



Water-Data Report 2012

05464302 Cedar River near Brandon, IA

Iowa Basin
Middle Cedar Subbasin

LOCATION.--Lat 42°17'35", long 92°03'34" referenced to North American Datum of 1927, in NW ¼ SE ¼ NW ¼ sec.6, T.86 N., R.10 W., Benton County, IA, Hydrologic Unit 07080205, at bridge on County Highway V66, 1.8 mi southwest of Brandon, 2.0 mi upstream from Lime Creek, and 136.8 mi upstream from mouth.

DRAINAGE AREA.--5,820 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 2001-2002, 2004, 2011-2012. Period of record includes water-quality data published in USGS annual reports and various project reports.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 1 of 15

[%, percent; CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Discharge, instantaneous, ft ³ /s (00061)	Dissolved oxygen, unfiltered, water, mg/L (00300)	Dissolved oxygen, unfiltered, water, % saturation (00301)	pH, unfiltered, field, standard units (00400)	pH, unfiltered, laboratory, standard units (00403)	Specific conductance, unfiltered, water, µS/cm at 25°C (90095)	Specific conductance, unfiltered, water, µS/cm at 25°C (00095)
09-26-2012 1230	743	23.2	571	E 19.1	E 201	9.2	8.5	471	533

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 2 of 15

[%, percent; CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Temperature, water, °C (00010)	Turbidity, water, unfiltered, broad band light source (400-680 nm), detectors at multiple angles including 90 +/- 30 degrees, ratiometric correction, NTRU (63676)	Stream width, ft (00004)	alpha-HCH-d6, surrogate, water, filtered (0.7 micron glass fiber filter), percent recovery (91065)	Diazinon-d10, surrogate, water, filtered (0.7 micron glass fiber filter), percent recovery (91063)	Dissolved solids, dried at 180°C, water, filtered, mg/L (70300)	Dissolved solids, water, filtered, sum of constituents, mg/L (70301)	Hardness, water, mg/L as CaCO ₃ (00900)	Non-carbonate hardness, water, filtered, field, mg/L as CaCO ₃ (00904)
09-26-2012 1230	16.7	E 17	307	102	109	252	237	181	64

05464302 Cedar River near Brandon, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 3 of 15

[%, percent; CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Suspended solids, water, unfiltered, mg/L (00530)	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, percent in equivalents of major cations (00932)	Sodium, water, filtered, mg/L (00930)	Alkalinity, water, filtered, inflection-point, incremental titration method, field, mg/L as CaCO ₃ (39086)	Bicarbonate, water, filtered, inflection-point, incremental titration method, field, mg/L (00453)
09-26-2012 1230	53	34.4	23.0	2.92	0.76	22	23.5	117	132

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 4 of 15

[%, percent; CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Carbon (inorganic plus organic), suspended sediment, total, mg/L (00694)	Carbonate, water, filtered, inflection-point, incremental titration method, field, mg/L (00452)	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Inorganic carbon, suspended sediment, total, mg/L (00688)	Silica, water, filtered, mg/L as SiO ₂ (00955)	Sulfate, water, filtered, mg/L (00945)	Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623)	Ammonia plus organic nitrogen, water, unfiltered, mg/L as N (00625)
09-26-2012 1230	7.29	5.3	39.3	0.20	< .03	0.123	38.3	0.27	2.4

05464302 Cedar River near Brandon, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 5 of 15

[% , percent; CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrite, water, filtered, mg/L as N (00613)	Organic nitrogen, water, unfiltered, mg/L (00605)	Orthophosphate, water, filtered, mg/L as P (00671)	Particulate nitrogen, suspended in water, mg/L (49570)	Phosphorus, water, filtered, mg/L as P (00666)	Phosphorus, water, unfiltered, mg/L as P (00665)	Esche- richia coli, Defined Substrate Tech- nology, water, MPN/100 mL
									(50468)
09-26-2012 1230	< .010	1.15	0.020	< 2.4	< .004	1.11	0.014	0.354	11

