Water-Data Report 2012

14240304 SPIRIT LAKE AT TUNNEL, AT SPIRIT LAKE, WA

Lower Columbia Basin
Lower Cowlitz Subbasin

LOCATION.--Lat 46°16′35″, long 122°09′41″ referenced to North American Datum of 1927, in NE ¼ NE ¼ sec.10, T.9 N., R.5 E., Skamania County, WA, Hydrologic Unit 17080005, Mount St. Helens National Volcanic Monument, at entrance of Spirit Lake Outlet Tunnel, 5.6 mi north-northeast of the Mount St. Helens volcanic edifice.

DRAINAGE AREA.--18.0 mi^2, at entrance to Spirit Lake Outlet Tunnel. Prior to the volcanic eruption on May 18, 1980, 14.9 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1987 to current year. Records of contents published in WDR-WA-94-1 are unreliable and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 3,400 ft above NGVD of 1929.

REMARKS.--As a result of the May 18, 1980, eruption of Mt St Helens, a gravitational landslide ensued, transporting an estimated 0.6 mi^3 of debris into the upper North Toutle River drainage basin. A massive debris avalanche completely filled the lake, blocking the natural outlet to the North Fork Toutle River with a deposit several hundred feet thick. This filling caused the lake to rise 200 ft to elevation 3,400 ft. Refer to report by Schuster, R.L., ed., 1986, Landslide Dams: Processes, Risk and Mitigation: Geotechnical Special Publication no. 3, American Society of Civil Engineers, 164 p., for history of Spirit Lake as it was impacted by the eruption and actions taken to reduce the resulting flood threat. U.S. Geological Survey satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded elevation, 3,460.13 ft Feb. 5, 1997; minimum recorded elevation, 3,437.00 ft Oct. 28, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 3,448.79 ft, Dec. 14; minimum elevation, 3,441.32 ft, Sept. 19.

Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 14240304, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/14240304.2012.pdf

