



Water-Data Report 2007

**06409500 DEERFIELD RESERVOIR NEAR HILL CITY, SD**

Cheyenne Basin  
Rapid Subbasin

LOCATION.--Lat 44°01'41", long 103°47'09" referenced to North American Datum of 1927, in NE ¼ SW ¼ sec.20, T.1 N., R.3 E., Pennington County, SD, Hydrologic Unit 10120110, at dam on Castle Creek, 0.4 mi upstream from Dutchman Creek and 12.5 mi northwest of Hill City.

DRAINAGE AREA.--95 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--May 1947 to current year (monthend contents only). Some elevations obtained during period of initial filling, December 1945 to May 1947, are available in Bureau of Reclamation files. Prior to October 1953, published as "near Deerfield."

GAGE.--Water-stage recorder. Elevations listed to NGVD of 1929 (levels by Bureau of Reclamation). Prior to July 20, 1964, nonrecording gage at same site and datum.

COOPERATION.--Records of elevation and contents provided by Bureau of Reclamation.

REMARKS.--Reservoir is formed by earthfill dam. Storage began Dec. 3, 1945; dam completed in 1947. Conservation capacity, 15,504 acre-ft between elevations 5,839.0 ft (lowest outlet) and 5,908.0 ft (crest of spillway). Dead storage below elevation 5,839.0 ft, 151 acre-ft. Surcharge capacity, 26,700 acre-ft between elevations 5,908.0 ft and 5,953.0 ft. Figures given herein represent conservation and surcharge contents above elevation 5,839.0 ft. Water is used to supplement Rapid City water supply and for irrigation in Rapid Creek basin downstream from Rapid City.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 16,006 acre-ft Feb. 25, 1985 (elevation, 5,909.05 ft); minimum observed, 429 acre-ft, Oct. 2, 1959 (elevation, 5,839.10 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 13,000 acre-ft, June 22, elevation, 5,901.76 ft; minimum, 11,500 acre-ft, Mar. 4, elevation, 5,897.80 ft.

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

Date	Elevation	Contents (acre feet)	Change in contents (acre-feet)
Sept. 30.....	5,898.79	11,900	--
Oct. 31.....	5,898.55	11,800	-100
Nov. 30.....	5,898.40	11,700	-100
Dec. 31.....	5,898.18	11,700	0
<b>CAL YR 2006</b>	--	--	-400
Jan. 31.....	5,898.01	11,700	0
Feb. 28.....	5,897.85	11,500	-200
Mar. 31.....	5,899.17	12,000	+500
Apr. 30.....	5,900.09	12,400	+400
May 31.....	5,901.17	12,800	+400
June 30.....	5,901.67	13,000	+200
July 31.....	5,901.07	12,700	-300
Aug. 31.....	5,900.61	12,600	-100
Sept. 30.....	5,900.02	12,300	-300
<b>WTR YR 2007</b>	--	--	+400