



Water-Data Report 2006

06452500 LAKE FRANCIS CASE AT PICKSTOWN, SD

Fort Randall Reservoir Basin
 Fort Randall Reservoir Subbasin

LOCATION.--Lat 43°04'05", long 98°33'15" referenced to North American Datum of 1927, in SE ¼ sec.5, T.9S N., R.65 W., Charles Mix County, SD, Hydrologic Unit 10140101, in tower 6 of outlet works at Fort Randall Dam, on Missouri River at Pickstown, 1.0 mi upstream from Randall Creek, and at mile 880.0.

DRAINAGE AREA.--263,500 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--December 1952 to current year (monthend contents only). Prior to October 1964, published as Fort Randall Reservoir at Pickstown.

GAGE.--Water-stage recorder. Elevations listed to NGVD of 1929. Prior to Mar. 25, 1953, elevations determined from temporary nonrecording gages.

COOPERATION.--Records of elevation and contents provided by U.S. Army Corps of Engineers.

REMARKS.--Reservoir is formed by earthfill dam; storage began in December 1952; initial closure made July 1952. Maximum capacity, 5,574,000 acre-ft below elevation 1,375.0 ft (top of spillway gates). Normal maximum, 4,589,000 acre-ft below elevation 1,365.0 ft. Inactive storage, 1,184,000 acre-ft below elevation 1,310.0 ft. No dead storage; elevation of invert of lowest outlet is 1,227.0 ft. Figures given herein represent elevations at outlet works and total contents adjusted for wind effect. The spillway consists of 21 taintor gates, each 40 ft wide by 29 ft high; spillway capacity, 490,000 ft³/s at pool elevation 1,375 ft. Crest of spillway is at elevation 1,346 ft. Normal releases are through 12 tunnels 22 ft in diameter. Installation of power units in 8 of these tunnels was completed in January 1956; maximum release through power tunnels is 46,000 ft³/s; maximum release through 4 other tunnels is 130,000 ft³/s at pool elevation 1,375 ft. Water is used for flood control, navigation, power, and incidental uses.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 5,102,000 acre-ft, May 6, 1997; maximum elevation, 1,372.17 ft, May 7, 1997; minimum since initial filling, 1,450,000 acre-ft, Oct. 23, 1956, affected by wind.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,809,000 acre-ft, May 5; minimum contents, 2,314,000 acre-ft, Dec. 7.

**MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS
 WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006**

Date	Elevation	Contents (acre feet)	Change in contents (acre-feet)
Sept. 30	1344.99	2,760,000	--
Oct. 31	1341.20	2,516,000	-244,000
Nov. 30	1338.69	2,367,000	-149,000
Dec. 31	1341.90	2,557,000	+190,000
CAL YR 2005	--	--	+8,000
Jan. 31	1347.76	2,953,000	+396,000
Feb. 28	1348.53	3,015,000	+62,000
Mar. 31	1355.04	3,533,000	+518,000
Apr. 30	1357.25	3,726,000	+193,000
May 31	1356.22	3,635,000	-91,000
June 30	1355.10	3,531,000	-104,000
July 31	1354.07	3,448,000	-83,000
Aug. 31	1354.02	3,447,000	-1,000
Sept. 30	1344.54	2,732,000	-715,000
WTR YR 2006	--	--	-28,000

Note.—Lake frozen over Feb. 18 to Mar. 5.