

10396000 DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OR

Oregon Closed Basins
Donner und Blitzen Subbasin

LOCATION.--Lat 42°47'27", long 118°52'03" referenced to North American Datum of 1983, in NW ¼ NW ¼ sec.20, T.32 S., R.32 E., Harney County, OR, Hydrologic Unit 17120003, U.S. Bureau of Land Management land, on left bank, 1.5 mi upstream from upper diversions for Malheur National Wildlife Refuge, 2.0 mi downstream from Fish Creek and 3.5 mi southeast of Frenchglen.

DRAINAGE AREA.--200 mi², approximately.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--March 1911 to September 1913, March 1914 to September 1916, April 1917 to September 1921, August to November 1929, April to September 1930, December 1937 to current year. Monthly discharge only for some periods, published in WSP 1314. Published as "near Diamond" 1911-21. Records of discharge for January 1909 to September 1910 (published in WSP 270, 290 and 370, for a nonequivalent site as "near Diamond") are unreliable and should not be used.

REVISED RECORDS.--WSP 330: Drainage area (former site). WSP 860: Drainage area (present site). WSP 1564: 1938-39(M), 1942-43(M), 1948(M), 1951(P), 1952-53. WSP 1714: Drainage area. WDR-US-2010: 2005(P), 2006(P), 2009(P). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,254 ft above NGVD of 1929 (levels by U.S. Fish and Wildlife Service). Prior to December 1937, nonrecording gage at several sites within 2 mi downstream at different datums. Dec. 6, 1937 to Feb. 14, 1938, nonrecording gage at present site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. Periodic water-quality records for period March 1975 to September 1986 and continuous water-quality records for period October 1975 to September 1981 have been collected at this location.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--82 years (water years 1912-13, 1915-16, 1918-21, 1939-2012), 128 ft³/s, 8.67 in/yr, 92,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,270 ft³/s Apr. 26, 1978, gage height, 7.15 ft, from floodmarks, from rating curve extended above 1,900 ft³/s on basis of slope-area measurement of peak flow; minimum discharge, 4.2 ft³/s Dec. 9, 1972, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,250 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr 26	1315	*722	*3.86

Minimum daily discharge, 36 ft³/s, on many days.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	66	65	57	55	56	56	105	242	238	81	40	36
2	65	62	57	58	52	51	87	227	311	79	39	37
3	66	66	58	56	50	59	85	210	276	76	39	37
4	66	68	61	55	57	60	100	205	258	71	39	36
5	74	65	52	55	55	72	88	231	231	68	39	36
6	74	68	51	54	54	73	84	209	179	66	39	36
7	76	66	60	55	57	57	82	182	172	64	39	36
8	75	63	59	51	57	61	85	186	159	63	38	36
9	73	65	58	55	55	71	97	215	152	62	38	36
10	73	66	61	56	58	93	104	288	151	59	37	36
11	82	65	58	47	61	100	109	245	142	56	37	36
12	75	66	60	49	61	76	95	247	151	55	37	37
13	71	64	51	49	58	65	88	272	168	53	37	37
14	71	64	56	62	56	77	90	312	168	52	37	36
15	71	64	65	56	55	123	88	346	155	52	37	36
16	73	62	61	48	51	325	91	390	148	51	37	36
17	76	65	59	41	58	193	105	373	141	49	37	37
18	71	66	63	64	56	103	111	262	162	48	37	36
19	69	63	60	63	50	83	114	222	128	47	37	36
20	69	61	64	59	57	80	165	226	114	47	41	36
21	69	66	56	72	56	117	227	274	111	46	38	36
22	68	65	48	58	70	141	253	290	113	45	38	36
23	68	64	48	58	101	135	297	228	106	44	37	37
24	68	63	e50	55	68	97	315	190	94	44	37	38
25	66	63	e50	56	67	107	329	181	92	44	37	38
26	65	61	e55	146	55	113	488	182	92	43	36	37
27	67	62	63	88	55	86	337	164	87	42	37	37
28	67	63	65	60	55	84	251	157	83	41	36	37
29	66	62	60	66	61	81	230	153	82	41	36	37
30	66	61	64	58	---	87	241	171	81	40	37	36
31	66	---	61	56	---	119	---	189	---	40	36	---
Total	2,172	1,924	1,791	1,861	1,702	3,045	4,941	7,269	4,545	1,669	1,166	1,094
Mean	70.1	64.1	57.8	60.0	58.7	98.2	165	234	152	53.8	37.6	36.5
Max	82	68	65	146	101	325	488	390	311	81	41	38
Min	65	61	48	41	50	51	82	153	81	40	36	36
Ac-ft	4,310	3,820	3,550	3,690	3,380	6,040	9,800	14,420	9,020	3,310	2,310	2,170
Cfsm	0.35	0.32	0.29	0.30	0.29	0.49	0.82	1.17	0.76	0.27	0.19	0.18
In.	0.40	0.36	0.33	0.35	0.32	0.57	0.92	1.35	0.85	0.31	0.22	0.20