14240304 SPIRIT LAKE AT TUNNEL, AT SPIRIT LAKE, WA—Continued

LAKE OR RESERVOIR WATER SURFACE ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY OBSERVATION AT 2400 HOURS

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	3,442.76	3,444.52	3,448.18	3,446.50	3,445.42	3,445.02	3,444.98	---	3,446.85	3,446.03	3,443.78	3,441.98
2	3,442.82	3,444.59	3,448.25	3,446.50	3,445.33	3,444.96	3,444.94	---	3,446.89	3,445.96	3,443.71	3,441.93
3	3,442.85	3,444.65	3,448.30	3,446.40	3,445.22	3,444.98	3,444.91	---	3,446.86	3,445.95	3,443.63	3,441.88
4	3,442.95	3,444.68	3,448.36	3,446.34	3,445.15	3,444.92	3,444.88	---	3,446.87	3,445.88	3,443.56	3,441.85
5	3,443.02	3,444.72	3,448.42	3,446.30	3,445.06	3,444.90	3,444.83	---	3,446.94	3,445.80	3,443.50	3,441.81
6	3,443.09	3,444.74	3,448.47	3,446.22	3,444.97	3,444.83	3,444.76	---	3,446.88	3,445.73	3,443.43	3,441.77
7	3,443.15	3,444.78	3,448.51	3,446.10	3,444.89	3,444.76	3,444.68	---	3,446.93	3,445.67	3,443.38	3,441.73
8	3,443.18	3,444.81	3,448.56	3,446.00	3,444.81	3,444.67	3,444.63	---	3,446.94	3,445.61	3,443.30	3,441.70
9	3,443.22	3,444.85	3,448.60	3,445.92	3,444.76	3,444.62	3,444.58	---	3,446.91	3,445.55	3,443.24	3,441.65
10	3,443.31	3,444.88	3,448.64	3,445.82	3,444.76	3,444.58	3,444.55	---	3,446.83	3,445.48	3,443.17	3,441.62
11	3,443.46	3,445.00	3,448.69	3,445.72	3,444.69	3,444.64	3,444.54	---	3,446.78	3,445.41	3,443.11	3,441.59
12	3,443.52	3,445.07	3,448.72	3,445.59	3,444.62	3,444.77	3,444.51	3,446.23	3,446.76	---	3,443.05	3,441.54
13	3,443.57	3,445.17	3,448.77	3,445.48	3,444.56	3,444.74	3,444.47	3,446.23	3,446.73	3,445.26	3,442.99	3,441.51
14	3,443.60	3,445.26	3,448.65	3,445.41	3,444.51	3,444.78	3,444.44	3,446.29	3,446.68	3,445.18	3,442.93	3,441.48
15	3,443.64	3,445.29	3,448.43	3,445.33	3,444.42	3,444.93	3,444.41	3,446.41	3,446.63	3,445.10	3,442.87	3,441.44
16	3,443.67	3,445.42	3,448.20	3,445.23	3,444.36	3,444.93	3,444.51	3,446.49	3,446.62	3,445.02	3,442.81	3,441.41
17	3,443.69	3,445.58	3,447.97	3,445.21	3,444.38	3,444.92	3,444.51	3,446.52	3,446.63	3,444.94	3,442.76	3,441.38
18	3,443.71	3,445.66	3,447.75	3,445.21	3,444.44	3,444.87	3,444.53	3,446.53	3,446.71	3,444.87	3,442.70	3,441.35
19	3,443.74	3,445.71	3,447.53	3,445.30	3,444.38	3,444.80	3,444.61	3,446.51	3,446.67	3,444.76	3,442.65	3,441.33
20	3,443.78	3,445.74	3,447.33	3,445.46	3,444.36	3,444.85	3,444.70	3,446.52	3,446.62	3,444.74	3,442.60	3,441.35
21	3,443.83	3,445.91	3,447.11	3,445.55	3,444.61	3,444.80	3,444.79	3,446.64	3,446.57	3,444.65	3,442.54	3,441.37
22	3,444.02	3,446.42	3,446.88	3,445.59	3,445.00	3,444.75	3,444.94	3,446.74	3,446.57	3,444.56	3,442.48	3,441.39
23	3,444.10	3,447.14	3,446.66	3,445.50	3,445.03	3,444.67	3,445.15	3,446.84	3,446.56	3,444.48	3,442.42	3,441.41
24	3,444.14	3,447.41	3,446.47	3,445.57	3,445.09	3,444.59	3,445.36	3,446.85	3,446.49	3,444.40	3,442.36	3,441.42
25	3,444.18	3,447.54	3,446.35	3,445.60	3,445.13	3,444.52	---	3,446.84	3,446.41	3,444.32	3,442.31	3,441.44
26	3,444.22	3,447.66	3,446.19	3,445.60	3,445.09	3,444.47	---	3,446.85	3,446.35	3,444.24	3,442.26	3,441.46
27	3,444.25	3,447.85	3,446.19	3,445.53	3,445.03	3,444.60	---	3,446.83	3,446.28	3,444.16	3,442.21	3,441.48
28	3,444.32	3,447.93	3,446.42	3,445.44	3,445.08	3,444.61	---	3,446.82	3,446.20	3,444.08	3,442.16	3,441.51
29	3,444.37	3,448.04	3,446.54	3,445.52	3,445.08	3,444.77	---	3,446.79	3,446.14	3,444.00	3,442.11	3,441.52
30	3,444.44	3,448.11	3,446.69	3,445.52	---	3,444.92	---	3,446.75	3,446.09	3,443.93	3,442.07	3,441.53
31	3,444.48	---	3,446.61	3,445.44	---	3,444.98	---	3,446.81	---	3,443.85	3,442.02	---
Mean	3,443.65	3,445.84	3,447.69	3,445.71	3,444.84	3,444.78	---	---	3,446.65	---	3,442.84	3,441.56
Max	3,444.48	3,448.11	3,448.77	3,446.50	3,445.42	3,445.02	---	---	3,446.94	---	3,443.78	3,441.98
Min	3,442.76	3,444.52	3,446.19	3,445.21	3,444.36	3,444.47	---	---	3,446.09	---	3,442.02	3,441.33