12175000 ROSS RESERVOIR NEAR NEWHALEM, WA

Puget Sound Basin
Upper Skagit Subbasin

LOCATION.--Lat 48°43′58″, long 121°04′02″ referenced to North American Datum of 1927, in SE ¼ sec.35, T.38 N., R.13 E., Whatcom County, WA, Hydrologic Unit 17110005, Ross Lake National Recreation Area, at Ross Dam on Skagit River, 1.0 mi downstream from Ruby Creek, 9.1 mi northeast of Newhalem, and at mile 105.2.

DRAINAGE AREA.--999 mi^2, of which 400 mi^2 is in Canada.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--March 1940 to current year (monthend elevations and contents only prior to October 1946). Prior to October 1945, published as "Ruby Reservoir near Newhalem."

REVISED RECORDS.--WSP 1932: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is City of Seattle Ross Dam datum; 1.79 ft above NGVD of 1929, U.S. Coast and Geodetic Survey datum; and 0.88 ft above NGVD of 1929, Geodetic Survey of Canada 1959 datum (by water level transfer of elevation from the international boundary). Prior to Sept. 24, 1940, nonrecording gage on west shore at site upstream from Ross Dam at same datum. June 29, 1943, to Apr. 29, 1948, nonrecording gage on right bank at site 500 ft upstream from dam at present datum.

COOPERATION.--Capacity table furnished by City of Seattle. This station is maintained by the United States under agreement with Canada.

REMARKS.--Reservoir is formed by concrete-arch dam completed to elevation 1,615 ft in 1949, storage began Mar. 11, 1940. Starting about July 1, 1967, taintor gates were extended to elevation 1,602.50 ft. Usable storage, 1,052,300 acre-ft between elevations 1,475 ft, lower limit of operation, and 1,602.5 ft, top of taintor gates. An additional 95,000 acre-ft of storage may be obtained during major floods by surcharge of the reservoir to a maximum elevation of 1,610.5 ft. Dead storage below elevation 1,250 ft, 1,175 acre-ft. Water used by City of Seattle for power development. Figures given herein represent total contents. U.S. Geological Survey satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,443,460 acre-ft, July 20, 1981, elevation, 1,603.23 ft; minimum contents observed since dam was completed in 1949, 51,760 acre-ft, Apr. 5, 1952, elevation, 1,348.50 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,427,717 acre-ft, occurred August 10, 11, 2010, elevation, 1,601.91 ft; minimum contents 820,660 acre-ft, April 17, 2010, elevation 1542.30 ft.

CAPACITY TABLE

(Based on 25-foot contour intervals furnished by City of Seattle in 1943)

Elevation (feet)	Contents (acre-feet)	Elevation (feet)	Contents (acre-feet)	Elevation (feet)	Contents (acre-feet)
1,490	454,480	1,525	678,950	1,575	1,130,200
1,500	509,240	1,550	888,320	1,603	1,440,700

