Water-Data Report 2013

14170000 LONG TOM RIVER AT MONROE, OR

Willamette Basin
Upper Willamette Subbasin

LOCATION.--Lat 44°18′47″, long 123°17′43″ referenced to North American Datum of 1927, in NE ¼ sec.33, T.14 S., R.5 W., Benton County, OR, Hydrologic Unit 17090003, on left bank, at Monroe, 110 ft upstream from bridge on State Highway 99W, 0.1 mi downstream from Shafer Creek and at mile 6.8.

DRAINAGE AREA.--391 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--November 1920 to July 1921, October 1921 to April 1926, November 1926 to May 1927, October 1927 to current year. Prior to October 1930, published as "near Monroe."

REVISED RECORDS.--WSP 654: Drainage area. WSP 1248: 1923, 1927, 1928(M). WSP 1288: 1952.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 270.57 ft above NGVD of 1929. Prior to Nov. 24, 1944, nonrecording gage at various sites ranging from present site to 1.5 mi downstream at different datums.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since November 1941 by Fern Ridge Lake (active capacity, 93,350 acre-ft). Several small diversions upstream from station. Minor diversion between station and concrete control. Periodic suspended sediment data are available for period October 1991 to September 1994.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--18 years (water years 1922-25, 1928-1941), 689 ft^3/s, 23.93 in/yr, 499,200 acre-ft/yr. 90 years (water years 1922-25, 1928-2013), 747 ft^3/s, 540,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,300 ft^3/s Jan. 2, 1943, gage height, 17.14 ft, site and datum then in use, from graph based on gage readings, includes some overflow from Willamette River near Junction City; no flow Oct. 20-22, 1944 (water filling pool at gage); minimum discharge observed prior to regulation, 7 ft^3/s Sept. 29, Oct. 1, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,910 ft^3/s Dec. 20, 21 gage height, 8.14 ft; minimum discharge, 17 ft^3/s May 6.

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 14170000, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/14170000.2013.pdf