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 6 of 15

[% , percent; CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Total coliform, Defined Substrate Technology, water, MPN/100 mL (50569)	Chlorophyll a, phytoplankton, chromatographic-fluorometric method, µg/L (70953)	Pheophytin a, phytoplankton, µg/L (62360)	Iron, water, filtered, µg/L (01046)	Manganese, water, filtered, µg/L (01056)	2,6-Diethyl-aniline, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82660)	2-[(2-Ethyl-6-methyl-phenyl)-amino]-2-oxo-ethane-sulfonic acid, water, filtered, µg/L (62850)	2-Chloro-4-amino-6-isopropyl-triazine, water, filtered, recoverable, µg/L (04040)	Acetochlor oxanilic acid, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (61030)
									< .02
09-26-2012 1230	4,400	167	68.2	4.5	3.44	< .0060	0.02	E .053	< .02

05464302 Cedar River near Brandon, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 7 of 15

[%, percent; CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Acetochlor ethane- sulfonic acid, water, filtered	Acetochlor	Aceto- chlor,	Alachlor oxanilic acid, water, filtered	Alachlor ethane- sulfonic acid, water, filtered	Alachlor	Alachlor,	alpha- HCH,	Atrazine,
	(0.7 micron glass fiber filter), recover- able, µg/L (61029)	sulfynil- acetic acid, water, filtered, µg/L (62847)	water, filtered, recover- able, µg/L (49260)	(0.7 micron glass fiber filter), recover- able, µg/L (61031)	(0.7 micron glass fiber filter), recover- able, µg/L (50009)	sulfynil- acetic acid, water, filtered, µg/L (62848)	water, filtered, recover- able, µg/L (46342)	water, filtered, recover- able, µg/L (34253)	water, filtered, recover- able, µg/L (39632)
09-26-2012 1230	< .02	< .02	< .02	< .02	0.22	< .02	< .02	< .0040	0.050

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

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[%, percent; CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Azinphos- methyl, water, filtered	Benfluralin, water, filtered	Butylate,	Carbaryl, water, filtered	Carbofuran, water, filtered	Chlor- pyrifos, water, filtered,	cis- Permeth- rin, water, filtered	Cyanazine,	DCPA, water, filtered
	(0.7 micron glass fiber filter), recover- able, µg/L (82686)	(0.7 micron glass fiber filter), recover- able, µg/L (82673)	water, filtered, recover- able, µg/L (04028)	(0.7 micron glass fiber filter), recover- able, µg/L (82680)	(0.7 micron glass fiber filter), recover- able, µg/L (82674)	water, filtered, recover- able, µg/L (38933)	(0.7 micron glass fiber filter), recover- able, µg/L (82687)	water, filtered, recover- able, µg/L (04041)	(0.7 micron glass fiber filter), recover- able, µg/L (82682)
09-26-2012 1230	< .120	< .014	< .0040	< .060	< .060	< .0036	< .010	< .022	< .0076

05464302 Cedar River near Brandon, IA—Continued

WATER-QUALITY DATA

WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

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[%, percent; CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Dechloro-aceto-chlor, water, filtered, recoverable, µg/L (63778)	Dechloro-alachlor, water, filtered, recoverable, µg/L (63777)	Dechloro-dimeth-enamid, water, filtered, recoverable, µg/L (63779)	Dechloro-metola-chlor, water, filtered, recoverable, µg/L (63780)	Desulfinyl-fipronil amide, water, filtered, recoverable, µg/L (62169)	Desulfinyl-fipronil, water, filtered, recoverable, µg/L (62170)	Diazinon, water, filtered, recoverable, µg/L (39572)	Dieldrin, water, filtered, recoverable, µg/L (39381)	Dimeth-enamid oxanilic acid, water, filtered, recoverable, µg/L (62482)
09-26-2012 1230	< .02	< .02	< .02	< .02	< .029	0.003	< .0060	< .008	< .02