12175000 ROSS RESERVOIR NEAR NEWHALEM, WA—Continued

LAKE OR RESERVOIR WATER SURFACE ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY OBSERVATION AT 2400 HOURS

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,596.69	1,596.09	1,589.18	1,577.26	1,569.26	1,556.74	1,547.09	1,546.92	1,568.77	1,600.24	1,601.00	1,600.34
2	1,596.42	1,595.99	1,588.81	1,576.93	1,568.66	1,556.42	1,546.76	1,546.98	1,570.37	1,600.09	1,601.09	1,600.30
3	1,596.23	1,595.64	1,588.79	1,576.59	1,567.92	1,556.05	1,546.39	1,547.04	1,572.38	1,599.91	1,601.22	1,600.24
4	1,596.00	1,595.00	1,588.64	1,576.26	1,567.22	1,555.73	1,546.19	1,547.10	1,573.79	1,599.98	1,601.32	1,600.21
5	1,595.59	1,594.70	1,588.42	1,575.96	1,566.56	1,555.38	1,545.86	1,547.37	1,575.07	1,600.07	1,601.41	1,600.19
6	1,595.21	1,594.84	1,588.16	1,575.55	1,566.07	1,555.11	1,545.58	1,547.39	1,576.06	1,600.07	1,601.62	1,600.11
7	1,594.93	1,594.71	1,587.63	1,575.11	1,565.59	1,554.72	1,545.11	1,547.24	1,577.31	1,600.25	1,601.78	1,599.80
8	1,594.62	1,594.49	1,587.27	1,574.67	1,565.04	1,554.36	1,544.98	1,547.22	1,578.57	1,600.62	1,601.79	1,599.47
9	1,594.33	1,594.01	1,586.82	1,574.24	1,564.66	1,554.10	1,544.64	1,547.30	1,580.02	1,600.94	1,601.84	1,599.04
10	1,593.98	1,593.79	1,586.32	1,573.92	1,563.96	1,553.85	1,544.27	1,547.19	1,581.45	1,601.33	1,601.88	1,598.78
11	1,593.66	1,593.44	1,585.78	1,573.85	1,563.51	1,553.54	1,543.97	1,547.21	1,582.64	1,601.63	1,601.77	1,598.44
12	1,593.26	1,593.04	1,585.36	1,574.01	1,563.10	1,553.35	1,543.41	1,547.26	1,583.88	1,601.79	1,601.74	1,598.01
13	1,592.90	1,592.67	1,584.94	1,574.14	1,562.61	1,553.00	1,543.02	1,547.68	1,585.50	1,601.78	1,601.74	1,598.05
14	1,592.56	1,592.10	1,584.36	1,574.25	1,562.32	1,552.65	1,542.85	1,548.12	1,587.01	1,601.53	1,601.69	1,597.67
15	1,592.23	1,591.65	1,583.87	1,574.51	1,561.81	1,552.37	1,542.56	1,549.16	1,588.24	1,601.31	1,601.54	1,597.31
16	1,592.20	1,592.35	1,583.38	1,574.57	1,561.51	1,552.02	1,542.50	1,550.68	1,589.18	1,601.26	1,601.24	1,597.13
17	1,593.39	1,593.97	1,582.84	1,574.55	1,561.36	1,551.65	1,542.37	1,552.46	1,590.06	1,601.25	1,601.29	1,596.91
18	1,594.09	1,594.49	1,582.43	1,574.67	1,560.95	1,551.26	1,542.53	1,554.49	1,590.71	1,601.31	1,601.36	1,596.97
19	1,594.23	1,594.71	1,582.03	1,574.26	1,560.41	1,550.90	1,542.72	1,556.46	1,591.48	1,601.24	1,601.30	1,596.96
20	1,594.14	1,594.50	1,581.80	1,574.17	1,559.93	1,550.45	1,543.35	1,558.25	1,592.45	1,601.38	1,601.25	1,597.57
21	1,594.06	1,594.03	1,581.68	1,573.61	1,559.50	1,550.15	1,544.03	1,559.41	1,593.31	1,601.49	1,601.16	1,597.87
22	1,593.93	1,593.46	1,581.44	1,573.22	1,559.04	1,549.80	1,544.79	1,560.20	1,594.20	1,601.74	1,601.06	1,597.87
23	1,593.99	1,592.82	1,581.12	1,572.80	1,558.60	1,549.39	1,545.18	1,560.82	1,595.23	1,601.58	1,600.94	1,597.71
24	1,594.33	1,591.96	1,580.63	1,572.22	1,558.31	1,549.13	1,545.51	1,561.26	1,596.28	1,601.53	1,600.80	1,597.66
25	1,594.43	1,591.17	1,580.33	1,571.94	1,557.98	1,548.77	1,545.59	1,561.65	1,597.16	1,601.48	1,600.70	1,597.56
26	1,594.70	1,591.13	1,579.85	1,571.66	1,557.73	1,548.49	1,545.88	1,562.14	1,597.98	1,601.41	1,600.71	1,597.61
27	1,594.88	1,590.76	1,579.35	1,571.42	1,557.42	1,548.25	1,546.13	1,562.85	1,598.47	1,601.30	1,600.71	1,597.44
28	1,594.83	1,590.21	1,578.81	1,571.00	1,557.13	1,547.85	1,546.56	1,563.96	1,599.15	1,601.30	1,600.64	1,598.07
29	1,594.66	1,589.67	1,578.32	1,570.57	---	1,547.72	1,546.86	1,565.19	1,599.80	1,601.13	1,600.54	1,598.39
30	1,595.00	1,589.40	1,577.99	1,570.30	---	1,547.39	1,546.83	1,566.26	1,600.05	1,600.97	1,600.41	1,598.37
31	1,595.76	---	1,577.58	1,569.98	---	1,547.38	---	1,567.38	---	1,600.89	1,600.30	---
Max	1,596.69	1,596.09	1,589.18	1,577.26	1,569.26	1,556.74	1,547.09	1,567.38	1,600.05	1,601.79	1,601.88	1,600.34
Min	1,592.20	1,589.40	1,577.58	1,569.98	1,557.13	1,547.38	1,542.37	1,546.92	1,568.77	1,599.91	1,600.30	1,596.91
Change in content acre-feet, at 2400, on last day of month												
	1,356,484	1,285,000	1,157,240	1,078,608	953,482	865,027	860,174	1,052,500	1,405,885	1,415,753	1,408,800	1,386,412
Change in content (acre-feet)												
	-13,358	-71,484	-127,760	-78,632	-125,126	-88,455	-4,853	+192,326	+353,385	+9,868	-6,953	-22,388

	Calendar Year 2009	Water Year 2010
Max	1,602.16	1,601.88
Min	1,538.00	1,542.37
Ac-ft	+15,905	+16,570