



Water-Data Report UT-2005

10172200 RED BUTTE CREEK AT FORT DOUGLAS, NEAR SALT LAKE CITY, UT
(Hydrologic bench mark station)

Jordan River Basin

LOCATION.--Lat 40°46'48", long 111°48'19" referenced to North American Datum of 1927, in NE ¼ SE ¼ NW ¼ sec.35, T.1 N., R.1 E., Salt Lake County, Hydrologic Unit 16020204, on right bank 0.4 mi upstream from dam forming Red Butte Reservoir, and 1.7 mi northeast of Fort Douglas.

DRAINAGE AREA.--7.25 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1963 to current year. Figures of monthly discharge for January 1942 to September 1963, collected by Corps of Engineers, U.S. Army, available in files of Salt Lake City District Office, Geological Survey.

GAGE.--Water-stage recorder. Elevation of gage is 5,400 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 105 ft³/s, May 28, 1983, maximum gage height, 3.81 ft, May 17, 1984; minimum, 0.17 ft³/s, Nov 20, 1992, possible ice jam upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)
May 11	1745	*51	*3.38

Minimum discharge, 0.75 ft³/s, Jan 5.

10172200 RED BUTTE CREEK AT FORT DOUGLAS, NEAR SALT LAKE CITY, UT—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1.2	1.6	1.4	1.5	1.8	1.8	5.0	13	13	5.7	3.0	1.9
2	1.2	1.6	1.4	1.5	1.7	1.8	5.8	12	13	5.5	3.1	1.9
3	1.2	1.6	1.3	1.5	1.8	1.9	6.4	12	12	5.4	3.0	1.9
4	1.2	1.6	1.4	1.5	1.6	2.0	7.2	12	12	5.2	2.9	1.9
5	1.2	1.6	1.4	1.1	1.6	2.0	7.3	12	11	5.1	2.8	1.8
6	1.2	1.6	1.4	1.2	1.6	2.0	7.2	12	12	5.0	2.8	1.8
7	1.2	1.6	1.4	1.4	1.6	2.1	7.7	12	12	4.9	2.7	1.8
8	1.2	1.6	1.4	1.5	e1.5	2.1	10	12	11	4.7	2.7	1.8
9	1.2	1.7	1.9	1.5	e1.6	2.2	11	11	11	4.5	2.7	1.8
10	1.2	1.7	1.7	e1.8	e1.6	2.3	9.6	13	10	4.5	2.6	1.8
11	1.2	1.8	1.7	e1.8	1.6	2.4	8.8	22	9.9	4.4	2.6	1.9
12	1.2	1.7	1.7	e1.6	1.8	2.5	8.5	19	10	4.3	2.5	1.9
13	1.2	1.7	1.7	e1.6	1.7	2.6	8.6	23	9.5	4.1	2.5	1.9
14	1.2	1.6	1.7	e1.7	1.8	2.6	8.9	23	9.1	4.0	2.5	1.9
15	1.2	1.6	1.7	e1.8	1.7	2.6	8.9	21	8.8	3.9	2.4	1.9
16	1.2	1.6	1.7	1.8	1.7	2.6	8.9	21	8.5	3.8	2.6	1.8
17	1.3	1.6	1.6	1.8	e1.7	2.5	9.0	22	8.2	3.8	2.6	1.8
18	1.4	1.5	1.6	1.8	e1.7	2.4	9.7	21	8.1	3.7	2.5	1.7
19	1.4	1.5	1.6	1.7	1.7	2.3	10	21	8.0	3.6	2.5	1.7
20	1.8	1.5	1.6	1.7	1.9	2.8	10	20	7.8	3.5	2.4	1.7
21	1.8	1.5	e1.5	1.7	1.8	2.6	9.5	19	7.6	3.4	2.4	1.8
22	1.6	1.5	e1.4	1.7	1.8	2.7	9.1	19	7.3	3.4	2.3	1.8
23	1.7	1.5	e1.3	1.7	1.8	3.6	9.0	18	7.3	3.4	2.3	1.8
24	2.2	1.5	1.4	1.7	1.8	4.2	11	17	7.1	3.3	2.3	1.8
25	1.9	1.5	1.4	1.8	1.8	3.9	12	17	6.9	3.3	2.2	1.8
26	1.8	1.5	1.4	1.8	1.8	3.8	12	16	6.7	3.2	2.2	1.8
27	1.7	1.5	1.4	1.8	1.8	4.2	12	16	6.4	3.1	2.1	1.8
28	1.8	1.5	1.4	1.8	1.8	5.0	13	15	6.2	3.0	2.1	1.8
29	1.7	e1.3	1.6	1.8	---	5.0	14	15	6.2	3.0	2.0	1.7
30	1.6	e1.4	1.5	1.8	---	4.9	13	15	5.9	3.0	1.9	1.7
31	1.7	---	1.5	1.8	---	4.7	---	14	---	3.0	1.9	---
Total	44.6	47.0	47.1	51.2	48.1	90.1	283.1	515	272.5	124.7	77.1	54.4
Mean	1.44	1.57	1.52	1.65	1.72	2.91	9.44	16.6	9.08	4.02	2.49	1.81
Max	2.2	1.8	1.9	1.8	1.9	5.0	14	23	13	5.7	3.1	1.9
Min	1.2	1.3	1.3	1.1	1.5	1.8	5.0	11	5.9	3.0	1.9	1.7
Ac-ft	88	93	93	102	95	179	562	1,020	541	247	153	108