WATER-QUALITY DATA

WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

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[%, percent; CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Dimeth-enamid ethane-sulfonic acid, water, filtered, recoverable, µg/L (61951)	Dimeth-enamid, water, filtered, recoverable, µg/L (61588)	Disulfoton, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82677)	EPTC, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82668)	Ethal-fluralin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82663)	Ethoprop, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82672)	Fipronil sulfide, water, filtered, recoverable, µg/L (62167)	Fipronil sulfone, water, filtered, recoverable, µg/L (62168)	Fipronil, water, filtered, recoverable, µg/L (62166)
09-26-2012 1230	< .02	< .02	< .040	< .0056	< .006	< .016	< .012	< .024	E .005

WATER-QUALITY DATA

WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 11 of 15

[%, percent; CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Flufenacet oxanilic acid, water, filtered, recoverable, µg/L (62483)	Flufenacet ethane-sulfonic acid, water, filtered, recoverable, µg/L (61952)	Flufenacet, water, filtered, recoverable, µg/L (62481)	Fonofos, water, filtered, recoverable, µg/L (04095)	Hydroxy-aceto-chlor, water, filtered, recoverable, µg/L (63784)	Hydroxy-alachlor, water, filtered, recoverable, µg/L (63783)	Hydroxy-dimeth-enamid, water, filtered, recoverable, µg/L (64045)	Hydroxy-metola-chlor, water, filtered, recoverable, µg/L (63785)	Lindane, water, filtered, recoverable, µg/L (39341)
09-26-2012 1230	< .02	< .02	< .02	< .0048	< .02	< .02	< .02	0.03	< .0040

05464302 Cedar River near Brandon, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 12 of 15

[%, percent; CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Linuron, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82666)	Malathion, water, filtered, recover- able, µg/L (39532)	Methyl parathion, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82667)	Methyl oxanilic acid, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (61044)	Metol- achlor ethane- sulfonic acid, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (61043)	Metola- chlor, water, filtered, recover- able, µg/L (39415)	Metri- buzin, water, filtered, recover- able, µg/L (82630)	Molinate, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82671)	Naprop- amide, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82684)
	09-26-2012 1230	< .060	< .016	< .008	0.05	0.30	0.06	< .012	< .0040

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 13 of 15

[%, percent; CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	p,p'-DDE, water, filtered, recover- able, µg/L (34653)	Parathion, water, filtered, recover- able, µg/L (39542)	Pebulate, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82669)	Pendi- methalin, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82683)	Phorate, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82664)	Prometon, water, filtered, recover- able, µg/L (04037)	Propachlor oxanilic acid, water, filtered, recover- able, µg/L (62767)	Propachlor ethane- sulfonic acid, water, filtered, recover- able, µg/L (62766)	Propa- chlor, water, filtered, recover- able, µg/L (04024)
	09-26-2012 1230	< .002	< .020	< .0160	< .012	< .020	0.062	< .02	< .05

05464302 Cedar River near Brandon, IA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

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[%, percent; CaCO₃, calcium carbonate; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Sample date-time	Propanil, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82679)	Propargite, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82685)	Propyz-amide, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82676)	Alachlor ethane-sulfonic acid secondary amide, water, filtered, µg/L (62849)	Simazine, water, filtered, recoverable, µg/L (04035)	Tebu-thiuron, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82670)	Terbacil, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82665)	Terbufos, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82675)	Thioben-carb, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82681)
09-26-2012 1230	< .010	< .020	< .0036	< .02	< .006	< .028	< .024	< .018	< .016

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 15 of 15

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Sample date-time	Triallate, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82678)	Trifluralin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82661)	2-Chloro-N-(2,6-diethyl-phenyl)-acetamide, water, filtered, recoverable, µg/L (63781)	2-Chloro-N-(2-ethyl-phenyl)-acetamide, water, filtered, recoverable, µg/L (63782)	Organic carbon, suspended sediment, total, mg/L (00689)	Organic carbon, water, filtered, mg/L (00681)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons per day (80155)
09-26-2012 1230	< .0046	< .018	< .02	< .02	7.27	9.91	29	45