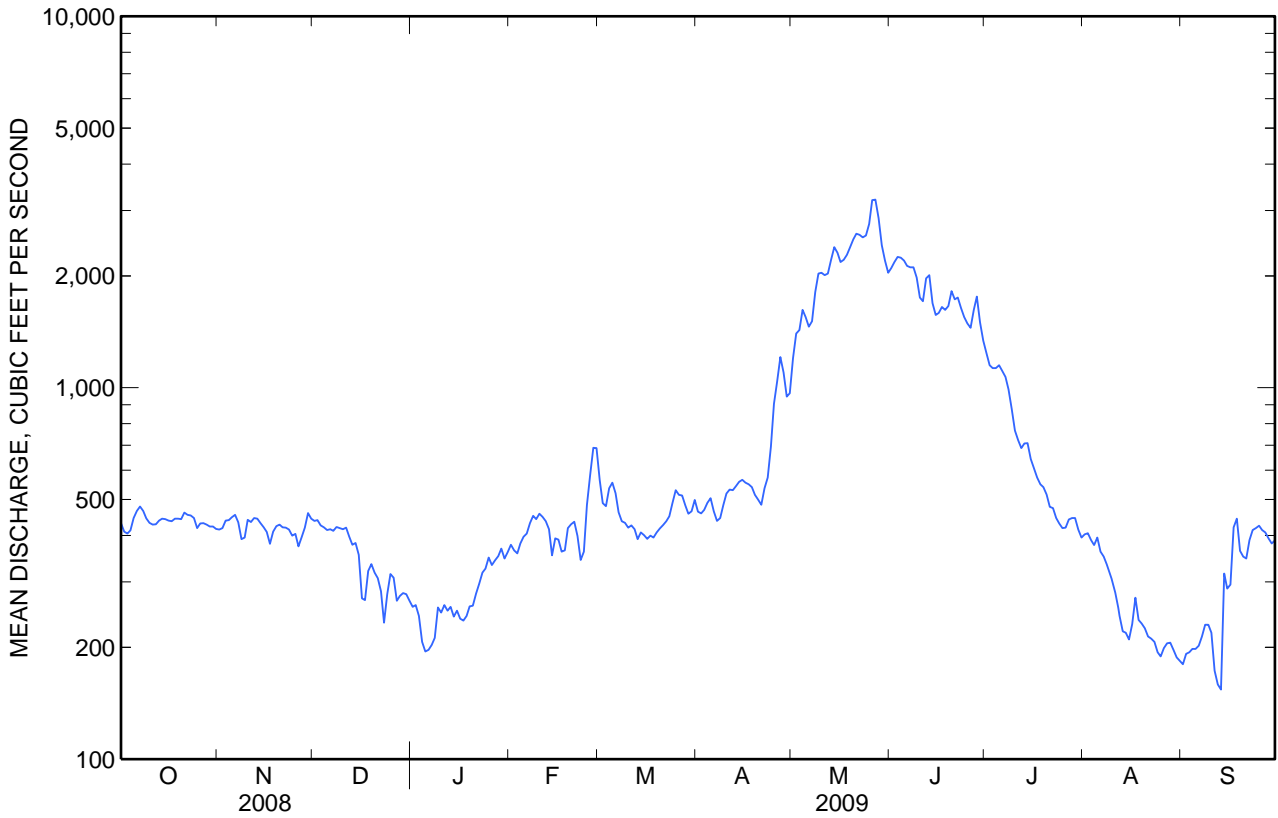
**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924-79, 1986-2009, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	467	426	360	355	419	565	705	1,603	1,783	704	459	427
<b>Max</b>	1,029	716	600	580	1,414	1,180	2,466	3,537	4,018	2,923	1,915	1,917
<b>(WY)</b>	(1930)	(1998)	(1926)	(1926)	(1986)	(1939)	(1929)	(1929)	(1929)	(1929)	(1929)	(1929)
<b>Min</b>	243	279	176	160	246	336	368	384	187	73.1	101	207
<b>(WY)</b>	(1964)	(1995)	(1995)	(1937)	(1949)	(1952)	(1961)	(1977)	(2002)	(2002)	(2002)	(2002)

09306500 WHITE RIVER NEAR WATSON, UTAH—Continued

SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1924-79, 1986-2009	
<b>Annual total</b>	265,983		250,893			
<b>Annual mean</b>	727		687		689	
<b>Highest annual mean</b>					1,736	1929
<b>Lowest annual mean</b>					298	2002
<b>Highest daily mean</b>	3,600	May 23	3,210	May 27	8,160	Jul 15, 1929
<b>Lowest daily mean</b>	220	Jan 1	154	Sep 13	13	Jul 3, 1977
<b>Annual seven-day minimum</b>	236	Jan 1	190	Aug 29	30	Jul 17, 2002
<b>Annual runoff (ac-ft)</b>	527,600		497,600		499,000	
<b>10 percent exceeds</b>	2,120		1,780		1,570	
<b>50 percent exceeds</b>	432		431		441	
<b>90 percent exceeds</b>	250		235		280	



## 09306500 WHITE RIVER NEAR WATSON, UTAH—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1950 to September 1979, October 1985 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1950 to September 1979, October 1986 to September 1993.

WATER TEMPERATURE: December 1950 to September 1979, October 1986 to September 1993.

SUSPENDED-SEDIMENT DISCHARGE: October 1976 to June 1979, October 1985 to September 1990.

INSTRUMENTATION.--Water-quality monitor November 1985 to September 1993.

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 in files of district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 4,450 microsiemens/cm, Aug. 4, 1955; minimum recorded, 136 microsiemens/cm, May 20, 1989.

