

Water-Data Report 2011

06670500 LARAMIE RIVER NEAR FORT LARAMIE, WY

North Platte Basin
Lower Laramie Subbasin

LOCATION.--Lat 42°12'02", long 104°32'16" referenced to North American Datum of 1927, in NE ¼ SE ¼ NE ¼ sec.28, T.26 N., R.64 W., Goshen County, WY, Hydrologic Unit 10180011, on right bank 600 ft upstream from bridge on county road, 0.6 mi upstream from mouth, and 1.1 mi southwest of Fort Laramie.

DRAINAGE AREA.--4,564 mi² of which 631 mi² probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--April 1915 to current year (no winter records prior to 1927). Monthly discharge only for some periods, published in WSP 1310.

Records for water years 1926-39, previously published including diversions to Gering-Fort Laramie Canal, were adjusted to exclude flow in the canal in WSP 1310. Prior to October 1931, published as "at Fort Laramie." No diversion to Gering-Fort Laramie Canal since 1956.

REVISED RECORDS.--WSP 1918: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,220 ft above NGVD of 1929, from topographic map. April 4, 1915 to March 31, 1925, nonrecording gage at site 0.1 mi downstream from station at different datum. April 1, 1925 to September 30, 1932, nonrecording gage and October 1, 1932 to August 20, 1935, water-stage recorder at site 4.3 mi upstream from station at different datum. August 21, 1935, to November 2, 1970, water-stage recorder at site 0.3 mi upstream from station at different datum. November 3, 1970 to May 9, 1973, water-stage recorder 0.1 mi downstream from station at different datum. May 10, 1973 to April 5, 1977, water-stage recorder 4.3 mi upstream from station at different datum. U.S. Army Corps of Engineers data collection platform with satellite telemetry at station.

COOPERATION.--Four discharge measurements provided by the Wyoming State Engineer's Office.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Major regulation began after completion of Grey Rocks Reservoir in 1980. Diversion, at times, to Gering-Fort Laramie Canal, 5.4 mi upstream. Natural flow of stream affected by transbasin diversions, storage reservoirs, ground-water withdrawals and diversions for irrigation upstream from station, and return flow from irrigated areas. Quality of water data were collected and are available at <http://waterdata.usgs.gov/usa/nwis/qw>.

06670500 LARAMIE RIVER NEAR FORT LARAMIE, WY—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	103	50	e50	e90	e120	177	334	1,220	2,140	206	412	82
2	66	52	e53	e88	e150	280	339	1,230	2,100	116	357	71
3	53	48	e58	e86	e155	530	383	1,240	1,980	101	311	69
4	50	47	e62	e85	e150	552	388	1,250	1,840	96	271	66
5	49	51	67	88	e140	532	422	1,260	1,570	95	249	66
6	55	50	72	81	e135	591	482	1,270	1,160	101	224	69
7	77	46	77	72	e140	606	554	1,290	1,130	214	203	74
8	73	46	78	71	e130	634	559	1,300	1,080	224	186	76
9	61	45	89	71	e150	642	566	1,300	1,090	228	190	81
10	60	49	59	e68	e145	644	566	1,310	1,060	235	249	98
11	56	53	58	e70	e140	641	576	1,330	1,040	237	175	101
12	54	53	e55	e72	139	638	618	1,500	990	241	157	92
13	53	46	67	75	139	636	670	2,170	854	250	144	82
14	52	46	64	80	141	633	678	2,010	573	241	135	82
15	55	46	70	81	144	631	694	1,880	466	232	131	86
16	54	50	71	84	155	626	776	1,760	233	280	122	97
17	52	48	73	91	170	622	869	1,710	216	468	112	84
18	53	54	80	105	173	621	784	1,680	206	567	107	68
19	53	53	68	124	183	619	764	1,760	206	744	102	74
20	53	51	75	e140	195	614	753	1,820	207	801	95	74
21	54	52	82	147	e200	613	1,100	1,970	195	785	99	75
22	56	61	90	148	e185	614	1,690	1,970	191	776	93	65
23	57	61	96	147	179	614	1,840	2,010	190	755	87	66
24	53	e58	96	143	167	618	1,850	1,960	189	721	85	61
25	52	e55	95	141	e160	617	1,830	1,970	204	697	81	61
26	52	e52	94	146	e185	611	1,600	2,000	223	683	77	62
27	50	e50	96	154	e175	610	1,290	1,960	226	661	71	61
28	51	47	102	162	e180	606	1,220	1,870	224	635	68	59
29	51	47	98	167	---	532	1,180	1,970	222	575	74	58
30	48	e40	87	165	---	353	1,210	1,960	224	518	71	57
31	47	---	e50	162	---	373	---	1,980	---	458	74	---
Total	1,753	1,507	2,332	3,404	4,425	17,630	26,585	51,910	22,229	12,941	4,812	2,217
Mean	56.5	50.2	75.2	110	158	569	886	1,675	741	417	155	73.9
Max	103	61	102	167	200	644	1,850	2,170	2,140	801	412	101
Min	47	40	50	68	120	177	334	1,220	189	95	68	57
Ac-ft	3,480	2,990	4,630	6,750	8,780	34,970	52,730	103,000	44,090	25,670	9,540	4,400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	62.7	72.0	77.5	76.6	82.0	102	149	363	304	128	64.1	59.4
Max	350	388	464	360	418	569	1,056	3,145	2,967	1,925	390	245
(WY)	(1985)	(1985)	(1985)	(1985)	(1984)	(2011)	(1984)	(1973)	(1983)	(1983)	(1984)	(1973)
Min	13.9	10.3	6.35	6.32	17.3	18.9	37.5	25.3	17.3	23.1	8.73	15.0
(WY)	(1965)	(1981)	(1981)	(1981)	(1981)	(2004)	(1981)	(1963)	(1966)	(1966)	(1975)	(1964)

06670500 LARAMIE RIVER NEAR FORT LARAMIE, WY—Continued

SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1957 - 2011	
Annual total	79,275		151,745			
Annual mean	217		416		129	
Highest annual mean					672	1983
Lowest annual mean					26.1	1981
Highest daily mean	4,620	Jun 17	2,170	May 13	5,810	May 10, 1973
Lowest daily mean	11	Jan 8	40	Nov 30	^a 2.0	Jan 23, 1981
Annual seven-day minimum	13	Jan 20	48	Nov 3	3.1	Jan 21, 1981
Maximum peak flow			2,290	May 13	6,260	May 10, 1973 ^b
Maximum peak stage			6.88	May 13	^c 9.40	May 10, 1973 ^b
Annual runoff (ac-ft)	157,200		301,000		93,100	
10 percent exceeds	450		1,280		206	
50 percent exceeds	62		148		54	
90 percent exceeds	21		53		23	

^a No flow January 31 to March 20, October 24 to December 17, 1926, March 1-26, April 14, 1938; all flows diverted to Gering-Fort Laramie Canal.

^b For period of record 1915-2011.

^c Site and datum then in use.

