



Water-Data Report 2007

03543000 WATTS BAR LAKE

Upper Tennessee Basin
Watts Bar Lake Subbasin

LOCATION.--Lat 35°37'13", long 84°47'00" referenced to North American Datum of 1927, Rhea County, TN, Hydrologic Unit 06010201, at Watts Bar Dam on Tennessee River, 6.5 mi southeast of Spring City, 72.4 mi downstream from Fort Loudoun Dam, and at mile 529.9.

DRAINAGE AREA.--17,310 mi², approximately.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1941 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level.

COOPERATION.--Records furnished by Tennessee Valley Authority.

REMARKS.--Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with 20 radial gates, each 32 ft high by 40 ft wide, also one 2-section leaf trashway gate 16.3 ft high by 24 ft wide. Storage began with partial closure Dec. 12, 1941, and final closure Jan. 1, 1942; water in reservoir first reached minimum navigation pool elevation Feb. 17, 1942. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 745.0 ft, top of gates, is 592,400 cfs-days, of which 191,000 cfs-days is controlled flood storage above elevation 735.0 ft, minimum navigation pool. Reservoir is used for navigation, flood control, and power. Monthend elevation and contents at 2400, for the water year are provided in the following table.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

DATE	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
Sept. 30...	740.53	500,000	
Oct. 31...	740.60	502,000	+2,000
Nov. 30...	736.92	435,600	-66,400
Dec. 31...	737.09	436,700	+1,100
CALENDAR YEAR			+13,800
Jan. 31...	736.87	432,800	-3,900
Feb. 28...	736.71	430,400	-2,400
Mar. 31...	737.17	420,800	-9,600
Apr. 30...	740.28	495,200	+74,400
May 31...	740.80	505,300	+10,100
June 30...	740.28	495,400	-9,900
July 31...	740.74	504,100	+8,700
Aug. 31...	740.05	491,800	-12,300
Sept. 30...	740.14	492,500	+700
WATER YEAR			-7,500

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 747.35 ft, May 7, 2003; minimum after first filling, 733.44 ft, Mar. 20, 1945.

EXTREMES FOR CURRENT YEAR.--Maximum midnight contents, 529,400 cfs-days, May 9; maximum elevation, 742.12 ft, May 8; minimum midnight contents, 409,000 cfs-days, Feb. 21; minimum elevation, 735.07 ft, Feb. 21. Contents based on backwater profile.