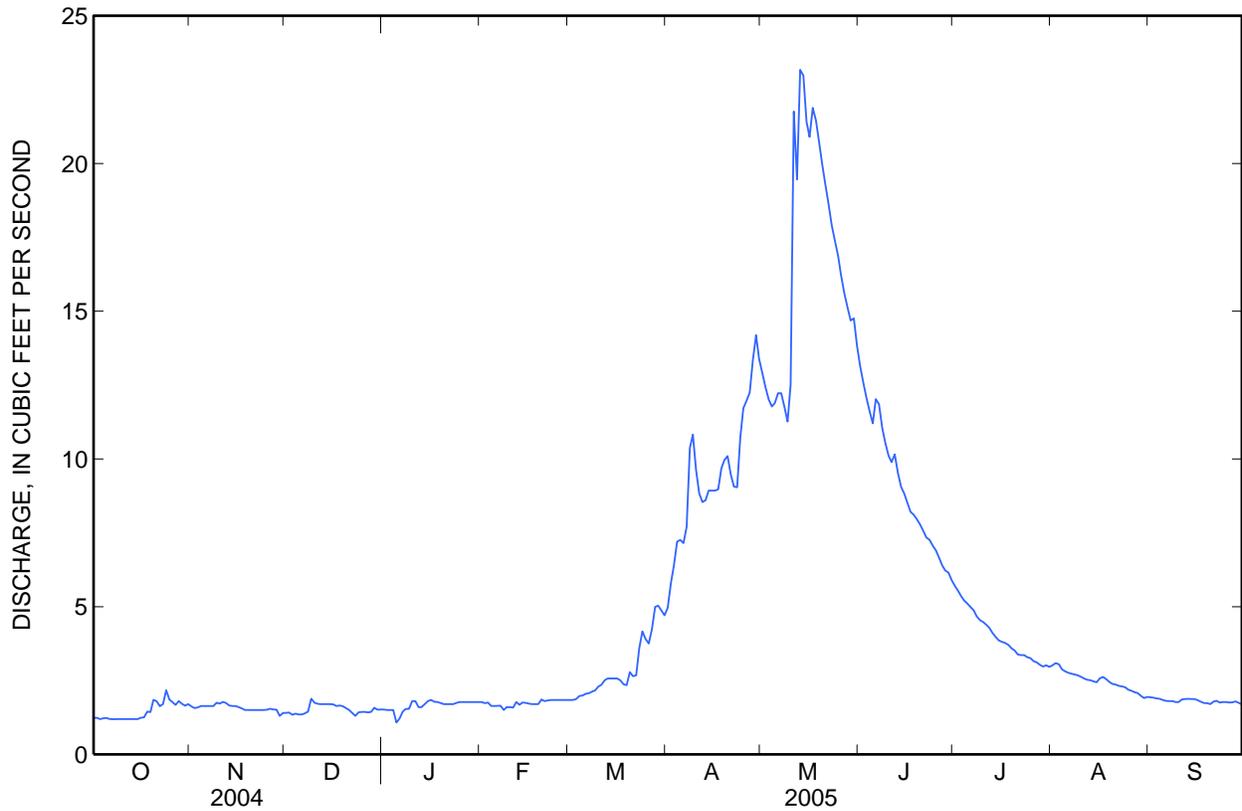
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2005, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1.91	1.98	1.89	1.92	2.32	4.49	9.07	12.5	6.59	3.28	2.12	1.80
Max	3.86	3.53	3.37	3.46	7.00	12.8	22.2	50.5	29.7	9.22	5.77	4.10
(WY)	(1984)	(1984)	(1984)	(1971)	(1986)	(1983)	(1986)	(1983)	(1983)	(1983)	(1983)	(1983)
Min	0.66	0.91	0.91	0.83	1.00	1.06	1.79	1.55	0.95	0.60	0.44	0.47
(WY)	(2004)	(2004)	(1964)	(1964)	(1964)	(1964)	(1990)	(1990)	(1992)	(1990)	(1990)	(1990)