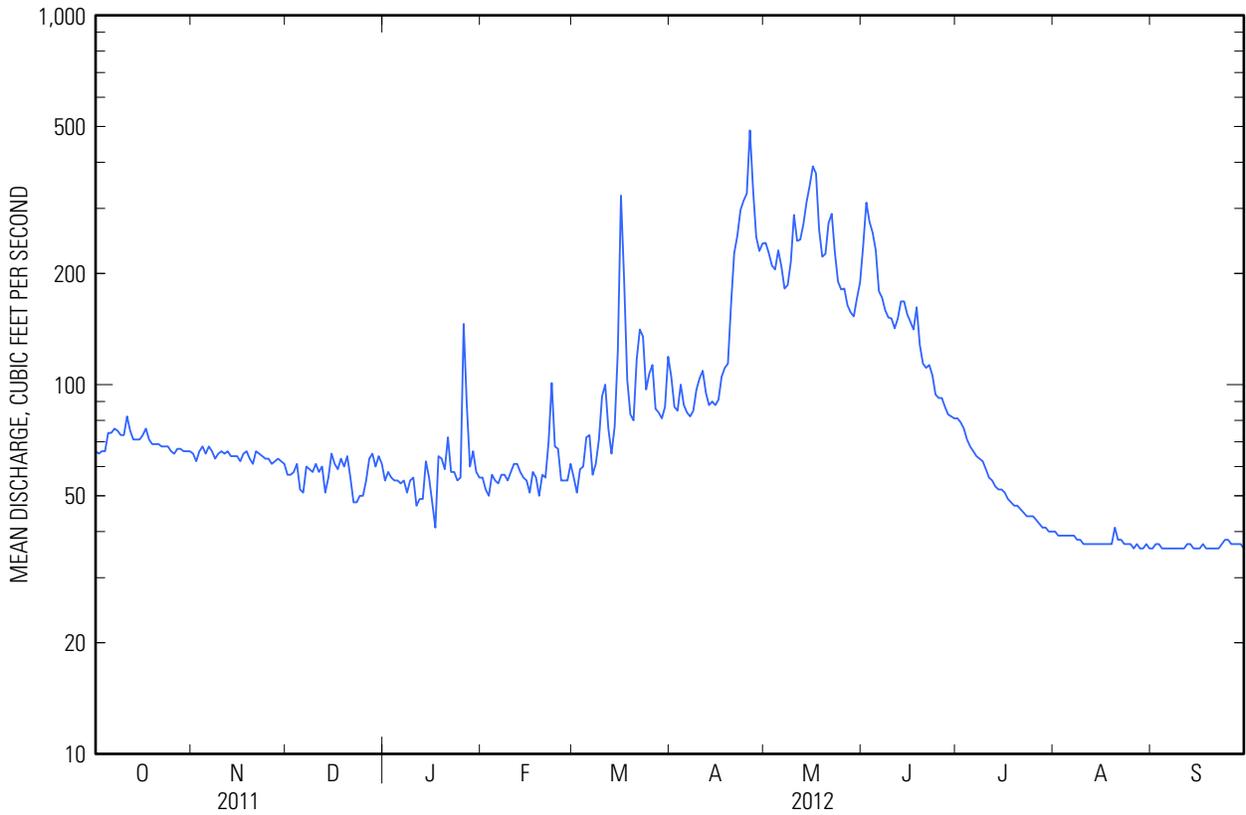
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	43.8	47.6	57.1	67.1	87.3	149	223	387	292	98.9	48.2	42.5
Max	86.4	94.3	189	277	310	500	666	826	802	322	113	87.3
(WY)	(1985)	(1985)	(2011)	(1997)	(1921)	(1993)	(1952)	(1998)	(1917)	(2011)	(1984)	(1984)
Min	24.2	25.3	25.2	25.0	27.8	40.5	61.2	105	44.7	28.9	21.1	22.2
(WY)	(1993)	(1962)	(1960)	(1916)	(1964)	(1977)	(1968)	(1992)	(1992)	(1968)	(1992)	(1992)

