



Water-Data Report 2009

**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. . . Data available from Bureau of Reclamation at: [http://www.usbr.gov/gp-bin/arcweb\\_dfr.pl](http://www.usbr.gov/gp-bin/arcweb_dfr.pl); elevation and end of month content data at: [http://www.usbr.gov/gp-bin/res070\\_form.pl?DFR](http://www.usbr.gov/gp-bin/res070_form.pl?DFR)

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, 15,400 acre-ft, July 16, elevation, 5,907.82 ft; minimum, 14,300 acre-ft, Oct. 8, elevation, 5,905.14 ft.

**MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS  
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**

Date	Elevation	Contents (acre feet)	Change in contents (acre-feet)
<b>Sept. 30</b> .....	5,905.22	14,400	--
<b>Oct. 31</b> .....	5,905.15	14,300	-100
<b>Nov. 30</b> .....	5,905.22	14,400	100
<b>Dec. 31</b> .....	5,905.24	14,400	0
<b>CAL YR 2008</b>	--	--	2,500
<b>Jan. 31</b> .....	5,905.29	14,400	0
<b>Feb. 28</b> .....	5,905.37	14,400	0
<b>Mar. 31</b> .....	5,906.30	14,800	400
<b>Apr. 30</b> .....	5,907.57	15,300	500
<b>May 31</b> .....	5,907.62	15,400	100
<b>June 30</b> .....	5,907.40	15,300	-100
<b>July 31</b> .....	5,907.52	15,300	0
<b>Aug. 31</b> .....	5,906.63	14,900	-400
<b>Sept. 30</b> .....	5,906.04	14,700	-200
<b>WTR YR 2009</b>	--	--	300