

Water-Data Report 2010

05056270 BIG COULEE BELOW CHURCHS FERRY, ND

Devils Lake-Sheyenne Basin
Devils Lake Subbasin

LOCATION.--Lat 48°15'33", long 99°12'00" referenced to North American Datum of 1927, in NE ¼ SE ¼ sec.12, T.155 N., R.67 W., Benson County, ND, Hydrologic Unit 09020201, on downstream side of bridge 1 mi south of Churchs Ferry.

DRAINAGE AREA.--1,260 mi² of which 140 mi² probably is noncontributing, drainage area reduced from approximately 2,510 mi² with the completion of Channel A in March 1979.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Water years 1998-99 (seasonal records only); Water year 2000 to current year (miscellaneous discharge measurements only).

REMARKS.--Two discharge measurements were made on August 3 due to rapidly changing conditions.

DISCHARGE MEASUREMENTS
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Date	Discharge, in ft³/s
Apr 1, 2010	178
May 17, 2010	132
Jun 23, 2010	246
Aug 3, 2010	461
Aug 3, 2010	348

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958, 1961-99, 2001 to current year.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 1 of 5

[ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than]

Date	Sample start time	Temperature, air, °C (00020)	Discharge, instantaneous, ft ³ /s (00061)	pH, water, unfiltered, field, standard units (00400)	pH, water, unfiltered, laboratory, standard units (00403)	Specific conductance, water, unfiltered, laboratory, µS/cm at 25 °C (90095)	Specific conductance, water, unfiltered, laboratory, µS/cm at 25 °C (00095)	Temperature, water, °C (00010)	Dissolved solids, water, filtered, sum of constituents, milligrams per liter (70301)	Dissolved solids, water, tons per day (70302)
04-01-2010	1050	6.0	178	8.1	8.1	1,010	1,000	4.9	626	301

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 2 of 5

[ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than]

Date	Sample start time	Hardness, water, mg/L as CaCO ₃ (00900)	Calcium, water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)	Sodium adsorption ratio, water, number (00931)	Sodium fraction of cations, water, percent in equivalents of major cations (00932)	Sodium, water, filtered, mg/L (00930)	ANC, water, unfiltered, fixed endpoint (pH 4.5) titration, laboratory, mg/L as CaCO ₃ (90410)	Chloride, water, filtered, mg/L (00940)
04-01-2010	1050	418	83.2	51.1	18.6	1.4	25	64.8	307	28.2

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 3 of 5

[ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than]

Date	Sample start time	Fluoride, water, filtered, mg/L (00950)	Silica, water, filtered, mg/L as SiO ₂ (00955)	Sulfate, water, filtered, mg/L (00945)	Aluminum, water, filtered, µg/L (01106)	Barium, water, filtered, µg/L (01005)	Beryllium, water, filtered, µg/L (01010)	Cadmium, water, filtered, µg/L (01025)	Chromium, water, filtered, µg/L (01030)	Copper, water, filtered, µg/L (01040)
04-01-2010	1050	.20	4.39	182	< 50	58	< 5.00	< 5.00	< 5.0	< 5.0

05056270 BIG COULEE BELOW CHURCHS FERRY, ND—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 4 of 5

[ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than]

Date	Sample start time	Iron,	Lead,	Manga	Nickel,	Silver,	Thallium,	Zinc,	Antimony,	Arsenic,
		water,	water,	nese,	water,	water,	water,	water,	water,	water,
		filtered,								
		µg/L								
		(01046)	(01049)	(01056)	(01065)	(01075)	(01057)	(01090)	(01095)	(01000)
04-01-2010	1050	< 50	< 5.00	604	< 5.0	< 5.0	< 5.00	7.7	< 5.00	5.4

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER
2010

Part 5 of 5

[ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than]

Date	Sample start time	Boron,	Selenium,
		water,	water,
		filtered,	filtered,
		µg/L	µg/L
		(01020)	(01145)
04-01-2010	1050	102	< 5.0