10172200 RED BUTTE CREEK AT FORT DOUGLAS, NEAR SALT LAKE CITY, UT—Continued

SUMMARY STATISTICS

	Calendar Year 2004		Water Year 2005		Water Years 1964 - 2005	
Annual total	977.25		1,654.9			
Annual mean	2.67		4.53		4.17	
Highest annual mean					12.5	1983
Lowest annual mean					1.12	1990
Highest daily mean	12	Mar 24	23	May 13	95	May 28, 1983
Lowest daily mean	0.90	Feb 12	1.1	Jan 5	0.38	Aug 9, 1990
Annual seven-day minimum	0.97	Feb 8	1.2	Oct 1	0.39	Sep 10, 1990
Annual runoff (ac-ft)	1,940		3,280		3,020	
10 percent exceeds	7.1		12		9.6	
50 percent exceeds	1.5		1.9		2.4	
90 percent exceeds	1.1		1.4		1.1	



10172200 RED BUTTE CREEK AT FORT DOUGLAS, NEAR SALT LAKE CITY, UT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1964 to September 1995, October 1998 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1999 to September 2002.

WATER TEMPERATURE: April 1964 to September 1978, October 1998 to September 2002.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 777 microsiemens/cm, Dec 16, 2001; minimum, 372 microsiemens/cm, Feb 3, 2001.

WATER TEMPERATURE: Maximum 24.0°C, Jul 29, 31, Aug 1, 3, 4, 1969; minimum, 0.0°C, many days during winter period of most years.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Part 1 of 2

[Remark codes: <, less than; E, estimated.]

Date	Time	Instan- taneous dis- charge, cfs (00061)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Carbon- ate, wat flt incrm. titr., field, mg/L (00452)	Chlor- ide, water, fltrd, mg/L (00940)
Nov 22...	1400	1.5	633	11.2	97	8.2	676	4.5	1.9	244	291	4	11.4
Jan 19...	1300	1.8	644	11.3	99	8.2	683	9.0	2.8	231	268	6	12.3
Mar 22...	1030	2.3	629	10.8	98	8.5	637	8.0	3.3	237	273	8	10.6
May 20...	1130	19	632	10.2	106	8.5	503	25.0	8.9	217	264	--	7.84
Jul 20...	1300	3.9	635	8.4	95	8.4	570	34.0	12.9	220	264	2	9.43
Sep 07...	1330	1.9	638	8.4	94	8.3	585	30.5	12.1	216	264	--	9.92

10172200 RED BUTTE CREEK AT FORT DOUGLAS, NEAR SALT LAKE CITY, UT—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Part 2 of 2

[Remark codes: <, less than; E, estimated.]

Date	Sulfate water, fltrd, mg/L (00945)	Ammoni a water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitro- gen, wat unf by anal ysis, mg/L (62855)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L (00665)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
Nov 22...	120	<.04	<.06	<.008	E.04	.058	.019	.027	--	--
Jan 19...	128	<.04	<.06	<.008	.09	.055	.018	.026	126	.60
Mar 22...	104	<.04	<.06	<.008	.12	.037	.012	.030	138	.87
May 20...	44.0	<.04	E.03	<.008	.38	.064	.021	.140	167	8.5
Jul 20...	68.6	<.04	<.06	<.008	.11	.028	.009	.025	99	1.0
Sep 07...	83.0	<.04	E.04	<.008	.07	.021	.007	.018	56	.29

WATER-QUALITY DATA
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instan- taneous dis- charge, cfs (00061)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, deg C (00010)	Biomass peri- phyton, ashfree drymass g/m2 (49954)	Peri- phyton biomass ash weight, g/m2 (00572)	Peri- phyton biomass dry weight, g/m2 (00573)	Biomass chloro- phyll ratio, peri- phyton, number (70950)	Pheo- phytin a, peri- phyton, mg/m2 (62359)	Chloro- phyll a peri- phyton, chromo- fluoro, mg/m2 (70957)
Aug 08...	1015	3.1	8.7	8.5	557	11.7	3.7	77	80.40	507	1.6	7.5