WATER TEMPERATURE: Maximum recorded, 33.0°C, Jul. 15, 1977; minimum, 0.0°C, many days during winter period.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 31,100 mg/L, Aug. 8, 1987; minimum daily mean, 31 mg/L, Sep. 7, 8, 1989.

SEDIMENT LOADS: Maximum daily, 121,000 tons, Aug. 8, 1987; minimum daily, 12 tons, Sep. 7, 8, 1989.

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**

Part 1 of 3

[Remark codes: <, less than; E, estimated; S, most probable value.]

Date	Time	Baro- metric pres- sure, mm Hg (00025)	Temper- ature, air, deg C (00020)	Instan- taneous dis- charge, ft <sup>3</sup> /s (00061)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduc- tance, wat unf lab, μS/cm @ 25 degC (90095)	Specif- ic conduc- tance, wat unf lab, μS/cm @ 25 degC (00095)	Temper- ature, water, deg C (00010)	Gage height, feet (00065)	Dis- solved solids dried @ 180degC wat flt mg/L (70300)	Calcium water, fltrd, mg/L (00915)
<b>Oct</b>													
<b>15-15</b>	1430	--	20.2	444	--	--	8.4	646	640	13.2	2.33	--	70.0
<b>Nov</b>													
<b>19...</b>	1305	--	15.0	441	--	8.5	8.3	665	676	4.5	2.40	--	70.0
<b>Feb</b>													
<b>10...</b>	1645	--	1.0	484	--	--	8.1	704	803	.2	--	--	66.9
<b>Mar</b>													
<b>31...</b>	1355	639	10.0	485	10.9	8.4	8.3	719	730	5.3	2.43	--	70.0
<b>Apr</b>													
<b>23...</b>	1025	638	12.0	--	9.3	8.6	8.3	753	586	12.1	--	--	74.0
<b>May</b>													
<b>21...</b>	1315	649	--	2,640	8.5	8.2	8.0	288	546	15.2	5.17	--	38.7
<b>Jun</b>													
<b>12...</b>	1000	--	--	1,800	--	8.4	8.2	378	386	13.8	4.34	--	45.0
<b>12...</b>	1005	--	--	1,800	--	8.5	8.2	381	386	13.8	--	--	44.2
<b>Jul</b>													
<b>01...</b>	1420	--	--	1,230	8.0	8.5	--	406	412	22.6	3.54	--	47.1
<b>01...</b>	1425	--	--	1,230	8.0	8.5	8.4	409	412	22.6	3.54	--	48.5
<b>Aug</b>													
<b>25...</b>	1035	--	--	186	7.9	8.2	8.4	674	698	18.8	1.84	449	67.5

## 09306500 WHITE RIVER NEAR WATSON, UTAH—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**

Part 2 of 3

[Remark codes: &lt;, less than; E, estimated; S, most probable value.]

Date	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L as SiO2 (00955)	Sulfate, water, fltrd, mg/L (00945)	Nitrate + nitrite, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Manganese, water, fltrd, µg/L (01056)
<b>Oct</b>													
<b>15-15</b>	24.7	1.62	38.0	--	--	9.98	.25	11.9	152	--	--	--	--
<b>Nov</b>													
<b>19...</b>	24.1	1.51	39.5	183	--	10.6	.24	12.8	156	--	--	--	--
<b>Feb</b>													
<b>10...</b>	25.4	2.15	49.6	194	--	12.2	.24	14.7	173	--	--	--	--
<b>Mar</b>													
<b>31...</b>	26.4	1.54	49.9	181	--	13.0	.21	13.5	181	--	--	--	--
<b>Apr</b>													
<b>23...</b>	28.6	1.62	48.5	188	--	12.8	.26	12.7	200	--	--	--	--
<b>May</b>													
<b>21...</b>	9.25	1.05	8.58	119	--	2.41	E.10	11.2	35.6	--	--	--	--
<b>Jun</b>													
<b>12...</b>	13.3	1.19	13.7	150	--	3.85	.11	12.5	60.2	--	--	--	--
<b>12...</b>	13.1	1.17	13.4	148	--	3.87	.13	12.5	61.0	--	--	--	--
<b>Jul</b>													
<b>01...</b>	14.4	1.05	15.8	129	--	4.33	--	13.1	67.3	<.04	<.002	.010	S2.0
<b>01...</b>	14.9	1.10	16.4	129	--	4.32	.14	13.1	67.2	--	--	--	--
<b>Aug</b>													
<b>25...</b>	25.9	1.87	44.2	178	179	14.4	.25	11.1	166	.04	.002	E.004	2.9

## 09306500 WHITE RIVER NEAR WATSON, UTAH—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**

Part 3 of 3

[Remark codes: &lt;, less than; E, estimated; S, most probable value.]

Date	Mercury water, unfltrd recover- -able, µg/L (71900)	Arsenic water, fltrd, µg/L (01000)	Boron, water, fltrd, µg/L (01020)	Selen- ium, water, fltrd, µg/L (01145)	Organic carbon, water, fltrd, mg/L (00681)
<b>Oct</b>					
15-15	--	--	--	--	--
<b>Nov</b>					
19...	--	--	--	--	--
<b>Feb</b>					
10...	--	--	--	--	--
<b>Mar</b>					
31...	--	--	--	--	--
<b>Apr</b>					
23...	--	--	--	--	--
<b>May</b>					
21...	--	--	--	--	--
<b>Jun</b>					
12...	--	--	--	--	--
12...	--	--	--	--	--
<b>Jul</b>					
01...	<.010	S.97	S21	S.47	3.3
01...	--	--	--	--	--
<b>Aug</b>					
25...	<.010	1.5	48	.56	3.0