



Water-Data Report 2007

06324710 POWDER RIVER AT BROADUS, MT

Powder Basin
Middle Powder Subbasin

LOCATION.--Lat 45°25'37", long 105°24'05" referenced to North American Datum of 1927, in NE ¼ NE ¼ SE ¼ sec.3, T.5 S., R.51 E., Powder River County, MT, Hydrologic Unit 10090207, on right bank, 40 ft downstream from bridge on U.S. highway 212, 0.4 mi downstream from Doyle Creek, 1.0 mi south of Broadus, and 7.0 mi upstream from Little Powder River.

DRAINAGE AREA.--8,748 mi².

GAGE.--None. Elevation at sampling site is 3,016 ft, referenced to the National Geodetic Vertical Datum of 1929.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to September 1992, June 1995, July 2005 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: March 1976 to September 1979.

SUSPENDED-SEDIMENT DISCHARGE: October 1975 to September 1978, March 1979 to September 1992 (seasonal records only).

REMARKS--The water-quality sample collected at this site was made in conjunction with aquatic ecology samples collected for an interagency task group studying the effects of coal-bed natural gas development. Additional information is available at <http://wy.water.usgs.gov/projects/atg/index.htm>.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum daily observed 34.0°C, July 12, 1976; minimum daily, 0.0°C, many days during winter.

SEDIMENT CONCENTRATION: Maximum daily mean, 44,100 mg/L, July 29, 1977; minimum daily mean, 16 mg/L, Sept. 27, 1981.

SEDIMENT LOAD: Maximum daily, 1,570,000 tons, May 31, 1978; minimum daily, 0.64 tons, Aug. 7, 1988.

WATER-QUALITY DATA

WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 1 of 3

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30 corrctd NTRU (63676)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
Jul													
25...	1200	29	3.0	7.4	8.1	3,090	28.0	900	190	102	13.4	6.2	428

06324710 POWDER RIVER AT BROADUS, MT—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 2 of 3

Date	Alka-	Chlor-	Fluor-	Silica,	Sulfate	Dis-	Dis-	Dis-
	linity,							
	wat flt	ide,	ide,	water,	water,	sum of	solids,	solids d,
	fxd end	water,	water,	water,	water,	consti-	tons/	tons/d
	lab,	fltrd,	fltrd,	fltrd,	fltrd,	tuent	acre-ft	
	mg/L as	mg/L	mg/L	mg/L	mg/L	mg/L	(70303)	(70302)
	CaCO3	(00940)	(00950)	(00955)	(00945)	(70301)		
	(29801)							
Jul								
25...	219	179	.50	11.5	1,290	2,340	3.19	182

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 3 of 3

[Remark codes: <, less than.]

Date	Time	Biomass	Peri-	Peri-	Biomass	Chloro-	Pheo-
		peri-	phyton	phyton	chloro-	phyll a	phytin
		phyton,	biomass	biomass	phyll	peri-	a,
		ashfree	ash	dry	ratio,	phyton,	peri-
		drymass	weight,	weight,	peri-	chromo-	phyton,
		g/m2	g/m2	g/m2	phyton,	fluoro,	mg/m2
		(49954)	(00572)	(00573)	number	mg/m2	(62359)
		(70950)	(70950)	(70950)	(70950)	(70957)	(70957)
Jul							
25...	1305	25.1	300	326	46,500	.5	<.1