14170000 LONG TOM RIVER AT MONROE, OR—Continued

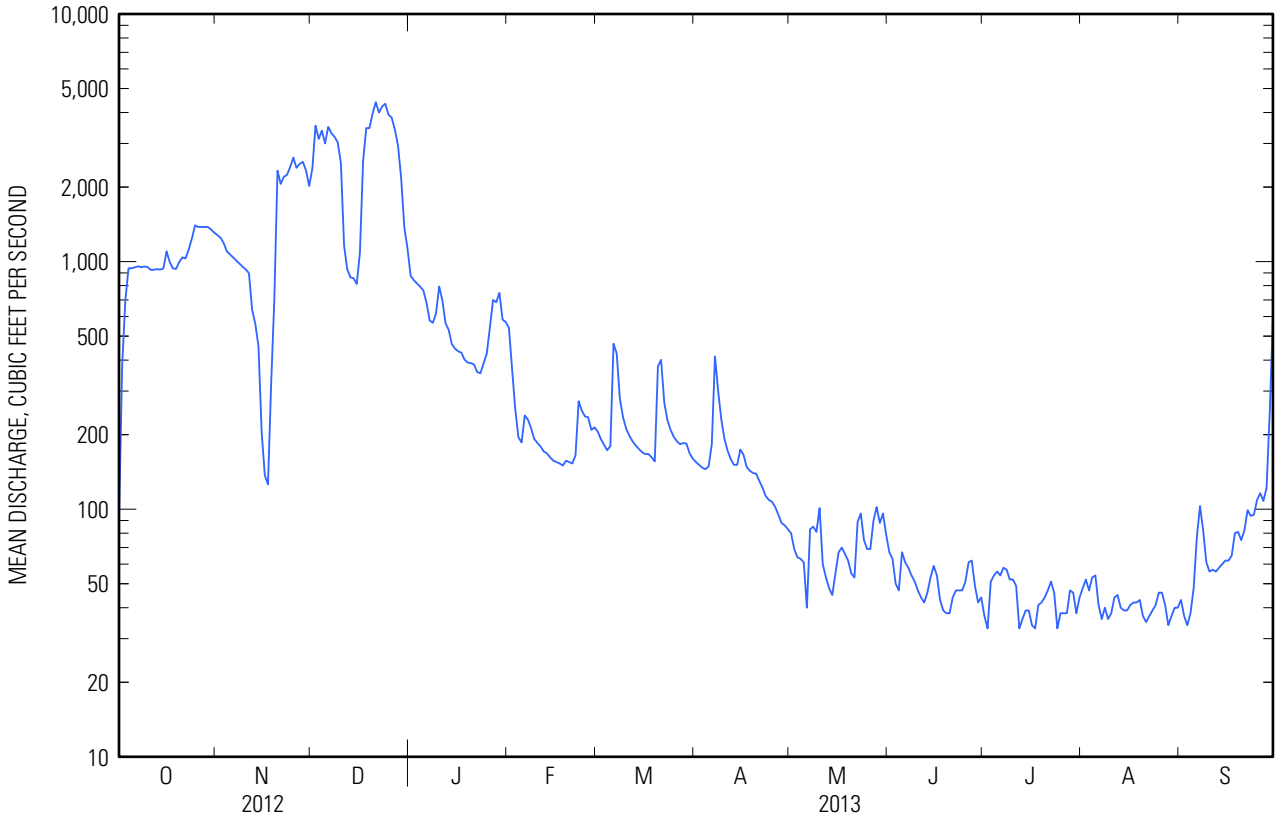
DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	90	1,280	2,380	877	540	206	155	80	67	37	48	43
2	380	1,250	3,540	841	368	192	151	69	63	33	52	37
3	696	1,190	3,130	816	253	182	147	64	50	51	47	34
4	939	1,100	3,380	792	195	173	145	63	47	54	53	38
5	940	1,070	3,000	765	186	180	149	61	67	56	54	48
6	948	1,040	3,500	682	239	466	183	40	61	54	41	77
7	957	1,010	3,300	579	230	425	414	83	58	58	36	103
8	949	981	3,190	566	212	279	300	85	54	57	40	82
9	955	954	3,030	617	192	235	230	81	51	52	36	61
10	951	929	2,500	793	185	211	192	101	47	52	38	56
11	926	897	1,160	698	179	198	172	60	44	49	44	57
12	927	638	931	564	171	188	159	53	42	33	45	56
13	932	561	864	530	168	181	151	48	46	36	40	58
14	929	454	856	464	162	175	151	45	53	39	39	60
15	937	205	812	445	157	170	174	55	59	39	39	62
16	1,100	137	1,090	434	155	167	166	67	54	34	41	62
17	996	126	2,550	429	153	167	148	70	43	33	42	65
18	939	321	3,460	402	150	162	143	66	39	41	42	80
19	934	705	3,460	391	157	156	140	62	38	42	43	81
20	996	2,330	3,960	389	155	377	139	55	38	44	37	75
21	1,040	2,060	4,400	384	153	401	130	53	44	47	35	82
22	1,030	2,200	4,000	358	165	270	122	89	47	51	37	99
23	1,120	2,240	4,230	354	273	229	113	96	47	46	39	94
24	1,240	2,410	4,340	388	250	209	109	75	47	33	41	95
25	1,400	2,630	3,920	424	237	196	107	69	51	38	46	109
26	1,380	2,390	3,820	542	235	188	102	69	61	38	46	116
27	1,380	2,480	3,420	700	209	183	95	90	62	38	41	108
28	1,380	2,530	2,950	685	214	185	88	102	49	47	34	122
29	1,380	2,330	2,180	748	---	184	86	88	42	46	37	247
30	1,350	2,020	1,380	583	---	168	83	96	44	38	40	590
31	1,310	---	1,130	570	---	160	---	79	---	44	40	---
Total	31,431	40,468	85,863	17,810	5,943	6,863	4,644	2,214	1,515	1,360	1,293	2,897
Mean	1,014	1,349	2,770	575	212	221	155	71.4	50.5	43.9	41.7	96.6
Max	1,400	2,630	4,400	877	540	466	414	102	67	58	54	590
Min	90	126	812	354	150	156	83	40	38	33	34	34
Ac-ft	62,340	80,270	170,300	35,330	11,790	13,610	9,210	4,390	3,010	2,700	2,560	5,750

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	611	871	1,641	2,105	1,621	961	549	253	110	45.3	57.9	141
Max	1,895	4,265	5,355	6,222	4,683	3,243	2,326	1,193	697	148	524	960
(WY)	(1948)	(1925)	(1956)	(1956)	(1996)	(1938)	(1937)	(1963)	(1993)	(1993)	(1951)	(1955)
Min	15.7	19.6	55.5	43.5	44.1	136	54.5	50.3	28.6	23.0	12.4	12.3
(WY)	(1937)	(1940)	(1977)	(1977)	(1977)	(1978)	(1977)	(1987)	(1987)	(1965)	(1939)	(1939)

14170000 LONG TOM RIVER AT MONROE, OR—Continued

SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1922 - 2013	
Annual total	438,867		202,301			
Annual mean	1,199		554		747	
Highest annual mean					1,517	1956
Lowest annual mean					177	1977
Highest daily mean	6,170	Jan 19	4,400	Dec 21	16,400	Jan 2, 1943
Lowest daily mean	39	Aug 8	33	Jul 2	0.00	Oct 20, 1944
Annual seven-day minimum	43	Aug 2	36	Jul 12	8.1	Sep 13, 1924
Annual runoff (ac-ft)	870,500		401,300		540,800	
10 percent exceeds	3,680		1,380		2,290	
50 percent exceeds	589		157		218	
90 percent exceeds	49		41		33