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SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1912 - 2012	
Annual total	95,367		33,179			
Annual mean	261		90.7		128	
Highest annual mean					273	1984
Lowest annual mean					49.1	1992
Highest daily mean	1,870	May 15	488	Apr 26	2,700	Mar 17, 1993
Lowest daily mean	40	Jan 2	36	Aug 26	11	Nov 16, 1961
Annual seven-day minimum	49	Jan 1	36	Sep 4	14	Jan 2, 1974
Annual runoff (ac-ft)	189,200		65,810		92,400	
Annual runoff (cfsm)	1.31		0.453		0.638	
Annual runoff (inches)	17.74		6.17		8.67	
10 percent exceeds	750		206		321	
50 percent exceeds	108		64		57	
90 percent exceeds	61		37		33	



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PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 2010 to current year.

INSTRUMENTATION.--Temperature probe and data logger.

REMARKS.--

WATER TEMPERATURE: Records good. No temperature record Apr. 27 to Sept. 30 as a result of the probe being buried in sediment. Records represent water temperature at thermistor within 0.2°C. Water temperature record is representational of a point in the river and not necessarily representational of mean temperature of the river cross section at that point.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 20.8°C Aug. 25, 2011; minimum, 0.1°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 15.2 °C Oct. 1; minimum, 0.7 °C on several days during winter months.

**TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	15.2	12.5	13.8	7.0	4.7	6.0	3.5	1.9	2.7	2.0	1.3	1.6
2	14.2	11.4	12.9	5.2	3.1	4.1	2.2	1.4	1.8	2.3	1.1	1.6
3	14.1	11.0	12.5	5.0	3.4	4.1	1.5	1.2	1.3	3.0	2.1	2.5
4	12.7	10.9	11.6	4.3	3.4	3.9	1.2	1.0	1.1	3.2	2.1	2.6
5	10.9	9.1	10.1	4.0	2.5	3.2	1.2	0.9	1.0	3.6	2.6	3.0
6	9.1	7.9	8.4	4.5	3.2	3.8	1.1	0.9	1.0	3.0	2.0	2.4
7	9.7	7.6	8.5	5.3	3.8	4.4	1.2	0.9	1.0	2.9	2.2	2.5
8	10.7	7.5	8.9	4.5	2.9	3.6	1.2	0.9	1.0	2.4	1.4	1.9
9	10.3	7.4	8.9	4.2	2.5	3.3	1.2	0.9	1.0	2.2	1.2	1.7
10	9.9	8.7	9.2	4.5	2.7	3.5	1.1	0.8	0.9	2.7	1.6	2.0
11	11.1	8.8	9.7	4.2	2.8	3.5	1.1	0.8	0.9	2.0	1.2	1.4
12	10.7	8.0	9.3	4.8	3.7	4.2	1.2	0.8	1.0	1.3	1.0	1.1
13	11.0	8.2	9.6	5.5	4.0	4.6	1.0	0.8	0.9	1.0	0.8	0.9
14	11.8	8.9	10.2	4.9	3.7	4.4	1.0	0.8	0.8	1.3	0.8	1.0
15	11.7	9.7	10.6	4.7	3.8	4.2	1.5	0.8	1.1	1.3	0.9	1.1
16	11.1	10.2	10.8	4.5	3.0	3.8	1.6	1.0	1.4	1.0	0.7	0.9
17	10.8	8.5	9.6	5.9	4.5	5.3	1.3	0.9	1.1	0.8	0.7	0.7
18	10.3	7.7	8.9	5.4	3.5	4.6	1.5	0.8	1.1	0.7	0.7	0.7
19	10.5	7.9	9.1	3.5	2.1	2.8	2.0	1.3	1.6	2.1	0.7	1.4
20	10.6	8.1	9.2	3.1	1.6	2.3	1.3	0.9	1.1	3.2	1.9	2.4
21	10.4	8.1	9.2	3.0	2.0	2.5	1.1	0.8	0.9	3.6	3.0	3.3
22	10.3	7.8	8.9	4.5	3.0	3.6	0.8	0.7	0.8	3.0	2.0	2.4
23	10.1	7.5	8.7	4.8	4.1	4.4	0.8	0.7	0.7	3.2	2.1	2.6
24	8.9	7.3	8.2	5.4	4.3	4.7	0.8	0.7	0.7	2.9	2.2	2.5
25	7.3	5.2	6.2	5.4	4.2	4.8	0.8	0.7	0.7	4.4	2.9	3.6
26	5.9	3.7	4.8	4.3	3.3	3.8	0.9	0.7	0.8	4.8	2.1	3.9
27	6.5	4.1	5.1	4.6	3.0	3.8	1.3	0.8	0.9	2.3	1.1	1.6
28	6.7	4.4	5.4	5.4	4.4	4.8	2.8	1.3	2.2	1.8	0.9	1.3
29	8.1	5.5	6.6	5.1	4.1	4.6	3.6	2.5	2.9	3.3	1.0	2.1
30	8.5	6.0	7.2	4.4	3.5	4.0	4.5	3.6	4.1	4.6	2.7	3.5
31	8.9	7.0	7.8	---	---	---	3.7	1.9	2.6	3.9	2.2	3.0
Month	15.2	3.7	9.0	7.0	1.6	4.0	4.5	0.7	1.3	4.8	0.7	2.0

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	4.0	2.8	3.3	3.3	1.8	2.4	6.5	4.7	5.7	---	---	---
2	3.2	1.5	2.3	3.3	1.3	2.3	6.7	4.0	5.3	---	---	---
3	2.1	1.1	1.5	5.5	2.4	3.7	8.0	4.8	6.2	---	---	---
4	1.9	0.9	1.3	6.3	3.4	4.8	7.4	5.6	6.5	---	---	---
5	1.9	0.8	1.3	5.7	3.9	4.9	6.5	4.1	5.3	---	---	---
6	1.9	0.8	1.3	5.1	2.5	3.8	5.4	3.6	4.5	---	---	---
7	1.8	0.8	1.2	4.0	1.6	2.7	7.2	3.6	5.3	---	---	---
8	3.9	1.7	2.8	5.1	1.6	3.2	8.8	4.9	6.7	---	---	---
9	5.5	3.4	4.3	6.1	2.9	4.4	9.3	6.9	8.0	---	---	---
10	5.7	4.1	4.8	6.7	4.4	5.4	9.1	7.2	8.1	---	---	---
11	5.5	4.6	5.0	6.1	5.1	5.6	8.6	7.3	7.8	---	---	---
12	5.4	3.8	4.6	5.5	4.3	5.0	8.2	6.0	7.1	---	---	---
13	4.3	3.3	3.7	4.9	4.1	4.5	7.7	5.7	6.7	---	---	---
14	4.7	3.2	3.9	5.4	3.8	4.5	7.4	6.1	6.7	---	---	---
15	4.0	2.5	3.2	6.5	5.0	5.6	9.5	5.5	7.3	---	---	---
16	3.7	1.6	2.6	6.0	3.9	4.4	8.9	7.4	8.1	---	---	---
17	5.1	3.1	3.9	5.0	3.9	4.3	9.5	7.5	8.5	---	---	---
18	4.6	3.3	4.1	4.4	3.4	3.9	9.1	7.7	8.4	---	---	---
19	3.9	1.8	2.8	5.1	2.1	3.5	9.7	8.0	8.7	---	---	---
20	3.3	2.0	2.6	4.5	2.8	3.7	11.2	8.1	9.5	---	---	---
21	4.6	3.2	3.8	6.8	3.9	5.1	10.6	8.0	9.5	---	---	---
22	5.4	4.2	4.7	7.1	5.7	6.2	11.1	8.6	10.0	---	---	---
23	4.8	3.1	3.8	6.8	5.4	6.0	10.7	8.3	9.6	---	---	---
24	4.8	2.2	3.4	7.8	5.1	6.3	10.1	7.9	9.2	---	---	---
25	4.0	2.4	3.3	8.2	5.7	6.9	9.6	7.2	8.1	---	---	---
26	2.8	1.6	2.2	7.6	6.2	6.9	8.1	5.8	7.0	---	---	---
27	3.4	1.4	2.3	6.5	5.0	5.8	---	---	---	---	---	---
28	2.9	1.4	2.1	7.7	5.2	6.4	---	---	---	---	---	---
29	3.2	1.5	2.4	6.6	5.6	6.1	---	---	---	---	---	---
30	---	---	---	6.7	5.5	6.1	---	---	---	---	---	---
31	---	---	---	7.4	5.9	6.6	---	---	---	---	---	---
Month	5.7	0.8	3.1	8.2	1.3	4.9	---	---	---	---	---	---